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The Machine

LOOKED up from the dark field photo micrograph I had been studying and glanced out the window, and as quickly, my thoughts turned from the matter at hand to a totally irrelevant consideration of how graciously the seasons come and go here on the Palmer University campus. It seemed only yesterday, I mused, as I enjoyed the spring foliage of the trees that lined the walks, that I was an undergraduate here, just plain John Woodbright. Oh, it was inevitable then that I would go into medicine. That had been a consuming interest of mine since I had been in my early teens, but I thought then how concerned I'd been with midnight-campus pranks, beers at the corner restaurant, and my greatest worries were over passing some exam (I always did with flying colors) and the result of some athletic contest.

It was Dr. John Woodbright now, and many of the things that had then been wonderful dreams had come true. I had won an appointment to the Palmer Medical Research Staff under the brilliant Dr. Cardoza, and sooner than I had expected in my wild-

est flights of imagination.

Conscience pricked me to get back to the study I'd been making of strain structure in a strep bacteria, but the investigation was more or less routine and my gaze remained fixed outside. At thirty-five I joshed myself, and in spring a young man's thoughts still turn to thoughts of, well, spring. I got up from my laboratory table. Perhaps I'd take a turn around the campus, get some of this lovely April air. There was a small hall mirror in the recess where I kept my coat and hat. I looked in it and Dr. Woodbright looked back. Young but with dignity, intelligence, I flattered myself. A little pale, too much work, needs more air. You, Doctor? Yes, Doctor.

I stopped with my hand on the knob of the door that led outside. It was no use kidding myself. My tension and restlessness came from one thing. What was Dr. Cardoza doing downstairs in Room X? His warning, brusque, imperative, still rang in my ears.

"Woodbright, I don't want to be disturbed for anything under any circumstances! I must be left completely alone

downstairs in X!"

I knew Professor Dr. Henric Cardoza well enough after five years to realize he meant no affront to me. The man was burning with intensity and enthusiasm from the top of his close-cropped gray hair to the tips of his shoes. I knew Cardoza was puttering around with some phase of electronic research, but you don't ask questions of a superior. You wait. That was what I'd been doing and I was jittery down to the very core of my being.

I heard the sudden sound of steps pounding up the stairs from our basement laboratory chambers. I heard Cardoza's voice calling and the door to my laboratory was abruptly thrown open and Henric Cardoza rushed in. My superior stood in front of me fuming.

"John!" he shook his head, "I'm not get-

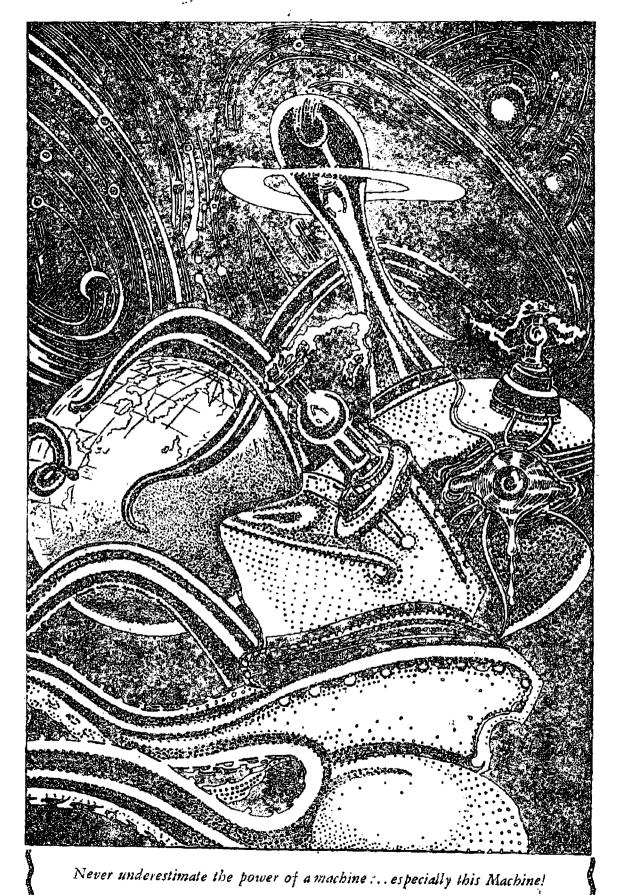
ting anywhere!"

He was perturbed, I could see with half an eye, and when Professor Cardoza was perturbed, he became voluble.

"I think I have a clew, I think I have a workable basis, and then, Poof," he waved his hand in the air expressively, "the whole

theory folds."

