

THE BRAIN

Edmond Hamilton

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CHAPTER I

Cautiously the young flight engineer stretched his cramped legs across some gadgets in his crowded little compartment. Leaning back in his swivel chair he folded a pair of freckled hands behind his neck and smiled at Lee.

America's greatest weapon, greater than the Atom Bomb, was its new, gigantic mechanical brain. It filled a whole mountain—and then it came to life...!

"This is it doctor; we're almost there."

The tall and lanky man at the frame of the door didn't seem to understand. Bending forward he peered through the little window near the engineer's desk, into the blue haze of the jets and down to the earth below, a vast bowl of desert land gleaming like silver in the glow of the sunrise.

"But this couldn't possibly be Washington," he finally said in a puzzled tone. "Why, we crossed the California coast only half an hour ago. Even at 1200 miles an hour we couldn't be almost there."

The engineer's smile broadened into a friendly grin: "No, we're not anywhere near Washington. But in a couple of minutes you'll see Cephalon and that's as far as we go. One professor and 15 tons of termites to be flown from Wallabawalla Mission station, Northern Territory, Australia, to Cephalon, Arizona, U.S.A., one way direct. Those are our instructions. Say, this is the queerest cargo I've ever flown, doctor, if you don't mind my saying so."

Lee blinked. Removing his glasses which were fairly thick, he wiped them carefully and put them on again as if to get a clearer picture of an unexpected situation. His long fingered hand went through his greying hair and then down the cheek which was sallow, stained with the atabrine from his latest malaria attack and badly in need of a shave. His mouth formed a big "O" of surprise as nervously he said:

"I don't get it. I don't understand this business at all. First the Department of Agriculture extends an urgent letter of invitation to a completely forgotten man out there in the Never-Never land. Then almost on the heels of the letter the government sends a plane. I would have been glad to mail to the Department samples of "Ant-termes Pacificus" sufficient for most scientific purposes if they needed them for experiments in termite control; that would have been the simple and the sensible thing to do. But no, they want everything I have; you fellows drop out of the sky with a sort of habeas corpus and a whole wrecking crew. You disturb the lives of my species, which took me ten years to breed; you pack up their mounds lock, stock and barrel. And then you drop me at some place I never even heard about— Cephalon. What is this Cephalon, anyway? If the place had any connotations to entomology, I would have known about it...."

The flight engineer glanced at the irritated scientist curiously and sympathetically: "If you don't know, I couldn't tell you what it's all about myself, I'm sure," he said slowly. "Cephalon—Cephalon is a place alright, but it doesn't show on the map. Sort of a Shangri-la, if you know what I mean."

This cryptic statement failed to have a calming effect on Lee. "Nonsense," he frowned. "If it is an inhabited place it must be on the map and if it isn't on the map the place doesn't exist."

"Look here," the flight engineer pointed through the window to the horizon ahead. "What do you think this is, doctor, a

mirage?"

Lee stared at the apparition which swiftly materialized out of the ground haze at the plane's supersonic speed. "It *does* look like a mirage," he said judiciously. "Is that Cephalon?"

The engineer nodded. "Prettiest little town in the U. S. for my money. Ideal airport, too. Rather unusual though—I mean the architecture. Take a good look while we're circling around for the come-in signal."

Pretty and unusual were hardly the words for it, Lee thought, as he gazed in admiration. Below, Cephalon spread like a visionary's dream of a far-away future blended with a far-away past. Along wide, palm shaded avenues the flatroofed terraced houses fanned out into the desert. Style elements of ancient Peru and Mexico were blended together with the latest advances of technology, such as the rectangular sheets of water which covered and cooled the roofs. The business center, dotted with helicopter landing fields on top of the pyramidal buildings, was reminiscent of the classic Babylon and Nineveh. At the center of the manmade oasis a huge fortress-like structure sprawled and towered like a seven-pointed star. Even so, for all its impressiveness of masonry, the lush green of its parks, the bursts of color from its hanging gardens, made Cephalon resemble one enormous flower bed.

Overawed and mystified the lone passenger from Down-Under took in the scene while the big plane circled with diminished speed. "It's beautiful," he murmered. "It's a dream." And louder then: "Pardon me if I find it hard to trust my senses. I've been away from home for more than ten years, to be sure. But then, even in the Australian bush I've received some periodicals and scientific journals from the U.S.A. Surely if a city like this has been built during my absence there should have been mention of the fact. And

surely a city like this must show on some map. I don't understand. The longer I look the less I understand...."

