

Report on "Grand Central Terminal"

By Leo Szilard
Professor of Biophysics

YOU CAN IMAGINE how shocked we were when we landed in this city and found it deserted. For ten years we were traveling through space, getting more and more impatient and irritable by our enforced idleness; and then, when we finally land on the earth, it turns out—as you have undoubtedly heard—that all life is *extinct* on this planet.

The first thing for us to do was, of course, to find out how this came to pass and to learn whether the agent which destroyed life—whatever it may have been—was still active and perhaps endangering our own lives. Not that there was very much that we could do to protect ourselves, but we had to decide whether we should ask for further expeditions to be sent here or should advise against them.

At first we thought we were confronted with an insoluble enigma. How could any virus or bacterium kill *all* plants and *all* animals? Then, before a week had passed, one of our physicists noticed—quite by accident—a slight trace of radioactivity in the air. Since it was very weak, it would not in itself have been of much significance, but, when it was analyzed, it was found to be due to a

peculiar mixture of quite a large number of *different* radioactive elements.

At this point, Xram recalled that, about five years ago, mysterious flashes had been observed on the earth (all of them within a period of one week). It occurred to him that perhaps these flashes had been uranium explosions and that the present radioactivity had perhaps originated in those explosions five years ago and had been initially strong enough to destroy life on the planet.

This sounded pretty unlikely indeed, since uranium is not in itself explosive, and it takes quite elaborate processing to prepare it in a form in which it can be detonated. Since the earth-dwellers who built all these cities must have been rational beings, it is difficult to believe that they should have gone to all this trouble of processing uranium just in order to destroy themselves.

But subsequent analysis has in fact shown that the radioactive elements found in the air here are precisely the same as are produced in uranium explosions and also that they are mixed in the ratio which you would expect had they originated five years

ago as fission products of uranium. This can hardly be a chance coincidence, and so Xram's theory is now generally accepted up to this point.

When he goes further, however, and attempts to explain why and how such uranium explosions came about, I am unable to follow him any longer. Xram thinks that there had been a war fought between the inhabitants of two continents, in which both sides were victorious. The records show, in fact, that the first twenty flashes occurred on the Eurasic continent and were followed by five (much larger) flashes on the American continent, and therefore, at first, I was willing seriously to consider the war theory on its merits.

I thought that perhaps these two continents had been inhabited by *two different* species of earth-dwellers who were either unable or unwilling to control the birth rate and that this might have led to conditions of overcrowding, food shortage, and to a life-and-death struggle between the two species. But this theory had to be abandoned in the face of two facts: (1) the skeletons of earth-dwellers found on the Eurasic continent and on the American continent belong to the *same* species and (2) skeleton statistics show that no conditions of overcrowding existed on either continent.

In spite of this, Xram seems to stick to his war theory. The worst of it is that he is now basing all his arguments on a single, rather puzzling but probably quite irrelevant observation recently made in our study of "Grand Central Terminal."

When we landed here, we did not know where to begin our investigations, and so we picked one of the largest buildings of the city as the first object of our study. What its name "Grand Central Terminal" had meant we do not know, but there

is little doubt as to the general purpose which this building had served. It was part of a primitive transportation system based on clumsy engines which ran on rails and dragged cars mounted on wheels behind them.

For over ten days now we have been engaged in the study of this building and have uncovered quite a number of interesting and puzzling details.

Let me start with an observation which I believe we have cleared up, at least to my own satisfaction. The cars stored in this station were labeled—we discovered—either "Smokers" or as "Nonsmokers," clearly indicating some sort of segregation of passengers. It occurred to me right away that there may have lived in this city two strains of earth-dwellers, a more pigmented variety having a dark or "smoky" complexion, and a less pigmented variety (though not necessarily albino) having a fair or "non-smoky" complexion.

All remains of earth-dwellers were found as skeletons, and no information as to pigmentation can be derived from them. So at first it seemed that it would be difficult to obtain confirmation of this theory. In the meantime, however, a few rather spacious buildings were discovered in the city which must have served as some unknown and rather mysterious purposes. These buildings had painted canvases in frames, fastened to the walls of their interior—both landscapes and images of earth-dwellers. And we see now that the earth-dwellers fall, indeed into *two* classes—those whose complexion shows strong pigmentation (giving them a smoky look) and those whose complexion shows only weak pigmentation (the nonsmoky variety). This is exactly as expected.

I should perhaps mention at this point that a certain percentage of the

images disclose the existence of a third strain of earth-dwellers. This strain has in addition to a pair of hands and legs also a pair of wings, and apparently *all of them* belonged to the less pigmented variety. None of the numerous skeletons so far examined seems to have belonged to this winged strain, and I concluded therefore that we have to deal here with images of an extinct variety. That this view is indeed correct can no longer be doubted, since we have determined that the winged forms are *much more frequently found among the older paintings than among the more recent paintings*.

