

# Vault of the Beast (v1.1)

A.E. VAN VOGT, 1940

THE CREATURE CREPT. It whimpered from fear and pain, a thin, slobbering sound horrible to hear. Shapeless, formless thing yet changing shape and form with every jerky movement.

It crept along the corridor of the space freighter, fighting the terrible urge of its elements to take the shape of its surroundings. A grey blob of disintegrating stuff, it crept, it cascaded, it rolled, flowed, dissolved, every movement an agony of struggle against the abnormal need to become a stable shape.

Any shape! The hard, chilled-blue metal wall of the Earth-bound freighter, the thick, rubbery floor. The floor was easy to fight. It wasn't like the metal that pulled and pulled. It would be easy to become metal for all eternity.

But something prevented. An implanted purpose. A purpose that drummed from electron to electron, vibrated from atom to atom with an unvarying intensity that was like a special pain: *Find the greatest mathematical mind in the Solar System, and bring it to the vault of the Martian ultimate metal. The Great One must be freed! The prime number time lock must be opened!*

That was the purpose that hummed with unrelenting agony through its elements. That was the thought that had been seared into its fundamental consciousness by the great and evil minds that had created it.

There was movement at the far end of the corridor. A door opened. Footsteps sounded. A man whistling to himself. With a metallic hiss, almost a sigh, the creature dissolved, looking momentarily like diluted mercury. Then it turned brown like the floor. It became the floor, a slightly thicker stretch of dark-brown rubber spread out for yards.

It was ecstasy just to lie there, to be flat and to have shape, and to be so nearly dead that there was no pain. Death was so sweet, so utterly desirable. And life such an unbearable torment of agony, such a throbbing piercing nightmare of anguished convulsion. If only the life that was approaching would pass swiftly. If the life stopped, it would pull it into shape. Life could do that. Life was stronger than metal, stronger than anything. The approaching life meant torture, struggle, pain.

The creature tensed its now flat, grotesque body -- the body that could develop muscles of steel -- and waited in terror for the death struggle.

Spacecraftsman Parelli whistled happily as he strode along the gleaming corridor that led from the engine room. He had just received a wireless from the hospital. His wife was doing well, and it was a boy. Eight pounds, the radiogram had said. He suppressed a desire to whoop and dance. A boy. Life sure was good.

Pain came to the thing on the floor. Primeval pain that sucked through its elements like acid burning, burning. The brown floor shuddered in every atom as Parelli strode over it. The aching urge to pull towards him, to take his shape. The thing fought its horrible desire, fought with anguish and shivering dread, more consciously now that it could think with Parelli's brain. A ripple of floor rolled after the man.

Fighting didn't help. The ripple grew into a blob that momentarily seemed to become a human head. Grey, hellish nightmare of demoniac shape. The creature hissed metallically in terror, then collapsed palpitating, slobbering with fear and pain and hate as Parelli strode on rapidly -- too rapidly for its creeping pace.

The thin, horrible sound died; the thing dissolved into brown floor, and lay quiescent yet quivering in every atom from its unquenchable, uncontrollable urge to live -- live in spite of pain, in spite of abysmal terror and primordial longing for stable shape. To live and fulfill the purpose of its lusting and malignant creators.

Thirty feet up the corridor, Parelli stopped. He jerked his mind from its thoughts of child and wife. He spun on his heels, and stared uncertainly along the passageway from the engine room.

'Now, what the devil was that?' he pondered aloud.

A sound -- a queer, faint yet unmistakably horrid sound was echoing and re-echoing through his consciousness. A shiver ran the length of his spine. That sound -- that devilish sound.

He stood there, a tall, magnificently muscled man, stripped to the waist, sweating from the heat generated by the rockets that were decelerating the craft after its meteoric flight from Mars. Shuddering, he clenched his fists, and walked slowly back the way he had come.

The creature throbbed with the pull of him, a gnawing, writhing, tormenting struggle that pierced into the depths of every restless, agitated cell, stabbing agonizingly along the alien nervous system; and then became terrifyingly aware of the inevitable, the irresistible need to take the shape of the life.

Parelli stopped uncertainly. The floor moved under him, a visible wave that reared brown and horrible before his incredulous eyes and grew into a bulbous, slobbering, hissing mass. A venomous demon head reared on twisted, half-human shoulders. Gnarled hands on apelike, malformed arms clawed at his face with insensate rage -- and changed even as they tore at him.

'Good God!' Parelli bellowed.

The hands, the arms that clutched him grew more normal, more human, brown, muscular. The face assumed familiar lines, sprouted a nose, eyes, a red gash of mouth. The body was suddenly his own, trousers and all, sweat and all.

'-- God!' his image echoed; and pawed at him with clenching fingers and an impossible strength.

Gasping, Parelli fought free, then launched one crushing blow straight into the distorted face. A drooling scream of agony came from the thing. It turned and ran, dissolving as it ran, fighting dissolution, uttering strange half-human cries.

And, struggling against horror, Parelli chased it, his knees weak and trembling from sheer funk and incredulity. His arm reached out, and plucked at the disintegrating trousers. A piece came away in his hand, a cold, slimy, writhing lump like wet clay.

The feel of it was too much. His gorge rising in disgust, he faltered in his stride. He heard the pilot shouting ahead:

'What's the matter?'

Parelli saw the open door of the storeroom. With a gasp, he dived in, came out a moment later, wild-eyed, an ato-gun in his fingers. He saw the pilot, standing with staring, horrid brown eyes, white face and rigid body, facing one of the great windows.

'There it is!' the man cried.

A grey blob was dissolving into the edge of the glass, becoming glass. Parelli rushed forward, ato-gun poised. A ripple went through the glass, darkening it; and then, briefly, he caught a glimpse of a blob emerging on the other side of the glass into the cold of space.

The officer stood gaping beside him; the two of them watched the grey, shapeless mass creep out of sight along the side of the rushing freight liner.

Parelli sprang to life. 'I got a piece of it!' he gasped. 'Flung it down on the floor of the storeroom.'

