Leon Theremin, the 95-year-old Russian titan of electroacoustic music technology, spent three weeks in the United States early last fall. The visit was an extraordinary event; Theremin has long been the subject of myths and musical lore, yet he has been a virtual prisoner in the Soviet Union until glasnost and perestroika made possible his travel abroad. Theremin had lived in New York from 1927 to 1938, at which time Soviet authorities summoned him back to Russia. He was then immediately arrested and imprisoned, for reasons that even today are not clear. There were rumors that he was shot as a German spy during World War II, and his name disappeared from the Soviet musical press for decades. Leon Theremin's very existence was top secret because, as he admitted at a press conference at Stanford University, he was on the development team.

PHOTOGRAPHY: RENEE MOOG
After a 43-year absence and decades of virtual imprisonment in his native Russia, a legendary electronic music pioneer visits America again at age...
his return to the United States was almost like a homecoming. During his stay he was reunited with portions of his erstwhile American life, including places where he had lived and worked, and people that he had known. At Stanford he was reacquainted with 97-year-old music encyclopedia author Nicolas Slonimsky, whom he'd known as a young conductor. Then, at a New York reception given in his honor, where his arrival was greeted with tumultuous applause, he saw former students and colleagues, all in their 80s and 90s, including Henry Solomonoff, Suki Bader, Beryl Campbell, and composer Otto Luening. But the most important reunion was with Clara Rockmore, the pre-eminent Thereminist whose virtuosity on the instrument legitimized it in musical circles (in the same way that the inspired playing of Jeanne Loric promoted Maurice Martenot's Ondes Martenot). Theremin has always thought of Clara as his greatest student, and their meeting last fall was like closing a circle.

On September 28, 1991, we talked with Theremin for several hours, asking him questions about his enigmatic life and career, and following up on the interview that one of us (Mattis) had conducted in Bourges on June 16, 1989. The following are edited excerpts of both interviews. For the careful translation of Theremin's detailed Russian prose, we would like to thank Patrick Lemoine, Nina Boguslawsky, and most especially Alejandro Tkaczewski.

... 

please tell us about your early life, and about your scientific and musical training.

I was born in Leningrad, which was then called St. Petersburg, in 1896. My father was a lawyer, and my mother was interested in the arts, especially music and drawing. Even before high school I was interested in physics, in electricity, and in oscillatory motions like those of a pendulum. In high school I was interested in physics, and after playing the piano I started studying cello. While in high school, I entered the conservatory on the cello, and I graduated with the title of "free artist on the violoncello." Then I entered the university, and majored in physics and astronomy.

Why did you first conceive of your instrument?

The idea first came to me right after our Revolution, at the beginning of the Bolshevik state. I wanted to invent some kind of an instrument that would not operate mechanically, as does the piano, or the cello and the violin, whose bow movements can be compared to those of a saw. I conceived of an instrument that would create sound without using any mechanical energy, like the conductor of an orchestra.

Why did you make this instrument?

I became interested in bringing about progress in music, so that there would be more musical resources. I was not satisfied with the mechanical instruments in existence, of which there were many. They were all built using elementary principles and were not physically well done. I was interested in making a different kind of instrument. And I wanted, of course, to make an apparatus that would be controlled in space, exploiting electrical fields, and that would use little energy. Therefore I used electronic technology to create a musical instrument that would provide greater resources.

How did Lenin find out about your instrument?

In the Soviet Union at that time everyone was interested in new things, in particular all the new uses of electricity: for agriculture, for mechanical uses, for transport, and for communication. I decided to create a musical use for electricity. I made the first few devices...
So I took my hands off his and he completed the whole thing independently, by himself, with great success and with great applause following. He was very happy that he could play on this instrument all by himself.

Incredible! In what year did you arrive in New York?
At the end of 1929, approximately. [In fact, the exact date was December 22, 1927.]
What brought you to New York?
When I was working in Leningrad in the Ioffe Institute for Physics and Technology, I had a lab. I was the inventor of this instrument, the first instrument. I was also the first in the world to invent a television device; this was in 1926.

