

"Breeds There a Man?"

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Police Sergeant Mankiewicz was on the telephone and he wasn't enjoying it. His conversation was sounding like a one-sided view of a firecracker.

He was saying, "That's right! He came in here and said, 'Put me in jail, because I want to kill myself.'

"... I can't help that. Those were his exact words. It sounds crazy to me, too.

". . . Look, mister, the guy answers the description. You asked me for information and I'm giving it to you.

". . . He has exactly that scar on his right cheek and he said his name was John Smith. He didn't say it was Doctor anything-at-all.

". . . Well, sure it's a phony. Nobody is named John Smith. Not in a police station, anyway.

". . . He's in jail now.

". . . Yes, I mean it.

"... Resisting an officer; assault and battery; malicious mischief. That's three counts.

"... I don't care who he is.

". . . All right. I'll hold on."

He looked up at Officer Brown and put his hand over the mouthpiece of the phone. It was a ham of a hand that nearly swallowed up the phone altogether. His blunt-featured face was ruddy and steaming under a thatch of pale-yellow hair.

He said, "Trouble! Nothing but trouble at a precinct station. I'd rather be pounding a beat any day."

"Who's on the phone?" asked Brown. He had just come in and didn't really care. He thought Mankiewicz would look better on a suburban beat, too.

"Oak Ridge. Long Distance. A guy called Grant. Head of somethingo-logical division, and now he's getting somebody else at seventy-five cents a min . . . Hello!"

Mankiewicz got a new grip on the phone and held himself down.

"Look," he said, "let me go through this from the beginning. I want you to get it straight and then if you don't like it, you can send someone down here. The guy doesn't want a lawyer. He claims he just wants to stay in jail and, brother, that's all right with me.

"Well, will you listen? He came in yesterday, walked right up to me, and said, 'Officer, I want you to put me in jail because I want to kill myself.' So I said, 'Mister, I'm sorry you want to kill yourself. Don't do it, because if you do, you'll regret it the rest of your life.'

"... I am serious. I'm just telling you what I said. I'm not saying it was a funny joke, but I've got my own troubles here, if you know what I mean. Do you think all I've got to do here is to listen to cranks who walk in and-

". . . Give me a chance, will you?" I said, 'I can't put you in jail for wanting to kill yourself. That's no crime.' And he said, 'But I don't want to die.' So I said, 'Look, bud, get out of here.' I mean if a guy wants to commit suicide, all right, and if he doesn't want to, all right, but I don't want him weeping on my shoulder.

". . . I'm getting on with it. So he said to me. 'If I commit a crime, will you put me in jail?' I said, 'If you're caught and if someone files a charge and you can't put up bail, we will. Now beat it.' So he picked up the inkwell on my desk and, before I could stop him, he turned it upside down on the open police blotter.

". . . That's right! Why do you think we have 'malicious mischief tabbed on him? The ink ran down all over my pants.

". . . Yes, assault and battery, too! I came hopping down to shake a little sense into him, and he kicked me in the shins and handed me one in the eye.

". . . I'm not making this up. You want to come down here and look at my face?

". . . He'll be up in court one of these days. About Thursday, maybe.

". . . Ninety days is the least he'll get, unless the psychoes say otherwise. I think he belongs in the loony-bin myself.

". . . Officially, he's John Smith. That's the only name he'll give.

". . . No, sir, he doesn't get released without the proper legal steps.

", . . O.K., you do that, if you want to, bud! I just do my job here."

He banged the phone into its cradle, glowered at it, then picked it up and began dialing. He said "Gianetti?", got the proper answer and began talking.

"What's the A.E.C.? I've been talking to some Joe on the phone and he says-

". . . No, I'm not kidding, lunk-head. If I were kidding, I'd put up a sign. What's the alphabet soup?"

He listened, said, "Thanks" in a small voice and hung up again.

He had lost some of his color. "That second guy was the head of the Atomic Energy Commission," he said to Brown. "They must have switched me from Oak Ridge to Washington."

Brown lounged to his feet, "Maybe the F.B.I, is after this John Smith guy. Maybe he's one of these here scientists." He felt moved to philosophy. "They ought to keep atomic secrets away from those guys. Things were O.K. as long as General Groves was the only fella who knew about the atom bomb. Once they cut in these here scientists on it, though--"

"Ah, shut up," snarled Mankiewicz.

Dr. Oswald Grant kept his eyes fixed on the white line that marked the highway and handled the car as though it were an enemy of his. He always did. He was tall and knobby with a withdrawn expression stamped on his face. His knees crowded the wheel, and his knuckles whitened whenever he made a turn.

Inspector Darrity sat beside him with his legs crossed so that the sole of his left shoe came up hard against the door. It would leave a sandy mark when he took it away. He tossed a nut-brown penknife from hand to hand. Earlier, he had unsheathed its wicked, gleaming blade and scraped casually at his nails as they drove, but a sudden swerve had nearly cost him a finger and he desisted.

He said, "What do you know about this Ralson?"

Dr. Grant took his eyes from the road momentarily, then returned them. He said, uneasily, "I've known him since he took his doctorate at Princeton. He's a very brilliant man."

"Yes? Brilliant, huh? Why is it that all you scientific men describe one another as 'brilliant'? Aren't there any mediocre ones?"

"Many. I'm one of them. But Ralson isn't. You ask anyone. Ask Oppenheimer. Ask Bush. He was the youngest observer at Alamogordo."

"O.K. He was brilliant. What about his private life?"

Grant waited. "I wouldn't know."

"You know him since Princeton. How many years is that?"

They had been scouring north along the highway from Washington for two hours with scarcely a word between them. Now Grant felt the atmosphere change and the grip of the law on his coat collar.

"He got his degree in '43."

"You've known him eight years then."

"That's right."

us "And you don't know about his private life?"

"A man's life is his own, Inspector. He wasn't very sociable. A great many of the men are like that. They work under pressure and when they're off the job, they're not interested in continuing the lab acquaintanceships."

"Did he belong to any organizations that you know of?"

"No."

The inspector said, "Did he ever say anything to you that might indicate he

was disloyal?"

Grant shouted "No!" and there was silence for a while.

Then Darrity said, "How important is Ralson in atomic research?"

Grant hunched over the wheel and said, "As important as any one man can be. I grant you that no one is indispensable, but Ralson has always seemed to be rather unique. He has the engineering mentality."

"What does that mean?"

"He isn't much of a mathematician himself, but he can work out the gadgets that put someone else's math into life. There's no one like him when it comes to that. Time and again, Inspector, we've had a problem to lick and no time to lick it in. There were nothing but blank minds all around until he put some thought into it and said, 'Why don't you try so-and-so?' Then he'd go away. He wouldn't even be interested enough to see if it worked. But it always did. Always! Maybe we would have got it ourselves eventually, but it might have taken months of additional time. I don't know how he does it. It's no use asking him either. He just looks at you and says 'It was obvious', and walks away. Of course, once he's shown us how to do it, it is obvious."

The inspector let him have his say out. When no more came, he said, "Would you say he was queer, mentally? Erratic, you know."

"When a person is a genius, you wouldn't expect him to be normal, would you?"

"Maybe not. But just how abnormal was this particular genius?"

"He never talked, particularly. Sometimes, he wouldn't work." • "Stayed at home and went fishing instead?"

"No. He came to the labs all right; but he would just sit at his desk.

Sometimes that would go on for weeks. Wouldn't answer you, or even look at you, when you spoke to him."

"Did he ever actually leave work altogether?"

"Before now, you mean? Never!"

"Did he ever claim he wanted to commit suicide? Ever say he wouldn't feel safe except in jail?"

"No."

"You're sure this John Smith is Ralson?"

"I'm almost positive. He has a chemical bum on his right cheek that can't be mistaken."