It was Lieutenant Morton who found it. A tiny section of floor reared up, and then grew amazingly large as it tried to expand into human shape. Parelli with distorted, crazy eyes scooped it up in a shovel. It hissed; it nearly became a part of the metal shovel, but couldn't because Parelli was so close. Changing, fighting for shape, it slobbered and hissed as Parelli staggered with it behind his superior officer. He was laughing hysterically. 'I touched it,' he kept saying. 'I touched it.'

A large blister of metal on the outside of the space freighter stirred into sluggish life, as the ship tore into the Earth's atmosphere. The metal walls of the freighter grew red, then white-hot, but the creature, unaffected, continued its slow transformation into grey mass. Vague thought came to the thing, realization that it was time to act.

Suddenly, it was floating free of the ship, falling slowly, heavily, as if somehow the gravitation of Earth had no serious effect upon it. A minute distortion in its electrons started it falling faster, as in some alien way it suddenly became more allergic to gravity.

The Earth was green below; and in the dim distance a gorgeous and tremendous city of spires and massive buildings glittered in the sinking Sun. The thing slowed, and drifted like a falling leaf in a breeze towards the still-distant Earth. It landed in an arroyo beside a bridge at the outskirts of the city.

A man walked over the bridge with quick, nervous steps. He would have been amazed, if he had looked back, to see a replica of himself climb from the ditch to the road, and start walking briskly after him.

*Find the -- greatest mathematician!*

It was an hour later; and the pain of that throbbing thought was a dull, continuous ache in the creature's brain, as it walked along the crowded street. There were other pains, too. The pain of fighting the pull of the pushing, hurrying mass of humanity that swarmed by with unseeing eyes. But it was easier to think, easier to hold form now that it had the brain and body of a man.

*Find -- mathematician!*

'Why?' asked the man's brain of the thing; and the whole body shook with startled shock at such heretical questioning. The brown eyes darted in fright from side to side, as if expecting instant and terrible doom. The face dissolved a little in that brief moment of mental chaos, became successively the man with the hooked nose who swung by, the tanned face of the tall woman who was looking into the shop window, the -

With a second gasp, the creature pulled its mind back from fear, and fought to readjust its face to that of the smooth-shaven young man who sauntered idly in from a side street. The young man glanced at him, looked away, then glanced back again startled. The creature echoed the thought in the man's brain: 'Who the devil is that? Where have I seen that fellow before?'

Half a dozen women in a group approached. The creature shrank aside as they passed, its face twisted with the agony of the urge to become woman. Its brown suit turned just the faintest shade of blue, the colour of the nearest dress, as it momentarily lost control of its outer atoms. Its mind hummed with the chatter of clothes and 'My dear, didn't she look dreadful in that awful hat?'

There was a solid cluster of giant buildings ahead. The thing shook its human head consciously. So many buildings meant metal; and the forces that held metal together would pull and pull at its human shape. The creature comprehended the reason for this with the understanding of the slight man in a dark suit who wandered by dully. The slight man was a clerk; the thing caught his thought. He was thinking enviously of his boss who was Jim Brender, of the financial firm of J.P. Brender & Co.

The overtones of that thought struck along the vibrating elements of the creature. It turned abruptly and followed Lawrence Pearson, bookkeeper. If people ever paid attention to other people on the street, they would have been amazed after a moment to see two Lawrence Pearsons proceeding down the street, one some fifty feet behind the other. The second Lawrence Pearson had learned from the mind of the first that Jim Brender was a Harvard graduate in mathematics, finance and political economy, the latest of a long line of financial geniuses, thirty years old, and the head of the tremendously wealthy J.P. Brender & Co. Jim Brender had just married the most beautiful girl in the world; and this was the reason for Lawrence Pearson's discontent with life.

'Here I'm thirty, too,' his thoughts echoed in the creature's mind, 'and I've got nothing. He's

got everything -- everything while all I've got to look forward to is the same old boarding-house till the end of time.'

It was getting dark as the two crossed the river. The creature quickened its pace, striding forward with aggressive alertness that Lawrence Pearson in the flesh could never have managed. Some glimmering of its terrible purpose communicated itself in that last instant to the victim. The slight man turned; and let out a faint squawk as those steel-muscled fingers jerked at his throat, a single, fearful snap.

The creature's brain went black with dizziness as the brain of Lawrence Pearson crashed into the night of death. Gasping, whimpering, fighting dissolution, it finally gained control of itself. With one sweeping movement, it caught the dead body and flung it over the cement railing. There was a splash below, then a sound of gurgling water.

The thing that was now Lawrence Pearson walked on hurriedly, then more slowly till it came to a large, rambling brick house. It looked anxiously at the number, suddenly uncertain if it had remembered rightly. Hesitantly, it opened the door.

A streamer of yellow light splashed out, and laughter vibrated in the thing's sensitive ears. There was the same hum of many thoughts and many brains, as there had been in the street. The creature fought against the inflow of thought that threatened to crowd out the mind of Lawrence Pearson. A little dazed by the struggle, it found itself in a large, bright hail, which looked through a door into a room where a dozen people were sitting around a dining table.

'Oh, it's you, Mr Pearson,' said the landlady from the head of the table. She was a sharp-nosed, thin-mouthed woman at whom the creature stared with brief intentness. From her mind, a thought had come. She had a son who was a mathematics teacher in a high school. The creature shrugged. In one penetrating glance, the truth throbbed along the intricate atomic structure of its body. This woman's son was as much of an intellectual lightweight as his mother.

'You're just in time,' she said incuriously. 'Sarah, bring Mr Pearson's plate.'

'Thank you, but I'm not feeling hungry,' the creature replied; and its human brain vibrated to the first silent, ironic laughter that it had ever known. 'I think I'll just lie down.'

All night long it lay on the bed of Lawrence Pearson, bright-eyed, alert, becoming more and more aware of itself. It thought:

'I'm a machine, without a brain of my own. I use the brains of other people, but somehow my creators made it possible for me to be more than just an echo. I use people's brains to carry out my purpose.'

It pondered about those creators, and felt a surge of panic sweeping along its alien system, darkening its human mind. There was a vague physiological memory of pain unutterable, and of tearing chemical action that was frightening.

