



FURTHERING SCIENCE AND ART

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The Swiss Academy of Arts and Sciences has grown out of a desire to facilitate effective dialogue between science, society and politics.

Professor Thierry Courvoisier discusses his role as President of the organisation and describes the future of both the Academy and the research landscape in Switzerland

What is the origin and goal of the Swiss Academy of Arts and Sciences?

It is the union of four academies. Historically, Switzerland had individual academies for medical sciences, technical sciences, humanities and natural sciences. We are in the process of putting these four academies together under one umbrella. I am both the President for the Swiss Academy for Natural Sciences and the overarching organisation.

The process of bringing together these four communities has not been easy because the cultures of each are very different; however, we at the Academy think it is absolutely essential to join forces, because the problems confronting our society will require an interdisciplinary approach. For example, a country cannot imagine solving energy questions with just natural sciences or just technology; a solution will require several aspects that deal with society's structure and the way in which we live.

Therefore, our overarching goal is to make use of our combined expert knowledge and to act as a network committed to the establishment and development of the arts and sciences, as well as promoting dialogue between the arts, science and society.

The Academy is invested in developing a national education strategy in Switzerland. Can you talk about the work the Academy is performing to bring this strategy to fruition?

Our country is very decentralised, and many aspects of education fall under the responsibility of the 26 different cantons. As a by-product of this structure, the actors in the cantons can be relatively different from one another, and can have varied goals and motivations. At the same time, there are actors at the national level who have a stake in the nation's education. Our aim is to improve the dialogue between these interested parties.

Since these issues are often linked with questions of power and responsibility, we have taken the approach of fostering dialogue. We are enabling people to sit together to discuss questions about the overarching system. The Academy is not developing a strategy; instead, it is serving as a platform where all the actors can meet. The individuals can then think about the aims and goals of the different educational branches, and having done that, they can smooth the difficulties that occur at the educational interfaces.

FINDING SOLUTIONS

The desire to produce interdisciplinary solutions to society's problems drives the work of the Swiss Academy of Arts and Sciences. The organisation is taking many actions to fulfil this remit

The Academy has drawn up a roadmap that identifies the steps needed to make the health system sustainable, especially with consideration to the cost of services. Our plan draws very concrete recommendations for the different healthcare players, including legislature, the Swiss Parliament, hospitals and the cantons. The aim of the recommendations is to make the whole system evolve into something that is better suited to our society.

We have also produced a study concerning renewable energy and land usage. Renewable energy resources require a large amount of real estate, as the quantity of energy from wind turbines or solar panels per square metre is relatively small. Our study is pre-emptive and looks into the potential conflicts between the use of land for renewable energy and for other purposes, such as agriculture. We have tried to identify possible tensions, so that interested parties can meet from the onset and discuss the situation. We have also identified areas where synergies are possible, because not everything is based on conflict.



How does the Academy work with international bodies to strengthen Switzerland's relationship with the rest of Europe?

We work with international bodies such as European Academies Science Advisory Council (EASAC), which has a similar brief to ours, but at the European level. The movement of the EASAC in Europe is going in the same direction as the line of action we are taking in Switzerland; this is encouraging.

The EASAC produces a number of reports and it is effective in shaping European policy, as it works in conjunction with the Chief Scientific Adviser to the President of the EC Professor Anne Glover by providing her with feedback from the European community from its various partner organisations, such as ours. This is an excellent process, and I hope it will be continued when the new commission is in place.

What are your goals for the Academy, and where would you like to see it go under your leadership?

If I take a number of concrete steps to integrate the four academies that make up the Swiss Academy of Arts and Sciences, then I will be very happy. I am proud to say that this is already starting.

A second motivation, which is central to my vision for the Academy, is to bring science and scientists closer to the political decision-making process, particularly in Parliament. We are making headway in this area too. For example, approximately a year ago, Parliament decided to impose new restrictions on genetically modified organisms. We approached the Parliament and pointed out that their decision was based on incomplete data as research from recent years was not included. This opened a dialogue with members of Parliament, and the consequences of this conversation have been that the ties between the Academy and Parliament are considerably stronger. This is a relationship I want to continue fostering.

IMMIGRATION AND INNOVATION

Professor Thierry Courvoisier discusses the impact that Switzerland's recent vote to stop mass immigration has had on the scientific community

Earlier this year, Switzerland voted to impose limits on immigration. Can you explain the consequences of this vote? What affect is this going to have on Switzerland's research landscape?

This is a difficult scenario, because the people did not vote against Europe, they voted on a question of immigration in general. Now, issues have arisen in two major ways. The first is that Switzerland and Europe's relationship is at stake. The free circulation of people is a central issue in the EU's remit, and upon the outcome of the Swiss vote against mass immigration, the EU made it clear that Switzerland cannot expect to be an exception to Europe's rule and maintain its associated country status. Hence, the EU excluded Switzerland from the Horizon 2020 programme and the Erasmus exchange programme. This is very bad because it will prevent people from the European-wide community from working in Swiss institutes, and it excludes Switzerland from the competition within the research community.

The second place where this vote could have consequences is that it will impose quotas on different people arriving in Switzerland. Therefore, if only certain numbers of people from different domains of society are allowed to immigrate to the country, then science and research could also be rather badly affected, as quite a few researchers and scientists in Switzerland are from other countries. In fact, we have one of the most international research communities in the world.

Is there anything in particular the Academy is doing in relation to this vote and the backlash with Horizon 2020?

We have joined forces with other organisations, such as the Swiss National Science Foundation (SNSF), which funds project-based research in universities. After the vote, we had to push the Swiss Government to act extremely quickly so that it could jump into the hole that was left from Switzerland's exclusion from Horizon 2020 and the European Research Council (ERC) grant scheme. In many ways, the money that was to be paid into the European system is now being invested within Switzerland. At the moment this is fine, but it is not a long term solution. The Academy has to make sure it says this very loudly, because the political forces that were successful with this initiative are forces that would also be inclined to say: "Look, we can solve our problems ourselves. We don't need the rest of the world".

The essence of the problem of this exclusion from Europe is not in the money itself, but in the fact that for a research community to be successful globally, it needs a base that is much larger than a country of 7 million people. Europe can do that, it must do that and any individual country that thinks it is sufficient to do this on its own is wrong. Switzerland absolutely needs to be a part of a continental approach to research and innovation. This is what the Academy has to explain, and this is what I am aiming to continue doing as President.



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