"O.K. That's that, then I'll speak to him and see what he sounds like." The silence fell for good this time. Dr. Grant followed the snaking line as Inspector Darrity tossed the penknife in low arcs from hand to hand.

The warden listened to the call-box and looked up at his visitors. "We can have him brought up here, Inspector, regardless." "No," Dr. Grant shook his head. "Let's go to him." Darrity said, "Is that normal for Ralson, Dr. Grant? Would you expect him to attack a guard trying to take him out of a prison cell?" Grant said, "I can't say."

The warden spread a calloused palm. His thick nose twitched a little. "We haven't tried to do anything about him so far because of the telegram from Washington, but, frankly, he doesn't belong here. I'll be glad to have him taken off my hands." "We'll see him in his cell," said Darrity.

They went down the hard, barlined corridor. Empty, incurious eyes watched their passing.

Dr. Grant felt his flesh crawl. "Has he been kept here all the time?" Darrity did not answer.

The guard, pacing before them, stopped. "This is the cell." Darrity said, "Is that Dr. Ralson?"

Dr. Grant looked silently at the figure upon the cot. The man had been lying down when they first reached the cell, but now he had risen to one elbow and seemed to be trying to shrink into the wall. His hair was sandy and thin, his figure slight, his eyes blank and china-blue. On his right cheek there was a raised pink patch that tailed off like a tadpole. Dr. Grant said, "That's

Ralson."

The guard opened the door and stepped inside, but Inspector Darrity sent him out again with a gesture. Ralson watched them mutely. He had drawn both feet up to the cot and was pushing backwards. His Adam's apple bobbed as he swallowed.

Darrity said quietly, "Dr. Elwood Ralson?" "What do you want?" The voice was a surprising baritone. "Would you come with us, please? We have some questions we would like to ask you."

"No! Leave me alone!"

"Dr. Ralson," said Grant, "I've been sent here to ask you to come back to work."

Ralson looked at the scientist and there was a momentary glint of something other than fear in his eyes. He said, "Hello, Grant." He got off his cot.

"Listen, I've been trying to have them put me into a padded cell. Can't you make them do that for me? You know me, Grant, I wouldn't ask for something I didn't feel was necessary. Help me. I can't stand the hard walls. It makes me want to ... bash-" He brought the flat of his palm thudding down against the hard, dull-gray concrete behind his cot.

•i Darrity looked thoughtful. He brought out his penknife and unbent the Reaming blade. Carefully, he scraped at his thumbnail, and said, "Would you like to see a doctor?"

i> But Ralson didn't answer that. He followed the gleam of metal and his lips parted and grew wet. His breath became ragged and harsh. :j He said, "Put that away!" ,, Darrity paused. "Put what away?"

"The knife. Don't hold it in front of me. I can't stand looking at it." j

Darrity said, "Why not?" He held it out. "Anything wrong with it? It's a good knife."

Ralson lunged. Darrity stepped back and his left hand came down on the other's wrist. He lifted the knife high in the air. "What's the matter, Ralson? What are you after?"

Grant cried a protest but Darrity waved him away. I Darrity said, "What do you want, Ralson?"

<•,. Ralson tried to reach upward, and bent under the other's appalling grip. ;He gasped, "Give me the knife."

"Why, Ralson? What do you want to do with it?" 1 "Please. I've got to-" He was pleading. "I've got to stop living."

"You want to die?" i "No. But I must."

Darrity shoved. Ralson flailed backward and tumbled into his cot, so that it squeaked noisily. Slowly, Darrity bent the blade of his penknife into its sheath and put it away. Ralson covered his face. His shoulders were shaking but otherwise he did not move.

There was the sound of shouting from the corridor, as the other prisoners reacted to the noise issuing from Ralson's cell. The guard came hurrying down, yelling, "Quiet!" as he went.

Darrity looked up. "It's all right, guard."

He was wiping his hands upon a large white handkerchief. "I think we'll get a doctor for him."

Dr. Gottfried Blaustein was small and dark and spoke with a trace of an Austrian accent. He needed only a small goatee to be the layman's caricature of a psychiatrist. But he was clean-shaven, and very carefully dressed. He watched Grant closely, assessing him, blocking in certain observations and deductions. He did this automatically, now, with everyone he met.

He said, "You give me a sort of picture. You describe a man of great talent, perhaps even genius. You tell me he has always been uncomfortable with people; that he has never fitted in with his laboratory environment, even though it was there that he met the greatest of success. Is there another environment to which he has fitted himself?"

"I don't understand."

"It is not given to all of us to be so fortunate as to find a congenial type of

company at the place or in the field where we find it necessary to make a living. Often, one compensates by playing an instrument, or going hiking, or joining some club. In other words, one creates a new type of society, when not working, in which one can feel more at home. It need not have the slightest connection with what one's ordinary occupation is. It is an escape, and not necessarily an unhealthy one." He smiled and added, "Myself, I collect stamps. I am an active member of the American Society of Philatelists."

Grant shook his head. "I don't know what he did outside working hours. I doubt that he did anything like what you've mentioned."

"Um-m-m. Well, that would be sad. Relaxation and enjoyment are wherever you find them; but you must find them somewhere, no?"

"Have you spoken to Dr. Ralson, yet?"

"About his problems? No."

"Aren't you going to?"

"Oh, yes. But he has been here only a week. One must give him a chance to recover. He was in a highly excited state when he first came here. It was almost a delirium. Let him rest and become accustomed to the new environment. I will question him, then."

"Will you be able to get him back to work?"

Blaustein smiled. "How should I know? I don't even know what his sickness is."

"Couldn't you at least get rid of the worst of it; this suicidal obsession of his, and take care of the rest of the cure while he's at work?"

"Perhaps. I couldn't even venture an opinion so far without several interviews."

"How long do you suppose it will all take?"

"In these matters, Dr. Grant, nobody can say."

Grant brought his hands together in a sharp slap. "Do what seems best then. But this is more important than you know."

"Perhaps. But you may be able to help me, Dr. Grant."

"How?"

"Can you get me certain information which may be classified as top secret?"

"What kind of information?"

"I would like to know the suicide rate, since 1945, among nuclear scientists. Also, how many have left their jobs to go into other types of scientific work, or to leave science altogether."

"Is this in connection with Ralson?"

"Don't you think it might be an occupational disease, this terrible unhappiness of his?"

"Well-a good many have left their jobs, naturally."

"Why naturally, Dr. Grant?"

"You must know how it is, Dr. Blaustein, The atmosphere in modern atomic research is one of great pressure and red tape. You work with the government; you work with military men. You can't talk about your work; you have to be careful what you say. Naturally, if you get a chance at a job in a university, where you can fix your own hours, do your own work, write papers that don't have to be submitted to the A.E.C., attend conventions that aren't held behind locked doors, you take it."

"And abandon your field of specialty forever."

"There are always non-military applications. Of course, there was one man who did leave for another reason. He told me once he couldn't sleep nights. He said he'd hear one hundred thousand screams coming from Hiroshima, when he put the lights out. The last I heard of him he was a clerk in a haberdashery."

"And do you ever hear a few screams yourself?"

Grant nodded. "It isn't a nice feeling to know that even a little of the

responsibility of atomic destruction might be your own."

"How did Ralson feel?"

"He never spoke of anything like that."

"In other words, if he felt it, he never even had the safety-valve effect of letting off steam to the rest of you."

"I guess he hadn't."

"Yet nuclear research must be done, no?"

"I'll say."

"What would you do, Dr. Grant, if you felt you had to do something that you couldn't do."

Grant shrugged. "I don't know." ' "Some people kill themselves." j "You mean that's what has Ralson down."

