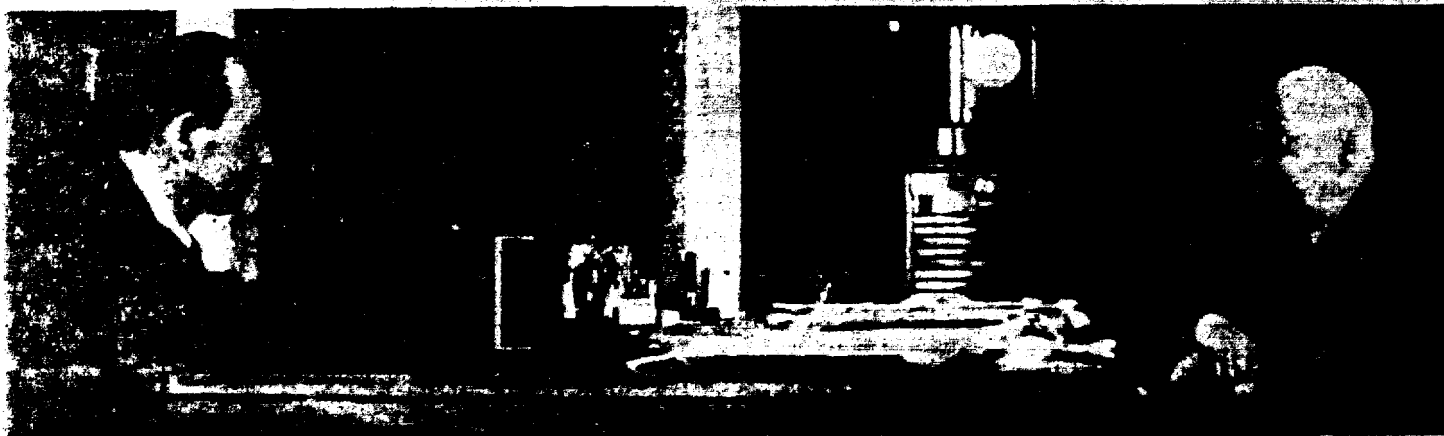


# THE BIG



*TRUE Correspondent Lloyd Mallan (shown above in an interview with Prof. Alexander Mikhailov, leading Soviet astronomer) is a veteran science writer/reporter, the author of numerous scientific books. Armand Spitz, head of the U.S. Moonwatch program calls Mallan "a superb observer, analyst and interpreter. . ." Dr. Fred Singer, designer of the first reusable earth satellite, introduces Mallan as "a science writer of great talent." Andrew Haley, president of the International Astronautical Federation, says of Mallan: "He is one of the truly great researchers. . ."*

## By LLOYD MALLAN

**O**n Friday, January 2, 1959, the Soviet Union announced that it had successfully launched a rocket toward the moon. The Russians also claimed that this rocket, which they dubbed "Lunik," subsequently went into orbit around the sun.

This was a monumental triumph of propaganda. In one shattering blow, it wiped out the effects on world opinion of three great American achievements: the two Pioneer rockets that had nosed farther into space than anything previously made by man, and the delicately instrumented Atlas satellite that had opened a new era of long-distance communications. The world was agog. U.S. scientists writhed in chagrin and admiration. President Eisenhower himself, in a heroic show of sportsmanship, offered the Kremlin his genuine congratulations.

As for me, I was stunned.

In those first wild hours after the Russian announcement, I walked around in a nightmare. I was faced with a clearcut choice between two fantastic propositions. Neither seemed acceptable, but somehow, I had to choose.

The first proposition was that something was wrong with me, that in some unfathomable way I had been led into a colossal error of judgment. The second proposition

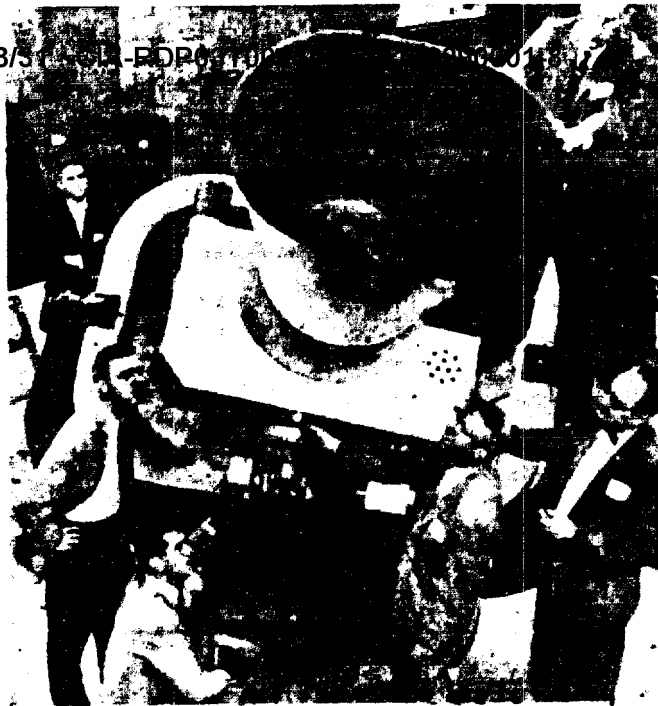
was, simply, that the Russian moon rocket did not exist.

A few months before, I had traveled 14,000 miles through Russia on a scientific reporting expedition. I had talked to 24 of the top Soviet scientists—far more, I'm told, than any other Western journalist has ever been lucky enough to reach. I had seen major Soviet universities, research centers, observatories. Seemingly eager to have me take home a glowing report of their progress, the Russians had proudly shown me the cream of their technological achievements. I had looked and listened carefully. I had formed conclusions, tested them and re-tested them.

And I had come out of Russia with the dead, flat certainty that the United States was immeasurably far ahead in space technology—that, for one thing, Russia had no effective intercontinental ballistic missile; and that, for another, the U.S. would beat Russia to the moon without half trying.

But here I stood on the evening of January 2, Russia's epic announcement ringing loudly and mockingly in my ears. I poured myself a drink and sat down. I combed back through the notes and tape recordings and photographs and memories of my Russian journey. But no matter how I sifted and re-evaluated, I couldn't make it add up. Every-

# RED LIE



Left, Alla Mashevich, leading lady of Soviet astronomy, watches an aide demonstrate best Russian aerial camera for Author Mallan. Compared to \$100,000 U.S. tracking cameras (above—which can photograph a golf ball at 1,000 miles) the best Russian satellite tracking equipment appeared primitive.

**This qualified observer, after 14,000 miles behind the Iron Curtain says:**

1. The Soviet Union's first man-made planet, "Lunik," does not exist and never did.
2. The Russians do not have any ICBMs, the long-distance terror missile with which Khrushchev has threatened this country.

thing I'd seen and heard in Russia argued against the alleged fact of Lunik. The scientific community which I had studied in that enigmatic land was not capable—simply not capable—of producing any such thing.

It was a hard concept to grasp, both intellectually and emotionally. But this was it: The Russians did not fire a rocket past the moon on January 2, 1959. If they fired anything, it failed to reach the distances achieved by the U.S. Pioneers. The Lunik, in short, was a coolly insolent, magnificent, international hoax.

I couldn't just let the incredible thought ferment in my brain, of course. I went to Washington, talked with military men and intelligence officers in the Pentagon. I visited Project Space Track, the Air Force installation in Massachusetts that collects and correlates tracking data from all over the Free World. I telephoned major tracking stations. I talked with scientists.