Then I was sent abroad. I was sent to an international conference in Frankfurt. My wife Katia joined me in Paris, where I went next, and we stayed with my relatives. After that we went to America.

Katia was interested in medicine, and she wanted to enter a medical institute that was about 35 kilometers from New York. So she entered this medical school, and she slept there in the dormitory, but she visited me once or twice a week in New York.

I'll tell you what happened afterwards. One fine day a young man came to me and said, “You know,” (he gave me his calling card), “I have a request to make of you and of your wife too. We love each other. Let us marry each other.” It was not quite pleasant for me, but I said, “Of course I cannot forbid — well, in the Soviet Union we have freedom. Divorce is legal.” But I told him that things could not happen in this way. He left, and I felt terrible.

I tried to reach my phone, but the phones weren’t working well. After a while, maybe three days later, I received from my embassy — because at the time I was working under the leadership of our consulate — a magazine that was published by German representatives of a fascist organization in America. In this article it was written that, “The wife of Theremin is sympathetic to our work, and we accepted her into our society, but Theremin doesn’t want to pay money, because he’s probably a Jew, and he is afraid to give money. That’s why he won’t become a member of our society.” Well, there was such a magazine.

At the embassy, the people said, “We cannot allow this.” Then in a few days, they said something more definite. The embassy called me and demanded that I get a divorce from her. They gave us a divorce without her presence or consent. I talked to her on the telephone about it. She said, “It’s my friends, but I was never a member of any such society,” and that was it. This was my first divorce. She continued to live there and to study at that institute.

Are you Jewish?
No.
Do you remember meeting Edgard Varèse in New York?
No, I couldn’t tell you. I met so many people. It was long ago, decades ago. I met a lot of people. I remember well a lot of my good students. I had a wonderful student Clara Rockmore, and also Lucie Rosen. These were the better ones whom I remember who worked in my studio.
There was one who was interested in the colors of music—the connection between light and music—and that was [Albert] Einstein. His wife played piano very well; he could play the violin, and he tried to play the Theremin. He asked me if he could use my studio. I had a big, big house that I rented in New York.

Einstein was interested in the connection between music and geometry, in particular, not only color but mostly triangles, hexagons, heptagons, different kinds of geometrical figures. He wanted to continue these into drawings. He asked whether he could have a laboratory in a small room in my house, where he could draw. So I gave him a studio not very big. I found him an assistant, one of my co-workers who was a painter, to help him draw these sketches, and he would come and do his work. However, it was not the field that I was interested in, these geometrical figures. I can't say that from my point of view the figures had a psychological effect on the colors of the music.

As for him personally, Einstein was a physicist and theorist, but I was not a theorist— I was an inventor—so we did not have that much in common. I had much more kinship with someone like Vladimir Ilyich [Lenin], who was interested in how the whole world is created.

Varese came to you to ask you to build him an instrument for his piece Ecuatorial, an electronic cello. Do you remember that?

I made my electronic cello, not only for Varese, but for all those who were interested. It was not just the instrument played with hands in the air. It was a different instrument, like a cello, that had a fingerboard. But instead of pressing down on strings, it was necessary just to place one's fingers in different places, thereby creating different pitches. I have photographs of the instrument. It was also called the Thereminvox. There was one man who was very much interested in this instrument. He was the conductor Leopold Stokowski, who had ordered instruments especially for Philadelphia orchestra. I made ten instruments especially for Stokowski. They used it in concerts, and it created a great impression.

Please tell us about Stokowski.

About Stokowski I can say yes, I remember him. He was of course a great conductor. He was very interested in technical resources, of course: not in the electronics specifically, but in what new sounds, what new timbres, what new characters of sound could be obtained.

Do you remember Joseph Schillinger?

Schillinger, yes, I knew him. I had many conversations with him, but I cannot say anything about his work. I recognize his name; he was famous, after all.

You worked together, and you performed the solo part in one of his compositions. [First Anaphonic Suite for Theremin and orchestra, 1929.]