The creature rose at dawn, and walked the streets till half past nine. At that hour, it approached the imposing marble entrance of J.P. Brender & Co. Inside, it sank down in the comfortable chair initialed L.P.; and began painstakingly to work at the books Lawrence Pearson had put away the night before.

At ten o'clock, a tall young man in a dark suit entered the arched hallway and walked briskly through the row after row of offices. He smiled with easy confidence to every side. The thing did not need the chorus of 'Good morning, Mr Brender' to know that his prey had arrived.

Terrible in its slow-won self-confidence, it rose with a lithe, graceful movement that would have been impossible to the real Lawrence Pearson, and walked briskly to the washroom. A moment later, the very image of Jim Brender emerged from the door and walked with easy confidence to the door of the private office which Jim Brender had entered a few minutes before.

The thing knocked and walked in -- and simultaneously became aware of three things: The first was that it had found the mind after which it had been sent. The second was that its image mind was incapable of imitating the finer subtleties of the razor-sharp brain of the

young man who was staring up from dark-grey eyes that were a little startled. And the third was the large metal bas-relief that hung on the wall.

With a shock that almost brought chaos, it felt the overpowering tug of that metal. And in one flash it knew that this was ultimate metal, product of the fine craft of the ancient Martians, whose metal cities, loaded with treasures of furniture, art and machinery were slowly being dug up by enterprising human beings from the sands under which they had been buried for thirty or fifty million years.

The ultimate metal! The metal that no heat would even warm, that no diamond or other cutting device could scratch, never duplicated by human beings, as mysterious as the *ieis* force which the Martians made from apparent nothingness.

All these thoughts crowded the creature's brain, as it explored the memory cells of Jim Brender. With an effort that was a special pain, the thing wrenched its mind from the metal, and fastened its eyes on Jim Brender. It caught the full flood of the wonder in his mind, as he stood up.

'Good lord,' said Jim Brender, 'who are you?'

'My name's Jim Brender,' said the thing, conscious of grim amusement, conscious, too, that it was progress for it to be able to feel such an emotion.

The real Jim Brender had recovered himself. 'Sit down, sit down,' he said heartily. 'This is the most amazing coincidence I've ever seen.'

He went over to the mirror that made one panel of the left wall. He stared, first at himself, then at the creature. 'Amazing,' he said. 'Absolutely amazing.'

'Mr Brender,' said the creature, 'I saw your picture in the paper, and I thought our astounding resemblance would make you listen, where otherwise you might pay no attention. I have recently returned from Mars, and I am here to persuade you to come back to Mars with me.'

'That,' said Jim Brender, 'is impossible.'

'Wait,' the creature said, 'until I have told you why. Have you ever heard of the Tower of the Beast?'

'The Tower of the Beast!' Jim Brender repeated slowly. He went around his desk and pushed a button.

A voice from an ornamental box said: 'Yes, Mr Brender?'

'Dave, get me all the data on the Tower of the Beast and the legendary city of Li in which it is supposed to exist.'

'Don't need to look it up,' came the crisp reply. 'Most Martian histories refer to it as the beast that fell from the sky when Mars was young -- some terrible warning connected with it -- the beast was unconscious when found -- said to be the result of its falling out of subspace. Martians read its mind; and were so horrified by its subconscious intentions they tried to kill it, but couldn't. So they built a huge vault, about fifteen hundred feet in diameter and a mile high -- and the beast, apparently of these dimensions, was locked in. Several attempts have been made to find the city of Li, but without success. Generally believed to be a myth. That's all, Jim.'

'Thank you!' Jim Brender clicked off the connection, and turned to his visitor. 'Well?'

'It is not a myth. I know where the Tower of the Beast is; and I also know that the beast is still alive.'

'Now, see here,' said Brender good-humouredly, 'I'm intrigued by your resemblance to me; and as a matter of fact I'd like Pamela -- my wife -- to see you. How about coming over to dinner? But don't, for Heaven's sake, expect me to believe such a story. The beast, if there is such a thing, fell from the sky when Mars was young. There are some authorities who maintain that the Martian race died out a hundred million years ago, though twenty-five million is the conservative estimate. The only things remaining of their civilization are their constructions of ultimate metal. Fortunately, towards the end they built almost everything from that

indestructible metal.'

'Let me tell you about the Tower of the Beast,' said the thing quietly. 'It is a tower of gigantic size, but only a hundred feet or so projected above the sand when I saw it. The whole top is a door, and that door is geared to a time lock, which in turn has been integrated along a line of ieis to the ultimate prime number.'

Jim Brender stared; and the thing caught his startled thought, the first uncertainty, and the beginning of belief.

'Ultimate prime number!' Brender ejaculated. 'What do you mean?' He caught himself. 'I know of course that a prime number is a number divisible only by itself and by one.'

He snatched at a book from the little wall library beside his desk, and rippled through it. 'The largest known prime is -- ah, here it is - is 230584300921393951. Some others, according to this authority, are 77843839397, 182521213001, and 78875943472201.'

He frowned. 'That makes the whole thing ridiculous. The ultimate prime would be an indefinite number.' He smiled at the thing. 'If there is a beast, and it is locked up in a vault of ultimate metal, the door of which is geared to a time lock, integrated along a line of ieis to the ultimate prime number -- then the beast is caught. Nothing in the world can free it.'

'To the contrary,' said the creature. 'I have been assured by the beast that it is within the scope of human mathematics to solve the problem, but that what is required is a born mathematical mind, equipped with all the mathematical training that Earth science can afford. You are that man.'

'You expect me to release this evil creature -- even if I could perform this miracle of mathematics.'

'Evil nothing!' snapped the thing. 'That ridiculous fear of the unknown which made the Martians imprison it has resulted in a very grave wrong. The beast is a scientist from another space, accidentally caught in one of his experiments. I say "his" when of course I do not know whether this race has a sexual differentiation.'

'You actually talked with the beast?'

'It communicated with me by mental telepathy.'

'It has been proven that thoughts cannot penetrate ultimate metal.'