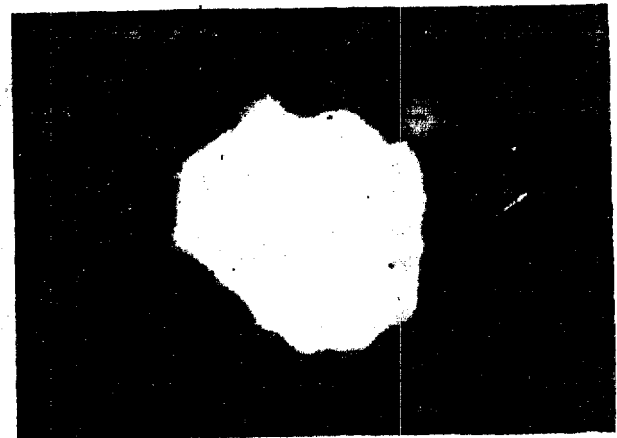
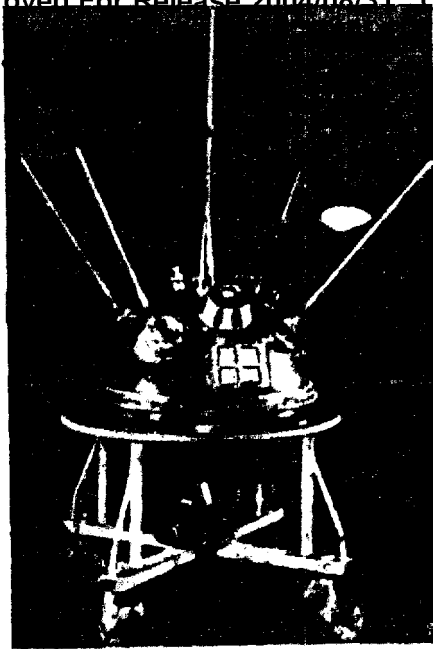
Not one of them would make the flat statement that he had heard a signal from Lunik. Officially, the U.S. was acknowledging the existence of Lunik. Unofficially and privately, the wet cold edge of doubt was beginning to seep into some clever minds.

Slowly, this doubt emerged into the open. Puzzled little

essays began to appear in newspapers. Syndicated columnist Fulton Lewis, Jr., for instance, wrote on January 21 that "intelligence sources" were questioning Russia's veracity. An editor of the magazine *Electronic News* ran an exhaustive probe of the affair through correspondents around the world; ended convinced that no Lunik exists. He couldn't print his conviction, however; his publisher feared repercus-

**PRESIDENT EISENHOWER:**  
"We seem very prone to give 100% credence to some statement of the Soviets, if it happens to touch upon our own anxieties. . . Apparently they are believed all around the world and too implicitly."





Russians say this (left) is Lunik and white splotch (above) is rocket's sodium flare. Author Mallan brands both Russian-released photographs as fakes.

sions, ordered merely another vaguely puzzled essay.

These men are on the trail of the Big Red Lie, but unfortunately they must piece the story together from shadows on this side of the Iron Curtain. There is virtually no more chance of getting any useful leads inside Russia, for the Kremlin is now undoubtedly on guard to protect its lie. I was lucky enough, though, to get the story *before* Lunik. I saw Russia and talked to Russian scientists at a time when there was no Lunik hoax to protect.

In my notes and pictures and tape recordings there is, I submit, solid evidence that no such sun-orbiting rocket—and no effective Russian ICBM—could or does exist.

I arrived in Russia one year ago this month. In my luggage were letters to top Soviet scientists from their counterparts in U.S. science—men such as physicist Dr. S. Fred Singer of the University of Maryland, the man who first seriously proposed an earth satellite and showed that the idea was feasible. These letters asked the Russians to cooperate with me, identified me as a trained scientific observer and author of scientific books, and stated my mission as that of bringing home an objective and, pre-

sumably flattering report on the state of Soviet science.

The whole idea of this mission sat well with the Russians, for they are politically committed to brag. To a huge extent, the success of Communism depends on the success of Communist propaganda in winning the world's admiration. From Premier Khrushchev down to the lowliest news paper hack, Russians lose no opportunity to tell the world of their every achievement. I fitted into this effort very nicely. Here I was: an American science journalist, all starry-eyed, eager to add my voice to the admiring chorus. I really was. As I entered Russia that spring, I was fully prepared to be overwhelmed by an impression of tremendous technological progress.

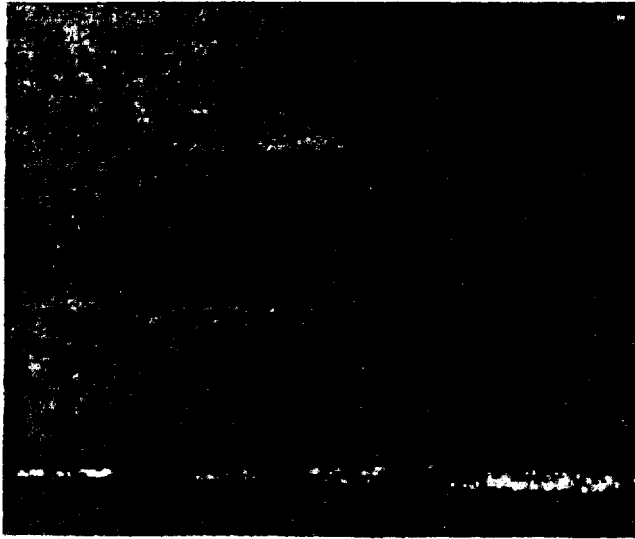
I let the Russians know this, and they welcomed me. I have no other explanation for the fact that I was allowed to talk with so many key scientists, to see so much of what previously had been obscured. American news correspondents whom I met in Moscow gaped in disbelief when I showed them the list of Russians I planned to interview. They told me that they rarely, if ever, get to see a Soviet scientist of any note. Most of their science news is spooned out to them by Soviet press bureaus. It isn't hard to guess why: these are hard digging reporters, and the Kremlin fears them. I, on the other hand, was billed as a man so full of awe and admiration that I'd swallow whatever was handed me.

Intourist, the Soviet government travel bureau, assigned an intelligent, moderately pretty girl named Natasha as my interpreter and guide. I told her that the first man I wanted to see was Prof. Leonid Sedov, head of the Permanent Interdepartmental Commission on Interplanetary Communications (i.e., space travel) of the Soviet Academy of Sciences. As over-all boss of the Russian space program, Sedov had two things that I needed badly: (1) the locations and phone numbers of other important scientists, and (2) the power to help me, or not help me, get in touch with them. There are no phone books available to the public in Russia, and it is very, very hard to track down key men without help. Hard? Impossible.

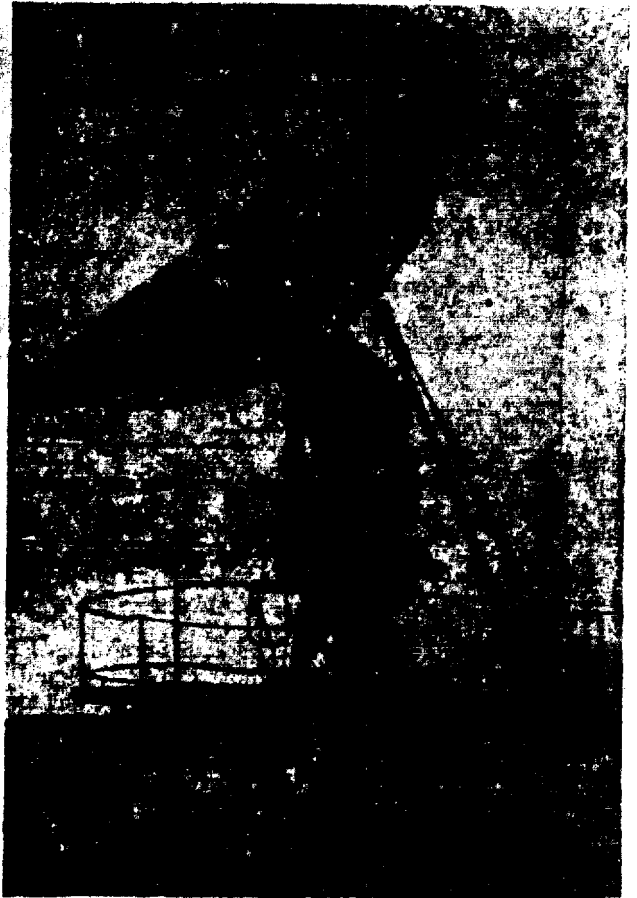
Sedov, a big man with thick rimless glasses, was as obliging as a salesman with a hot prospect. I asked if I could look in on key research projects. Of course I could. Could you look in on key research projects of the Russian space program? Cer-



GENERAL LESLIE GROVES, former chief of the Manhattan Project: "I have always been skeptical of the reports we receive on Russian progress in scientific engineering and will remain so until there is free access across the Iron Curtain."