The flight engineer shrugged. "It's a new city, maybe that's why it doesn't show."

Lee nodded. "In that case you must know the meaning of all this. Why did they build this city in the middle of the desert? What purpose does it serve? Why am I here? Why are we circling for so long? There don't seem to be any other planes up in the air."

"We cannot come in until our cargo has been examined and okayed," the engineer said.

Lee raised a pair of heavy and untidy brows: "Cargo examination? In mid-air and with nobody from the ground examining it?"

"That's it. It's being done by Radar, one of the new fangled kinds, you know." He grinned: "I hope, doctor, that your termite species is neither explosive nor fissionable in any way. Because in that case we could never make a landing in Cephalon."

"How utterly absurd," Lee said disgustedly. "Even a child would know better. There is no war going on—or is there? What makes them take such absurd precautions?"

The engineer narrowed his eyes. "You're an American, Dr. Lee, aren't you? Well, in any case, I can see no reason why I should be beating about the bush. After all, every foreign agent in this country must have learned by now about the existence of Cephalon. It's too big to be secret anyway. Besides, as you perceive, no attempt has been made to camouflage the place. Cephalon and the whole district takes up about a thousand square miles. It's a military preserve. Only you don't see any Brass. What they are doing, I

wouldn't know, but I would rather try to rob all the gold from Fort Knox than get away with a single scrap of paper from that Braintrust Building in the center of the city over there. By the way, that skull shaped building right across the Plaza is the official hotel reserved for very important persons, such as you are listed."

A deep-throated buzz over the intercom interrupted him. "There, thank God, they finally made up their minds to let us in. One minute more and then a shower, a shave, bacon and eggs, and lots of Java!"

There were what appeared to Lee to be a multitude of people waiting as they landed. Eager and intelligent white faces all lifted up to him and pressed forward with bewildering offerings and requests. A Western Union messenger handed him a telegram in which one Dr. Howard K. Scriven proffered greetings, expressing a desire to interview him. Some cleancut youngster, obviously a scientific worker, assured Lee that he was fully familiar with the care and feeding of "Ant-termes-pacificus-Lee", that Lee need not concern himself about their welfare, that the mounds would be immediately transferred to Experimental Station 19 G. The "Flying Wing's" supercargo and two truckdrivers came forward with papers for Lee to sign, as the first of the heavy steelboxes which harbored the mounds were lowered into a van with the whine of an electric hoist. Meanwhile somebody who said he was an assistant manager of the Cranium hotel informed Lee that reservations had been made for him and that he had a car waiting to conduct Dr. Lee to his suite. It was all very mysterious, but efficient. Feeling more and more like some prize exhibit handled without a will of its own on a whirlwind tour, Lee allowed himself to be whisked from the airport to the hotel. With the din of the jets still in his ears, overpowered by impressions which crowded his senses from all sides, he listened politely to the hotel manager's explanations of the sights without understanding a word of them.

There were flowers in his suite, the carpets were deeper, the bathtub was bigger, the towels piled higher, the breakfast more abundantly rich than anything Lee could remember in the 38 years of his life. "So this is America in 1960," he thought. "It must have advanced by leaps and by bounds over these past ten years."

He felt embarrassed because he had almost forgotten the uses of all those comforts, and at the same time deeply moved over the way they embraced him, him, the lost son, the voluntary exile who once had turned his back on them in despair and disgust. But why was all this? He had done nothing to deserve this kind of hospitality. Entomologists as a rule were not transported by magic carpets into Arabian Nights for modest achievements such as the discovery of a new species. All the things which had happened within the last 24 hours were riddles wrapped up in enigmas. Fatigued as he was he couldn't lie down, he was desperately resolved to get at the bottom of this thing.

There came a buzz from the telephone. A soft and melodious contralto voice announced that its carrier was Dr. Howard K. Scriven's secretary and would Dr. Lee be good enough to come over to the Braintrust Building to meet Dr. Scriven at 9:30 A.M.? Lee said that he would.