'What do humans know about telepathy? They cannot even communicate with each other except under special conditions.' The creature spoke contemptuously.

'That's right. And if your story is true, then this is a matter for the Council.'

'This is a matter for two men, you and I. Have you forgotten that the vault of the beast is the central tower of the great city of Li -- billions of dollars' worth of treasure in furniture, art and machinery? The beast demands release from its prison before it will permit anyone to mine that treasure. You can release it. We can share the treasure.'

'Let me ask you a question,' said Jim Brender. 'What is your real name?'

'P-Pierce Lawrence!' the creature stammered. For the moment, it could think of no greater variation of the name of its first victim than reversing the two words, with a slight change on 'Pearson.' Its thoughts darkened with confusion as the voice of Brender pounded:

'On what ship did you come from Mars?'

'O-on *F4961*,' the thing stammered chaotically, fury adding to the confused state of its mind. It fought for control, felt itself slipping, suddenly felt the pull of the ultimate metal that made up the bas-relief on the wall, and knew by that tug that it was dangerously near dissolution.

'That would be a freighter,' said Jim Brender. He pressed a button. 'Carltons, find out if the *F4961* had a passenger or person aboard, named Pierce Lawrence. How long will it take?'

'About a minute, sir.'

'You see,' said Jim Brender, leaning back, 'this is mere formality. If you were on that ship,

then I shall be compelled to give serious attention to your statements. You can understand, of course, that I could not possibly go into a thing like this blindly. I -- '

The buzzer rang. 'Yes?' said Jim Brender.

'Only the crew of two was on the *F4961* when it landed yesterday. No such person as Pierce Lawrence was aboard.'

'Thank you.' Jim Brender stood up. He said coldly, 'Good-bye, Mr Lawrence. I cannot imagine what you hoped to gain by this ridiculous story. However it has been most intriguing, and the problem you presented was very ingenious indeed - '

The buzzer was ringing. 'What is it?'

'Mr Gorson to see you sir.'

'Very well, send him right in.'

The thing had greater control of its brain now, and it saw in Brender's mind that Gorson was a financial magnate, whose business ranked with the Brender firm. It saw other things, too; things that made it walk out of the private office, out of the building, and wait patiently until Mr Gorson emerged from the imposing entrance. A few minutes later, there were two Mr Gorsons walking down the street.

Mr Gorson was a vigorous man in his early fifties. He had lived a clean, active life; and the hard memories of many climates and several planets were stored away in his brain. The thing caught the alertness of this man on its sensitive elements, and followed him warily, respectfully, not quite decided whether it would act.

It thought: 'I've come a long way from the primitive life that couldn't hold its shape. My creators, in designing me, gave to me powers of learning, developing. It is easier to fight dissolution, easier to be human. In handling this man, I must remember that my strength is invincible when properly used.'

With minute care, it explored in the mind of its intended victim the exact route of his walk to his office. There was the entrance to a large building clearly etched on his mind. Then a long, marble corridor, into an automatic elevator up to the eighth floor, along a short corridor with two doors. One door led to the private entrance of the man's private office. The other to a storeroom used by the janitor. Gorson had looked into the place on various occasions; and there was in his mind, among other things, the memory of a large chest -- The thing waited in the storeroom till the unsuspecting Gorson was past the door. The door creaked. Gorson turned, his eyes widening. He didn't have a chance. A fist of solid steel smashed his face to a pulp, knocking the bones back into his brain.

This time, the creature did not make the mistake of keeping its mind tuned to that of its victim. It caught him viciously as he fell, forcing its steel fist back to a semblance of human flesh. With furious speed, it stuffed the bulky and athletic form into the large chest, and clamped the lid down tight.

Alertly, it emerged from the storeroom, entered the private office of Mr Gorson, and sat down before the gleaming desk of oak. The man who responded to the pressing of a button saw John Gorson sitting there, and heard John Gorson say:

'Crispins, I want you to start selling these stocks through the secret channels right away. Sell until I tell you to stop, even if you think it's crazy. I have information of something big on.'

Crispins glanced down the row after row of stock names; and his eyes grew wider and wider. 'Good lord, man!' he gasped finally, with that familiarity which is the right of a trusted adviser, 'these are all the gilt-edged stocks. Your whole fortune can't swing a deal like this.'

'I told you I'm not in this alone.'

'But it's against the law to break the market,' the man protested.

'Crispins, you heard what I said. I'm leaving the office. Don't try to get in touch with me. I'll call you.'

The thing that was John Gorson stood up, paying no attention to the bewildered thoughts that flowed from Crispins. It went out of the door by which it had entered. As it emerged from the building, it was thinking:

'All I've got to do is kill half a dozen financial giants, start their stocks selling, and then -- '

By one o'clock it was over. The exchange didn't close till three, but at one o'clock, the news was flashed on the New York tickers. In London, where it was getting dark, the papers brought out an extra. In Hankow and Shanghai, a dazzling new day was breaking as the newsboys ran along the streets in the shadows of skyscrapers, and shouted that J.P. Brender & Co. had assigned; and that there was to be an investigation -- 'We are facing,' said the chairman of the investigation committee, in his opening address the following morning, 'one of the most astounding coincidences in all history. An ancient and respected firm, with worldwide affiliations and branches, with investments in more than a thousand companies of every description, is struck bankrupt by an unexpected crash in every stock in which the firm was interested. It will require months to take evidence on the responsibility for the short-selling which brought about this disaster. In the meantime, I see no reason, regrettable as the action must be to all the old friends of the late J.P. Brender, and of his son, why the demands of the creditors should not be met, and the properties, liquidated through auction sales and such other methods as may be deemed proper and legal - '

'Really, I don't blame her,' said the first woman, as they wandered through the spacious rooms of the Brenders' Chinese palace. 'I have no doubt she does love Jim Brender, but no one could seriously expect her to remain married to him *now*. She's a woman of the world, and it's utterly impossible to expect her to live with a man who's going to be a mere pilot or space hand or something on a Martian spaceship -- '

Commander Hughes of Interplanetary Spaceways entered the office of his employer truculently. He was a small man, but extremely wiry; and the thing that was Louis Dyer gazed at him tensely, conscious of the force and power of this man.