He turned on his heel then, indicating with a jerk of his head that I was to follow him. My feelings were mixed as I went down the steps into Room X. Curiosity, of course, conjecture, made up a large part of my emotions, but truthfully I must confess a certain vague, intangible something beyond the frontiers of my mind hard to analyze. But if a word must be given in



description, fear is as good as any other. Cardoza, I knew, was one of those brilliant and fanatical scientists to whom is given a span of years, his life, to delve into things, many of which perhaps we mortals werenever meant to know. Cardoza had been one of those, for instance, to work on the atomic bomb. His part had been an important one and I realized full well that he was in no way affected by the panic and near-hysteria which had reverberated around the world following that fateful day in August, 1945, when the first A-bomb was exploded in the last war. Cardoza had been ecstatic in his triumph and the triumph of the other scientists. He seemed unconcerned with the potentialities of this energy monster he had worked so hard to bring into being.

I do not mean to imply that Professor Cardoza was not a good man. His contributions to science, to medical science in particular, had been both spectacular and humanitarian, but he was first and foremost a scientist. The humanitarianism was a coin-

cidental by-product.

Thusly I was thinking as I stepped into the sound-proofed experimentally equipped room in the basement where Cardoza worked on many of his research projects. There was a roughly constructed elaborate-looking box-like machine in the corner, in rude frame almost like a human being, but with innumerable electrodes winding sinuously from it.

"What do you make of it?" asked the

professor, gesturing.

I came closer. Parts of the mechanism were familiar to me. Other parts, most

elaborate, undecipherable.

"You will recall," lectured Cardoza not waiting for me to answer, "that the early tradition of medicine was to construct apparati and appliances that did something to the patient, from the surgeon's scalpel to a stomach pump. Only in more recent years have we come to realize that the actions, motions, and even vibrations of the human being have a message for us if we had but a medium to interpret them. We know, of course," the professor went on, "that the electrocardiogram is a crude step in that direction taking as it does the actual electrical impulses from the heart and retaining them."

I nodded.

"The newer electroencephalogram is a more delicate and complicated machine taking its impulses from the brain."

I wondered what he was leading up to.

"John," he leaned towards me, his hands on a desk, "I believe I shall be able to devise a machine a thousand times more sensitive than the electroencephalogram, a machine which would magnify and record vibrations not only from the human heart and the human brain—but from the human soul!"

THE only fitting rejoinder to such a re-I mark was complete awed silence. No one knew better than I did that Cardoza was no crackpot, no harum-scarum mad scientist. He believed what he had just told me. The thought was staggering. For perhaps the greatest mystery of life, the most closely guarded by nature, is that intangible thing which we, for want of a more exact term, call the soul. It is the fount of the life force itself. It is the thing which separates us from the animal. It has never been measured, and to my knowledge as a doctor, no soberminded scientist has ever cared to look into the future and hazard a guess as to when it could be measured.

Dr. Cardoza, seeing my astonishment, frowned and flung his hands wide help-

lessly.

"But something escapes me, John. There is some mystery quotient, some aggregate of energy, some factor of radiation or receptivity to radiation which I have not as yet been able to put my fingers on. Lacking this, my machine is the useless, almost comical-looking contraption you see there in the corner, a skeleton without flash and blood, without life."

He finished, his eyes downcast, and my first inclination was to cross to him and put my hand on his shoulder. His last phrase drummed in my head though: "Without life." Without life, and I looked again at the monstrosity of wires that stood in the corner with its lead electrodes flowing out from it across the room like octopus tentacles. I am highly imaginative, a fact that has given me much pleasure, but now I shuddered. Without life? With life I pictured this machine-monster in the corner moving with Frankenstein precision, uncurling its

tentacles—I turned my head away disciplining myself sharply. Cardoza had a brilliant idea here and a surge of enthusiasm quickly drowned my fears.

"Could you go over the ground again with me at your side? Possibly we could

uncover the missing quotient."

He looked up with a smile, the first time I'd seen him happy in days and his expres-

sion was a deep compliment to me.

"I was hoping you'd say that, John. I know your work upstairs is important but I was wishing you'd check me on this thing."

He gripped his hands. "Tomorrow then we go to work again on my soul machine."

We both laughed and left Room X arm n arm.

The morning of the next day we spent in the X laboratory room. Cardoza went-carefully over the ground he had covered, explaining in detail the avenues of investigation and experimentation he had followed only to turn back. He had incorporated some high-voltage apparatus for accelerating particles and these neutrons, combined with the sensitive electrical machine that was embodied in a cruder form in the already practicable electroencephalogram, formed the main nucleus of Cardoza's project.