The distance across the Plaza was short enough, but as Lee entered the hall of the huge concrete pyramid he was reminded of Washington's Pentagon in wartime, for his progress was halted right from the start and at more than one point. He had to line up at the receptionist's, he was being checked over the phone, a pass was handed to him,

and somebody, obviously a plain-clothes man, took him to the express elevator which shot him up to the 40th floor.

There, another plain-clothes man conducted Lee through a long carpeted corridor and up one flight of stairs to a steel door which slid open automatically at their approach. Sunlight was flooding through its frame as Lee followed the guard and the door closed noiselessly behind them.

The man from Down-Under took a deep breath. He had not expected this for it was not a stepping in, but rather a stepping out from a vast tomb into the light of day. This was the top of a huge pyramid, and was in an entirely different kind of world.

The terrace was laid with flagstones and landscaped like a luxurious country club. In its middle there arose a penthouse, low and irregularly shaped like some organic outcropping of native rock. It could hardly be said that it had walls, overgrown as was the stone by creepers and built into the shape of massive pillars. The structure seemed a kind of Stonehenge improved upon by America's late architect Frank Lloyd Wright. There were birch shade trees around the house, the leaves whispering in the breeze. From some crevice in the rock came the peaceful murmurings of a spring. A meandering little brook criss-crossed the gravel path under Lee's feet. From a stone table which might have belonged to some Pharaoh there came the only incongruous noise in this bucolic idyll; it was the nervous ticking of a typewriter, which stopped abruptly at Lee's approach, and the melodious contralto voice he had already heard over the phone greeted him. "Oh—it's Dr. Lee from Canberra University, isn't it? I'm so happy to meet you. Please, do sit down. How was your trip? I'm Oona Dahlborg, Dr. Scriven's secretary."

Lee blinked. Out of this world as was this Stone Age cabin in the sky, even more so was the girl. He had a vivid image of American girls as they had been when he had left the States way back in '49; in fact, he had an all too vivid memory of at least one of them. His memory had been refreshed within the last hour at the airport, at the hotel, at the receptionist's, and it had been confirmed: they still wore masks instead of their true faces, they still were overdressed, overloud, oversexed, overhung with trinkets and their voices still resounded shrilly from the roof of their mouths.

This girl Oona Dahlborg was different. He raked his brains to find some concept which would express how she was different. The word "organic" came to mind; yes, as one looked at her one sensed a unity of being, a creatural whole compared to which those other girls appeared as artificial composites.

She was tall for a girl, the pure Scandinavian type, and she looked like a young Viking with the golden helmet of her hair gleaming in the sun. She wore a tunic, short, sleeveless and of classic simplicity, the kind of dress which once Diana wore. It revealed the splendor of her slender figure and stressed the length of her full white limbs. On the black of the tunic an antique necklace of large amber beads formed the only ornament. The bow or the spear of the great huntress whom she resembled so much would have looked more natural in her hands than the typewriter; even so, her every move showed perfect coordination of body and mind, a large surplus of vital energy carefully controlled. Had she turned to some different career she might easily have developed into some great athlete or else a great singer. Her beautiful voice had that rare natural gift of using the whole thorax for a vessel of resonance instead of merely the mouth.

It was this voice which fascinated Lee more than the strangeness of the scene, more than her beauty, more even than the things she said. It was like remembering some haunting melody, it transported him into the forgotten land of his youth. It made him feel happy except that suddenly he felt painfully conscious of his ill fitting suit, the emaciation of his body, the atabrine stains on the skin of his face, the wildness and the grey of his hair.

With the shyness of a boy, he accepted first the firm pressure of her hand and then a seat which was another piece of ancient Egyptian furniture.

"Dr. Scriven will be with you in a few minutes," she said. "Unfortunately he is a little delayed by an official visitor from Washington. The unexpected always happens over here. Meanwhile...."

She suddenly interrupted herself. The searching look of her deep blue eyes startled Lee by its directness. There was in it a depth of understanding and of sympathy which penetrated to his heart. He felt as if she already knew about him and knew everything. It lasted only a few seconds before she continued, but in a different, a warmer voice:

"I think we can drop the usual conventions," she said. "We know you, Dr. Scriven and I. We know your work as published in the journal of entomology. It is the work of a man of genius. You are not the kind of man whom I must entertain with the usual small talk about the weather, how you have enjoyed your trip, or whether you feel very tired—as you probably do—and all the rest of it. That is routine with most of our visitors; it's quite a relief to feel that I can dispense with it for once."

