

# *Astounding* SCIENCE FICTION

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## THE FIGURE

BY  
EDWARD GRENDON

Illustrated by Cartier

*Beauty is, naturally, a question of view-point. But any view-point will agree on technical skill, the high cultural development behind it—*

It's a funny sort of deal and I don't mind admitting that we're scared. Maybe not so much scared as puzzled or shocked. I don't know, but it's a funny'deal—. Especially in these days.

The work we have been doing is more secret than anything was during the war. You would never guess that the firm we work for does this kind of research. It's a very respectable outfit, and as I said, no one would ever guess that they maintained this lab, so I guess it's safe to tell you what happened. It looks like too big a thing to keep to ourselves anyhow, although of course it may mean nothing at all. You judge for yourself.

There are three of us who work here. We are all pretty highly trained in our field and get paid pretty well. We have a sign on our door that has nothing whatsoever to do with our work, but keeps most people away. In any case we leave by a private exit and never answer a knock. There's a private wire to the desk of the guy who hired us and he calls once in awhile, but ever since we told him that we were making progress he has more or less left us alone. I promised him—I'm chief here insofar as we have one—that I'd let him know as soon as we had something to report.

It's been a pretty swell setup. Dettner, Lasker, and myself, have got along fine. Dettner is young and is an electrical physicist as good as they make them. Studied at M.I.T., taught at Cal. Tech., did research for the Army, and then

came here. My own background is mostly bioelectrics. I worked at designing electroencephalographs for awhile, and during the war worked at Oak Ridge on nuclear physics. I'm a Jack of All Trades in the physics field. Lasker is a mathematician. He specializes in symbolic logic and is the only man I know who can really understand Tarski. He was the one who provided most of the theoretical background for our work. He says that the mathematics of what we are doing is not overly difficult, but we are held back by the language we think in and the unconscious assumptions we make. He has referred me to Korzybski's "*Science and Sanity*" a number of times, but so far I haven't had a chance to read it. Now I think I will. I *have* to know the meaning of our results. It's too important to let slide. Lasker and Dettner have both gone fishing. They said they would be back, but I'm not sure they will. I can't say I would blame them, but I've got to be more certain of what it means before I walk out of here for good.

We have been here over a year now. Ever since they gave me that final lecture on Secrecy at Oak Ridge, and let me go home. We have been working on the problem of time travel. When we took the job, they told us that they didn't expect any results for a long time, that we were on our own as far as working hours went, and that our main job was to clarify the problem and make preliminary experiments. Thanks to Lasker, we

went ahead a lot faster than either they or we had expected. There was a professional philosopher working here with us at first, He taught philosophy at Columbia and was supposed to be an expert in his field. He quit after two months in a peeve. Couldn't stand it when Lasker would change the logic we were working with every few weeks. He had been pretty pessimistic about the whole thing from the first and couldn't understand how it was possible to apply scientific methods to a problem of this sort.

I still don't understand all the theory behind what we've done. The mathematics are a bit too advanced for me, but Lasker vouches for them.

Some of the problems we had should be fairly obvious. For instance, you can't introduce the concept "matter" into space-time mathematics without disrupting the space-time and working with Newtonian space *and* time mathematics. If you handle an "object"—as we sense it as a curvature of space-time—as Einstein does, it's pretty hard to do much with it theoretically. Lasker managed that by using Einstein formulations and manipulating them with several brands of Tarski's non-Aristotelian logic. As I said, we did it, although Dettner and I don't fully understand the mathematics and Lasker doesn't understand the gadget we used to produce the electrical fields.

There had been no hurry at all in our work up to the last month. At that time the Army wrote Dett-

ner and myself and asked us to come back and work for them awhile. Neither of us wanted to refuse under the circumstances so we stalled them for thirty days and just twenty-two days later made our first test. The Army really wanted us badly and in a hurry and it took a lot of talking to stall them.

What the Army wanted us for was to help find out about the cockroaches. That sounds funny, but it's true. It didn't make the newspapers, but about a year after the New Mexico atom bomb test, the insect problem at the testing ground suddenly increased a hundredfold. Apparently the radiation did something to them and they came out in force one day against the control station. They finally had to dust the place with DDT to get rid of them.

Looking over the dead insects, all the government entomologists could say was that the radiation seemed to have increased their size about forty percent and made them breed faster. They never did agree whether it was the intense radiation of the blast, or the less intense, but longer continued radiation from fused sand and quartz on the ground.