We worked tirelessly until the clock pointed to one, then the professor stood up and rubbed his hand across his eyes. He had had many discouragements for many days and yet the relentless energy and stick-at-itness of the man was incredible to me. I must confess that the monstrosity of tubes and wires before us was no nearer to becoming the world's most finely tuned machine than it had been early that morning; no nearer in fact, as Cardoza said to me, than in the early days of his experiment weeks ago.

We went up the stairs, locked the door of Laboratory X. On the way out of the building we nodded to the janitor, old Bill Lowry. I liked old Bill. To be sure, I knew he tippled a bit but he was a spry sixty-five and man and boy had personally witnessed all the great events of the last half century (according to him). He and his fat white dog, Trixie, were a familiar sight around the campus.

We strode across the campus and I admired the newly planted tulip beds. Cardoza walked silently at my side, obviously

depressed and deep in thought. We reached the dining hall and took the lift to the second floor where the faculty had a private eating place. We were barely seated when a rotund jolly man came into the room and hailed us. He was the head of the Medical School.

"Hello, Trowbridge," greeted Cardoza. I rose and inclined my head, "Hello, Doctor."

Trowbridge sat with us and his bustling good humor transferred itself at least to me but the professor was still deep in gloom.

"What's wrong, Henric?" said Trow-

bridge.

Cardoza shook his head sadly. The Medical School director knew better than to push his colleague. He subsided and then after a moment: "What you boys need is to come along on one of my staff rounds at City Hospital. Got one scheduled for tomorrow. How about it, Cardoza?"

The professor nodded his head absently. "We'll see, Trowbridge. We'll see."

WE GOT up and walked back across the sunlit campus towards the Medical Research building, passing as we went laughing groups of young students, young men in their sweaters and slacks and girls in plaid skirts and ankle socks. I thought how carefree life was in those "bright college years" and wondered idly if it was quite fair that nature always prevents the individual from fully enjoying the phase of life he is in by making some other period seem more enticing.

We reached Research and Cardoza clumped down the stairs and fumbled with the lock. Old Bill Lowry had turned off the light and it was dark. Cardoza swore. "What the devil! I almost tripped."

He got the hall switch on and we both smiled. There was old Bill's dog lying in front of the door wagging her tail at us. She didn't seem to mind the professor brushing into her. When we opened X Trixie trotted in with us and lay down in the corner. We set to work and again time had no meaning.

It was, I think, some time after five when Cardoza gave an exclamation of excitement. He had tried an utterly revolutionary rearrangement of circuits and radiation units, and for one brief instant, the machine had

pulsed with life. He sat back on the workbench and rubbed his hands with satisfaction. I looked at him, reading the message of triumph there.

"John," he said, "I think we are on the verge of a discovery far greater than the

atomic bomb!"

"You mean, Doctor. . . ?"

"Our soul machine," nodded Professor Dr. Henric Cardoza, "is virtually a reality."

"But the precedent of the thing, the interpretation?" I queried, "What about that? Presuming the machine uses a graph and produces a film like that for electrocardiograms or an electroencephalogram, who is to decide what is normal, Professor? No one has ever before seen a recording of the human soul!"

Cardoza nodded impatiently. "Certainly, certainly, John, but these things are built up through practice. In that way we can discover the range of the norm. We have here the most delicate apparatus that has ever been invented. It is so delicate that I do not hesitate to say that it is human in both capacity and complexity, far more complicated than the human brain, John, as complicated as the human soul, the personality, the psyche, the very life and spiritual force of a man!"

We worked on feverishly, setting up the recording equipment which, similar to that used with an electrocardiogram, magnifies electrical impulses relayed on by the machine, recording them on film or paper which feeds out of the recorder like ticker tape.

I HAD not realized the hour until somewhere in the distance and upstairs, muted by the nearly sound-proof room we were in, I heard Bill calling to his dog. Trixic, who had lain quietly in the corner of the room sleeping through our epic efforts, got up slowly and shook herself. I was about to cross to the door to let the animal out when Cardoza raised his arm. I stopped.

"The dog! That's it! The dog shall be our first patient." Cardoza smiled at me. "People have said, John, that animals have no souls. Now we shall find out." He walked over to Trixie and picked up the fat white animal gently. He laid her on the table near the machine and I assisted him

with the electrode leads, placing one on each paw, one on the head, and one around the chest.

THE dog lay quietly except for an occasional wag of her tail. With preparations completed, Cardoza stepped away. I moistened my lips.

"This won't hurt the animal, Professor?" I queried, iI couldn't picture old Bill with-

out his Trixie.

Henric Cardoza shook his head. "The principle is exactly the same as in the other electro machines, John. As you know with them, they act as recipients of impulses rather than as senders. No, I am not going to electrocate Trixie." This with a pat on her head.