Yeah, he was a composer, but from my point of view he was one of many interesting good people who were interested in old-fashioned ideas and viewpoints that were not suitable for the development of musical art.

Tell us about your dance instrument, the Terpsitone.

This is a platform that a person dances on. When the dancer's body is low, you hear the lowest pitch. When the dancer raises her body, the pitch also goes up. It's also possible to dance without changing the sound. For instance, if the dancer raises one arm and lowers the other, there will be no change in pitch. But if the dancer raises both arms, then the pitch will go up.

How about the loudness, the volume? If the dancer goes more forward, it gets louder. When she steps back, the sound gets quieter. I had a Terpsitone dance studio in New York. I had many pupils dancing there.

There was another instrument, the Rhythmonic.

This was an instrument that produced one pitch, plus all of its harmonics. Each of the harmonics was heard as a series of repeating notes separated by silences. For each harmonic, the repetition speed was related to the number of the harmonic. For instance, when you have the pitch three times higher [the third harmonic], it will repeat three times as fast as the fundamental pitch. You could select which harmonics you wanted to hear.

Do you have anything more to add about your life in New York?

There are many interesting things connected with my work, with the composers I had to see. But anyway, I felt lonely, I sometimes called my wife on the telephone, but I couldn't get her attention— well, we really didn't argue—but I felt lonely that I had no wife.

I had my studio, where I was conducting many studies on the Terpsitone. I had a very beautiful student, a black woman. She danced well, and it happened that we liked each other very much. When I said in my consulate that I liked a black woman, they said, "Okay, marry her." Then we went to the consulate, where we were married, and that was my marriage number two. Her name was Lavinia Williams. When I left America—I had to leave America—she was to be sent in a few weeks.

Why did you leave New York?

I left New York because at that time the war was coming. The military troops of the fascists were approaching Leningrad, and so on. I asked to be sent to the Soviet Union so as to make myself useful. I asked many times. For a whole year I asked to be sent back. The war had already started, and they didn't send me, they didn't send me. Then at last they permitted me. They assigned me to be an assistant to the captain of a large motor ship. So I went home, but they did not take my wife.

So what happened then?

I was arrested, and I was taken prisoner. Not quite a prisoner, but they put me in a special lab in the Ministry of Internal Affairs. There I worked in this lab just as others worked. [Airplane designer] Andrei Tupolev was imprisoned in such a way too, if you know about that. He was considered to be a prisoner, and I was considered a prisoner too.

So what did you do in that lab?

Electronics and other things that were...
mostly associated with military matters: television and other types of communication.

Weren't you in a camp?

At one time, on the way to the laboratory, I was sent to a camp, where they did road construction. I was assigned to be supervisor over the prisoners. From there, after eight months on road construction, I was sent with Tupolev to the Aviation Institute. Many important people worked there: [Missile designer] Sergei Korolyov worked there for me.

Why were you arrested?

We were all under suspicion, all the people, and I as a suspicious person was assigned to be under investigation. The investigator was occupied with my case for a month or more. He and the magistrate asked me all kinds of questions. This was all very formal, and they congratulated me and said that everything was okay, but they said that unfortunately there would be a second investigation. There was a second investigator, who also asked questions. And they wrote down that everything would be fine. But after that, together with the other prisoners, I went with Tupolev. Officially I was considered a prisoner, but as soon as I arrived they made me the supervisor of a group of prisoners.

Why was your name not mentioned in the West? We have one book that says that you died around 1945. [Andy Mackay, Electronic Music: The Instruments, the Music & the Musicians, Control Data Publishing, 1981.]

Because at that time my arrival was kind of secret. At the end of the long situation, a long time passed, about half a year, and then there was a procedure that was standard with many people who were under suspicion. At that time it was quite acceptable for people to be detained in such a way. I was appointed to be in charge of the laboratory, but it was written that they could detain me as a prisoner. They used a word not as terrible as "prison," but I was imprisoned there for eight years.

What did you do after you became free?