I cannot of course describe to you here *all* the puzzling discoveries which we made within the confines of the "Grand Central Terminal," but I want to tell you at least about the most puzzling one, particularly since Xram is basing his war theory on it.

This discovery arose out of the investigation of an insignificant detail. In the vast expanse of the "Grand Central Terminal" we came upon two smaller halls located in a rather hidden position. Each of these two halls (labeled "men" or "women") contains a number of small cubicles which served as temporary shelter for earth-dwellers while they were depositing their excrements. The first question was how did the earth-dwellers locate these hidden depositories within the confines of "Grand Central Terminal."

An earth-dweller moving about at random within this large building would have taken about one hour (on the average) to stumble upon one of them. It is, however, possible that the earth-dwellers located the depositories with aid of olfactory guidance, and we have determined that if their sense of smell had been about thirty to forty times more sensitive than the rudimentary sense of smell of

our own species, the average time required would be reduced from one hour to about five or ten minutes. This shows there is no real difficulty connected with this problem.

Another point, however, was much harder to understand. This problem arose because we found that the door of each and every cubicle in the depository was locked by a rather complicated gadget. Upon investigation of these gadgets it was found that they contained a number of round metal disks. By now we know that these ingenious gadgets barred entrance to the cubicle until an additional disk was introduced into them through a slot; at that very moment the door became unlocked, permitting access to the cubicle.

These "disks" bear different images and also different inscriptions which, however, all have in common the word "Liberty." What is the significance of these gadgets, the disks in the gadgets and the word "Liberty" on the disks?

Though a number of hypotheses have been put forward in explanation, consensus seems to veer toward the view that we have to deal here with a ceremonial act accompanying the act of deposition, similar perhaps to some of the curious ceremonial acts reported from the planets Sigma 25 and Sigma 43. According to this view, the word "Liberty" must designate some virtue which was held in high esteem by the earth-dwellers or else their ancestors. In this manner we arrive at a quite satisfactory explanation for the sacrificing of disks immediately preceding the act of deposition.

But why was it necessary to make sure (or, as Xram says, to enforce) by means of a special gadget, that such a disk was in fact sacrificed in each and every case? This too can be explained if we assume that the earth-

dwellers who approached the cubicles were perhaps driven by a certain sense of urgency, that in the absence of the gadgets they might have occasionally forgotten to make the disk sacrifice and would have consequently suffered pangs of remorse afterward. Such pangs of remorse are not unknown as a consequence of omissions of prescribed ceremonial performances among the inhabitants of the planets Sigma 25 and Sigma 43.

I think that this is on the whole as good an explanation as can be given at the present, and it is likely that further research will confirm this view. Xram, as I mentioned before, has a theory of his own which he thinks can explain everything, the disks in the gadgets as well as the uranium explosions which extinguished life.

He believes that these disks were given out to earth-dwellers as rewards for services. He says that the earth-dwellers were *not* rational beings and that they would not have collaborated in co-operative enterprises without some special incentive.

He says that, by barring earth-dwellers from depositing their excrements unless they sacrificed a disk on each occasion, they were made eager to acquire such disks and that the desire to acquire such disks made it possible for them to collaborate in co-operative efforts which were necessary for the functioning of their society.

He thinks that the disks found in the depositories represent only a special case of a more general principle and that the earth-dwellers probably had to deliver such disks not only prior to being given access to the depository but also prior to being given access to food, etc.

He came to talk to me about all this a couple of days ago; I am not sure that I understood all that he

said, for he talked very fast, as he often does when he gets excited about one of his theories. I got the general gist of it though, and what he says makes very little sense to me.

Apparently, he has made some elaborate calculations which show that a system of production and distribution of goods based on a system of exchanging disks cannot be stable but is necessarily subject to great fluctuations vaguely reminiscent of the manic-depressive cycles of the insane. He goes as far as to say that in such a depressive phase war becomes psychologically possible even within the same species.

No one is more ready than I to admit that Xram is brilliant. His theories have invariably been proved to be wrong, but so far all of them had contained at least a grain of truth. In the case of his present theory the grain must be a very small grain indeed, and moreover, this once I can *prove* that he is wrong.

In the last few days we made a spot check of ten different lodging houses of the city, selected at random. We found a number of depositories but not a single one that was equipped with a gadget, containing disks—not in any of the houses which we checked so far. In view of this evidence, Xram's theory collapses.

It seems now certain that the disks found in the depositories at "Grand Central Terminal" had been placed there as a ceremonial act. Apparently such ceremonial acts were connected with the act of deposition *in public places* and in public places only.

I am glad that we were able to clear this up in time, for I should have been sorry to see Xram make a fool of himself by including his theory in the report. He is a gifted young man, and in spite of all the non-sensical ideas he can put forward at the drop of a hat, I am quite fond of him.

May 11, 1948

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