



**Korea and Germany share challenges and opportunities**

Speech of the President of the Max Planck Society

Professor Dr. Patrick Cramer

At the occasion of a meeting with the Max Planck Partner Group Leaders in Korea

12 April 2024

The Plaza Hotel, Seoul, South Korea

– Check against delivery –

A couple of years ago, a statue was unveiled in Berlin. It is located next to the clock tower of the old Olympic Stadium in the German capital. The statue shows a Korean athlete, a marathon runner named Son Kee-Chung. How did he become famous?

I am sure our Korean colleagues know this story. A very warm welcome to you! I hope you don't mind if I tell it again because it is less familiar to us Germans.

Son Kee-Chung won the gold medal in 1936. At that time Korea was part of the Japanese Empire, so when receiving the medal he wore a Japanese sports suit and listened to the Japanese anthem. Old photos show a sad man on the podium.

But twelve years later, Son smiled. During the opening ceremony of the 1948 Olympics, he carried the flag of the newly established state of South Korea into the London stadium. And another 40 years later, during the opening ceremony of the 1988 Games, he carried the Olympic flame into the stadium here at Seoul.

What an incredible story. But it does not end here. Son also trained young runners. One of them, Hwang Young-Cho, won the gold medal in 1992. After that, Son said he could now pass away peacefully. But he lived for ten more years.

Dear colleagues, this story is telling us something about the history of Korea. But it also tells us about the nature of scientific research. Let me explain.

First, like sportsmen, scientists thrive for excellence and this requires hard work, competition and fairness. Second, like athletes, researchers must work within a certain geopolitical context. Third, excellent scientific research projects are like a marathon: they require motivation and perseverance.



Forth, scientists must train the next generation, like Son did. And finally, the world can change, and our work in science can contribute to this change.

There is yet another similarity between science and sports: both rely on outstanding individuals and both are also team efforts. This is why we are here together. We want to learn from each other, celebrate our shared successes, and discuss our options for future collaborations.

Why is South Korea an important partner for us? Well, just look at the recent developments. According to the Bloomberg Index of 2021, South Korea is the most innovative country in the world. Academia and industry are closely interlinked here, and applied research has been long supported in Korea.

In addition, over the past ten years, the government expanded capacities in basic research. Together with Israel, South Korea is now the country spending most on research, around 5% of the GDP! Korea is also attractive for international talents.

In addition, we can build on our shared achievements. The MPG has strong partners here. Yesterday we extended our MoU with the Institute of Basic Science. And Pohang University of Science and Technology hosted two Max Planck Centers, one on Attosecond Science with Ferenc Krausz who just obtained a Nobel Prize.

We also have two active and two new Max Planck Partner Groups in Korea. The first partner group was established here in 2012, and since then nine groups have been set up. They are a success story, thus I predict that more groups are to come.

So – what about the future? I see many opportunities. Yesterday we discussed biophysics and neuroscience. May I add today three more. First, artificial intelligence. Machine-learning is transforming science and society. According to the global AI index, South Korea ranks number 6, following the US, China and Singapore on the first ranks, and Germany ranks number 8.

AI is an incredibly fast-moving field. A few big global players are moving ahead, with academia beginning to lag behind. I propose that we develop AI in future fields and explore the interfaces between AI and earth system sciences, synthetic chemistry, or the social sciences. At the Max Planck Society, we have experts in these fields, and we are developing an overall AI strategy.

But AI also has its negative sides. To mention just one: In Europe we see a huge amount of disinformation in social media and we also see that this promotes right-wing extremists and can influence elections. It is difficult how to go about these issues, but one thing is clear: Democracies must defend themselves against fake news, disinformation and manipulation.



Related to this, we founded a new institute just five years ago, the Max Planck Institute for Security and Privacy that concentrates on cybersecurity. We are very fortunate that Meeyoung Cha from the IBS recently became a director there. Her interest is computational social science, including human-machine interactions.