"I don't know. I do not know. I will speak to Dr. Ralson this evening. I OBN promise nothing, of course, but I will let you know whatever I can."

Grant rose. "Thanks, Doctor. I'll try to get the information you want."

Elwood Ralson's appearance had improved in the week he had been at Dr. Blaustein's sanatorium. His face had filled out and some of the restlessness had gone out of him. He was tieless and beltless. His shoes were without laces.

Blaustein said, "How do you feel, Dr. Ralson?"

"Rested."

"You have been treated well?"

"No complaints, Doctor."

Blaustein's hand fumbled for the letter-opener with which it was his habit to play during moments of abstraction, but his fingers met nothing. It had been put away, of course, with anything else possessing a sharp edge. There was nothing on his desk, now, but papers.

He said, "Sit down, Dr. Ralson. How do your symptoms progress?"

"You mean, do I have what you would call a suicidal impulse? Yes. It gets worse or better, depending on my thoughts, I think. But it's always with me. There is nothing you can do to help."

"Perhaps you are right. There are often things I cannot help. But I would like to know as much as I can about you. You are an important man--"

Ralson snorted.

"You do not consider that to be so?" asked Blaustein.

"No, I don't. There are no important men, any more than there are important individual bacteria."

"I don't understand."

"I don't expect you to."

"And yet it seems to me that behind your statement there must have been much thought. It would certainly be of the greatest interest to have you tell me some of this thought."

For the first time, Ralson smiled. It was not a pleasant smile. His nostrils were white. He said, "It is amusing to watch you, Doctor. You go about your business so conscientiously. You must listen to me, mustn't you, with just that air of phony interest and unctuous sympathy. I can tell you the most ridiculous things and still be sure of an audience, can't I?"

"Don't you think my interest can be real, even granted that it is professional, too?"

"No, I don't."

"Why not?"

"I'm not interested in discussing it."

"Would you rather return to your room?"

"If you don't mind. No!" His voice had suddenly suffused with fury as he stood up, then almost immediately sat down again. "Why shouldn't I use you? I don't like to talk to people. They're stupid. They don't see things. They stare at the obvious for hours and it means nothing to them. If I spoke to them, they

wouldn't understand; they'd lose patience; they'd laugh. Whereas you must listen. It's your job. You can't interrupt to tell me I'm mad, even though you may think so."

"I'd be glad to listen to whatever you would like to tell me."

Ralson drew a deep breath. "I've known something for a year now, that very few people know. Maybe it's something no live person knows. Do you know that human cultural advances come in spurts? Over a space of two generations in a city containing thirty thousand free men, enough literary and artistic genius of the first rank arose to supply a nation of millions for a century under ordinary circumstances. I'm referring to the Athens of Pericles.

"There are other examples. There is the Florence of the Medicis, the England of Elizabeth, the Spain of the Cordovan Emirs. There was the spasm of social reformers among the Israelites of the Eighth and Seventh centuries before Christ. Do you know what I mean?"

•r Blaustein nodded. "I see that history is a subject that interests you." '

"Why not? I suppose there's nothing that says I must restrict myself to nuclear cross-sections and wave mechanics."

"Nothing at all. Please proceed."

"At first, I thought I could learn more of the true inwardness of historical cycles by consulting a specialist. I had some conferences with a professional historian. A waste of time!"

"What was his name; this professional historian?"

"Does it matter?"

"Perhaps not, if you would rather consider it confidential. What did he tell you?"

"He said I was wrong; that history only appeared to go in spasms. He said that after closer studies the great civilizations of Egypt and Sumeria did not arise suddenly or out of nothing, but upon the basis of a long-developing sub-civilization that was already sophisticated in its arts. He said that Periclean Athens built upon a pre-Periclean Athens of lower accomplishments, without which the age of Pericles could not have been.

"I asked why was there not a post-Periclean Athens of higher accomplishments still, and he told me that Athens was ruined by a plague and by a long war with Sparta. I asked about other cultural spurts and each time it was a war that ended it, or, in some cases, even accompanied it. He was like all the rest. The truth was there; he had only to bend and pick it up; but he didn't." Ralson stared at the floor, and said in a tired voice, "They come to me in the laboratory sometimes, Doctor. They say, 'How the devil are we going to get rid of the such-and-such effect that is ruining all our measurements, Ralson?' They show me the instruments and the wiring diagrams and I say, 'It's staring at you. Why don't you do so-and-so? A child could tell you that.' Then I walk away because I can't endure the slow puzzling of their stupid faces. Later, they come to me and say, 'It worked, Ralson. How did you figure it out?' I can't explain to them, Doctor; it would be like explaining that water is wet. And I couldn't explain to the historian. And I can't explain to you. It's a waste of time."

"Would you like to go back to your room?"

"Yes."

Blaustein sat and wondered for many minutes after Ralson had been escorted out of his office. His fingers found their way automatically into the upper right drawer of his desk and lifted out the letter-opener. He twiddled it in his fingers.

Finally, he lifted the telephone and dialed the unlisted number he had been given.

He said, "This is Blaustein. There is a professional historian who was consulted by Dr. Ralson some time in the past, probably a bit over a year ago. I don't know his name. I don't even know if he was connected with a

university. If you could find him, I would like to see him."

Thaddeus Milton, Ph.D., blinked thoughtfully at Blaustein and brushed his hand through his iron-gray hair. He said, "They came to me and I said that I had indeed met this man. However, I have had very little connection with him. None, in fact, beyond a few conversations of a professional nature."

"How did he come to you?"

"He wrote me a letter; why me, rather than someone else, I do not know. A series of articles written by myself had appeared in one of the semi-learned journals of semi-popular appeal about that time. It may have attracted his attention."

"I see. With what general topic were the articles concerned?"

"They were a consideration of the validity of the cyclic approach to history. That is, whether one can really say that a particular civilization must follow laws of growth and decline in any matter analogous to those involving individuals."

"I have read Toynbee, Dr. Milton."

"Well, then, you know what I mean."

Blaustein said, "And when Dr. Ralson consulted you, was it with reference to this cyclic approach to history?"

"U-m-m-m. In a way, I suppose. Of course, the man is not an historian and some of his notions about cultural trends are rather dramatic and. . . what shall I say. . . tabloidish. Pardon me, Doctor, if I ask a question which may be improper. Is Dr. Ralson one of your patients?"

"Dr. Ralson is not well and is in my care. This, and all else we say here, is confidential, of course."

"Quite. I understand that. However, your answer explains something to me. Some of his ideas almost verged on the irrational. He was always worried, it seemed to me, about the connection between what he called 'cultural spurts' and calamities of one sort or another. Now such connections have been noted frequently. The time of a nation's greatest vitality may come at a time of great national insecurity. The Netherlands is a good case in point. Her great artists, statesmen, and explorers belong to the early Seventeenth Century at the time when she was locked in a death struggle with the greatest European power of the time, Spain. When at the point of destruction at home, she was building an empire in the Far East and had secured footholds on the northern coast of South America, the southern tip of Africa, and the Hudson Valley of North America. Her fleets fought England to a standstill. And then, once her political safety was assured, she declined.

"Well, as I say, that is not unusual. Groups, like individuals, will rise to strange heights in answer to a challenge, and vegetate in the absence of a challenge. Where Dr. Ralson left the paths of sanity, however, was in insisting that such a view amounted to confusing cause and effect. He decried that it was not times of war and danger that stimulated 'cultural spurts', but rather vice versa. He claimed that each time a group of men showed too much vitality and ability, a war became necessary to destroy the possibility of their further development."

"I see," said Blaustein.

"I rather laughed at him, I am afraid. It may be that that was why he did not keep the last appointment we made. Just toward the end of that last conference he asked me, in the most intense fashion imaginable, whether I did not think it queer that such an improbable species as man was dominant on earth, when all he had in his favor was intelligence. There I laughed aloud. Perhaps I should not have, poor fellow."