Lee had blushed under this frankness of compliment as if a decoration had been pinned to his breast. "Thank you, Miss

Dahlberg, you put me at my ease. I've been out in the wilderness for so long that I've lost the language of the social amenities. I really feel like another Rip van Winkle. All this," he made a sweeping gesture, "is tremendously new and surprising to me. There are so many burning questions to ask...."

The girl gave him a smile of sympathy. "Of course," she said, "and I can imagine some of them. To begin with, we owe you an explanation and an apology for having used the methods of deception in getting you here. As you probably know by now the work we're doing here is closely connected with the National defense. Whether we like it or not, military secrecy forces us to use roundabout ways in contacting scientists who happen to work in some context with our field, especially if they live in foreign lands. That's why in your case we have used the good offices of the Department of Agriculture in bringing you here. Dr. Scriven feels terrible about this. He feels that to be lifted out from one desert just to be dropped into the middle of another must be a fierce disappointment to you. For this and all the disturbance of your work—can you manage to forgive us Dr. Lee?"

The sincerity in these regrets was such that Lee hastened to reply: "You don't owe me any apology, Miss Dahlborg," he reassured her. "Naturally it is impossible for me to see any connection between my work with ants and termites and the problems of National Defense. But I am an American; I wouldn't doubt for a moment the legitimacy of your call." The girl nodded: "Besides you have fought for your country in the second world war," she added. "And also you are the son of General Jefferson Lee of the Marines. You understand of course that we had you investigated before calling you here; do you mind very much?"

Again Lee blushed; this time even deeper than before. He squirmed in his seat. "No, I guess not. I suppose it's

necessary. Now that I'm going to meet Dr. Scriven, who is he? I probably ought to know—forgive my ignorance."

"You really don't know about him?" The girl sounded surprised. "He's a surgeon. He's considered the foremost living brain-specialist. Remember the Nuremberg trials of the Nazi war criminals? Dr. Scriven did the post-mortems on their brains. He wrote a book that made him famous."

"Of course," Lee slapped his forehead. "Yes, but of course, how could I forget."

"Yes," she answered, "He was made the head of the Braintrust over here."

"What is the Braintrust? What does it do? What am I supposed to do here?" Lee asked eagerly.

The girl's smile was mysterious: "I think Howard would like to explain all that to you in his own way."

"Howard". The word struck Lee like a vicious little snake. Was he a friend, or more than a friend to her? "This is terrible," he thought, "I've been away from normal life for overlong. Must be that I'm emotionally unbalanced. I haven't known her for five minutes. There is nothing between us. I've no earthly right to be jealous; it is absurd, it's mean."

He felt deeply ashamed. Yet as he looked at her he couldn't deny the truth before himself: that he was jealous, that he had fallen in love with a girl who looked like the goddess Diana with a golden helmet for hair.

There was a noise of footsteps on the gravel paths. A man with a portfolio under his arm walked briskly by the stonetable; despite his civilian clothes he had "Westpoint" written all over him. He disappeared through the steel door. "That was General Vandergeest", Oona said. "Dr. Scriven will see you now; just walk in, Dr. Lee."

CHAPTER II

Inside, the cabin in the sky seemed to be built almost entirely around a huge primeval looking fireplace. Despite the fierceness of the Arizona sun there was a fire in it of long and bluish flames, one of those modern inventions which reverse the processes of nature. Like the gas refrigerators of an older period, this fire worked in combination with the airconditioning system to *cool* the house, lending to it in the midst of summer heat the same attractions which it had in winter.

In front of the fire and framed by its rather ghostly light, there stood a man with his head bowed down, pensively staring at the flames. As Lee's steps resounded from the ancient millstones which formed the floor, Dr. Scriven wheeled around; he approached the man from Down-Under with outstretched hands.

Rarely had Lee seen such a distinguished looking figure of a man. He looked more like a diplomat of the extinct old school than a scientist, with the immaculate expanse of his white tropical suit and the dignity of his leonine head. His width of shoulder and the smooth agility with which he moved gave the impression of great strength. Only his fingers were small, slender, almost like a woman's.

The reluctant softness of their pressure contrasted so much with his heartiness of manner that Lee felt repulsed by their touch until he remembered that a great surgeon lived and caused others to live by his sensitivity of hand.