New Mexico was nothing to Hiroshima and Nagasaki. After all, there are comparatively few "true bugs" in the desert and a great many in a Japanese city. About a year and a half after Japan got A-bombed, they really swarmed on both cities at the same time. They came out suddenly one

night by the millions. It's been estimated that they killed and ate several hundred people before they were brought under control. To stop them, MacArthur had his entire Chemical-Warfare Service and a lot of extra units concentrated on the plague spots. They dusted with chemicals and even used some gas. At that, it was four days before the bugs were brought under control.

This time the government experts really went into the problem. They traced the insect tunnels about ten feet down and examined their breeding chambers and what not. According to their reports,—all this is still kept strictly hush-hush by the Army, but we've seen all the data—the radiation seems to drive the insects down into the earth. They stay down for awhile and breed and then seem to have a "blind urge" to go to the surface. This urge "seems to affect the entire group made up of an immense number of connected colonies at the same time". That's a quote from their report. One other thing they mentioned is that there were large breeding chambers and some sort of communal life that—to their knowledge—had not been observed in these particular insects before. We told Lasker about it and showed him the reports. He was plenty worried, but he wouldn't say why.

Don't know why I wandered so far afield. I just wanted to explain that if this test wasn't successful, we would probably have to put things off for quite a while. We were interested in the beetle problem

as it not only has some interesting implications, but the effect of radiation on protoplasm is a hard nut to crack. However we had come so far on our time gadget that we wanted to finish it first. Well, we finished and tested it and now Dettner and Lasker are out fishing. As I said, they probably won't come back.

It was the day before yesterday that we made the final test. Looked at one way, we had made tremendous progress. Looked at another we had made very little. We had devised an electric field that would operate in the future. There were sixteen outlets forming the sides of a cube about four feet in diameter. When switched on, an electric field was produced which "existed" at

some future time. I know Lasker would say this was incorrect, but it gets the general idea over. He would say that instead of operating in "Here-Now", it operates in "Here-Then." He'd get angry every time we'd separate "space" and "time" in our talk and tell us that we weren't living in the eighteenth century.

"Newton was a great man," he'd say, "but he's dead now. If you talk as if it were 1750, you'll *think* and *act* as if it were 1750 and then we won't get anywhere. You use non-Newtonian formulations in your work, use them in everyday speech, too."

How far in the future our gadget would operate we had no way of knowing. Lasker said he would

not even attempt to estimate "when" the field was active. When the power was turned off, anything that was in the cube of forces would be brought back to the present space-time. In other words, we had a "grab" that would reach out and drag something back from the future. Don't get the idea we were sending something into the future to bring something back with it, although that's what it amounts to for all practical purposes. We were warping space-time curvature so that anything "Here-Then" would be something "Here-Now."

We finished the gadget at three a.m. Tuesday morning. Lasker had been sleeping on the couch while we worked on it. He had checked and rechecked his formulae and said that if we could produce the fields he'd specified, it would probably work. We tested each output separately and then woke him up. I can't tell you how excited we were as we stood there with everything ready. Finally Dettner said, "Let's get it done", and I pressed the start button.

The needles on our ammeters flashed over and back, the machine went dead as the circuit breakers came open, and there was an object in the cube.

We looked it over from all sides without touching it. Then the implications of it began to hit us. It's funny what men will do at a time like that. Dettner took out his watch, examined it carefully, as if he had never seen it before, and then went over and turned on the

electric percolator. Lasker swore quietly in Spanish or Portuguese, I'm not sure which. I sat down and began a letter to my wife. I got as far as writing the date and then tore it up.

What was in the cube—it's still there, none of us have touched it—was a small statue about three feet high. It's some sort of metal that looks like silver. About half the height is pedestal and half is the statue itself. It's done in great detail and obviously by a skilled artist. The pedestal consists of a globe of the Earth with the continents and islands in relief. So far as I can determine it's pretty accurate, although I think the continents are a little different shape on most maps. But I may be wrong. The figure on top is standing up very straight and looking upwards. It's dressed only in a wide belt from which a pouch hangs on one side and a flat square box on the other. It looks intelligent and is obviously representing either aspiration or a religious theme, or maybe both. You can sense the dreams and ideals of the figure and the obvious sympathy and understanding of the artist with them. Lasker says he thinks the statue is an expression of religious feeling. Dettner and I both think it represents aspirations: *Per adra ad astra* or something of the sort. It's a majestic figure and it's easy to respond to it emphatically with a sort of "upward and onward" feeling. There is only one thing wrong. The figure is that of a beetle.

THE END.