"It was a natural reaction," said Blaustein, "but I must take no more of your time. You have been most helpful."

They shook hands, and Thaddeus Milton took his leave.

"Well," said Darrity, "there are your figures on the recent suicides among



scientific personnel. Get any deductions out of it?"

"I should be asking you that," said Blaustein, gently. "The F.B.I, must have investigated thoroughly."

"You can bet the national debt on that. They are suicides. There's no mistake about it. There have been people checking on it in another department. The rate is about four times above normal, taking age, social status, economic class into consideration."

"What about British scientists?"

"Just about the same."

"And the Soviet Union?"

"Who can tell?" The investigator leaned forward. "Doc, you don't think the Soviets have some sort of ray that can make people want to commit suicide, do you? It's sort of suspicious that men in atomic research are the only ones affected."

"Is it? Perhaps not. Nuclear physicists may have peculiar strains imposed upon them. It is difficult to tell without thorough study."

"You mean complexes might be coming through?" asked Darrity, warily.

Blaustein made a face. "Psychiatry is becoming too popular. Everybody talks of complexes and neuroses and psychoses and compulsions and whatnot. One man's guilt complex is another man's good night's sleep. If I could talk to each one of the men who committed suicide, maybe I could know something."

"You're talking to Ralson."

"Yes, I'm talking to Ralson."

"Has he got a guilt complex?"

"Not particularly. He has a background out of which it would not surprise me if he obtained a morbid concern with death. When he was twelve he saw his mother die under the wheels of an automobile. His father died slowly of cancer. Yet the effect of those experiences on his present troubles is not clear."

Darrity picked up his hat. "Well, I wish you'd get a move on, Doc. There's something big on, bigger than the H-Bomb. I don't know how anything can be bigger than that, but it is."

Ralson insisted on standing. "I had a bad night last night, Doctor."

"I hope," said Blaustein, "these conferences are not disturbing you."

"Well, maybe they are. They have me thinking on the subject again. It makes things bad, when I do that. How do you imagine it feels being part of a bacterial culture, Doctor?"

"I had never thought of that. To a bacterium, it probably feels quite normal."

Ralson did not hear. He said, slowly, "A culture in which intelligence is being studied. We study all sorts of things as far as their genetic relationships are concerned. We take fruit flies and cross red eyes and white eyes to see what happens. We don't care anything about red eyes and white eyes, but we try to gather from them certain basic genetic principles. You see what I mean?"

"Certainly."

"Even in humans, we can follow various physical characteristics. There are the Hapsburg lips, and the haemophilia that started with Queen Victoria and cropped up in her descendants among the Spanish and Russian royal families. We can even follow feeble-mindedness in the Jukeses and Kal-likakas. You learn about it in high-school biology. But you can't breed human beings the way you do fruit flies. Humans live too long. It would take centuries to draw conclusions. It's a pity we don't have a special race of men that reproduce at weekly intervals, eh?"

He waited for an answer, but Blaustein only smiled.

Ralson said, "Only that's exactly what we would be for another group of beings whose life span might be thousands of years. To them, we would reproduce rapidly enough. We would be short-lived creatures and they could study the

genetics of such things as musical aptitude, scientific intelligence, and so on. Not that those things would interest them as such, any more than the white eyes of the fruit fly interest us as white eyes."

"This is a very interesting notion," said Blaustein.

"It is not simply a notion. It is true. To me, it is obvious, and I don't care how it seems to you. Look around you. Look at the planet, Earth. What kind of a ridiculous animal are we to be lords of the world after the dinosaurs had failed? Sure, we're intelligent, but what's intelligence? We think it is important because we have it. If the Tyrannosaurus could have picked out the one quality that he thought would ensure species domination, it would be size and strength. And he would make a better case for it. He lasted longer than we're likely to.

"Intelligence in itself isn't much as far as survival values are concerned. The elephant makes out very poorly indeed when compared to the sparrow even though he is much more intelligent. The dog does well, under man's protection, but not as well as the house-fly against whom every human hand is raised. Or take the primates as a group. The small ones cower before their enemies; the large ones have always been remarkably unsuccessful in doing more than barely holding their own. The baboons do the best and that is because of their canines, not their brains."

A light film of perspiration covered Ralson's forehead. "And one can see that man has been tailored, made to careful specifications for those things that study us. Generally, the primate is short-lived. Naturally, the larger ones live longer, which is a fairly general rule in animal life. Yet the human being has a life span twice as long as any of the other great apes; considerably longer even than the gorilla that outweighs him. We mature later. It's as though we've been carefully bred to live a little longer so that our life cycle might be of a more convenient length."

He jumped to his feet, shaking his fists above his head. "A thousand years are but as yesterday--"

Blaustein punched a button hastily.

For a moment, Ralson struggled against the white-coated orderly who entered, and then he allowed himself to be led away.

Blaustein looked after him, shook his head, and picked up the telephone.

He got Darrity. "Inspector, you may as well know that this may take a long time."

He listened and shook his head. "I know. I don't minimize the urgency."

The voice in the receiver was tinny and harsh. "Doctor, you are minimizing it. I'll send Dr. Grant to you. He'll explain the situation to you."

Dr. Grant asked how Ralson was, then asked somewhat wistfully if he could see him. Blaustein shook his head gently.

Grant said, "I've been directed to explain the current situation in atomic research to you."

"So that I will understand, no?"

"I hope so. It's a measure of desperation. I'll have to remind you--"

"Not to breathe a word of it. Yes, I know. This insecurity on the part of you people is a very bad symptom. You must know these things cannot be hidden."

"You live with secrecy. It's contagious."

"Exactly. What is the current secret?"

"There is ... or, at least, there might be a defense against the atomic bomb."

"And that is a secret? It would be better if it were shouted to all the people of the world instantly."

"For heaven's sake, no. Listen to me, Dr. Blaustein. It's only on paper so far. It's at the E equal me square stage, almost. It may not be practical. It would be bad to raise hopes we would have to disappoint. On the other hand, if it were known that we almost had a defense, there might be a desire to start and win a war before the defense were completely developed."

"That I don't believe. But, nevertheless, I distract you. What is the nature of this defense, or have you told me as much as you dare?"

"No, I can go as far as I like; as far as is necessary to convince you we have to have Ralson-and fast!"

"Well, then tell me, and I too, will know secrets. I'll feel like a member of the Cabinet."

"You'll know more than most. Look, Dr. Blaustein, let me explain it in lay language. So far, military advances have been made fairly equally in both offensive and defensive weapons. Once before there seemed to be a definite and permanent tipping of all warfare in the direction of the offense, and that was with the invention of gunpowder. But the defense caught up. The medieval man-in-armor-on-horse became the modern man-in-tank-on-treads, and the stone castle became the concrete pillbox. The same thing, you see, except that everything has been boosted several orders of magnitude."

"Very good. You make it clear. But with the atomic bomb comes more orders of magnitude, no? You must go past concrete and steel for protection."

"Right. Only we can't just make thicker and thicker walls. We've run out of materials that are strong enough. So we must abandon materials altogether. If the atom attacks, we must let the atom defend. We will use energy itself; a force field."

"And what," asked Blaustein, gently, "is a force field?"

"I wish I could tell you. Right now, it's an equation on paper. Energy can be so channeled as to create a wall of matterless inertia, theoretically. In practice, we don't know how to do it."

"It would be a wall you could not go through, is that it? Even for atoms?"