"Dr. Lee, I'm happy, most happy, that you have been able to come." Scriven's voice was soft, but he spoke with an

extraordinary precision of diction which had a quality almost of command. "Over there, please, by the fire...."

From the blue flames there came the freshness and the coolness of an ocean breeze; the rawhide chairs, built for barbaric chieftains as they seemed, proved to be most comfortable; the semidarkness, the roughness of the unhewn stone, gave a sense of the phantastical and the paradox. Lee sat and waited patiently for Scriven to explain.

"In case you're wondering a little about this setup," Scriven made a sweeping gesture around the room, "I've long since reached the conclusion that in these mad times a man needs above all some padded cell, some shell in which to retire and preserve his sanity. This is my padded cell, soundproof, lightproof, telephoneproof; a wholesome reminder of the basic, the primeval things. Simple, isn't it?"

Lee blinked at the extravagance of this statement. "Do you really call that simple?" he asked.

Scriven grinned: "You are right; it is of course a willed reversal from the complex, synthetic and perhaps a little perverse. But then, not everybody has the opportunity you had in living in the heart of nature. Frankly I envy you; your work reflects the depth of thinking which comes out of retirement from the world. That's why I called you here; that's why I am so sure you'll understand."

He paused. Lee thought that he saw what was perhaps a mannerism; the great surgeon didn't look at his visitor. With his head turned aside, staring into the flames, stroking his chin, speaking as if to himself, he reminded Lee of some medieval alchemist.

"It's a long story, Lee," Scriven continued. "It starts way back with a letter I wrote to the President of the United States. In this letter I pointed to the immense dangers which

I anticipated in the event of an atom war; dangers to which the military appeared to be blind. I am referring to the inadequacy of the human brain and its susceptibility to mental and psychic shock. I explained how science and technology over the past few hundred years had developed by the pooled efforts of the elite in human brains, but that the individual brain, even if outstanding, was lagging farther and farther below the dizzy peak which science and technology in their totality had reached. I further explained, by the example of the Nazi and Jap States, how the collective brains of modern masses are reverting from and are hostile to a high level of civilization because it is beyond their mental reach. You know all this, of course, Lee, I made it clear that not even the collective brains of a general staff could be relied upon for normal functioning; that no matter how carefully protected physically, they remained exposed to psychic shock with its resultant errors of judgment. How much less then could production and transportation workers be expected to function effectively in the apocalyptic horrors they would have to face...."

Lee's eyes had narrowed in the concentration of listening; his head nodded approval. He wasn't conscious of it, but Scriven took note of it by a quick glance. His voice quickened:

"That was the first part of my letter, Lee. I then came out squarely with the project which has since become the work of my life. I told the President that under these circumstances the most needed thing for our country's national security would be the creation of a *mechanical* brain, some central ganglion bigger and better than its human counterpart, immune to shock of any kind. This ganglion to be established in the innermost fortress of America as an auxiliary augmenting and controlling the work of a general staff. I gave him a fairly detailed outline of

just how the thing could be done. There was really nothing basically new involved. Personally I have held for a long time that Man never "invents", that in fact it is constitutionally impossible for him to do so. Being a part of nature Man merely discovers what nature has "invented" in some form of its own a long time ago. Mechanical brains. Lord, we have had them in their rudiments for the past hundred thousand years, at a minimum. The calendar is one; every printed book is one; the simplest of machines incorporates one. And ever since the first mechanical clock started its ticking we have developed them by leaps and bounds!"

"And did the President react positively to this project?" Lee asked.

Scriven shook his head. "He did not."

Then he paused. Little beads of perspiration had appeared on his forehead; he wiped them away with a handkerchief:

"That year, Lee," he began again, "when the decision was pending and I could do nothing but wait, knowing that there was no other defense against the Atom Bomb, knowing that our country's fate was at stake—it made me grey, it came pretty close to shattering my nerve.... But *then*...." His body tightened, the small fist pounded the rail of the chair: "... But then We BUILT THE BRAIN."

He said it almost in a triumphant cry.

Mounting tension had Lee almost frozen to his seat. Now he stirred and leaned forward.

"It actually exists? I mean it works? It is not limited to the analysis of mathematical problems but capable of cerebrations after the manner of the human brain?"