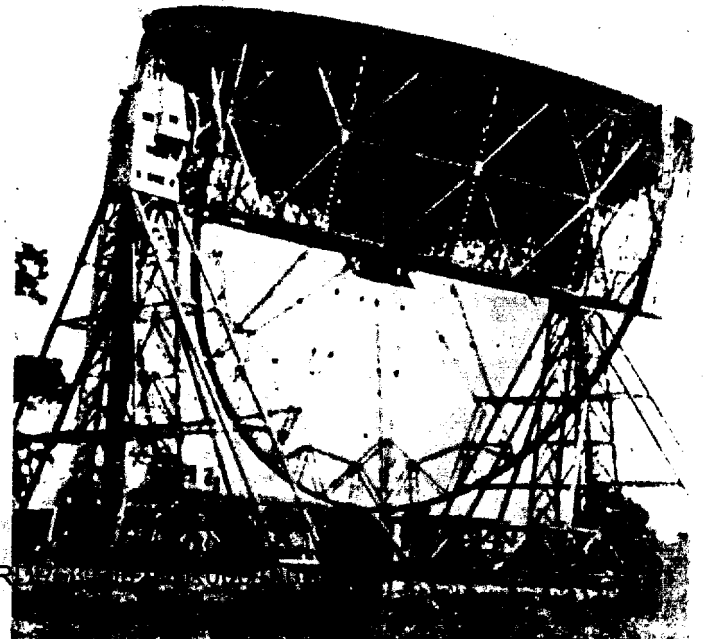
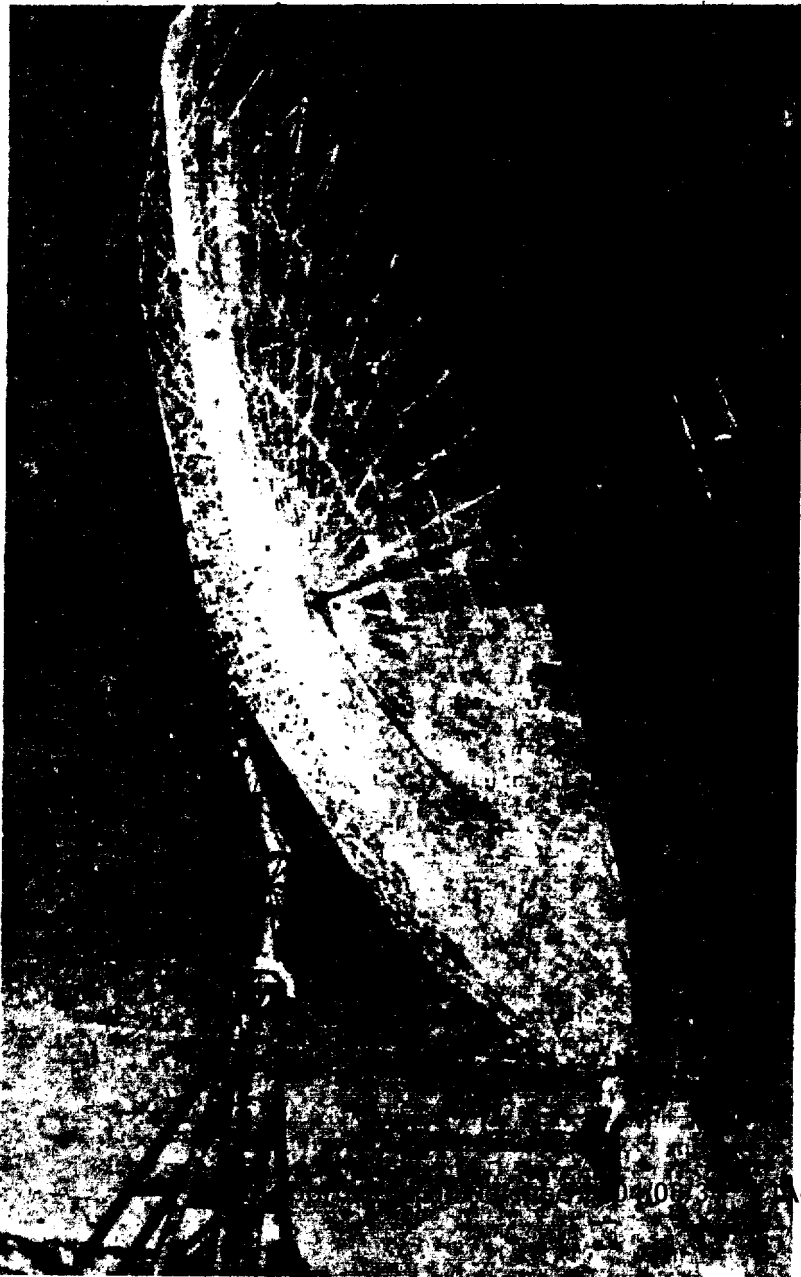
Amateur photographer in Scotland took this picture of a light in the sky after Lunik "launching." London papers said bright area might be a flare, but experts disagree.

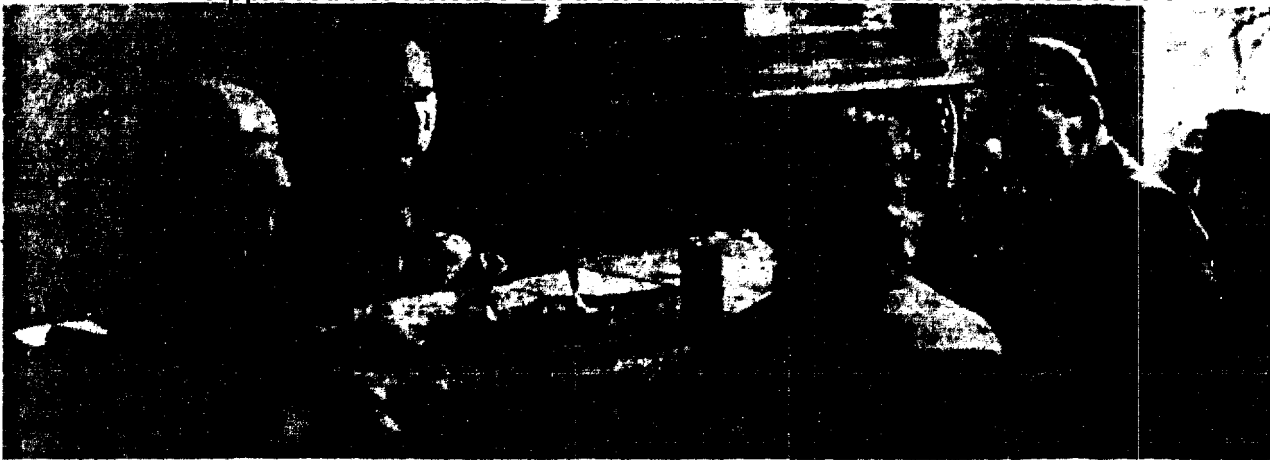


Small Russian radio telescopes such as this were said to have picked up signals "loud and clear" from Lunik, whereas ...

... giant U.S. Air Force instruments like this one (left) had no success in locating any trace of the fugitive Red rocket.

Lunik mystery deepened when world's largest radio scope at Jodrell Bank (below) reported failure to track rocket.





Author Mallan, right, and girl interpreter chat with astrophysicist Prof. Gleb Chebotarev (second from left) and aide.

family. Could I photograph rockets? Sure thing. I handed him a list of the top men I hoped to visit. Would he tell me where these people were and smooth the way for me to see them? He nodded amicably, jotting reminders to himself in a notebook. It could all be arranged. No problem.

