

## **Russia's war and science "From one day to the next, the connections were cut off"**

Russia has been at war against Ukraine for a year and thus also paralyzes science. Some researchers are rebelling. By Julia Köppe 03/05/2023, 7:19 p.m.

When Hannes Jung speaks of the unexpected caesura in his career as a scientist, he is still surprised "From one day to the next, the connections were cut off," says the physicist from Hamburg on the phone. It all began just over a year ago, in February 2022: Jung, 66 years old at the time, but continues as emeritus in research, was just preparing the publication of a new study. Nothing special in itself, Jung has already published many scientific papers. He had no idea that everything would go differently this time.

On the 24th In February, Russian troops attacked Ukraine. The attack aimed at the whole country, even Kiev was bombed, Kremlin leader Vladimir Putin apparently tried to bring the whole of Ukraine under his control. At first, many still believed in Russia's quick victory - a mistake. The invasion stalled, now the war lasts a year.

What does all this have to do with physicist Jung? Since the beginning of the Russian war of aggression on Ukraine, scientific relations with Russia have also been on hold. Research results are withheld, scientific projects are stamped, joint meetings are cancelled. The result: In some research areas, there are data gaps that can no longer be closed.

### **Silence in science**

Jung's study initially remained unpublished because he had worked on it together with colleagues from Russian institutes. The Desy Research Center, for which the physicist works, has suspended joint publications with Russian institutions in response to the war of aggression. "We have since the 25th February

2022, all scientific cooperations with state institutions and business enterprises in Russia frozen with immediate effect until further notice," informs the Helmholtz Association (HGF) at SPIEGEL's request, which also includes the Desy. And the HGF is far from alone in the decision, it follows a recommendation of the Alliance of Science Organizations, which includes the most important research institutions in Germany.

The Ministry of Education and Research (BMBF) also put all scientific links with Russia to the test. "The German universities and research and intermediary organizations were asked to suspend cooperation agreements and institutional cooperation with Russian and Belarusian partners within the scope of legal possibilities," the BMBF said shortly after the beginning of the war of aggression.

### **Blind spots in the permafrost**

The damage to science is only hinted at, but it is likely to increase the longer the war lasts. Decades of measurement series on the permafrost soil in Siberia, for example, have been interrupted. There is one ticking climate bomb. It stores huge amounts of carbon dioxide; if it thaws, the climate-damaging gas enters the atmosphere.

Now the data chains are breaking down, which allow observations over longer periods of time. They can no longer be patched in the end. "This creates blind spots in areas that are important for the understanding of our earth system," the HGF writes to SPIEGEL in an e-mail.

After all, the renowned research institution Cern near Geneva is at least partially withdrawing from scientific silence.

### **Cern agrees on compromise on studies**

There, too, the publication of all studies involving Russian institutes was suspended. Cern is closely linked to Russia. About a thousand scientists from Russia work at Cern, many of whom are supported by Russian research institutions. In the meantime,

about 250 studies were paused because it was uncertain whether participating Russian institutions should be better concealed or openly recognized as partners.

Now there is a compromise: The studies are still to be published in renowned specialist journals. However, only the researchers involved, cooperating institutes from Russia and Belarus that support the war, should only appear hidden in the metadata. Cern is working on the technical implementation, it was said at the request of SPIEGEL.

But even if an agreement is reached, in the long term Cern's cooperation with Russia is on the brink. The agreed cooperation has been going on for almost 30 years and has been routinely extended, now it is to expire in 2024 if nothing changes in the political situation.

**"I know Russian colleagues who have been living in Germany for 20 years and are now suddenly excluded."**

Physicist Hannes Jung

Physicist Jung is concerned about the development. Science is a bridge of diplomacy that is carelessly torn down, he argues. Even in the Cold War, there was scientific exchange between the West and the then Soviet Union. "I know Russian colleagues who have been living in Germany for 20 years and are now suddenly excluded," says Jung. Although they would have clearly positioned themselves against the war of aggression, also publicly. Nevertheless, their mail accounts with German research institutions have been blocked, their names have been removed from email lists because they work for Russian institutes. Jung thinks it's exaggerated. Formally, personal contacts with Russian scientific colleagues should be maintained, but how should this work if they are no longer allowed to come to joint conferences?

Some scientists want to resume cut connections Science is not a suitable place to fight a war, says Jung. He therefore founded the "Science4Peace" initiative, for example Science for Peace in German. "We strongly condemn the war against Ukraine," says a petition from Science4Peace. But sanctions in science would not

help to achieve a ceasefire. On the contrary, these measures will isolate Russian and Belarusian scientists and decouple them from international discussions, in science and elsewhere. So far, Jung has collected almost 330 signatures.

The fact that some scientists, like Jung, struggle with the situation should also be due to the structure of the research community. She thrives on international exchange - despite political upheavals. But she can't ignore a war of aggression either. A turning point is coming.

### **The principle of change through science has failed**

"Science is no longer only in a competition for knowledge and scientific progress, but also in a competition between conflicting political and social systems," informs the Max Planck Society at the request of SPIEGEL.

In the economy, there was long hope that international trade could be used to export liberal values practically incidentally, but the principle of change through trade has failed.

The situation is now similar in science. According to the Max Planck Society, it is becoming increasingly difficult to impossible to "design international cooperation purely knowledge-driven."

Ethical standards, respect for human rights and freedoms of science, democratic structures are also crucial.

### **Russia threatens brain drain**

But does scientific silence harm the Kremlin at all? "In the short term, the sanctions in the scientific field hardly affect Putin," political scientist Christopher Daase tells SPIEGEL. He works at the Leibniz Institute Hessian Foundation for Peace and Conflict Research. In the long term, however, Russia's technical ability to innovate suffers. Daase expects Russian researchers to leave the country, there is a threat of a so-called brain drain. Putin would lose the well-educated people in the country, Russia's brain performance would practically flow to other countries.

Meanwhile, physicist Jung has come up with a trick so that his study can still be published. He voluntarily refrained from being named an author, he says. Formally, there is no cooperation between the German scientist and Russia. Above the study published in a US journal are only the names of Russian scientists.