"Even for atom bombs. The only limit on its strength would be the amount of energy we could pour into it. It could even theoretically be made to be impermeable to radiation. The gamma rays would bounce off it. What we're dreaming of is a screen that would be in permanent place about cities; at minimum strength, using practically no energy. It could then be triggered to maximum intensity in a fraction of a millisecond at the impingement of short-wave radiation; say the amount radiating from the mass of plutonium large enough to be an atomic war head. All this is theoretically possible."

"And why must you have Ralson?"

"Because he is the only one who can reduce it to practice, if it can be made practical at all, quickly enough. Every minute counts these days. You know what the international situation is. Atomic defense must arrive before atomic war."

"You are so sure of Ralson?"

"I am as sure of him as I can be of anything. The man is amazing, Dr. Blaustein. He is always right. Nobody in the field knows how he does it."

"A sort of intuition, no?" the psychiatrist looked disturbed. "A kind of reasoning that goes beyond ordinary human capacities. Is that it?"

"I make no pretense of knowing what it is."

"Let me speak to him once more then. I will let you know."

"Good." Grant rose to leave; then, as if in afterthought, he said, "I might say, Doctor, that if you don't do something, the Commission plans to take Dr. Ralson out of your hands."

"And try another psychiatrist? If they wish to do that, of course, I will not stand in their way. It is my opinion, however, that no reputable practitioner will pretend there is a rapid cure."

"We may not intend further mental treatment. He may simply be returned to work."

"That, Dr. Grant, I will fight. You will get nothing out of him. It will be his death."

"We get nothing out of him anyway."

"This way there is at least a chance, no?"

"I hope so. And by the way, please don't mention the fact that I said anything about taking Ralson away."

"I will not, and I thank you for the warning. Good-bye, Dr. Grant."

"I made a fool of myself last time, didn't I, Doctor?" said Ralson. He was frowning.

"You mean you don't believe what you said then?"

"Ida!" Ralson's slight form trembled with the intensity of his affirmation. He rushed to the window, and Blaustein swiveled in his chair to keep him in view. There were bars in the window. He couldn't jump. The glass was unbreakable.

Twilight was ending, and the stars were beginning to come out. Ralson stared at them in fascination, then he turned to Blaustein and flung a finger outward. "Every single one of them is an incubator. They maintain temperatures at the desired point. Different experiments; different temperatures. And the planets that circle them are just huge cultures, containing different nutrient mixtures and different life forms. The experimenters are economical, too- whatever and whoever they are. They've cultured many types of life forms in this particular test-tube. Dinosaurs in a moist, tropical age and ourselves among the glaciers. They turn the sun up and down and we try to work out the physics of it. Physics!" He drew his lips back in a snarl.

"Surely," said Dr. Blaustein, "it is not possible that the sun can be turned up and down at will."

"Why not? It's just like a heating element in an oven. You think bacteria know what it is that works the heat that reaches them? Who knows? Maybe they evolve theories, too. Maybe they have their cosmogonies about cosmic catastrophes, in which clashing light-bulbs create strings of Petri dishes. Maybe they think there must be some beneficent creator that supplies them with food and warmth and says to them, 'Be fruitful and multiply!'

"We breed like them, not knowing why. We obey the so-called laws of nature which are only our interpretation of the not-understood forces imposed upon us.

"And now they've got the biggest experiment of any yet on their hands. It's been going on for two hundred years. They decided to develop a strain for mechanical aptitude in England in the seventeen hundreds, I imagine. We call it the Industrial Revolution. It began with steam, went on to electricity, then atoms. It was an interesting experiment, but they took their chances on letting it spread. Which is why they'll have to be very drastic indeed in ending it."

Blaustein said, "And how would they plan to end it? Do you have an idea about that?"

"You ask me how they plan to end it. You can look about the world today and still ask what is likely to bring our technological age to an end. All the earth fears an atomic war and would do anything to avoid it; yet all the earth fears that an atomic war is inevitable."

"In other words, the experimenters will arrange an atom war whether we want it or not, to kill off the technological era we are in, and to start fresh. That is it, no?"

"Yes. It's logical. When we sterilize an instrument, do the germs know where the killing heat comes from? Or what has brought it about? There is some way the experimenters can raise the heat of our emotions; some way they can handle us that passes our understanding."

"Tell me," said Blaustein, "is that why you want to die? Because you think the destruction of civilization is coming and can't be stopped?"

Ralson said, "I don't want to die. It's just that I must." His eyes were tortured. "Doctor, if you had a culture of germs that were highly dangerous and that you had to keep under absolute control, might you not have an agar medium impregnated with, say, penicillin, in a circle at a certain distance

from the center of inoculation? Any germs spreading out too far from the center would die. You would have nothing against the particular germs who were killed; you might not even know that any germs had spread that far in the first place. It would be purely automatic.

"Doctor, there is a penicillin ring about our intellects. When we stray too far; when we penetrate the true meaning of our own existence, we have reached into the penicillin and we must die. It works slowly-but it's hard to stay alive."

He smiled briefly and sadly. Then he said, "May I go back to my room "ow, Doctor?"

Dr. Blaustein went to Ralson's room about noon the next day. It was a small room and featureless. The walls were gray with padding. Two small windows were high up and could not be reached. The mattress lay directly on the padded floor. There was nothing of metal in the room; nothing that could be utilized in tearing life from body. Even Ralson's nails were clipped short. , Ralson sat up. "Hello!"

"Hello, Dr. Ralson. May I speak to you?"

"Here? There isn't any seat I can offer you."

"It is all right. I'll stand. I have a sitting job and it is good for my sitting-down place that I should stand sometimes. Dr. Ralson, I have thought all night of what you told me yesterday and in the days before."

"And now you are going to apply treatment to rid me of what you think are delusions."

"No. It is just that I wish to ask questions and perhaps to point out some consequences of your theories which . . . you will forgive me? . . . you may not have thought of."

"Oh?"

"You see, Dr. Ralson, since you have explained your theories, I, too, know what you know. Yet I have no feeling about suicide."

"Belief is more than something intellectual, Doctor. You'd have to believe this with all your insides, which you don't."

"Do you not think perhaps it is rather a phenomenon of adaptation?"

"How do you mean?"

"You are not really a biologist, Dr. Ralson. And although you are very brilliant indeed in physics, you do not think of everything with respect to these bacterial cultures you use as analogies. You know that it is possible to breed bacterial strains that are resistant to penicillin or to almost any bacterial poison."

"Well?"

"The experimenters who breed us have been working with humanity for many generations, no? And this particular strain which they have been culturing for two centuries shows no sign of dying out spontaneously. Rather, it is a vigorous strain and a very infective one. Older high-culture strains were confined to single cities or to small areas and lasted only a generation or two. This one is spreading throughout the world. It is a very infective strain. Do you not think it may have developed penicillin immunity? In other words, the methods the experimenters use to wipe out the culture may not work too well any more, no?"

Ralson shook his head. "It's working on me."

"You are perhaps non-resistant. Or you have stumbled into a very high concentration of penicillin indeed. Consider all the people who have been trying to outlaw atomic warfare and to establish some form of world government and lasting peace. The effort has risen in recent years, without too awful results."

"It isn't stopping the atomic war that's coming."

"No, but maybe only a little more effort is all that is required. The peace-advocates do not kill themselves. More and more humans are immune to the

experimenters. Do you know what they are doing in the laboratory?"

"I don't want to know."

"You must know. They are trying to invent a force field that will stop the atom bomb. Dr. Ralson, if I am culturing a virulent and pathological bacterium; then, even with all precautions, it may sometimes happen that I will start a plague. We may be bacteria to them, but we are dangerous to them, also, or they wouldn't wipe us out so carefully after each experiment.

"They are not quick, no? To them a thousand years is as a day, no? By the time they realize we are out of the culture, past the penicillin, it will be too late for them to stop us. They have brought us to the atom, and if we can only prevent ourselves from using it upon one another, we may turn out to be too much even for the experimenters."