Obviously, then, the Russians intended to show me things, send me reeling back to my hotel dazzled by scenes of mighty rockets and pioneering experiments. Mentally, I shrugged. It was an acceptable bargain. If they wanted to put on a show for me, I'd give it honest reviews when I got home.

But almost as soon as the curtain went up, I sensed that something was wrong.

One of my key interviews was with a man who, as far as

I know, had never before talked with a Western reporter: Prof. Gleb Chebotarev, director of the Institute of Theoretical Astronomy in Leningrad. Chebotarev is one of Russia's top mathematical astronomers. In the months before I'd come to Russia, he had been widely touted in the Soviet press as the head of "Project Boomerang," a planned effort to send a rocket around the moon. According to these reports, Project Boomerang was well along; the Russian moon rocket would be launched quite soon.

Chebotarev was a bespectacled, amiable, middle-aged man; he looked the way astronomers look in the movies. I asked him how close his project was to its goal.

He shrugged. "I cannot say," he said. "I have not yet been approached by the engineers."

Trying not to look startled, I asked: "At any rate, your project is being seriously considered for future use?"

"Right now this is only theoretical work."

"You mean to say that no engineers have read your calculations and at least commented on them?"

Chebotarev smiled. "If they have, they have not let me know. I do not think they believe in my sanity."

It was a shock. All along, I'd pictured the Boomerang project as a missile center alive with busy men, designs being drawn, components arriving, maybe a launching pad being made ready. Instead, it turned out to be a middle-aged professor in an ivory tower. The propagandists had grabbed a little weed of fact, held a magnifying glass up to it and made it look like a tall tree.

I was badly shaken, but I tried to hide it. I went on with more questions. Before coming to talk with Chebotarev I'd read over some newspaper clippings on him, and I now remembered a fragment from the *New York Times*. The *Times* was quoting from a *Moscow News* story on Boomerang: "The increase of a rocket's speed from the 18,000 mph already achieved (by the Sputniks) to 25,000 mph so that it can escape the earth's gravitational pull is 'perfectly possible' at the present stage of technical development."

I asked Chebotarev about the problem of speed. Said he: "It will be a very great jump from eight to eleven kilometers a second. I do not know when it will be possible for them to do it."

Another shock. I sat there and looked at Chebotarev, trying to figure it out. He wasn't lying to me. Why should he? When the whole Communist propaganda machine was bragging raucously about the coming moon shot, why



**GENERAL NATHAN F. TWINING**, Chairman of the Joint Chiefs of Staff, commenting on Russian Defense Minister Malinovsky's assertion that Soviet ballistic rockets can pinpoint their targets has said flatly that he doesn't believe the Red claim.



**GENERAL BERNARD SCHRIEVER**, chief of the Air Force ballistic missile division, when asked whether he accepted Russian boasts about ICBMs, said: "I don't believe the Soviet Union now has an operational long-range missile ready."

should this one scientist suddenly try to play it down? If he was going to lie, he'd have lied in the other direction; he'd have told me how the rocket was poised and ready to shoot.

I could only conclude he was telling the truth as he knew it. He was a scientist. Scientists are rigorously trained against falling into the trap of exaggeration; they make statements cautiously. They know that, in their business, a man's professional reputation can collapse overnight if he's caught saying misleading things about his work.

Then I wondered: wouldn't Sedov have foreseen this? Sedov, or whoever else was masterminding my journey? Wouldn't he have realized that, in sending me to see scientists, he was sending me to see truth? Maybe not. Maybe he believed the propaganda himself, or maybe he felt certain that the scientists, being Russians, would loyally back up the Big Red Lie.

Or maybe, I thought, maybe there's a moon shot under wraps somewhere, and Chebotarev just doesn't know about it. But this didn't stand up. One of Russia's top astronomers, a well-known expert in celestial mechanics, kept in the dark about Soviet space activities?

I put out another probe. I remembered reading an article in *Znaniye-Sila* (translation: Knowledge is Power), a leading Soviet science magazine. The article dealt with Chebotarev's lab, and it said in part: "By means of huge automatic computing machines, this Institute is engaged in calculating the precise movements of the earth, moon, and planets..."

I said to Chebotarev: "Perhaps you can give me some information regarding your electronic computers?"

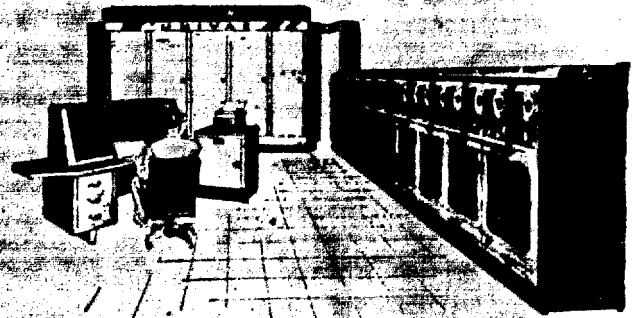
Chebotarev said: "I am not acquainted with these machines. In my kind of work the electronic machines are not needed. All my calculations are made by another professor with the help of small electrical calculators."

It was unbelievable. Not *Znaniye-Sila's* exaggeration, which was remarkable enough, but the fact itself. In the U.S. today, electronic computers are 100% essential both to theoretical astronomy and to the nuts-and-bolts work of space travel. Even small research shops use computers—scramble for them, rent them part-time when there's no other way to get them. Yet one of Russia's best astrophysicists is "not acquainted with these machines."

I wanted to read more about Soviet computers. I knew that a good place to do so was at Moscow's Technical Bookstore, the one place in the city where scientists, technical people and students can buy their specialized books. In this store, I reasoned, I'd find descriptions of the most up-to-date Soviet equipment.

I sneaked in without Natasha, for I didn't want to give her too many clues to the direction of my thinking. I have only a minimum knowledge of the Russian language, but mathematical and scientific symbols—and, of course, pictures—know no language barriers. In books with 1957 and 1958 publication dates, I found diagrams and photos of primitive electronic machines such as those used in America back in the early 1950's. In the fast-moving computer business, six or seven years add up to a long, long time. Compared to what IBM and Remington Rand are producing today, those old machines were [Continued on page 102]

**EDITOR'S NOTE:** Next month TRUE Correspondent Lloyd Mallan will reveal Other Big Lies which he discovered in Russia. Be sure to read his revelations on the myths of Soviet air power.



# UNIVAC

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Remington Rand Univac ad ran October 24, 1955.

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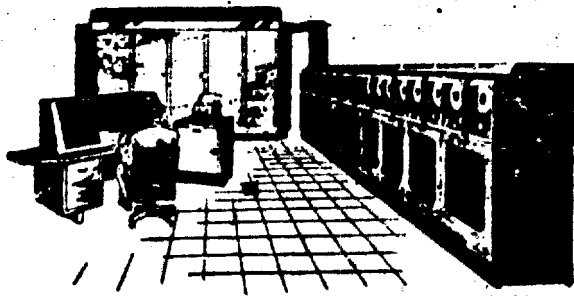
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Red Star used retouched drawing, August 23, 1956.



ORDINATEUR SOVIETIQUE (d'après l'Étoile Rouge - 23 Août 1956)

French publication later accepted Soviet fakery.

An interesting example of Russian techniques of deception is documented above. The drawing of a Remington Rand Univac computer (top) appeared as part of a full-page advertisement in the international edition of *Time*. Ten months later, the same drawing, now minus the brand names at the top of the computer, appeared in the Russian Army paper *Red Star* in conjunction with an article on Soviet progress in the computer field. As has so often happened before and since, the lie found some takers: a French technical journal, *Review of Automation*, soon picked up the *Red Star* story, faked picture and all, and passed it along as fact for the rest of the too-trusting world to believe.

not a fresh-ground sirloin strip steak with mashed potatoes. Approved for R  
 A hypochondriac, thinks he has stomach trouble. About once a year, when Mrs. Murray has snap beans, Murray balances his diet by reaching over to her plate and taking one. But he gets a lot of fruit and dairy products, for he eats an extra-large chunk of apple pie with two scoops of rich ice cream for dessert.