Hughes began: 'You have my report on this Brender case?'

The thing twirled the moustache of Louis Dyer nervously; then picked up a small folder, and read out aloud:

'Dangerous for psychological reasons ... to employ Brender ... So many blows in succession. Loss of wealth, position and wife ... No normal man could remain normal under ... circumstances. Take him into office ... befriend him ... give him a sinecure, or position where his undoubted great ability ... but not on a spaceship, where the utmost hardiness, both mental, moral, spiritual and physical is required -- '

Hughes interrupted: 'Those are exactly the points which I am stressing. I knew you would see what I meant, Louis.'

'Of course, I see,' said the creature, smiling in grim amusement, for it was feeling very superior these days. 'Your thoughts, your ideas, your code and your methods are stamped irrevocably on your brain and' -- it added hastily -- 'you have never left me in doubts as to where you stand. However, in this case, I must insist. Jim Brender will not take an ordinary position offered by his friends. And it is ridiculous to ask him to subordinate himself to men to whom he is in every way superior. He has commanded his own space yacht; he knows more about the mathematical end of the work than our whole staff put together; and that is no reflection on our staff. He knows the hardships connected with space flying, and believes that it is exactly what he needs. I, therefore, command you, for the first time in our long association, Peter, to put him on space freighter *F4961* in the place of Spacecraftsman Parelli who collapsed into a nervous breakdown after that curious affair with the creature from space, as Lieutenant Morton described it -- By the way, did you find the ... er ... sample of that creature yet?'

'No, sir, it vanished the day you came in to look at it. We've searched the place high and low -- queerest stuff you ever saw. Goes through glass as easy as light; you'd think it was some form of light-stuff -- scares me, too. A pure sympodial development -- actually more adaptable to environment than anything hitherto discovered; and that's putting it mildly. I tell



you, sir -- But see here, you can't steer me off the Brender case like that.'

'Peter, I don't understand your attitude. This is the first time I've interfered with your end of the work and -- '

'I'll resign,' groaned that sorely beset man.

The thing stifled a smile. 'Peter, you've built up the staff of Spaceways. It's your child, your creation; you can't give it up, you know you can't -- '

The words hissed softly into alarm; for into Hughes' brain had flashed the first real intention of resigning. Just hearing of his accomplishments and the story of his beloved job brought such a rush of memories, such a realization of how tremendous an outrage was this threatened interference. In one mental leap, the creature saw what this man's resignation would mean: The discontent of the men; the swift perception of the situation by Jim Brender; and his refusal to accept the job. There was only one way out -- that Brender would get to the ship without finding out what had happened. Once on it, he must carry through with one trip to Mars; and that was all that was needed.

The thing pondered the possibility of imitating Hughes' body; then agonizingly realized that it was hopeless. Both Louis Dyer and Hughes must be around until the last minute.

'But, Peter, listen!' the creature began chaotically. Then it said, 'Damn!' for it was very human in its mentality; and the realization that Hughes took its words as a sign of weakness was maddening. Uncertainty descended like a black cloud over its brain.

'I'll tell Brender when he arrives in five minutes how I feel about all this!' Hughes snapped; and the creature knew that the worst had happened. 'If you forbid me to tell him, then I resign. I -- Good God, man, your face!'

Confusion and horror came to the creature simultaneously. It knew abruptly that its face had dissolved before the threatened ruins of its plans. It fought for control, leaped to its feet, seeing the incredible danger. The large office just beyond the frosted glass door -- Hughes' first outcry would bring help -- with a half sob, it sought to force its arm into an imitation of a metal fist, but there was no metal in the room to pull it into shape. There was only the solid maple desk. With a harsh cry, the creature leaped completely over the desk, and sought to bury a pointed shaft of stick into Hughes' throat.

Hughes cursed in amazement, and caught at the stick with furious strength. There was sudden commotion in the outer office, raised voices, running feet --

It was quite accidental the way it happened. The surface cars swayed to a stop, drawing up side by side as the red light blinked on ahead. Jim Brender glanced at the next car.

A girl and a man sat in the rear of the long, shiny, streamlined affair, and the girl was desperately striving to crouch down out of his sight, striving with equal desperation not to be too obvious in her intention. Realizing that she was seen, she smiled brilliantly, and leaned out of the window.

'Hello, Jim, how's everything?'

'Hello, Pamela!' Jim Brender's fingers tightened on the steering wheel till the knuckles showed white, as he tried to keep his voice steady. He couldn't help adding: 'When does the divorce become final?'

'I get my papers tomorrow,' she said, 'but I suppose you won't get yours till you return from your first trip. Leaving today, aren't you?'

'In about fifteen minutes.' He hesitated. 'When is the wedding?'

The rather plump, white-faced man who had not participated in the conversation so far, leaned forward.

'Next week,' he said. He put his fingers possessively over Pamela's hand. 'I wanted it tomorrow but Pamela wouldn't -- er, good-bye.'

His last words were hastily spoken, as the traffic lights switched, and the cars rolls on,

separating at the first corner.

The rest of the drive to the spaceport was a blur. He hadn't expected the wedding to take place so soon. Hadn't, when he came right down to it, expected it to take place at all. Like a fool, he had hoped blindly -- Not that it was Pamela's fault. Her training, her very life made this the only possible course of action for her. But -- *one week!* The spaceship would be one fourth of the long trip to Mars -- He parked his car. As he paused beside the runway that led to the open door of *F4961* -- a huge globe of shining metal, three hundred feet in diameter -- he saw a man running towards him. Then he recognized Hughes.

The thing that was Hughes approached, fighting for calmness. The whole world was a flame of cross-pulling forces. It shrank from the thoughts of the people milling about in the office it had just left. Everything had gone wrong. It had never intended to do what it now had to do. It had intended to spend most of the trip to Mars as a blister of metal on the outer shield of the ship. With an effort, it controlled its funk, its terror, its brain.

'We're leaving right away,' it said.

Brender looked amazed. 'But that means I'll have to figure out a new orbit under the most difficult -- '

'Exactly,' the creature interrupted. 'I've been hearing a lot about your marvellous mathematical ability. It's time the words were proved by deeds.'