He went to the elaborate apparatus then, pushed several levers and then raised his hand. The recording of the very life force itself was about to begin. I suppose I had expected something spectacular, a whir of machinery perhaps, a flash of electricity. There was nothing. Cardoza bent over the machine but I could tell from the cathodes that it was in operation. I watched Trixie but the dog, after one suspicious lick at the lead on her paw, simply put her head down . and started to sleep. In a few moments the test was over and Cardoza and I removed the electrodes from Trixie. We opened the door and the dog scampered up the stairs, apparently none the worse for its experience.

On a tray beside the recorder lay the strip of paper, looking much like ticker tape, on which was registered we knew not what. Perhaps you may recall that the records from, for instance, an electrocardiogram are a series of up and down lines mirroring the heartbeat. It looks something like a most regular range of exceedingly sharp mountains, one after another. The piece of paper we looked at together was incredible for its markings. They zigzagged every which way, turned upon themselves and darted abruptly here and there. The whole thing in aspect almost appeared humorous.

Cardoza, it was plain to see, was some-

what puzzled.

"This is hardly what I expected, John, but then we are beating a completely new path in science. We must have comparisons. Many of them." His face brightened. "John, lock up. I'm going upstairs to call Trow-

bridge.'

He pounded out of the room like a youngster and disappeared up the stairs. I disconnected the apparatus, cleaned up our workbenches and turned off the lights. When I reached the next floor, Cardoza was obviously much pleased with himself.

"It's all arranged, John. I'm to take the machine over to City Hospital tomorrow. We're going to try it on the patients there."

The next day was memorable. I recall I awoke with something of the anticipation of a youngster on Christmas morning. By ninethirty Cardoza and I had packed up the equipment with great care and with the aid of several University porters we transported it all over to City Hospital just beyond the limits of the campus.

Trowbridge met us. "Now what is this all about?" he fussed with genial depreca-

tion.

"Trowbridge, I have a revolutionary machine here," Cardoza answered. "It is the most sensitive in the world. With it I believe endless avenues of research are open to us." He explained quickly the electrical and radiation principles.

Trowbridge listened. "But it's so com-

pletely new, Gentlemen!"

"Its principle is exactly the same as the other electro machines now in general use," persisted Cardoza. "John," he turned to me brusquely "assemble the machine. I shall be

the first human patient."

My fingers leaped to life, and in a few moments the machine was set up, squatting in box-like monstrousness near the side of the room. Trowbridge inspected it minutely and nodded his head as Henric Cardoza explained the points of similarity between it and the electrocardiogram and electroence-phalogram.

"But I have carried that principle on much further," the professor went on.

HURRIEDLY took off his coat, rolled up his sleeves and trousers legs. I strapped an electrode around his forehead. I put one on each arm, on each leg, and around his chest. It was then that I noticed Cardoza looking at the machine, and his look gave words to a feeling, nameless, that I had had from the moment I saw the mon-

strosity in Medical Research's Room X. There was a kind of strange magnetism about the machine. Cardoza felt it, sitting there ridiculously with wires streaming from him to a monstrous box, and I felt it. The professor wrenched his eyes away from his project.

"All right, John Let us proceed."

I adjusted the levers as he had instructed me, pushed the proper ones and the radiation impulses were set. Trowbridge watched fascinatedly over my shoulder, glancing from the faceless front of the machine to Cardoza, to me, and then back to the machine again.

In a moment the brief test was done and I had taken the electrodes from Cardoza. He smiled, rose and indicated the paper strips to Trowbridge. We three bent over them. They were, in a way, completely dissimilar to those markings we had gotten from the dog and yet in their erratic mumbojumbo formation, there was a sameness. The designs in spots were, yes, I use the words advisedly, startlingly profane, even obscene. Trowbridge bent closer, his small eyes smaller.

"But what does all this prove? Of what have we recordings here, Cardoza?"

"The soul," said the professor through clenched teeth, his eyes on fire. "Trowbridge, we have captured man's soul."

The silence that followed those words seemed endless. Perhaps it would have been except for the commotion outside the City Hospital window. There were voices raised in alarm and finally the unmistakable short flat crack of a revolver. As though coming out of a trance, we three rushed to the window and looked out. We saw a patrolman with his revolver still smoking running up the street, and behind but at a safe distance, several Palmer students. When the procession was out of sight, we heard another report and then another.

Trowbridge rang a bell and a City Hospi-

tal attendant come in.

"What's going on, George?" he queried.
"A mad dog," said the attendant. "Dog
on the campus started to attack people.
We've got a few of them in the Emergency
Room now. I guess the policeman got him
though."