Things haven't been too good in the oil business lately. Due to unsettled conditions in the Middle East, the big companies are pumping all the oil they can get out of those wells while the getting is good. The world is flooded with oil. To hold up the price, most of the petroleum-producing states limit the production of existing wells. In Texas, well owners are allowed to take only that amount of oil out of each well that they could get in eight 8-hour days. Most operators run out all the allowable time in one continuous three-day operation, which means that the wells are closed down tight 90 per cent of the time. This is hardly a profitable way for anyone to do business.

At present, therefore, you hear less criticism of the provision in the income tax laws which gives the oil producer a 27.5 percent depletion allowance. On the surface this allowance looks like a whale of a windfall for the oil producer. Under its terms a busy producer with an income of millions of dollars a year can get by without paying any tax at all. He sticks \$275,000 per million in his pocket tax-free, and uses up the rest drilling for new oil—which, if he hits it, will again be 27.5 per cent tax free.

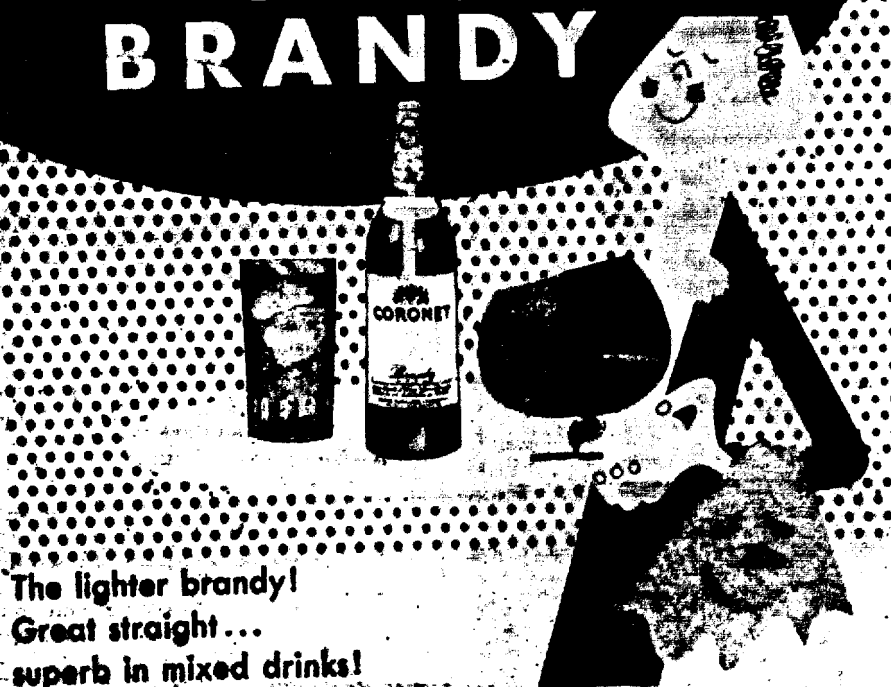
It's hard for a person making a lot less dough and coughing up a lot more in income tax to work up much sympathy for the oil man. However, there are extenuating circumstances. For one thing, as Jeff Davis, oil editor of the *New Orleans Times-Picayune* points out, oil isn't the only industry with a depletion. If you deal in certain types of gravel in New York State, for example, you get a 25 percent depletion allowance. Some 30-odd other minerals carry depletion allowances. Coal producers get additional tax benefits on top of that.

But the most important reason for the oil allowance—even though it makes life pretty soft for the big companies—is to stimulate the independent wildcatter. Without it a man would be a fool to wildcat for oil, especially under today's conditions. And the nation needs the wildcaters, for it is they who find the great majority of the half-billion barrels of new oil reserves discovered in this country each year. The big companies have too much sense to gamble away their stockholders' money in wildcatting.

Murray is going to keep right on, however. It's in his blood. Further, a recent development has taken place. Murray has completed a Dale Carnegie success course.

"I'm not afraid to make a speech any more," he told me proudly. "I almost wish I was busted again, so I could try it out on somebody. Approved for R

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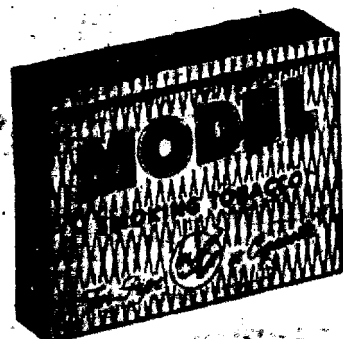


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## The Big Red Lie

(Continued from page 43)

slow, not very versatile, and hounded by frequent breakdowns. I got the definite impression—and Chebotarev's statement backed me up—that even these machines were not used widely in Russia.

Maybe Russia is keeping its new computers under wraps. I thought. But this didn't make much sense. Keep them from Chebotarev? Keep them from the Technical Bookstore?

I was deeply puzzled. Without high-speed computers, you can't advance very fast in space technology. Maybe you can slam a satellite into a half-baked orbit by bolting a few big rockets together, aiming them at the sky, and hoping. But you can't quickly progress from there to the delicately instrumented, perfectly controlled craft that will land on the moon or pass close to it. You can't quickly progress to new, more powerful kinds of propulsion. Millions upon millions of calculations are necessary. Take nuclear propulsion. Both IBM and Remington Rand are now building for the U.S. Atomic Energy Commission machines that will multiply a pair of 15-digit numbers in millionths of a second. These machines will do as much work in a day as the fastest existing computers can do in a month—and even so, says AEC, don't expect results too soon.

Next, I went to Moscow's Polytechnic Museum, the most important scientific showplace in Russia. In a special room devoted to progress in electronics, I found a computer that U.S. scientists would not have been very proud of even back in 1952. This was the Polytechnic

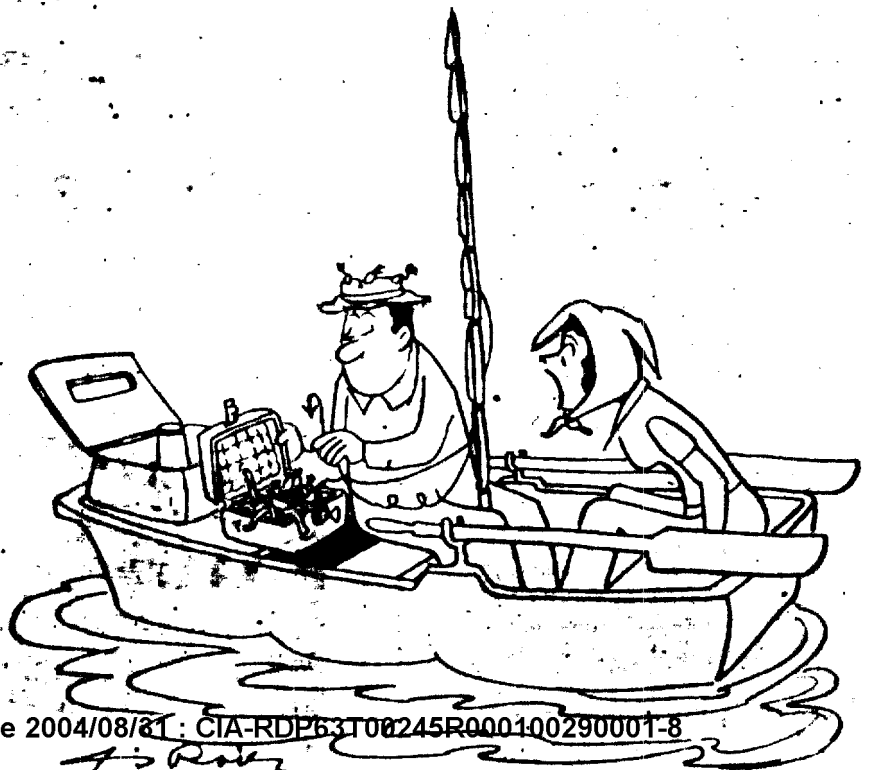
Museum, an institution designed for showing off. Could I assume this backward machine was an example of Russia's best?

