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Dream of a Journey to Mars

Marek Wollner, host

Twenty years ago he was told he had a few months to live. Today you would hardly believe he is 80. His energy, vitality and vigour could make him the envy of those generations younger. He has done all sorts of things in his life from flying to experimenting with human behaviour in crisis situations, which won him credit, but also unwanted attention from the communist secret police. Since childhood, he has had a big dream which has not come true yet, but he is still anxious for it, though he knows he will perhaps never achieve it: to go to space. The story of Jaroslav Sýkora is narrated by Ivan Bareš.

Jaroslav Sýkora, sociologist

I'm entering a room where the entrance check-up took place and where absolutely all items were taken away from the participants, all their things. Here was the sanitary section. Sanitary sections were really well furnished then, though not as economically as in spaceships. This room served for living, here the hidden group slept and stayed throughout the experiment.

Ivan Bareš, narrator

In 1988 the sociologist Jaroslav Sýkora decided to lock a group of students in isolated underground rooms and simulate a flight to Mars. The experiment aimed at mapping and evaluating people's behaviour in extreme situations.

period documentary narrator

We are in a new underground laboratory of the Czechoslovak Academy of Sciences. It was built in a disused mine tunnel near the city of Brno. The place will serve for basic research into extreme psychological load, for stress research under the Interkosmos programme.

Jaroslav Sýkora, sociologist

I modelled it on the Apollo programme. I wanted to try it out in the Czech small-scale format.

Ivan Bareš, narrator

Through the Tunnel to Mars project, Jaroslav Sýkora got closer to his boyhood dream: to fly higher and higher, and finally conquer the space.

Jaroslav Sýkora, sociologist

I sometimes think it was destiny that threw me into this world. I was born in the military hospital of the 1st Infantry Division in 1934, when my father happened to be in a field exercise, and besides I

suddenly found myself on a carousel which included an airplane, and it was me, a little boy, sitting in the plane.

Ivan Bareš, narrator

Jaroslav Sýkora started work on his dream to fly high right after WWII. He decided to become a pilot.

Stanislava Sýkorová, wife

My future husband, at first a secondary school friend, only talked flying. And this dream came true.

Jaroslav Sýkora, sociologist

This was the first glider I began flying in 1949. This is actually how my flying career started. When I entered the flight training school, the first motor plane was Bücker 181. It would climb to some 3,000 m and could not get any higher.

With this plane I jumped another step higher, that is, we got to 5,000 or 6,000 m. And when the era of war booties ended in 1955, I started flying MiG-15, mainstay of the Czechoslovak air force. It would reach up to 15,000 m, so I again jumped a bit closer to the space.

Ivan Bareš, narrator

Jaroslav Sýkora was also interested in human relationships, and managed to get a postgraduate degree in sociology.

Jaroslav Sýkora, sociologist

Well, sometimes I would break the rules, I remember, for instance, tuning the radio compass to a station where Mozart was just on, and I could move the machine in line with the music, which took me, for instance, into the clouds, and only the cockpit and my head could be seen outside the cloud. Then I would be at the heights of happiness.

I would look up, and see that it was dark, black up there. Of course, I always strived to look up and get up there.

Ivan Bareš, narrator

Sýkora's dreams to conquer the space as a military pilot perished in the same year as the first people stepped on the Moon.

Jaroslav Sýkora, sociologist

Unfortunately, my dream career finished subsequently in 1969, when I was dismissed from the army under Article 39 (c), for political unreliability. Before 1969 I became unreliable because I held different opinions of the ways our society, also the government, and of course our army was steered. And since I often expressed my opinions aloud, these were broadly recorded, and then it all added up, in a really 'perfect way'.

Ivan Bareš, narrator

After being dismissed, Jaroslav Sýkora made his living as a lorry driver. But besides he continued to lead a paddle sports club, for which he had a unique white water course in Brandýs nad Labem built.

period documentary narrator

Brandýs nad Labem this morning. Military music band, festive atmosphere. Julius Chvalný, deputy head of the Czechoslovak Union of Physical Education, is cutting the white ribbon to press the button and let water into the new artificial course, which was so needed for our water slalomists. Their history of success deserves such a facility.

Jaroslav Sýkora, sociolog

Here we started research into sportsmen's load and endurance, and we in fact launched the basis of the more recent research into endurance, stress and load.

Ivan Bareš, narrator

As a military pilot, Jaroslav Sýkora knew very well how much stress and mental load the pilots undergo. This made him even more fascinated by the idea to discover how people would behave in the space.