Ralson rose to his feet. Small though he was, he was an inch and a half taller than Blaustein. "They are really working on a force field?"

"They are trying to. But they need you."

"No. I can't."

"They must have you in order that you might see what is so obvious to you. It is not obvious to them. Remember, it is your help, or else-defeat of man by the experimenters."

Ralson took a few rapid steps away, staring into the blank, padded wall. He muttered, "But there must be that defeat. If they build a force field, it will mean death for all of them before it can be completed."

"Some or all of them may be immune, no? And in any case, it will be death for them anyhow. They are trying."

Ralson said, "I'll try to help them."

"Do you still want to kill yourself?"

"Yes."

"But you'll try not to, no?"

"I'll try not to, Doctor." His lip quivered. "I'll have to be watched."

Blaustein climbed the stairs and presented his pass to the guard in the lobby. He had already been inspected at the outer gate, but he, his pass, and its signature were now scrutinized once again. After a moment, the guard retired to his little booth and made a phone call. The answer satisfied him. Blaustein took a seat and, in half a minute, was up again, shaking hands with Dr. Grant.

"\* "The President of the United States would have trouble getting in here, no?" said Blaustein.

The lanky physicist smiled. "You're right, if he came without warning." v They took an elevator which traveled twelve floors. The office to which Grant led the way had windows in three directions. It was sound-proofed and air-conditioned. Its walnut furniture was in a state of high polish.

Blaustein said, "My goodness. It is like the office of the chairman of a board of directors. Science is becoming big business."

Grant looked embarrassed. "Yes, I know, but government money flows easily and it is difficult to persuade a congressman that your work is important unless he can see, smell, and touch the surface shine."

Blaustein sat down and felt the upholstered seat give way slowly. He said, "Dr. Elwood Ralson has agreed to return to work."

"Wonderful. I was hoping you would say that. I was hoping that was why you wanted to see me." As though inspired by the news, Grant offered the psychiatrist a cigar, which was refused.

"However," said Blaustein, "he remains a very sick man. He will have to be treated carefully and with insight."

"Of course. Naturally."

"It's not quite as simple as you may think. I want to tell you something of Ralson's problems, so that you will really understand how delicate the situation is."

He went on talking and Grant listened first in concern, and then in

astonishment. "But then the man is out of his head, Dr. Blaustein. He'll be of no use to us. He's crazy."

Blaustein shrugged. "It depends on how you define 'crazy.' It's a bad word; don't use it. He had delusions, certainly. Whether they will affect his peculiar talents one cannot know."

"But surely no sane man could possibly--"

"Please. Please. Let us not launch into long discussions on psychiatric definitions of sanity and so on. The man has delusions and, ordinarily, I would dismiss them from all consideration. It is just that I have been given to understand that the man's particular ability lies in his manner of proceeding to the solution of a problem by what seems to be outside ordinary reason. That is so, no?"

"Yes. That must be admitted."

"How can you and I judge then as to the worth of one of his conclusions. Let me ask you, do you have suicidal impulses lately?"

"I don't think so."

"And other scientists here?"

"No, of course not."

"I would suggest, however, that while research on the force field proceeds, the scientists concerned be watched here and at home. It might even be a good enough idea that they should not go home. Offices like these could be arranged to be a small dormitory--"

"Sleep at work. You would never get them to agree."

"Oh, yes. If you do not tell them the real reason but say it is for security purposes, they will agree. 'Security purposes' is a wonderful phrase these days, no? Ralson must be watched more than anyone."

"Of course."

"But all this is minor. It is something to be done to satisfy my conscience in case Ralson's theories are correct. Actually, I don't believe them. They are delusions, but once fiat is granted, it is necessary to ask what the causes of those delusions are. What is it in Ralson's mind, in his background, in his life that makes it so necessary for him to have these particular delusions? One cannot answer that simply. It may well take years of constant psychoanalysis to discover the answer. And until the answer is discovered, he will not be cured.

"But, meanwhile, we can perhaps make intelligent guesses. He has had an unhappy childhood, which, in one way or another, has brought him face to face with death in very unpleasant fashion. In addition, he has never been able to form associations with other children, or, as he grew older, with other men. He was always impatient with their slower forms of reasoning. Whatever difference there is between his mind and that of others, it has built a wall between him and society as strong as the force field you are trying to design. For similar reasons, he has been unable to enjoy a normal sex life. He has never married; he has had no sweethearts.

"It is easy to see that he could easily compensate to himself for this failure to be accepted by his social milieu by taking refuge in the thought that other human beings are inferior to himself. Which is, of course, true, as far as mentality is concerned. There are, of course, many, many facets to the human personality and in not all of them is he superior. No one is. Others, then, who are more prone to see merely what is inferior, just as he himself is, would not accept his affected pre-eminence of position. They would think him queer, even laughable, which would make it even more important to Ralson to prove how miserable and inferior the human species was. How could he better do that than to show that mankind was simply a form of bacteria to other superior creatures which experiment upon them. And then his impulses to suicide would be a wild desire to break away completely from being a man at all; to stop this identification with the miserable species he has created in his mind. You

see?"

Grant nodded. "Poor guy."

"Yes, it is a pity. Had he been properly taken care of in childhood- Well, it is best for Dr. Ralson that he have no contact with any of the other men here. He is too sick to be trusted with them. You, yourself, must arrange to be the only man who will see him or speak to him. Dr. Ralson has agreed to that. He apparently thinks you are not as stupid as some of the others."

•5! Grant smiled faintly. "That is agreeable to me."

Vi "You will, of course, be careful. I would not discuss anything with him but his work. If he should volunteer information about his theories, which I doubt, confine yourself to something non-committal, and leave. And at all times, keep away anything that is sharp and pointed. Do not let him reach a window. Try to have his hands kept in view. You understand. I leave my patient in your care, Dr. Grant." "I will do my best, Dr. Blaustein."

For two months, Ralson lived in a comer of Grant's office, and Grant lived with him. Gridwork had been built up before the windows, wooden furniture was removed and upholstered sofas brought in. Ralson did his thinking on the couch and his calculating on a desk pad atop a hassock.

The "Do Not Enter" was a permanent fixture outside the office. Meals were left outside. The adjoining men's room was marked off for private use and the door between it and the office removed. Grant switched to an electric razor. He made certain that Ralson took sleeping pills each night and waited till the other slept before sleeping himself.

And always reports were brought to Ralson. He read them while Grant watched and tried to seem not to watch.

Then Ralson would let them drop and stare at the ceiling, with one hand shading his eyes.

"Anything?" asked Grant. 1 Ralson shook his head from side to side.

'; Grant said, "Look, I'll clear the building during the swing shift. It's important that you see some of the experimental jigs we've been setting 1 UP •" , They did so, wandering through the lighted, empty buildings like drifting

\* ghosts, hand in hand. Always hand in hand. Grant's grip was tight. But after each trip, Ralson would still shake his head from side to side. 1 Half a dozen times he would begin writing; each time there would be a ; few scrawls and then he would kick the hassock over on its side.

Until, finally, he began writing once again and covered half a page rapidly. Automatically, Grant approached. Ralson looked up, covering the sheet of paper with a trembling hand. He said, "Call Blaustein." "What?"

"I said, 'Call Blaustein.' Get him here. Now!" Grant moved to the telephone. Ralson was writing rapidly now, stopping only to brush wildly at his forehead with the back of a hand. It came away wet. He looked up and his voice was cracked, "Is he coming?" Grant looked worried. "He isn't at his office."

"Get him at his home. Get him wherever he is. Use that telephone. Don't play with it."

Grant used it; and Ralson pulled another sheet toward himself.

Five minutes later, Grant said, "He's coming. What's wrong? You're looking sick."