I was reminded of the time a year or two back when a Russian magazine published a picture of a Univac, with Remington Rand's label blacked out and a caption proudly referring to Soviet progress in electronic brains.

The thing that impressed me most at the museum was something that wasn't there: miniaturization. In space flight, where every ounce of weight counts, you must build microscopically small. You must have tiny sensing devices, a tiny computer, tiny navigation and control equipment. Without such miniaturized innards, the U.S. Atlas missile, for instance, would not be able to guide itself through space and land on a target 6,000 miles away. That's controlled space flight, necessary either for an ICBM or a trip to the moon.

At the museum, where the pride of Soviet science is displayed, I saw no evidence of miniaturization. The smallest vacuum tubes on display were bulky compared to what's turned out in the U.S., Germany, England and Japan. The Russians are known to make transistors, tiny gadgets that can do the work of big vacuum tubes in certain uses, but none were on display. From this and from subsequent reading and looking, I got the impression that Russians don't consider miniaturization an important kind of progress.

They admire bigness. Premier Krushchev is fond of referring to the U.S. Vanguard satellite as the "Grapefruitnik." He alludes to the greater size of the Sputniks. What he doesn't say is that the Vanguard spaceball is evidence of a much more sophisticated technology, a much



"That's my jewelry box!"



former mastery of miniaturization. The Vanguard was guided into an orbit so stable that it'll be up there for a good two centuries. Sputniks I and II had remarkably unstable orbits, indicating that they weren't guided but merely thrown almost haphazardly into space.

In fact, Dr. I. M. Levitt, director of the Fels Planetarium in Philadelphia, took the Sputniks' faulty orbits alone as evidence that the Kremlin has no ICBM, no really accurate guidance system.

The Sputniks are big. Could the reason be that Russian engineers don't know how to build electronic equipment small? U.S. scientists have grumbled that Russia hasn't published much data collected by the Sputniks. Could it be that there is no data—no fine enough instruments aboard to collect it? Even the instruments that are aboard seem inferior. The monster Sputnik III's signals have always been so weak that only the most sensitive receiving equipment can detect them. Tiny Vanguard, less than a thousandth as big, comes in loud and clear.

I came out of the museum with my head spinning. Over a quiet cup of bad Soviet coffee, I tried to reconcile what I had seen and heard with the picture of Russia that I'd carried into the country. The whole progress of world affairs in the past 10 years had been shaped, to a big extent, by the belief that Russia was developing ICBM's, fearsome weapons that could break up New York and San Francisco and Detroit in one colossal attack. Were these terrifying things nothing, after all, but figments of somebody's imagination?

No, I told myself. You're going too far on too little evidence. Surely, before long, they'll show you some instruments that'll knock your eye out.

I went to see Alla Masevich, Vice-President of the Astronomical Council of the Academy of Sciences. She heads Russia's optical tracking network. A Red newspaper had said that Sputniks and Lunik were tracked by "specially built scientific stations equipped with a great number of radio-technical and optical instruments." This is a field in which I have real interest and knowledge, and I was anxious to talk to this celebrated woman astrophysicist. Accurate tracking is a must; you need to know exactly how your spacecraft behave in flight in order to improve them. And for accurate tracking you need extremely fine, super-accurate cameras, radio telescopes, and other very precise equipment.

Alla Masevich took me up on the roof of the Sternberg Astronomical Institute. "We have twenty-five tracking stations like this at universities and observatories all across Russia," she told me, proudly.

The major piece of equipment was an ordinary Red Air Force aerial reconnaissance camera, adapted for its new space-track job. It was of World War II vintage. Sure, it was a good, serviceable camera—but if you tried to sell it at Cape Canaveral, they'd laugh at you. In fact, Edmund Scientific Company of Barrington, New Jersey, will sell you a similar plus American aerial camera of the same type for under \$80.

I asked Alla Masevich whether Russia's other tracking stations had the same equipment. She said they had. All of them? Yes. Later in my trip, I verified this by visits to the key optical teaching stations. I also talked to a scientist who was starting to develop more accurate space-tracking cameras. But his project had hardly got off the ground.

It was all very hard to believe. The whole thing had the air of a last-minute scramble to throw a tracking network together with whatever equipment happened to be lying around loose. In the U.S., scientists had planned ahead. The Navy had gone to Perkin-Elmer Corporation more than a year before the first satellites were due to be launched, and had ordered special tracking cameras built at a cost of some \$100,000 each. These cameras weren't just set up wherever universities and observatories chanced to be, but were very carefully spotted across the Northern and Southern Hemispheres for the best possible tracking effectiveness.

Well, I thought, maybe the Russians depend on radio and radar more than optical tracking. I asked Dr. Masevich about this. Said she: "We have amateur radio enthusiasts all over Russia. They collect this information for us."

I pressed her further on the point, later asked other scientists about it. Crazy as it seemed, that's the way it was: this huge, science-minded nation depended on hams to keep track of the satellites' signals. The U.S. welcomes hams' track-

ing reports, but these aren't enough for the precise measurements demanded by an advanced space technology. In the American space program, official, professionally manned radio tracking posts are located at carefully picked spots on the map.

I remembered something about the Sputniks. Instead of broadcasting on the high frequency bands originally agreed on by International Geophysical Year scientists, the Russian moons came in on low frequencies—the frequencies allotted by worldwide convention to hams. This surprised and puzzled the West. Maybe, I now thought, the reason was simply that Russia didn't have enough of the more critical, harder-to-build high frequency equipment. Maybe Russia had to depend on ham receivers because nothing else was available.

I also remembered something else. Some three months after Sputnik I was launched, the Russians lost track of it. An official announcement from Moscow said that it had burned to nothing in the atmosphere. This revealed much about the precision of Russian tracking equipment. Eight days later, astronomers at Ohio State University's Radio Observatory were still tracking the fragments of Sputnik I that remained in orbit.

My whole concept of Russia was turning upside-down, and it turned a little more with each scientist I questioned. I went to see Prof. Alexander Mikhailov, director of the Pulkovo Observatory at Leningrad. A big front-page story in the

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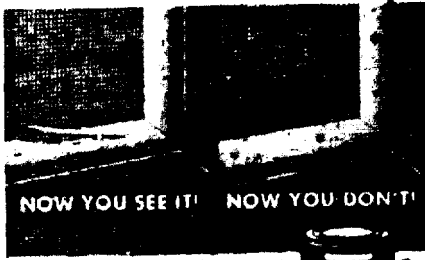
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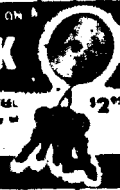
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tronomers with this statement. "The biggest telescope in the world, with a six-metre (236-inch) diameter reflector, is being built in the Soviet Union. The designing of such an astronomical instrument is a very complex technical problem. . . . It took ten years to build a similar telescope with a five-metre reflector in the United States. . . . The new instrument will help astronomers in their observations of artificial satellites and interplanetary rockets which may soon fly around the moon, to Venus and Mars."

That's a whopping big statement. In one blow, it (1) sneers at the present world's largest (200 inch) scope, at Mount Palomar, California, (2) establishes Russia as a nation with superb technical skills, and (3) hints at an ambitious space program. I was eager to hear more about this new giant telescope. I asked Mikhailov for details.

"That telescope will take ten or fifteen years to make," he said. "The construction has not yet begun."

I asked him for details on the design. "There weren't any. "It is not yet decided what kind of mount it will have." Mikhailov said. "We do not know yet where it will be installed."

In other words, the telescope that was "being built" hadn't even been designed. About all that had happened, apparently, was that somebody had decided it would be nice to have such a telescope some day. Once again, the weed of fact and the magnifying glass.