Jim Brender shrugged. 'I have no objection. But how is it that you're coming along?'

'I always go with a new man.'

It sounded reasonable. Brender climbed the runway, closely followed by Hughes. The powerful pull of the metal was the first real pain the creature had known for days. For a long month, it would now have to fight the metal, fight to retain the shape of Hughes -- and carry on a thousand duties at the same time.

That first stabbing pain tore along its elements, and smashed the confidence that days of being human had built up. And then, as it followed Brender through the door, it heard a shout behind it. It looked back hastily. People were streaming out of several doors, running towards the ship.

Brender was several yards along the corridor. With a hiss that was almost a sob, the creature leaped inside, and pulled the lever that clicked the great door shut.

There was an emergency lever that controlled the antigravity plates. With one jerk, the creature pulled the heavy lever hard over. There was a sensation of lightness and a sense of falling.

Through the great plate window, the creature caught a flashing glimpse of the field below, swarming with people. White faces turning upward, arms waving. Then the scene grew remote, as a thunder of rockets vibrated through the ship.

'I hope,' said Brender, as Hughes entered the control room, 'you wanted me to start the rockets.'

'Yes,' the thing replied, and felt brief panic at the chaos in its brain, the tendency of its tongue to blur. 'I'm leaving the mathematical end entirely in your hands.'

It didn't dare stay so near the heavy metal engines, even with Brender's body there to help it keep its human shape. Hurriedly, it started up the corridor. The best place would be the insulated bedroom -- Abruptly, it stopped in its headlong walk, teetered for an instant on tiptoes. From the control room it had just left, a thought was trickling -- a thought from Brender's brain. The creature almost dissolved in terror as it realized that Brender was sitting at the radio, answering an insistent call from Earth -- It burst into the control room, and braked to a halt, its eyes widening with humanlike dismay. Brender whirled from before the radio with a single twisting step. In his fingers, he held a revolver. In his mind, the creature read a dawning comprehension of the whole truth. Brender cried:

'You're the ... thing that came to my office, and talked about prime numbers and the vault

of the beast.'

He took a step to one side to cover an open doorway that led down another corridor. The movement brought the telescreen into the vision of the creature. In the screen was the image of the real Hughes. Simultaneously, Hughes saw the thing.

'Brender,' he bellowed, 'it's the monster that Morton and Parelli saw on their trip from Mars. It doesn't react to heat or any chemicals, but we never tried bullets. Shoot, you fool!'

It was too much, there was too much metal, too much confusion. With a whimpering cry, the creature dissolved. The pull of the metal twisted it horribly into thick half-metal; the struggle to be human left it a malignant structure of bulbous head, with one eye half gone, and two snakelike arms attached to the half metal of the body.

Instinctively, it fought closer to Brender, letting the pull of his body make it more human. The half metal became fleshlike stuff that sought to return to its human shape.

'Listen, Brender!' Hughes' voice came urgently. 'The fuel vats in the engine room are made of ultimate metal. One of them is empty. We caught a part of this thing once before, and it couldn't get out of the small jar of ultimate metal. If you could drive it into the vat while its lost control of itself, as it seems to do very easily -- '

'I'll see what lead can do!' Brender rapped in a brittle voice.

*Bang!* The half-human creature screamed from its half-formed slit of mouth, and retreated, its legs dissolving into grey dough.

'It hurts, doesn't it?' Brender ground out. 'Get over into the engine room, you damned thing, into the vat!'

'Go on, go on!' Hughes was screaming from the telescreen.

Brender fired again. The creature made a horrible slobbering sound, and retreated once more. But it was bigger again, more human; and in one caricature hand a caricature of Brender's revolver was growing.

It raised the unfinished, unformed gun. There was an explosion, and a shriek from the thing. The revolver fell, a shapeless, tattered blob, to the floor. The little grey mass of it scrambled frantically towards the parent body, and attached itself like some monstrous canker to the right foot.

And then, for the first time, the mighty and evil brains that had created the thing, sought to dominate their robot. Furious, yet conscious that the game must be carefully played, the Controller forced the terrified and utterly beaten thing to its will. Scream after agonized scream rent the air, as the change was forced upon the unstable elements. In an instant, the thing stood in the shape of Brender, but instead of a revolver, there grew from one browned, powerful hand a pencil of shining metal. Mirror bright, it glittered in every facet like some incredible gem.

The metal glowed ever so faintly, an unearthly radiance. And where the radio had been, and the screen with Hughes' face on it, there was a gaping hole. Desperately, Brender pumped bullets into the body before him, but though the shape trembled it stared at him now, unaffected. The shining weapon swung towards him.

'When you are quite finished,' it said, 'perhaps we can talk.'

It spoke so mildly that Brender, tensing to meet death, lowered his gun in amazement. The thing went on:

'Do not be alarmed. This which you hear and see is a robot, designed by us to cope with your space and number world. Several of us are working here under the most difficult conditions to maintain this connection, so I must be brief.

'We exist in a time world immeasurably more slow than your own. By a system of synchronization, we have geared a number of these spaces in such fashion that, though one of our days is millions of your years, we can communicate. Our purpose is to free our colleague, Kalorn, from the Martian vault. Kalorn was caught accidentally in a time warp of his

own making and precipitated onto the planet you know as Mars. The Martians, needlessly fearing his great size, constructed a most diabolical prison, and we need your knowledge of the mathematics peculiar to your space and number world -- and to it alone -- in order to free him.'

The calm voice continued, earnest but not offensively so, insistent but friendly. He regretted that their robot had killed human beings. In greater detail, he explained that every space was constructed on a different numbers system, some all negative, some all positive, some a mixture of the two, the whole an infinite variety, and every mathematic interwoven into the very fabric of the space it ruled. Its force was not really mysterious. It was simply a flow from one space to another, the result of a difference in potential. This flow, however, was one of the universal forces, which only one other force could affect, the one he had used a few minutes before. Ultimate metal was *actually* ultimate.