I did not, of course, think of Trixie, but

my moment of horror and of dread realization was only postponed. We wheeled the machine into the halls and started upstairs to the wards with it. Dr. Trowbridge explained in turn to each floor doctor that the test was to be given only to certain types of patients, that it was to be explained to them beforehand, that it was of an experimental although completely harmless type.

By late afternoon, the machine had hitched its long sinuous electrodes to a

dozen persons.

PACK at the Medical Research building we, were greedily looking over the records when old Bill Lowry came staggering in. I have remarked before that Lowry was not averse to taking a drink but I had never seen the man in the state he was in that night. He could hardly stand. His eyes were bloodshot and he stumbled to the nearest chair and sank into it, his head in his hands, shaking all over and sobbing.

"Trixie," he mumbled, "my little Trixie.

Cardoza was impatient to get on with the reading of the soul machine records but I tried as best I could to find out the details of what was troubling Lowry. The story came out brokenly, haltingly, interspersed with sobs. It seems, when I had all the pieces of the narrative put together, that Trixie had suddenly gone berserk on the campus, had rushed around attacking students and biting them. Finally, one of the campus policemen had been forced to shoot the dog. It was inexplainable, old, Bill wagged his head. Trixie had never been vicious. Trixie had never before. There was no explanation.

Cardoza was more and more impatient. "Come on, John," he said snappily. "We

must get on with the work.".

I left Lowry reluctantly then. The man was completely broken up and I feared what might happen to him. However, my professional responsibilities came first. I followed the professor down the stairs and we disappeared into Room X. The reports were interesting. Through them again ran the same pattern of outrageous markings, magnified in each one. To be sure, now we began to work out a certain pattern. The markings at first were absurdly irregular, then they settled down to a certain continuity. I can only

describe the whole effect of these records though as unspeakable. There was something amining harmonic thing amining harmonic things amining harmonic things amining the second s

thing ominous here.

It was eleven o'clock that night when the extension phone in the lab where we were still working rang. It was Trowbridge. Cardoza answered and I could tell from his face that something had happened. He hung up after saying for the fourth time, "Impossible, impossible, my dear Trowbridge."

"What is it?" I whispered, a sense of fear

gripping my heart.

"It's all atterly absurd," said the professor angrily. "It seems that Trowbridge is trying to tell me some poppycock about those people upon whom we did the tests earlier today."

"What? Tell you what, Professor?" I

pushed.

His face set stubbornly. "Of course, it has nothing to do with our machine, John, but Trowbridge tells me that every one of those persons will submitted for recordings today has reacted rather violently." He would say no more and retired grumpily a few minutes later.

The next day, bright and early, I went over to City Hospital. Trowbridge had spent the night there in conference with his staff. "Reaction" was hardly the word to describe what had happened to those dozen patients. They had gone utterly mad. They had perpetrated bestial acts upon themselves and others in the hospital. Subduing them had been a major task and additional attendants, nurses, and doctors had been hurried from nearby hospitals, in addition to all available police reserves. In spite of this, some of the apparently deranged persons had escaped.

"I cannot myself believe," said Trowbridge, his dull, tired eyes set in a pallid face, "that Cardoza's machine could have had this most devastating effect and yet the coincidence is too strong to ignore. Each and every one of those experimented upon

has reacted in this violent way."

In my mind, I returned to what the professor had told Trowbridge about the workings of the machine. I wish to stress again that the full implications of the situationhad not, as yet, occurred to any of us. I think even then Trowbridge's cursory examination of the machine and my own work upon it still convinced us that it was of the architecture familiarly set up to put it in lay terms

for "receiving" purposes only.

We attempted feverishly to rationalize. Some of these patients were, to be sure, unstable. Possibly the procedure had frightened them into temporary states of insanity. Still, this was a hard one to swallow. If several of them had so reacted, it would have been reasonable but the hundred per cent similarity in symptomotology was incredible. More than that, it seemed impossible.

Then Trowbridge said something to me which found a responsive chord in my own

thoughts.

"Perhaps it would be advisable to have the machine brought back to City for experimentation on a limited and carefully supervised basis, of course."

T WAS, on the surface, an incredible re-I mark for the head of a prominent medical school and the superintendent of a leading hospital to make about a contraption which had already apparently inspired such outrageous reactions in several of his patients. And yet I think I know what caused him to make it. I had thought fleetingly last night when I tossed and turned sleeplessly that Cardoza and I might have to give up the machine, scrap it as useless, and those thoughts, in turn, had been greeted by a profound distaste and unwillingness and a determination that nothing, come what might, must destroy the machine. Perhaps we three, Cardoza, Trowbridge, and myself were medical pioneers, unwilling to sacrifice something of such potentialities at the first discouragements, but I suspected then and there sitting with Dr. Trowbridge that morning in City Hospital that it was not an intellectual process but an emotional one. The machine had reached out with its strange beyond-normal magnetism to affect Trowbridge as it had Cardoza and myself.