Ralson could speak only thickly, "No time- Can't talk--"

He was writing, scribbling, scrawling, shakily diagraming. It was as though he were driving his hands, fighting it.

"Dictatp!" urged Grant. "I'll write."

Ralson shook him off. His words were unintelligible. He held his wrist with his other hand, shoving it as though it were a piece of wood, and then he collapsed over the papers.

Grant edged them out from under and laid Ralson down on the couch. He hovered over him restlessly and hopelessly until Blaustein arrived.



Blaustein took one look. "What happened?"

Grant said, "I think he's alive," but by that time Blaustein had verified that for himself, and Grant told him what had happened.

Blaustein used a hypodermic and they waited. Ralson's eyes were blank when they opened. He moaned.

Blaustein leaned close. "Ralson."

Ralson's hands reached out blindly and clutched at the psychiatrist. "Doc. Take me back."

"I will. Now. It is that you have the force field worked out, no?"

"It's on the papers. Grant, it's on the papers."

Grant had them and was leafing through them dubiously. Ralson said, weakly, "It's not all there. It's all I can write. You'll have to make it out of that. Take me back, Doc!"

"Wait," said Grant. He whispered urgently to Blaustein. "Can't you leave him here till we test this thing? I can't make out what most of this is. The writing is illegible. Ask him what makes him think this will work."

"Ask him?" said Blaustein, gentry. "Isn't he the one who always knows?"

"Ask me, anyway," said Ralson, overhearing from where he lay on the couch. His eyes were suddenly wide and blazing.

They turned to him.

He said, "They don't want a force field. They! The experimenters! As long as I had no true grasp, things remained as they were. But I hadn't followed up that thought—that thought which is there in the papers—I hadn't followed it up for thirty seconds before I felt ... I felt- Doctor—"

Blaustein said, "What is it?"

Ralson was whispering again, "I'm deeper in the penicillin. I could feel myself plunging in and in, the further I went with that. I've never been in ... so deep. That's how I knew I was right. Take me away."

Blaustein straightened. "I'll have to take him away, Grant. There's no alternative. If you can make out what he's written, that's it. If you can't make it out, I can't help you. That man can do no more work in his field without dying, do you understand?"

"But," said Grant, "he's dying of something imaginary."

"All right. Say that he is. But he will be really dead just the same, no?"

Ralson was unconscious again and heard nothing of this. Grant looked at him somberly, then said, "Well, take him away, then."

Ten of the top men at the Institute watched glumly as slide after slide filled the illuminated screen. Grant faced them, expression hard and frowning.

He said, "I think the idea is simple enough. You're mathematicians and you're engineers. The scrawl may seem illegible, but it was done with meaning behind it. That meaning must somehow remain in the writing, distorted though it is. The first page is clear enough. It should be a good lead. Each one of you will look at every page over and over again. You're going to put down every possible version of each page as it seems it might be. You will work independently. I want no consultations."

One of them said, "How do you know it means anything, Grant?"

"Because those are Ralson's notes."

"Ralson! I thought he was—"

"You thought he was sick," said Grant. He had to shout over the rising hum of conversation. "I know. He is. That's the writing of a man who was nearly dead. It's all we'll ever get from Ralson, any more. Somewhere in that scrawl is the answer to the force field problem. If we can't find it, we may have to spend ten years looking for it elsewhere."

They bent to their work. The night passed. Two nights passed. Three nights—Grant looked at the results. He shook his head. "I'll take your word for it that it is all self-consistent. I can't say I understand it."

Lowe, who, in the absence of Ralson, would readily have been rated the best

nuclear engineer at the Institute, shrugged. "It's not exactly clear to me. If it works, he hasn't explained why."

"He had no time to explain. Can you build the generator as he describes it?"

"I could try."

"Would you look at all the other versions of the pages?"

"The others are definitely not self-consistent."

"Would you double-check?"

"Sure."

"And could you start construction anyway?"

"I'll get the shop started. But I tell you frankly that I'm pessimistic."

"I know. So am I." • i > ", i, ...

The thing grew. Hal Ross, Senior Mechanic, was put in charge of the actual construction, and he stopped sleeping. At any hour of the day or night, he could be found at it, scratching his bald head.

He asked questions only once, "What is it, Dr. Lowe? Never saw anything like it? What's it supposed to do?"

Lowe said, "You know where you are, Ross. You know we don't ask questions here. Don't ask again."

Ross did not ask again. He was known to dislike the structure that was being built. He called it ugly and unnatural. But he stayed at it.

Blaustein called one day.

Grant said, "How's Ralson?"

"Not good. He wants to attend the testing of the Field Projector he designed."

Grant hesitated, "I suppose we should. It's his after all."

"I would have to come with him."

Grant looked unhappier. "It might be dangerous, you know. Even in a pilot test, we'd be playing with tremendous energies."

Blaustein said, "No more dangerous for us than for you."

"Very well. The list of observers will have to be cleared through the Commission and the F.B.I., but I'll put you in."

Blaustein looked about him. The field projector squatted in the very center of the huge testing laboratory, but all else had been cleared. There was no visible connection with the plutonium pile which served as energy-source, but from what the psychiatrist heard in scraps about him—he knew better than to ask Ralson—the connection was from beneath.

At first, the observers had circled the machine, talking in incomprehensibles, but they were drifting away now. The gallery was filling up. There were at least three men in generals' uniforms on the other side, and a real coterie of lower-scale military. Blaustein chose an unoccupied portion of the railing; for Ralson's sake, most of all.

He said, "Do you still think you would like to stay?"

It was warm enough within the laboratory, but Ralson was in his coat, with his collar turned up. It made little difference, Blaustein felt. He doubted that any of Ralson's former acquaintances would now recognize him.

Ralson said, "I'll stay."

Blaustein was pleased. He wanted to see the test. He turned again at a new voice.

"Hello, Dr. Blaustein."

For a minute, Blaustein did not place him, then he said, "Ah, Inspector Darrity. What are you doing here?"

"Just what you would suppose." He indicated the watchers. "There isn't any way you can weed them out so that you can be sure there won't be any mistakes. I once stood as near to Klaus Fuchs as I am standing to you." He tossed his pocketknife into the air and retrieved it with a dexterous motion.

"Ah, yes. Where shall one find perfect security? What man can trust even his own unconscious? And you will now stand near to me, no?"

"Might as well." Darrity smiled. "You were very anxious to get in here,

weren't you?"

"Not for myself, Inspector. And would you put away the knife, please." Darrity turned in surprise in the direction of Blaustein's gentle head-gesture. He put his knife away and looked at Blaustein's companion for the second time. He whistled softly.

He said, "Hello, Dr. Ralson."

Ralson croaked, "Hello."

Blaustein was not surprised at Darrity's reaction. Ralson had lost twenty pounds since returning to the sanatorium. His face was yellow and wrinkled; the face of a man who had suddenly become sixty.

Blaustein said, "Will the test be starting soon?"

Darrity said, "It looks as if they're starting now."

He turned and leaned on the rail. Blaustein took Ralson's elbow and began leading him away, but Darrity said, softly, "Stay here, Doc. I don't want you wandering about."

Blaustein looked across the laboratory. Men were standing about with the uncomfortable air of having turned half to stone. He could recognize Grant, tall and gaunt, moving his hand slowly to light a cigarette, then changing his mind and putting lighter and cigarette in his pocket. The young men at the control panels waited tensely.

Then there was a low humming and the faint smell of ozone filled the air.

Ralson said harshly, "Look!"

Blaustein and Darrity looked along the pointing finger. The projector seemed to flicker. It was as though there were heated air rising between it and them. An iron ball came swinging down pendulum fashion and passed through the flickering area.