Jaroslav Sýkora, sociologist

In 1976 I was asked by Dr Drahota, head of the Institute of Physiology in Prague to take part in their assignments. In 1985 we opened the first experiment. I think it was a week-long experiment with isolating a group of five, and then we already started to prepare another experiment.

When I was invited here and I saw the place, I said: Goodness! This is a spaceship, a facility to isolate people who should really fly one day, this is a spaceship! Please, give it to me, I will furnish it my way.

Ivan Bareš, narrator

Jaroslav Sýkora was really given a free hand by the Institute of Physiology, Czechoslovak Academy of Sciences, and started preparing an experiment of his dreams. He set goals that no one had met before.

Jaroslav Sýkora, sociologist

Finally, I was most interested in Apollo 11 and the landing on the Moon. So I even tried to adopt the terminology the crew and the control centre was using then, and this brought me to an idea of simulating the flight of Apollo 11 transferred to Mars.

period documentary narrator

The artificial induction of stress is helped by the not very usual way of communication between the scientists and those in the tunnel. The instructions from the centre are only in writing. The responses too. It is not possible to see each other, talk, or call. Any information going in and out passes through this chamber. The inner armoured door can only be opened by order of the control centre.

Zdeněk Drahota, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

I think no one had done it before to this extent, with this intention and in this complexity.

Jaroslav Sýkora, sociologist

We designed the experiment so that there was a group in one part to pilot a spaceship which would not fly anywhere, and a group in the other part to look after animals. Both groups were subjected to detailed examination throughout the experiment.

There were desks with computers here, where the tasks were completed, such as elimination of extraordinary events.

Ivan Bareš, narrator

Who was making up the crisis events?

Jaroslav Sýkora, sociologist

Well, I was: being a pilot I had to make them up.

Ivan Bareš, narrator

And what did you make up?

Jaroslav Sýkora, sociologist

For instance, though I perhaps should not say that, it was work under oxygen deprivation, which was allowed then, that is, under changed atmospheric conditions, to find out how such a situation must be dealt with so that people are fully capable of work again. This was one thing. Then there was simulated fire, electricity blackout, and failure of the appliances they were supposed to operate.

Zdeněk Drahota, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

When the first Czechs Remek and Pelčák were chosen for space flights, he was very envious of them and hoped for another chance to go there, so there was this desire to fly up, and he wanted to take part in the challenge related to Mars. If not actively, then passively at least.

Oldřich Pelčák, pilot and astronaut

He would always turn the conversation to spaceflights. And he told me several times that his childhood dream was to become an astronaut.

Pavel Toufar, author, participant in the Tunnel 88 experiment

He was the spirit of the whole experiment, so his role was absolutely irreplaceable, and not only from the professional point of view, but I saw him also as a source, or fireworks of enthusiasm, so even when somebody was tired they would immediately forget about that.

Ivan Bareš, narrator

The Tunnel to Mars experiment was undertaken together with the Soviet specialists.

Albert Nechayev, scientist, co-worker on the Tunnel 88 experiment

Tunnel 88 was a scientific project. It had no military or practical assignments. It was a study into the behaviour of groups of people performing various activities under conditions of separation.

Ivan Bareš, narrator

But its originality still made it a target of interest for the political secret police. Naturally, they chiefly focused on the project author, Jaroslav Sýkora, the dismissed pilot.

Zdeněk Drahota, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

A potential major problem was that even the secret police failed to have a clear idea of him, because it was typical of him that once, somewhere in a reception, and this was later on, I think, he put his one arm round a Soviet general's shoulder, and his other arm round an American general's shoulder. And everybody was watching it in astonishment. So they couldn't figure out whether he was a spy for one side or the other, or both.

Jaroslav Sýkora, sociologist

My first distinction for doing the experiment was being found guilty under Articles 100, 105 and 107, subversion of the republic, espionage, and so on, because I handed in properly the videos with the experiment outcomes in 4 languages to be ready for distribution at embassies, so that Czechoslovakia could prove to be really doing something in space research.

Ivan Bareš, narrator

The videocassettes with the experiment records got through one of the embassies to Max Planck Institute. It was based in West Germany, which was a sufficient reason for restrictions by the secret police. But Jaroslav Sýkora had made good contacts round the world through the successful experiment.

Zdeněk Drahota, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

When after the Tunnel I was once with Sýkora in Moscow, he met the head of the Moscow institute, who called a general, who called another one, so a direction was sent to Prague to leave Sýkora alone for some more time.