This was how the Big Red Lie was built. I reflected. It was cumulative; each lie supported a complex of others. Having believed other Russian exaggerations about their technical progress, the West was ready to believe the giant telescope story. And, believing that, it now stood ready to swallow still more.

I tried to get an interview with Prof. Viktor Zhdanov, Russia's Deputy Commissioner of Public Health. He had been quoted in the Soviet press as a space physiologist. He was said to be studying problems of human survival as these might be posed by viruses in space during interplanetary flight. He turned me down. "I do not have connections in these fields," he said.

I had a long session with Professors Yury Pobedonostev and Kiril Stanyukovich, both key scientists in the Soviet space program. One topic I had on my mind was inertial navigation, an important technique used in guiding U.S. rockets and missiles. I was fairly sure by now that Russia had not mastered the technique, for it requires a miniature computer and other kinds of high-grade

But I asked any way. I was right. "Some work in this field has been done," Stanyukovich told me. "But it is all theoretical so far."

I turned to another topic. The Soviet press had made much of Russia's intensive program to send men up in satellites and out to the moon. I asked about pressure suits, the kind that would be used by men in outer space.

Said Pobedonostev: "We will develop such suits when we need them."

Here it was again: the apparent unwillingness or inability of Russian space officials to plan ahead. In the U.S., pressure suits are the subject of elaborate and determined research, and have been for a good fifteen years. Both the Air Force and the Navy have already developed operational pressure suits.

I asked: "Are you working toward manned space flight?"

"Yes," said Pobedonostev. "Then you must have rocket-powered aircraft?"

"We have jets."

"No—I mean pure rocket-powered aircraft such as the American Bell X-1 series."

"We do not believe in such aircraft."

I stared. The rocket plane, capable of climbing over the top layers of atmosphere, is an essential experimental tool for manned space flight. It trains pilots in the art of flying through a vacuum, gives space physiologists priceless information on medical problems involved. It's the forerunner of the true spaceship, the logical stepping stone to interplanetary travel. I pointed this out.

"Such flying," said Stanyukovich, "is much too risky."

I asked what Russia was doing about space medicine, in that case.

"We make use of dogs," Pobedonostev replied. "The dogs will lead to the time when we can use men. One cannot know where he is going until he gets there."

"But if you don't know where you're going until you get there," I pointed out, "then you must take risks. You claimed rocket aircraft are too risky, but aren't such risks necessary for achieving space flight?"

Stanyukovich suddenly exploded with anger. He and Pobedonostev held a heated argument in Russian, which Natasha didn't translate for me. Obviously, I'd touched a tender spot. Despite all the bragging, Soviet Russia was a long, long way from landing a man on the moon. Matter of fact, there seemed to be no organized, long-range program at all for any such purpose.

Bit by bit, my picture of the Russian space and missile program was fitting together. The program, it turned out, was more noise than reality. It was a superb example of the propagandist's art.

I went on probing. I dropped in on *Znaniye-Sila*, the science magazine. Among the photographs that the editor proudly pulled out of his files for me was one of a radar-optical camera. It had a caption subtly leading the reader to believe the instrument was of Russian origin. I had helped take the photo myself four years before, at the

### White Sands Proving Ground in New Mexico.

Academician Sedov, who had promised me the world when I started out, now seemed to have changed his mind. He'd disappeared, leaving me to shift for myself. I was getting nervous. More than once, I thought I was being spied upon—and whether it was just nerves or the real thing, it was enough to worry me seriously. I was also worried about my photographs and film, my tape recordings, my notes. I began to think of ways to get them out of there safely.

It was time to go home. The film and tapes were a real problem. By Soviet law, I was supposed to submit them to the government for review before taking them out of the country. But if I did so, I felt, I'd be unlikely ever to see them again.

I put the tapes, photos and film on the bottom of a large suitcase, surrounded them with socks, covered them with a layer of shirts. On top of the shirts I put a row of scientific and technical books that had been autographed for me by their authors—big men like Pobedonostev and Chebotarev.

I walked up to the baggage inspector at the Moscow Airport and handed him the hot suitcase first. Then I held my breath.

He lifted the lid. A frown crossed his face when he saw the books' titles—all severely technical. Brows knit, he picked up one of the books, flipped through it. He looked at me, then back at the book. He seemed to be wondering whether it was all right to allow such books out of the country. It was, of course, but now I'd made him suspicious and alert.

Finally he saw the flyleaf and the autograph. His eyes widened. He looked at the other books' flyleaves. His hand wandered over the layer of shirts. He was going to lift them up. I thought: I'm finished.

Then he pushed the suitcase at me. I'd made it.

In West Germany, I was questioned about what I'd seen by U.S. intelligence agents. Eventually, I got home. The American picture of Russia hadn't changed much since I'd left. There was still fright in the air. Russia was dangerous, they said. Russia claimed to have intercontinental missiles that could cripple America in one crushing blow. Russia would soon have armed satellites and a base on the moon. Russia would control space and all earth beneath.

This wasn't the Russia I knew.

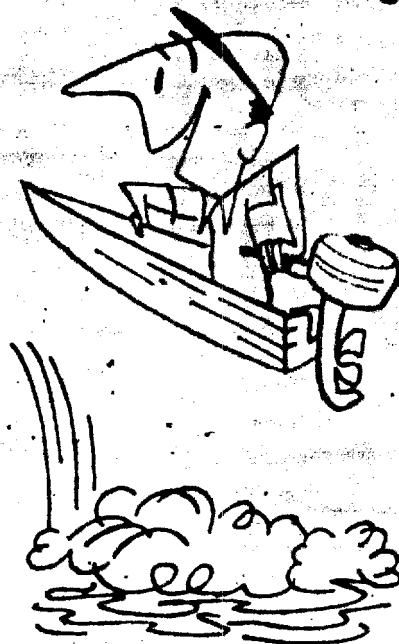
The Russia I knew was not capable of designing or building an effective intercontinental missile—or, indeed, any long-range rocket that would know where it was going before it got there. This Russia was a good twenty years behind the U.S. in space technology. It had little more hope of controlling space than did the Principality of Monaco. If it was ever foolhardy enough to start a war, the Strategic Air Command would destroy it as a nation in one week.

Then the Soviet Union announced Lunik. You may imagine how it hit me. Only by an incredible freak of luck could a Russian rocket have turned in any such performance. A moon shot predicated the existence of highly sophisticated computers, clever miniaturization, precise tracking, fine guidance, high-grade electronics. These things were not available to the scientists who allegedly built Lunik. A moon shot must also be planned very carefully in advance. No such plan existed when I was in Russia half a year before. One lonely professor was mulling over the idea. No one else seemed actively interested.

Lunik had to be a hoax. I was almost certain of it. I started to check around. By the time I finished, I was 100% certain.

The first new clue I got came, paradoxically, from a phone call that didn't go through. The Lunik announcement reached the U.S. on a Friday evening. On Saturday, I placed a call to Ohio

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State's Radio Observatory to find out heard from Lunik. The switchboard operator told me that the astronomers had closed shop for the New Year's holiday weekend.

Sure, I thought. If I wanted to perpetrate a space hoax, when would I do it? Over a holiday weekend, when the Western World was relaxed.

On Monday, the Kremlin announced that Lunik's radio transmitters had gone dead as it passed the moon and headed into an orbit around the sun. Thus, all contact with the rocket—and all hope of proving or disproving its existence—was thenceforth and forever lost. Convenient. A little too convenient, perhaps. Two months later the successful U.S. space probe, Pioneer IV, kept transmitting useful data on three channels until it was almost half a million miles away.

When I finally got in touch with the Ohio State people and other tracking stations, a provocative new fact came to light: nobody, absolutely nobody, had received a signal that he could identify with certainty as coming from Lunik.