I left the hospital then and Trowbridge, promising to discuss the matter with Cardoza. I walked slowly back across the campus to our laboratory. I heard faint noises from downstairs and quickly descended the steps to Room X where I found Cardoza working. He was in one of his black moods, and after a curt hello, he settled again into a bleak silence. He was puttering with some of the tubes and leads of the machine, but I noticed that his convictions concerning just what to do were not very strong, for after he changed something, inevitably I saw him chin in hand replace the object so that the adjustment remained as it had been.

"I can't understand it," he finally said petulantly turning towards me. "John, I am sure that we have stumbled across something of the greatest portent in medical history, in fact in human affairs, and it is our puny knowledge, our lack of knowledge he thumped long fingers against his forehead "... that makes the job of evaluating this device so difficult and complicated. Letus suppose," his voice was lower, confidential, "by some strange chance there was more than mere coincidence between the use of this," he patted the box-like side of his invention "and the violent reactions on the part of old Bill's dog and the patients at City Hospital. Don't you see, man? We have stumbled across the secret of insanity, the secret of mind, of personality!" Cardoza's face was lit with enthusiasm.

"What you say is intriguing, Doctor," I replied, "but we hardly have substantial evidence to prove one thing or another. As I see it," Cardoza having broken the silence, I felt I had the license to continue with my own opinions, "we have a machine here which electronically, shall we say, is highly

gifted."

Cardoza nodded his head quickly and smiled approval at my choice of words.

"But we don't know yet for sure . . . " I broke in continuing with my chain of thought, ". what its gifts, its talents may be!"

TATE SAT for some time going over again V the technical data with which we had been concerned in building Cardoza's invention. Step by step, we checked, evaluated and discussed each point. At the end, and my wrist-watch told me some hours had passed, it was evening and we were no further along than when we had started. A machine—whose talents were undetermined. As we sat together in that little room gazing at the machine, I felt the beginning of the icy chill of premonition that I'd noticed

before. I looked away, reassuring myself that I was tired, overworked, distraught at the series of unfortunate events that had occurred earlier at City Hospital connected with our device's introduction in the clinical field. As I turned my head, my eyes met Cardoza's and I saw that his face was as white as I am sure my own was. We stared at each other for a moment almost in surprise and then he looked away almost as if ashamed and I likewise.

We both rose. It wasn't for me to speak the words that were in my mind. Their reflection mirrored in Cardoza's face as well. Instead though, he testily admitted the shoughts we'd both been thinking by saying softly, "John, we must not give up on this invention now. We must not destroy it, for it is, I am sure, unique. It has a purpose and a meaning which in time will become selfevident. On that I would stake my reputation as a scientist!"

I nowlded my head and turned towards the door. We exchanged goodnights and I tramped upstairs leaving Cardoza behind in Room X. I was disappointed, I knew, for I hoped for a moment—and desperately—that Cardoza would say abruptly with that finality that was so typical of him something like, "It's no good, John. Might as well dismantle the thing. It hasn't panned out." And yet there was something else. Do you believe that a man can be both disappointed and glad at the same time? I was.

I climbed another flight of stairs to my room. The top of the small Medical Research laboratory building was given over to our living quarters. My medium-sized chamber looked west. Cardoza's room, and the largest, was across the hall and at its carpeted end there was a third smaller room where occasionally one of our associates, when working late, would spend the night. I got into bed and lay there outside the covers trying to get enjoyment from the soft air that blew through the window and bathed my aching body in coolness. The chapel clock tolled twelve and the campus paths beneath my window were lonely and moon-bathed when I rose finally in desperation and hunted for my bottle of mild sedative pills. I swallowed one and then curiously stuck my head out the door into the hall. Cardoza's room across the way was

dark, the door open, and the light was coming up from downstairs. He was obviously still in the laboratory. I thought for a moment of going down, but my fatigue and the fact that I'd just taken the sedative were arguments against it. I got into bed again thinking guiltily that I really should see what Cardoza was up to. I wish to God now that I had. As it was, I turned my head towards the window and soon fell into a deep slumber.

It was not the first of the horrific screams that awakened me, of that I am sure because when I finally stumbled out of bed and ran barefooted down the stairs with human cries of outrageous qualities ringing in my ears, I found that one of the college guards and a couple late-walking across the campus were already pounding at the front door. I paused in my race towards Room X to unbolt the door and then without so much as a word, I leaped down the stairs.