Let me go to the second opportunity: green energy and climate mitigation. The South Korean government wishes to intensify scientific collaboration with Germany in these fields, where the Max Planck Society also has much to offer. We develop new catalysts for energy conversion, new processes for circular chemistry, and we are redirecting an institute towards sustainable materials such as green steel.

By the way: The German government is making big efforts to reduce CO<sub>2</sub> emissions. Last year, half of our electricity came from renewable resources, and it is planned to be 80% by 2030. At the Max Planck Society we also contribute our share. With our Climate Action Plan we aim at cutting our emissions by half until 2029.

We also welcome that Korea develops an economy for green hydrogen and promotes international cooperation on hydrogen certification, trading and industrial demonstration projects. Economically, South Korea is already the third most prominent partner of Germany in Asia.

Let me now come to the third area of interest, research on the resilience of democracies. This morning, we visited the Demilitarized Zone. Why? Well, some things you have to see with your own eyes. Allow me to say some personal words here.

The first 20 years of my life I was in the unshakable believe that the inner German border will never go away. My grandparents lived only a few hundred meters away from the border, in the Western part of a divided village. When I get there today, I still have difficulties to believe that the fences, watchtowers and soldiers are gone.

In 1988, I did my military service and really nobody had the slightest idea that soon Germany would be reunited. But one year later, the Soviet Union broke down, the Berlin wall came down, and well over 1000 kilometers of fences were torn down. The story of our reunification teaches us that the course of history cannot be predicted.

However, the situation here in Korea is different in many ways. For example, we are all concerned about the developments in North Korea. It is now one of nine countries possessing nuclear weapons. The atomic potential is rising and over the last two years 100 missiles were tested.



Only two days ago, our delegation visited the Peace Memorial at Hiroshima. One may argue that nuclear deterrence has prevented a war between superpowers. But there is a simple conclusion from our visit: a nuclear war can never be won and nuclear weapons must never be used again.

In face of such threats, the question of the resilience of democracies appears in a different light. Just two days ago, free elections took place here. I mention this to remind us that we should never take free elections and democracy for granted. In Germany, there are threats to democracy. Earlier this year, about two million German people have taken to the streets to stand up for freedom rights and an open society.

These were topics we also discussed today at the residency of the German Ambassador. We learned about ongoing democracy and peace research in Korea. The discussion also sheds light on our experiences as divided countries, the ongoing conflict on the Korean peninsula and democracy building.

To understand these threats to democracy, we need a cross-disciplinary approach that combines social sciences, computational sciences and humanities. I think this way we can investigate how democracies are influenced by AI or by the new communication technologies. And we need to engage in a discourse that allows for a change in perspective. In this context, we should also discuss the impact of geopolitical conflicts on our institutions and, more generally, on our democracies.

Facing such geopolitical conflicts, we should stand united as an international scientific community. In this respect, we are excited about the possibility that South Korea joins Horizon Europe shortly. It would be one of the first countries outside Europe to join, following New Zealand and Canada.

Let me end by saying that this is the last evening of our tour through Asia. It took us to Delhi, Bangalore, Singapore, Tokyo, Hiroshima and – last but not least – to Seoul. Now the circle closes. We meet tonight with our Partner Group Leaders, and did so also the first evening in Delhi. Everywhere we met collaborators and friends.

Let me thank those who worked behind the scenes to make it possible that we did this tour through the most dynamic region in our world: Christiane Haupt and her team. Thanks also to Vice President Christian Doeller and our colleagues Joachim Spatz and Klaus Blaum for joining during part of this tour. Tonight, however, I want to mention one person in particular: Sabine Panglung, who has been there from the start of our partner program, which is now 25 years ago.

Why did we go on this tour through Asia at all? Well, science is driven by people. And these people need to meet, exchange ideas and identify exciting projects. This is why our international strategy relies on excellent, courageous and open-minded scientists who build bridges in a multilateral world.



This takes me back to the beginning of my speech. Remember the young Korean marathon runner and gold medalist of 1992, Young-Cho? Apparently he said after his victory that his shoes were produced in Japan. Thus, in the end, this story is not only a story about change, but also a story about the possibility of reconciliation.