I stayed in my lab, first I was under some supervision, and then I became the director of the lab. I remained in the same place. I had some new things that I invented. I received a big bonus; I received an apartment. It was at that time that I got remarried, to Maria. Eight years elapsed while I was there.

Even when I was interned I was treated very well. I was not considered to be in prison, but I worked as a normal person. I was the head of the lab, and when they liberated me I was still working in the same lab. It turned out that when I was free it was much more difficult to work in the lab. When I was considered to be imprisoned I had a supervisor, and they would say to me that I had to do this and that. Then, when I was freed, I had to do it myself. Then I had to fuss, do much more paperwork, keep an office in order. The work became much worse.

I went on pension in 1966 or '67. Then I started to look for an organization where I could work. The first place I came to work was at the Moscow Conservatory. They gave me a space, and I started to work on the electronic musical instrument and the dancing instruments at the conservatory.
There was a very unpleasant situation at the conservatory that I'm going to tell you about. One of the journalists from The New York Times came to Svishnikov, the director, and said, "We thought Theremin was dead, but it turns out that he's working here. I would like to meet him, to see him, to find out what he's been doing." Svishnikov called me to his office, and I talked to the journalist. I showed him the musical instrument, a good Theremin, that I had made, and the dancing instrument. He liked them very much.

And then it happened that in a month, the newspaper arrived containing an article that Theremin is doing this and that, electrical musical instruments in the conservatory, instruments for dancing. ["Music: Leon Theremin" by Harold C. Schonberg, The New York Times, April 26, 1967.] This very newspaper got into the hands of Svishnikov's assistant; his name was Nuzhin, and he did not know what I was doing there. This is how he learned that electrical musical instruments were being made in the conservatory. He announced that, "Electricity is not good for music. Electricity is to be used for electrocution." So he ordered that all these instruments be removed from the conservatory, and Theremin too, and to throw all these things out, and that there be no more projects at the conservatory.

Then how did you live? How did you survive?
Later on I had some other kinds of inventions. I was working in the university.
Which university was that?
Moscow University, department of acoustics.
You spoke about a polyphonic instrument. Did it exist?
Yes, I did make such an instrument.
A person could regulate one voice, or at the same time could add two or three more voices which would be in some sort of exact intervals. I mean a chordal relationship in some natural pitch system. You change the pitch with the right hand just as it was with my other instruments, and the amplitude with the left hand. But then if you move the left hand from left to right, you can select 12 or 13 different intervals in exact relation to the melody — 3:4, 5:7, and so on. So there were two antennas for the left hand, one for the volume and one to select the chords.
That is correct.
Does the instrument still exist?
I had the instrument in the university in a special place where I demonstrated it for my lectures. But the university was reorganized and rooms reassigned. The instrument was left in a room for four years, where people could come and gradually dismantle it. So now it is in a completely dismantled and ruined condition at the university somewhere.

After that I started working on a new instrument. The old instrument was made using "radio lamps," but the new instrument I started making was based on semiconductors. The project was going well. It was partially completed when I had to clear out the place where the instrument was located because there were other projects going on that were
unrelated to music. The chair-
man of the physics depart-
ment considered music not to
be a science, that this should
not be taking place at the un-
iversity, and I had to vacate the
room that I was occupying at
the university.

In what year was this?
Approximately — I am afraid to say —
'78. It was about '78.

Do you have a message now that you
would like to convey to the Western World?
What words! The only thing I wanted to
ask, if it were allowed by the Soviet govern-
ment, is that I be allowed to promote my in-
struments. You must make the impression that
I was allowed to come here. It seems that
there will be no punishment for me if you
write in the newspaper about all I have told
you. I hope nothing will happen. We'll see
what happens. The same with my invention.
I want to stress to you that all this needs to
be done in a disciplined way, and that when
people will be asking about me and writing
about me, that all this be done in a respon-
sible way. But if you write that I have said
something against the Soviet government and
that I have said that it is better to work else-
where, then I shall have difficulties back home
[ironic laughter].

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