I don't know exactly what I expected to find. I was still in that state of befuddled numbness in which the suddenly awakened sleeper finds himself. Added to that were the still-potent effects of the sedative I'd taken. But had I discovered my superior locked in mortal combat with a burglar, I surely would not have been surprised, but what I did see as I stopped-square in the center of the room shocked the rest of sleep and the soporific effects of the sedative clear out of my body.

TURNED quickly, allowed the college guard to come into the room but then slammed the door and locked it behind him. This was no sight for the young couple to see. Let me recall that scene. It is clearer in my eyes; than my own reflection in a shaving mirror. Cardoza was sitting in the rough wooden chair to one side of the machine and from him to his invention trailed sinuously across the floor the six electrodes clamped at his legs and arms and chest. I saw at the back of the machine a collection of used electrogram charts where they had spewed forth from the tracing mechanism. All this I took in in a fraction of a second and with this part of the chain, a conclusion readily supplied itself. Simply, Cardoza had hooked himself up to his invention to test its talents upon himself, its creator, and now the best description of my superior, the Professor

Doctor, came in the blurted-out words of the guard who stood at my shoulder, jaw hanging open and eyes popping from his head: "My God," he uttered and turned to me shaking and white. "That isn't... that couldn't be Professor Cardoza!"

Even while he was speaking, I tore loose the electrodes and leads from Cardoza, but the man before me remained unchanged. It was true what the guard had said. This disheveled, contorted-featured, writhing and livid-faced creature could not—yet, of course, it was—my superior, the learned scientist, Dr. Cardoza, creator of the machine.

As another bubbling cry rose to his lips, the doughty guard turned for the door and even I fell back a step or so, but the professor made no move to leave his chair. It was as though he was held there by unseen forces. I knew even as I mechanically ordered the uniformed man with me to call City Hospital that it was no use, that we would never reclaim Cardoza here in the land of the sane, that he had crossed the Divide forever.

The guard was only too glad to escape from the room, and I heard him pounding up the stairs as I relocked the door. A thin line of saliva fell from the professor's mouth as his hands convulsively clenched the chair seat. I made then what in my conscience I know to have been a sincere and wholehearted effort to turn upon the machine and wreck it. I chose another chair as a weapon and I advanced upon the squat ugly thing in the corner with its mass of tubes and electrical devices. I raised the chair to the full length of my arms and then I felt the emanations; I was humbled utterly and completely powerless first, and then subjugated. I believe, looking back, that mine was the last whole-hearted effort to destroy the machine. I struggled desperately against something that I did not understand and that was fearful in its strength. The chair fell harmlessly to the floor, splintering itself into pieces, and I backed away with a feeling of revulsion. At the time, I did not allow myself to dwell on the significance of what had just happened. I much preferred to think of it as a quirk in myself, that I was still master of my own fate, that free will still existed in this world and self-determination.

I bent again over Cardoza to see if there was anything that I could do. The eyes were staring and vacant though, those once-fine intelligent eyes. The mouth was a slack moist line and the nose expanded and contracted with each breath like a race horse.

IN a few moments the guard was back accompanied by one of the assistant accompanied by one of the assistant custodians, another guard, and two doctors from the hospital. We got Cardoza upstairs. Well, I should say we carried him upstairs, and it took the combined efforts of the five of us to get him over to the hospital. By now, Trowbridge had been summoned and the other head doctors. It was evident that Cardoza had gone completely mad. I paced the floor the wee hours of that moming in Trowbridge's study. He waved his hands helplessly. "A terrible thing for the University. Tragic! I can't help thinking, Woodbright, that it has something to do with that machine."

I inclined my head without speaking.

"I forbid its use," he said suddenly, and I smiled. Yes, imagine that, I smiled to myself. There was nothing to smile about, John Woodbright. But I knew as though I'd been a clairvoyant what the next few steps would be. Trowbridge would come over to our laboratory. He would descend to Room X and he would order the destruction of Cardoza's invention. And then—then he would temporize, he would say how absurd it was to vent spleen upon an inanimate object. Why, we were no better than those who practiced witchcraft. His convictions would moderate and dissolve and he would leave Room X and the machine and go away. And, of course, that is exactly how it happened.

