

01. September 2022

Strengthening Trust in Science



From left to right: Markus Weißkopf, Eva Schernhammer, Martin Polaschek, Christof Gattringer, Tobias Thomas, Sabine Chai, and Martina Merz met in Alpbach to discuss causes and strategies for the relationship between science and society.

© EFA/Philipp Huber

Despite the research successes during the Covid pandemic, people's confidence in science has declined. How can we regain and strengthen the public's trust? In a breakout session organised by the FWF and the Federal Ministry of Education, Science and Research entitled "Whom to trust? The Challenge of Being Excellent, Relevant, and Trustworthy" at this year's Forum Alpbach, a panel of highly-qualified experts discussed the fraught relationship between science and society and strategies to counter it.

The benefits of science for society have rarely been as highly visible and tangible as in the recent past. During the Covid-19 global health crisis, the world saw how quickly new molecular biology technologies can be used to respond to a suddenly emerging pathogen. Never before have epidemiological and immunological questions been addressed so publicly and discussed in such depth. And yet, it seems that the rejection of scientific knowledge has never been so great as in today's social-media-driven society. And that's not all: Especially in Austria, the social status of science is particularly low in comparison with other European countries, as was shown in a much-publicised Eurobarometer study during the pandemic.

Based on this background information, a breakout session was held at the the European Forum Alpbach on 26 August. In the discussion organised by the Austrian Science Fund (FWF) and the Federal Ministry of Education, Science and Research (BMBWF), a panel of high-ranking experts, led by Science Minister Martin Polaschek, discussed the causes behind the currently problematic relationship between science and society and strategies for improvement. FWF President Christof Gattringer acted as host and moderator.

In his opening statement, Minister Martin Polaschek emphasised that strengthening trust in science is a serious challenge and has the highest priority: "Two or three simple measures will not be enough. What we need is a comprehensive strategy with short-, medium- and long-term projects," he explained. Initial steps include a current study on the causes behind the phenomenon as a starting point for developing effective measures as well as efforts to strengthen the educational sciences - for example with a targeted doctoral programme.

More understanding for the public's uncertainty

The opening statements were followed by contributions from experts illuminating the topic not only from the perspective of different scientific disciplines, but also based on a number of various observations on the relationship between science and society. Epidemiologist Eva Schernhammer of the Medical University of Vienna, who has become a sought-after media commentator on pandemic developments, believes it is important to distinguish between science sceptics and science deniers. The boundaries between these two positions are often blurry, which puts people in danger of rejection and subsequently drifting towards conspiracy theories. The climate change debate of the past decade has demonstrated this clearly. "The fear and isolation that large parts of society experienced due to the pandemic became a new trigger for the phenomenon," Schernhammer explained. The expert says we need to be more understanding. "We need to really hear people. We need to listen to their concerns and think about what triggers them," she explained.

Statistics Austria Director General Tobias Thomas also emphasised the fact that uncertainty, loss of trust, and scepticism are particularly pronounced in times of crisis. In his statement, he talked about what it takes for science to be a good partner for society. "I think we need to make sure that all the individual steps in the science production chain are implemented in a manner that inspires trust," the economist said. "We need to be sure that results are independent and unbiased." Thomas also introduced Statistics Austria's recently launched Austrian Micro Data Center (AMDC) as a new resource for evidence-based research that is beneficial to society. In giving researchers data protection-compliant access to Statistics Austria's data sets and other administrative data, the country is catching up with international pioneers in this area, like Denmark or the Netherlands.



The discussion that followed the experts' statements revealed, among other things, some of the practical challenges in the interaction between science and society.

© EFA/Philipp Huber



The discussion that followed the experts' statements revealed, among other things, some of the practical challenges in the interaction between science and society.

© EFA/Philipp Huber

What science are we even talking about?

Martina Merz, Head of the Department of Science Communication and Higher Education Research at the University of Klagenfurt, critically interpreted the 2021/2022 Eurobarometer survey, which has become an important reference point in discussions about trust in science. Among other issues, she questioned the concept of science on which the study is based. Every individual, every society has their own ideas about what science is. This is difficult to cover in a study that also focuses to a large extent on comparisons between countries. "My hypothesis is that the concept of science in public discourse in Finland is perhaps quite different from ours," says Merz. In light of this overly broad definition of science, the question arises as to what exactly the study is actually investigating. To promote trust in science, Merz advocates for increasing the public's contact with researchers: We need many more opportunities for people to meet and talk with scientists of all kinds, in a variety of contexts other than just science communication, which focuses on making complex topics understandable and available to non-scientists.

Markus Weißkopf, Managing Director of the German dialogue platform "Wissenschaft im Dialog," which encourages a broad discourse on research topics, offered an international perspective. "We see in Germany, Switzerland, or Sweden that trust in science remains high. But even here there is a stable segment of about 10% who strongly distrust science," explained Weißkopf. In his view, the reason for Austria's comparatively poor performance could be the pronounced role of religion in the country, but also the fact that only a few media sources offer quality science reporting - this is an area that requires increased support. Overall, there are many institutions and activities involved, for example in the field of citizen science. "But I do have the impression that strategies, goals, and evaluations are lacking on a national level," criticised the German expert.

Teaching academic standards from a young age

Could the poor image of science and scientists have something to do with a questionable research culture in Austria? Sabine Chai, Managing Director of the Austrian Agency for Research Integrity, noted that while issues such as plagiarism are getting more attention in the media today, most researchers work reliably and responsibly. However, educational programs need to be improved to teach young people about academic integrity and quality standards from the very beginning. "Even before students write a pre-academic thesis in school, they need basic information on how to do it properly," Chai said. "That's my recommendation. Please provide students with relevant training."

The discussion that followed the experts' statements revealed, among other things, some of the practical challenges in the interaction between science and society. One important question: What incentives do scientists have to make their knowledge more widely available? What status will science outreach activities have in the future and how should they be evaluated? Should outreach activities be included in proposals submitted for public funding? And how much of the communication work should be done by scientists and how much left to communication professionals? These questions and many others like them are open to debate, but is up to policy-makers to set the right course. "We have to show people that research institutions deserve trust because they guarantee reliable knowledge. We need to make sure people know the difference between scientific facts and 'fake news.' We have to show that although scientists may have different opinions, these opinions are evidence-based," summed up Minister Polaschek summed in his closing remarks.

The Austrian Science Fund (FWF)

The Austrian Science Fund (FWF) is Austria's leading organisation for funding all fields of basic and arts-based research. On the basis of rigorous peer review by international experts, the FWF supports excellent researchers and their ground-breaking ideas. The insights they gain make Austria a more attractive research location and create the broad knowledge base needed to face future challenges.