The Russians claimed that, on their receivers, signals were coming in clear as bells on all four of Lunik's announced radio frequencies. No one else had any luck, although trackers throughout the world had picked up Sputniks, U.S. satellites and moon probes—including, later, Pioneer IV. The huge radio telescope at Jodrell Bank, England, which later followed out beyond 400,000 miles, and which detects radio impulses from galaxies thousands of trillions of miles away, scanned the skies for 18 hours without finding a trace of Lunik. Prof. Bernard Lovell, Jodrell Bank's director, was quoted by the New York Daily News in March as speculating that "the whole story may have been a Russian" propaganda hoax."

Other trackers around the world had doubts, too. Drs. Nakada and Takeuchi, top Japanese tracking scientists who had caught signals from all other space vehicles, detected nothing from Lunik. "We have to rely on the Russians' claims," they told *Astronautics*, official publication of the American Rocket Society. "We cannot acknowledge the existence

of the rocket on the basis of our own

According to George Grammer, official of the American Radio Relay League, the search for Lunik was "a complete negative as far as we're concerned." The ARRL has 90,000 members throughout the world, and hundreds of them reported picking up each U.S. and Russian satellite. But only one report came in on Lunik. The ARRL is now sure the signals described in this report came from Sputnik III.

I checked with military and intelligence men to find out what they thought. They were wary; I sensed that they wanted to keep their doubts to themselves. But the doubts were real. One Pentagon general told me: "Yes, it could have been a hoax. There's at least one other case where we know they were doing the same thing." He wouldn't elaborate. There was a good deal of embarrassment in the air. Another general smiled enigmatically. "Even if I knew," he said, "I wouldn't tell you." I guessed that he knew.

The embarrassment seemed to stem partly from the fact that President Eisenhower had publicly congratulated the Russians. He'd look silly, the feeling ran, if he now had to retract his words. But still the doubts piled up in secret. I was amused to notice that it took weeks for any of this to leak into the newspapers. On January 21, Fulton Lewis Jr. wrote in his column: "Allen Dulles, chief of the Central Intelligence Agency, reported roefully to a secret session of Senators and Representatives that all evidence indicates the missile never went beyond the general vicinity of the moon, if, indeed, it got that far." Shortly afterward, the Defense Department slammed a security lid on all information about Lunik, and the papers lapsed into silence on the subject.

But the doubts and puzzlement continued. I talked with John T. Mengel, Director of the Tracking and Guidance Section of Project Vanguard. He told me that, theoretically, the skin temperature of a rocket or other body in sunlight should grow hotter as it moves away from the earth. Thus, the Lunik on its sun-bathed way to the moon should have reported considerably higher temperatures than does the Vanguard satellite, which never goes farther from the earth than 2,460 miles. But the people who invented Lunik apparently didn't know about this. An early report from Tass, the Soviet news agency, boasted that Lunik was 150,000 miles from the earth and stated that its skin temperature was 59 to 68 degrees Fahrenheit. In months when the Vanguard is in sunlight all the way around its orbit, its skin temperature goes up near 150 degrees.

To bolster their lie, the Russians released what they said was a photograph of Lunik before launching. At least two things about this picture made it suspect. First, it was very crudely and very heavily retouched—as much as painting as a photograph. Second, the transmitting antenna system depicted could not possibly have broadcast clearly from outer space on Lunik's announced wavelengths. According to A. Benham of

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at Oxford College, well-known expert in radiophysics, the Russians would have needed a receiving antenna system several acres broad to catch any signals at all after *alone* the loud, clear ones they claim to receive from such a rig.

The Kremlin also published what it said was a photograph of a sodium flare released by Lunik at a point 62,000 miles out from earth. The photo, allegedly, was taken by the Alma Ata Observatory in Soviet Asia. It wasn't very convincing. It showed a great big nondescript white blob on a starless black background. There was no grain in the photo, so it wasn't an enlargement. I'd visited the Alma Ata Observatory, and I know that the biggest telescope there is 500 millimeters in diameter. Even if Lunik's flare was a mile across, it would have appeared to this telescope as a mere dot of light from 62,000 miles away.

Only one non-Russian observer thought he saw Lunik's flare. This was a Scottish cameraman, who snapped a picture of a cigar-shaped patch of light in the sky over Edinburgh. If it was 62,000 miles away, it would have had to be at least a thousand miles across to appear that big to the camera's naked eye. Scientists, examining the picture, concluded that what the Scotsman saw was really the result of a temperature inversion—a mirage-like reflection of light from the city below.

Yet despite all these inconsistencies and improbabilities, the U.S. man-in-the-street believed in Lunik—just as he has believed other parts of the Big Red Lie. Americans in general are gullible when it comes to Soviet stories; no boast from that big, mysterious nation seems too fantastic to be true. The Lie is self-supporting.

Occasionally, you hear a voice beseeching everybody to calm down. Late in January, for instance, General Nathan F. Twining, Chairman of the Joint Chiefs of Staff, stated flatly that the Kremlin's boast about having operational ICBMs is just that—a boast. Said Twining: "There's nothing to it."

But most Americans fear Russia. It is easy to fear something you don't understand; and to most Westerners, Russians are a strange, paradoxical people. They don't think or act like us, as many Western reporters have noted. John Gunther, author of *Inside Russia Today*, comments that the Russians can build big, powerful machines, "but a simple flashlight seems beyond them." It's hard for Americans to understand this. We tend to think that, because the Russians can blast an earth satellite into orbit, they must also be able to guide a rocket to the moon or a missile to a U.S. city. It just isn't so.

It is also hard for Americans to understand how anybody could have the sheer nerve to lie on so huge a scale. To the Russians, it comes easy. The lie, the hoax, the con game occurs again and again, down through their history.

For instance, every schoolboy who has studied Russia knows of the famous hoax that was perpetrated on Catherine the Great in 1787. When she visited what is now the Ukraine in that year, the Governor General of

Potemkin was worried over what might happen to him if "Catherine found" out how poverty-stricken the area had become under his inefficient administration. To fool her, he had the wretched hovels along her river route drenched with bright new paint. Collapsed roofs were covered with painted cardboard. The boards of ragged poor were so fixed to stay indoors out of sight. The bright landscape was even brightened with cardboard trees.

That's what Russians are like. Today, they're hoaxers not only by temperament, but also by political decree. Make no mistake, the Communists in control of Russia are without morality as we know it. They gibe at democratic nations for their honesty. As it was written by Lenin, the Father of the Russian Revolution:

"We repudiate all morality taken apart from human society and classes. We say that it is a deception, a fraud, a befogging of the minds of the workers and peasants in the interests of the landlords and capitalists.

"We say that our morality is entirely subordinated to the interests of the class struggle of the proletariat."

What Lenin meant, simply, was that if lying was useful to Communism, then it was moral. To those in the Kremlin today, lying is not only useful, it is a foundation stone of their power.

Next time the Kremlin announces a new space triumph, consider carefully whether the triumph is real—or whether the Russians are merely, once again, practicing the gospel that Lenin preached. —Lloyd Mallan

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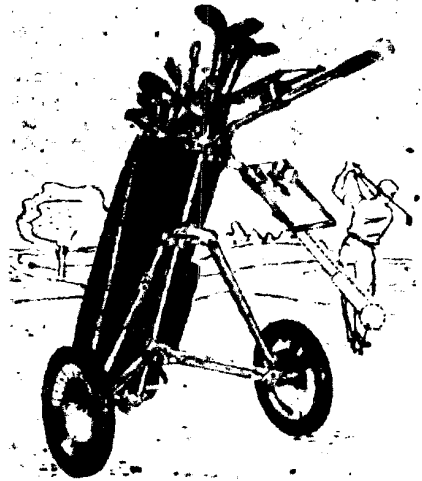
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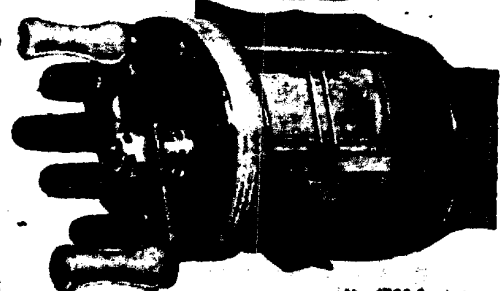
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