"It slowed up, no?" said Blaustein, excitedly.

Ralson nodded. "They're measuring the height of rise on the other side to calculate the loss of momentum. Fools! I said it would work." He was speaking with obvious difficulty.

Blaustein said, "Just watch, Dr. Ralson. I would not allow myself to grow needlessly excited."

The pendulum was stopped in its swinging, drawn up. The flickering about the projector became a little more intense and the iron sphere arced down once again.

Over and over again, and each time the sphere's motion was slowed with more of a jerk. It made a clearly audible sound as it struck the flicker. And eventually, it bounced. First, soggily, as though it hit putty, and then ringingly, as though it hit steel, so that the noise filled the place.

They drew back the pendulum bob and used it no longer. The projector could hardly be seen behind the haze that surrounded it.

Grant gave an order and the odor of ozone was suddenly sharp and pungent.

There was a cry from the assembled observers; each one exclaiming to his neighbor. A dozen fingers were pointing.

Blaustein leaned over the railing, as excited as the rest. Where the projector had been, there was now only a huge semi-globular mirror. It was perfectly and beautifully clear. He could see himself in it, a small man standing on a small balcony that curved up on each side. He could see the fluorescent lights reflected in spots of glowing illumination. It was wonderfully sharp.

He was shouting, "Look, Ralson. It is reflecting energy. It is reflecting light waves like a mirror. Ralson--"

He turned, "Ralson! Inspector, where is Ralson?"

"What?" Darrity whirled. "I haven't seen him."

He looked about, wildly. "Well, he won't get away. No way of getting out of here now. You take the other side." And then he clapped hand to thigh, fumbled for a moment in his pocket, and said, "My knife is gone."

Bkustein found him. He was inside the small office belonging to Hal Ross. It

led off the balcony, but under the circumstances, of course, it had been deserted. Ross himself was not even an observer. A senior mechanic need not observe. But his office would do very well for the final end of the long fight against suicide.

Blaustein stood in the doorway for a sick moment, then turned. He caught Darrity's eye as the latter emerged from a similar office a hundred feet down the balcony. He beckoned, and Darrity came at a run.

Dr. Grant was trembling with excitement. He had taken two puffs at each of two cigarettes and trodden each underfoot thereafter. He was fumbling with the third now.

He was saying, "This is better than any of us could possibly have hoped. We'll have the gunfire test tomorrow. I'm sure of the result now, but we've planned it; we'll go through with it. We'll skip the small arms and start with the bazooka levels. Or maybe not. It might be necessary to construct a special testing structure to take care of the ricochet problem."

He discarded his third cigarette.

A general said, "We'd have to try a literal atom-bombing, of course."

"Naturally. Arrangements have already been made to build a mock-city at Eniwetok. We could build a generator on the spot and drop the bomb. There'd be animals inside."

"And you really think if we set up a field in full power it would hold the bomb?"

"It's not just that, general. There'd be no noticeable field at all until the bomb is dropped. The radiation of the plutonium would have to energize the field before explosion. As we did here in the last step. That's the essence of it all."

"You know," said a Princeton professor, "I see disadvantages, too. When the field is on full, anything it protects is in total darkness, as far as the sun is concerned. Besides that, it strikes me that the enemy can adopt the practice of dropping harmless radioactive missiles to set off the field at frequent intervals. It would have nuisance value and be a considerable drain on our pile as well."

"Nuisances," said Grant, "can be survived. These difficulties will be met eventually, I'm sure, now that the main problem has been solved."

The British observer had worked his way toward Grant and was shaking hands. He said, "I feel better about London already. I cannot help but wish your government would allow me to see the complete plans. What I have seen strikes me as completely ingenious. It seems obvious now, of course, but how did anyone ever come to think of it?"

Grant smiled. "That question has been asked before with reference to Dr. Ralson's devices--"

He turned at the touch of a hand upon his shoulder. "Dr. Blaustein! I had nearly forgotten. Here, I want to talk to you."

He dragged the small psychiatrist to one side and hissed in his ear, "Listen, can you persuade Ralson to be introduced to these people? This is his triumph."

Blaustein said, "Ralson is dead." i, "What'"

"Can you leave these people for a time?" 5 "Yes . . . yes- Gentlemen, you will excuse me for a few minutes?"

He hurried off with Blaustein.

The Federal men had already taken over. Unobtrusively, they barred the doorway to Ross's office. Outside there were the milling crowd discussing the answer to Alamogordo that they had just witnessed. Inside, unknown to them, was the death of the answerer. The G-man barrier divided to allow Grant and Blaustein to enter. It closed behind them again.

For a moment, Grant raised the sheet. He said, "He looks peaceful." i "I would say-happy," said Blaustein.

• Darrity said, colorlessly, "The suicide weapon was my own knife. It was my negligence; it will be reported as such."

• "No, no," said Blaustein, "that would be useless. He was my patient and I am responsible. In any case, he would not have lived another week. Since he invented the projector, he was a dying man."

Grant said, "How much of this has to be placed in the Federal files? Can't we forget all about his madness?"

"I'm afraid not, Dr. Grant," said Darrity.

"I have told him the whole story," said Blaustein, sadly.

Grant looked from one to the other. "I'll speak to the Director. I'll go to the President, if necessary. I don't see that there need be any mention of suicide or of madness. He'll get full publicity as inventor of the field projector. It's the least we can do for him." His teeth were gritting.

Blaustein said, "He left a note."

"A note?"

Darrity handed him a sheet of paper and said, "Suicides almost always do. This is one reason the doctor told me about what really killed Ralson."

The note was addressed to Blaustein and it went:

"The projector works; I knew it would. The bargain is done. You've got it and you don't need me any more. So I'll go. You needn't worry about the human race, Doc. You were right. They've bred us too long; they've taken too many chances. We're out of the culture now and they won't be able to stop us. I know. That's all I can say. I know."

He had signed his name quickly and then underneath there was one scrawled line, and it said:

"Provided enough men are penicillin-resistant."

Grant made a motion to crumple the paper, but Darrity held out a quick hand.

"For the record, Doctor," he said.

Grant gave it to him and said, "Poor Ralson! He died believing all that trash."

Blaustein nodded. "So he did. Ralson will be given a great funeral, I suppose, and the fact of his invention will be publicized without the madness and the suicide. But the government men will remain interested in his mad theories. They may not be so mad, no, Mr. Darrity?"

"That's ridiculous, Doctor," said Grant. "There isn't a scientist on the job who has shown the least uneasiness about it at all."

"Tell him, Mr. Darrity," said Blaustein.

Darrity said, "There has been another suicide. No, no, none of the scientists. No one with a degree. It happened this morning, and we investigated because we thought it might have some connection with today's test. There didn't seem any, and we were going to keep it quiet till the test was over. Only now there seems to be a connection.

"The man who died was just a guy with a wife and three kids. No reason to die. No history of mental illness. He threw himself under a car. We have witnesses, and it's certain he did it on purpose. He didn't die right away and they got a doctor to him. He was horribly mangled, but his last words were 'I feel much better now' and he died."

"But who was he?" cried Grant.

"Hal Ross. The guy who actually built the projector. The guy whose office this is."

Blaustein walked to the window. The evening sky was darkening into starriness. He said, "The man knew nothing about Ralson's views. He had never spoken to Ralson, Mr. Darrity tells me. Scientists are probably resistant as a whole. They must be or they are quickly driven out of the profession. Ralson was an exception, a penicillin-sensitive who insisted on remaining. You see what happened to him. But what about the others; those who have remained in walks of life where there is no constant weeding out of the sensitive ones. How much

of humanity is penicillin-resistant?"  
"You believe Ralson?" asked Grant in horror.  
"I don't really know."  
Blaustein looked at the stars. Incubators?