In their space they had a similar metal, built up from negative atoms. He could see from Brender's mind that the Martians had known nothing about minus numbers, so that they must have built it up from ordinary atoms. It could be done that way, too, though not so easily. He finished:

'The problem narrows down to this: Your mathematic must tell us how, with our universal force, we can short-circuit the ultimate prime number -- that is, factor it -- so that the door will open any time. You may ask how a prime can be factored when it is divisible only by itself and by one. That problem is, for your system, solvable only by your mathematic. Will you do it?'

Brender realized with a start that he was still holding his revolver. He tossed it aside. His nerves were calm as he said:

'Everything you have said sounds reasonable and honest. If you were desirous of making trouble, it would be the simplest thing in the world to send as many of your kind as you wished. Of course, the whole affair must be placed before the Council -- '

'Then it is hopeless -- the Council could not possibly accede -- '

'And you expect me to do what you do not believe the highest governmental authority in the System would do?' Brender exclaimed.

'It is inherent in the nature of a democracy that it cannot gamble with the lives of its citizens. We have such a government here; and its members have already informed us that, in a similar condition, they would not consider releasing an unknown beast upon their people. Individuals, however, can gamble where governments must not. You have agreed that our argument is logical. What system do men follow if not that of logic?'

The Controller, through its robot, watched Brender's thoughts alertly. It saw doubt and uncertainty, opposed by a very human desire to help, based upon the logical conviction that it was safe. Probing his mind, it saw swiftly that it was unwise, in dealing with men, to trust too much to logic. It pressed on:

'To an individual we can offer -- everything. In a minute, with your permission, we shall transfer this ship to Mars; not in thirty days, but in thirty seconds. The knowledge of how this is done will remain with you. Arrived at Mars, you will find yourself the only living person who knows the whereabouts of the ancient city of Li, of which the vault of the beast is the central tower. In this city will be found literally billions of dollars' worth of treasure made of ultimate metal; and according to the laws of Earth, fifty per cent will be yours. Your fortune re-established you will be able to return to Earth this very day, and reclaim your former wife, and your position. Poor silly child, she loves you still, but the iron conventions and training of her youth leave her no alternative. If she were older, she would have the character to defy those conventions. You must save her from herself. Will you do it?'

Brender was as white as a sheet, his hands clenching and unclenching. Malevolently, the thing watched the flaming thought sweeping through his brain -- the memory of a pudgy white hand closing over Pamela's fingers, watched the reaction of Brender to its words, those words that expressed exactly what he had always thought. Brender looked up with tortured eyes.

'Yes,' he said, 'I'll do what I can.'

A bleak range of mountains fell away into a valley of reddish grey sand. The thin winds of Mars blew a mist of sand against the building.

*Such* a building! At a distance, it looked merely big. A bare hundred feet projected above the desert, a hundred feet of length and *fifteen hundred feet of diameter*. Literally thousands of feet must extend beneath the restless ocean of sand to make the perfect balance of form, the graceful flow, the fairy-like beauty, which the long-dead Martians demanded of all their constructions, however massive. Brender felt suddenly small and insignificant as the rockets of his spacesuit pounded him along a few feet above the sand towards the incredible building.

At close range the ugliness of sheer size was miraculously lost in the wealth of the decoration. Columns and pilasters assembled in groups and clusters, broke up the façades, gathered and dispersed again restlessly. The flat surfaces of wall and roof melted into a wealth of ornaments and imitation stucco work, vanished and broke into a play of light and shade.

The creature floated beside Brender; and its Controller said: 'I see that you have been giving considerable thought to the problem, but this robot seems incapable of following abstract thoughts, so I have no means of knowing the course of your speculations. I see however that you seem to be satisfied.'

'I think I've got the answer,' said Brender, 'but first I wish to see the time lock. Let's climb.'

They rose into the sky, dipping over the lip of the building. Brender saw a vast flat expanse; and in the centre -- He caught his breath!

The meagre light from the distant sun of Mars shone down on a structure located at what seemed the exact centre of the great door. The structure was about fifty feet high, and seemed nothing less than a series of quadrants coming together at the centre, which was a metal arrow pointing straight up.

The arrow head was not solid metal. Rather it was as if the metal had divided in two parts, then curved together again. But not quite together. About a foot separated the two sections of metal. But that foot was bridged by a vague, thin, green flame of ieis force.

'The time lock!' Brender nodded. 'I thought it would be something like that, though I expected it would be bigger, more substantial.'

'Do not be deceived by its fragile appearance,' answered the thing. 'Theoretically, the strength of ultimate metal is infinite; and the ieis force can only be affected by the universal I have mentioned. Exactly what the effect will be, it is impossible to say as it involves the temporary derangement of the whole number system upon which that particular area of space is built. But now tell us what to do.'

'Very well.' Brender eased himself onto a bank of sand, and cut off his antigravity plates. He lay on his back, and stared thoughtfully into the blue-black sky. For the time being all doubts, worries and fears were gone from him, forced out by sheer will power. He began to explain:

'The Martian mathematic, like that of Euclid and Pythagoras, was based on endless magnitude. Minus numbers were beyond their philosophy. On Earth, however, beginning with Descartes, an analytical mathematic was evolved. Magnitude and perceivable dimensions were replaced by that of variable relation-values between positions in space.

'For the Martians, there was only one number between 1 and 3. Actually, the totality of such numbers is an infinite aggregate. And with the introduction of the idea of the square root of minus one -- or  $i$  -- and the complex numbers, mathematics definitely ceased to be a simple thing of magnitude, perceivable in pictures. Only the intellectual step from the infinitely small quantity to the lower limit of every possible finite magnitude brought out the conception of a variable number which oscillated beneath any assignable number that was not zero.

'The prime number, being a conception of pure magnitude, had no reality in *real* mathematics, but in this case was rigidly bound up with the reality of the ieis force. The Martians knew ieis as a pale-green flow about a foot in length and developing say a thousand horsepower. (It was actually 12.171 inches and 1021.23 horsepower, but that was

unimportant.) The power produced never varied, the length never varied, from year end to year end, for tens of thousands of years. The Martians took the length as their basis of measurement, and called it one "ci"; they took the power as their basis of power and called it one "rb". And because of the absolute invariability of the flow they knew it was eternal.