I slept on in the laboratory building, not that I wanted to particularly, but in spite of myself. I was always conscious of that squat box-like conglomeration of tubes and cathodes in the basement. I was its keeper and its subordinate. As time passed, Trowbridge came more and more often and he brought with him doctors from City Hospital, doctors from other hospitals throughout the city. Long ago the tracings made from Cardoza had been laid away. We didn't know enough to interpret them, but Trowbridge held increasingly long conferences down-

stairs, and I, two flights up in my room looking out across the campus whereon, at least to me, the sun no longer shone, knew, knew I tell you, with exactitude what the next

step would be.

Trowbridge would come to me and he would say—it would be something like this—that after conferring with the other learned medical men of his hospital and other hospitals it had been decided to move the machine out of this laboratory building. Would I mind installing it and operating it at City Hospital, and behind Trowbridge with his small strained face and bulging eyes, I would see the image of the machine, and of course, that, too, was exactly how it happened.

The machine was installed in a first-floor experimental room of its own with doors opening out onto a terrace, and patients were brought to it day in and day out, brought to it as heathens sacrificed their own to native gods in the olden days. No one knew what the machine did to those with rheumatism or heart trouble or appendicitis or broken limbs, but one and all indiscriminately, they came to have the octopus-like leads fastened upon them. They came and were claimed.

I was something of a potentate. I had a small room off the machine's. Although most of the doctors at the hospital and many consultant physicians from outside had learned to operate the device, I was still the

main authority on its operation.

Those were monotonous days but strangely made up of lethargic compliance to duty. Long since had I given up the thought of stepping close to that evil monster and destroying it, as it should be destroyed and as it could not be, for no man could stand before the machine, could stand near enough to do it harm and still have a will of his own, and monstrously enough, its greatest secret of all was becoming every day more apparent to me, that as it fed upon new humans and more souls, its powerful emanations grew, its circle of radiation increased; now the hospital, then the campus, the entire University would come under its power.

I realized now full well, remembering back to what Cardoza had said, those talents, those gifts. He had created a machine that was human and more. It was beyond human,

for it wasn't as we had so fondly hoped, just a mechanism for recording the mysteries of personality and the soul; it took of people the very life force and gave it back impregnated with a limitless mechanical evil that was epidemic among those it touched or came close to. Somewhere was the dividing line, a day upon which we no longer thought of the machine as inanimate but knew at last that it lived. You cannot chronicle those things exactly in any diary of terror. All I know is that the machine liked to be wheeled out onto the terrace some days, and to it would come eagerly the instructors and professors of the University and the students, the young fresh clean girls and the straight young men coming to it eagerly as though to a lover, and it would pollute and capture and subjugate, and as I sat in my little room next to its big one, my head in my hands. I realized that this town was only the first, that it had the life force that it needed to expand to cover a county, a state, so that it was only a question of time before your town and yours and yours would fall under its spell; the nation, the world, the universe.

It was not impossible, it was not improbable. It was entirely logical, for I recalled during those countless days of terror the words of someone who had said that when Nature tired of the experiment of man, she would find a means first of destroying him, then of supplanting him with some other medium of life, and yet inevitable as this seemed, I could not reconcile myself to the thought of a universe taken over and controlled by such a wholly malign, mechanical and godless travesty of life as was this monstrosity.

those days of terror. My own undergraduate career on this campus, my working with Cardoza, and then it always struck me as so ironical that the same Cardoza was upstairs in the insane ward on the sixth floor from where, if he could clear the befuddlement and distortions of his brain away, he could look down and see on the terrace directly below the machine he had created, squatting almost daily before increasing numbers of disciples.

Time loses all significance in the face of

fear and resignation of a deep enough quality, so that I can only guess that it was a Saturday, possibly a Thursday, late in August that the incredible happened. The machine had wanted to go out on the terrace, and after wheeling it there, I had returned to my room. An hour or two had passed and I hardly noticed the sound of people outside, it was so usual, these worshipful crowds. Then it was that I heard the crash, sharp, splintering and final.

Automatically I moved from my room and headed out to the terrace. You, elsewhere in the world in your small village or town or large city, did not know but you were reprieved at that moment. Perhaps some of you, a very few, saw the small item tucked away in some papers: "NOTED SCIENTIST DIES. Palmer, August 19, 19—. Professor Henric Cardoza, world-

famous scientist who figured prominently in atom bomb research and many other important scientific and medical investigations, fell or jumped to his death here today from the sixth floor of City Hospital where he had been confined for some time by illness. Authorities reveal that Cardoza's body narrowly missed several students who had been inspecting a recently developed diagnostic machine invented by the professor before his sickness and newly installed at City Hospital. His body crashed into the device, utterly wrecking it, Supervisor Trowbridge reported. It was the only machine of its type in the world."

That late afternoon the sun came out at last to my eyes for the first time in months over the Palmer University campus, making it again just like any other college in any other town throughout the world.