Ivan Bareš, narrator

We are searching the archives to find out why the secret political police was so interested in Jaroslav Sýkora. The file says the reason for watching him was a suspicion of contacts with the right and with foreign citizens. It follows from the file that he met a few times his co-worker Jiřina Šiklová, who had signed the Charter 77 initiative, which was a political crime then, and that he met foreign citizens who had somehow taken part in the experiment. At that time 12 people in 4 cars were watching him.

Jaroslav Sýkora, sociologist

Later on I asked the Institute for the Study of Totalitarian Regimes to show me my file. It was only then that I became scared, because I found I was a spy in fact, a person disclosing state secrets, and a right wing exponent. The nasty thing was that many people making such statements were not only strangers but also people I worked with.

Ivan Bareš, narrator

The 1989 fall of communism freed Jaroslav Sýkora of all accusations and he could go on to follow his space dream. The Tunnel to Mars experiment was duly appreciated at last. But not in the country of its origin.

Jaroslav Sýkora, sociologist

Immediately invitations to Paris followed, one, two, three, and then it moved off. And the experiment was very well received in Paris.

Zdeněk Drahota, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

I think his problem was that he was too much ahead of time.

Jaroslav Sýkora, sociologist (1988)

We are trying to find a sort of common denominator, an answer to the issue of aggregate loads in terms of their identification and intervention, of course.

Zdeněk Drahota, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

His project was a success in all the conferences. The problem was that he was not equally successful at home, because the situation at the institute was getting worse. Dr Sýkora's department was becoming a sort of metastasis to them as it had a bigger publicity, which annoys most people.

Karel Pacner, journalist and author

It was not forged, it was not useless, and as far as I heard, the papers they had in international conferences made a very positive impact.

Ivan Bareš, narrator

The Tunnel to Mars experiment sparked off a series of follow-ups to the findings of Jaroslav Sýkora and his team. A crucial one is the international Mars 500 project, finished in 2014, where Jaroslav Sýkora also took part.

Albert Nechayev, scientist, co-worker on the Tunnel 88 experiment

Because he always wanted to fly to Mars. So we decided in the institute on this really unique experiment, because such an experiment had never been and is not done anywhere else. It is 526 days and 6 people in strict isolation. So when he and his co-workers took part in the experiment with his methods, it resulted in many useful data on how the people behaved in isolation.

Jiří Šedivý, former Chief of the General Staff of the Armed Forces of the Czech Republic

He will hardly get into a rocket and get to Mars or the Moon. I think it is well-known that he works very hard on the Mars 500 project because it is his huge dream, and I think he will live with it till the end of his days.

Ivan Bareš, narrator

Today Jaroslav Sýkora is 80 years old. 20 years ago he was diagnosed with cancer, and predicted to have 3 months to live.

Zdeněk Drahoš, former head of the Institute of Physiology, Czechoslovak Academy of Sciences

He always sang the 'We are the steel birds' song, it went somehow like that in the past, and he said he was simply made of iron, so nothing could beat him out.

Jaroslav Sýkora, sociologist

And then another year came and another, and now it has been 20 years and I am still trying to get into the space with my eyes at least, when it is not possible any other way.

Radvan Bahbouh, psychologist, co-worker of Jaroslav Sýkora

If he had an opportunity to fly to the space, he would. I am even afraid, and he has claimed this a few times, that he would not mind staying there, it was this crazy idea with the one-way flight to Mars. I think he would go in for that.

Ivan Bareš, narrator

We are on Mars.

Jaroslav Sýkora, sociologist

Well, and I am happy.

We have just landed on Mars. And why have we chosen Mars? We have chosen Mars, because it is our best peer planet and is invaluable for us, and its immense value is that we people, or we the mankind are destroying our planet so fast, that sooner or later, maybe after centuries but definitely, the Earth will be exhausted one day, exploited to the marrow. Then it will be necessary to look for a new homeland for the mankind.

Karel Pacner, journalist and author

It is estimated that the man could get close to Mars or land on Mars not sooner than 2030, let's say in 2035.

Ivan Bareš, narrator

This year should see the launch of a new experiment monitoring the behaviour of a spaceship crew. This follow-up to the tests started by Jaroslav Sýkora in the 1980s should be held right in low Earth orbit. The visionary and dreamer Jaroslav Sýkora will be at it again.

Albert Nechayev, scientist, co-worker on the Tunnel 88 experiment

He is a man who has always longed to fly to the stars.

Jaroslav Sýkora, sociologist

What only matters is that something good has been done and appreciated by the world. I think this is the greatest satisfaction, although I was really looked down upon here at that time.