'They knew furthermore that nothing could be eternal without being prime; their whole mathematic was based on numbers which could be factored, that is, disintegrated, destroyed, rendered less than they had been; and numbers which could not be factored, disintegrated or divided into smaller groups.

'Any number which could be factored was incapable of being infinite. Contrariwise, the infinite number must be prime.

'Therefore, they built a lock and integrated it along a line of ieis, to operate when the ieis ceased to flow -- which would be at the end of Time, provided it was not interfered with. To prevent interference, they buried the motivating mechanism of the flow in ultimate metal, which could not be destroyed or corroded in any way. According to their mathematic, that settled it.'

'But you have the answer,' said the voice of the thing eagerly.

'Simply this: The Martians set a value on the flow of one "rb." If you interfere with that flow to no matter what small degree, you no longer have an "rb." You have something less. The flow, which is a universal, becomes automatically less than a universal, less than infinite. The prime number ceases to be prime. Let us suppose that you interfere with it to the extent of *infinity minus one*. You will then have a number divisible by two. As a matter of fact, the number, like most large numbers, will immediately break into thousands of pieces, i.e., it will be divisible by tens of thousands of smaller numbers. If the present time falls anywhere near one of those breaks, the door would open then. In other words, the door will open immediately if you can so interfere with the flow that one of the factors occurs in immediate time.'

'That is very clear,' said the Controller with satisfaction and the image of Brender was smiling triumphantly. 'We shall now use this robot to manufacture a universal; and Kalorn shall be free very shortly.' He laughed aloud. 'The poor robot is protesting violently at the thought of being destroyed, but after all it is only a machine, and riot a very good one at that. Besides, it is interfering with my proper reception of your thoughts. Listen to it scream, as I twist it into shape.'

The cold-blooded words chilled Brender, pulled him from the heights of his abstract thought. Because of the prolonged intensity of his thinking, he saw with sharp clarity something that had escaped him before.

'Just a minute,' he said. 'How is it that the robot, introduced from your world, is living at the same time rate as I am, whereas Kalorn continues to live at your time rate?'

'A very good question.' The face of the robot was twisted into a triumphant sneer, as the Controller continued. 'Because, my dear Brender, you have been duped. It is true that Kalorn is living in our time rate, but that was due to a shortcoming in our machine. The machine which Kalorn built, while large enough to transport him, was not large enough in its adaptive mechanism to adapt him to each new space as he entered it. With the result that he was transported but not adapted. It was possible of course for us, his helpers, to transport such a small thing as the robot, though we have no more idea of the machine's construction than you have.

'In short, we can use what there is of the machine, but the secret of its construction is locked in the insides of our own particular ultimate metal, and in the brain of Kalorn. Its invention by Kalorn was one of those accidents which, by the law of averages, will not be repeated in millions of our years. Now that you have provided us with the method of bringing Kalorn back, we shall be able to build innumerable interspace machines. Our purpose is to control all spaces, all worlds -- particularly those which are inhabited. We intend to be absolute rulers of the entire Universe.'

The ironic voice ended; and Brender lay in his prone position the prey of horror. The horror was twofold, partly due to the Controller's monstrous plan, and partly due to the thought that was pulsing in his brain. He groaned, as he realized that warning thought must be ticking away

on the automatic receiving brain of the robot. 'Wait,' his thought was saying, 'That adds a new factor. Time - '

There was a scream from the creature as it was forcibly dissolved. The scream choked to a sob, then silence. An intricate machine of shining metal lay there on that great grey-brown expanse of sand and ultimate metal.

The metal glowed; and then the machine was floating in the air. It rose to the top of the arrow, and settled over the green flame of ieis.

Brender jerked on his antigravity screen, and leaped to his feet. The violent action carried him some hundred feet into the air. His rockets sputtered into staccato fire, and he clamped his teeth against the pain of acceleration.

Below him, the great door began to turn, to unscrew, faster and faster, till it was like a flywheel. Sand flew in all directions in a miniature storm.

At top acceleration, Brender darted to one side.

Just in time. First, the robot machine was flung off that tremendous wheel by sheer centrifugal power. Then the door came off, and, spinning now at an incredible rate, hurtled straight into the air, and vanished into space.

A puff of black dust came floating up out of the blackness of the vault. Suppressing his horror, yet perspiring from awful relief, he rocketed to where the robot had fallen into the sand.

Instead of glistening metal, a time-dulled piece of junk lay there. The dull metal flowed sluggishly and assumed a quasi-human shape. The flesh remained grey and in little rolls as if it were ready to fall apart from old age. The thing tried to stand up on wrinkled, horrible legs, but finally lay still. Its lips moved, mumbled:

'I caught your warning thought, but I didn't let them know. Now, Kalorn is dead. They realized the truth as it was happening. End of Time came -- '

It faltered into silence; and Brender went on: 'Yes, end of Time came when the flow became momentarily less than eternal -- came at the factor point which occurred a few minutes ago.'

'I was ... only partly ... within its ... influence, Kalorn all the way. Even if they're lucky ... will be years before ... they invent another machine ... and one of their years is billions ... of yours ... I didn't tell them ... I caught your thought ... and kept it ... from them -- '

'But why did you do it? Why?'

'Because they were hurting me. They were going to destroy me. Because ... I liked ... being human. I was ... somebody!'

The flesh dissolved. It flowed slowly into a pool of lavalike grey. The lava crinkled, split into dry, brittle pieces. Brender touched one of the pieces. It crumbled into a fine powder of grey dust. He gazed out across that grim, deserted valley of sand, and said aloud, pityingly:

'Poor Frankenstein.'

He turned towards the distant spaceship, towards the swift trip to Earth. As he climbed out of the ship a few minutes later, one of the first persons he saw was Pamela.

She flew into his arms. 'Oh, Jim, Jim,' she sobbed. 'What a fool I've been. When I heard what had happened, and realized you were in danger, I -- Oh, Jim!'

Later, he would tell her about their new fortune.