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4 SPEAKERS

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START OF TRANSCRIPT

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It was really an awful moment to push the button and send the rejection of an ERC grant.

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Katharina Gapp is a group leader at the Institute for Neuroscience at ETH Zurich. She received the prestigious grant from the European Union and had to reject it due to politics.

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The thing that worries me most is that we will see the impact not right now, but only in a few years when it might be much harder to actually remedy it.

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Andreas Wallraff is an ETH scientist in the field of Quantum. His group played a crucial role in a European collaboration and now has to search for new partners due to politics. Thanks for joining the ETH podcast. I'm Jennifer Khakshouri and in this episode we will be talking about politics. ETH researchers like Katharina and Andreas are directly affected by political dissent between the European Union on the one side and Switzerland, as well as the UK on the other. The frictions aren't about science and research, but the EU nevertheless saw a suitable instrument of pressure to stop the current access to European research programmes.

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Not having an association of Switzerland and the UK is a big loss for cooperation across borders in Europe in general. So it's bad news I think, not just for the Swiss, not just for the UK, but for Europe as a whole.

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This is Robert-Jan Smits. He's the president of the Eindhoven University of Technology in the Netherlands, and he used to be the director general of research and innovation at the European Commission.

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That's the kind of a state secretary position at national level. So I was running the program and also has been involved in designing Horizon 2020 and to a certain extent also the successor program Horizon Europe.

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Horizon Europe is the multi billion program for science and innovation of the European Union. Up to about a year ago, Switzerland was treated as an associated third country regarding grants from the European Research Council, and it means a lot for researchers here if they acquire a grant from the ERC.

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I can only personally talk for myself, but it really feels a little bit like you've made it.

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It's a very nice program these ERC grants, they provided research funding for our lab for five years on a project that we would otherwise not have been able to do. And that also allowed us to receive a distinction that is very visible on the European level, also to all other researchers in Europe, because it's not only a research grant, but it's also some form of a prize for the researchers who receive this type of grant.

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If countries are associated to a program like Horizon 2020 or now Horizon Europe, it means that there is a fantastic instrument which allows the best scientists from all over Europe to work together to extend the frontiers of knowledge and to find solutions for some of the ground societal challenges we are facing. If this instrument, this program is excluding certain countries, it's very, very difficult then to continue cooperation between scientists or with scientists of these countries.

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And there are individual struggles such as Katharina experienced. She tells her story of having to reject an ERC grant.

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That was probably two months after I received the letter that I had been awarded, and ETH has been very helpful in liaising with the officers who do the communication from sides of ERC. They prepared the rejection letter with me, but I still needed to send it off and it was really a painful move, I can tell.

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Switzerland is at risk of losing its talents. Katharina was offered positions in EU countries.

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In my particular case, that was Spain, very unexpectedly from the city that my husband is from. So I indeed actually talked to them and listened to what they offered. Again, same story. They want to offer a long term perspective, not too unattractive, but it's also a kind of an ethical conflict because it's not really okay to take advantage of the situation. Right. And yeah, for me, that was La Colonia in Spain and also Cordoba University and in Sweden it was actually three different prestigious institutions. Of course, as a scientist, you start wondering, even though it's maybe ethically not that correct from those universities to really consider these options.

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Andreas, what crosses your mind when you hear that, that other countries are trying to take advantage of this actually desperate situation Switzerland is in right now?

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I think one of the aspects that it shows is that the candidates in Switzerland for these type of grants are attractive for universities in other countries. And I'm not surprised at all that researchers and professors at ETH are the target of that because ETH is a very good international university, and I think it's part of the international competition. I think ETH is also proud if we get a professor from Harvard to join ETH. So I think this is part of the game and now, you know, it feels a bit wrong, I would agree, but I think there is the international competition about it and we have to see how we position ourselves as an institution and maybe also as a country to make sure that science remains successful in Switzerland.

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Similar to Andreas, Robert-Jan finds offers such as Katharina got unethical too, but competing is also part of science on an international level.

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Listen. There's a battle for talent, a global battle for talent. And if certain scientists in the UK and Switzerland feel that they cannot internationalize or cooperate with other partners because Switzerland is excluded from the programme, from Horizon Europe, they look for other opportunities and there are certainly countries who are desperate for top talent and they will open the door to let these talents in. So I think it's something which is natural, which is unavoidable. It would of course, be very unfair. And I think that's not happening if European countries, EU countries, member states who deliberately start shopping in Switzerland and the UK say, Oh, come to us and launch back and big campaigns, that's not happening. That would be, I think, not really ethical if that would happen. But that is the old scientists from Switzerland, the UK, who says, Listen, I don't want to be in such an isolated community, I want to really be part of the European project and they leave. That is, I think, unavoidable and it will happen.

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Are you shopping for talents for your university?

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No, we are not. We are, we are open for anyone. Any top talent wants to join the university. But it is not that we say, Oh, Switzerland is in a difficult situation. They are not associated. The UK is a difficult situation not to associated and therefore we launch recruitment campaigns in these countries. I think this I would never do with regard to my colleagues and partners in Switzerland and the UK. That's not my policy and we will never do that.

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Now let's look a little deeper into what Europe would lose without ETH researchers. Andreas is a prominent scientist in the field of quantum.

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Computing technologies are very important in everyday life for our economies, for society. And we've gotten used to the computational power of our laptops and cell phones and supercomputer centers to grow throughout the last 60 years. And the power sort of doubled every two years. And this is slowed down quite a bit in the recent ten years even. And so now there's research on trying to figure out how the improvement of computers could continue. And one of the ways to make better computers is to try to build quantum computers that solve certain types of problems more efficiently than other types of computers. And our own lab happens to work on a realization of such quantum computers that is based on superconducting circuits. And that is also an approach that, for example, IBM and Google and Amazon follow, and also quite a number of startups follow. And our lab happens to be a big contributor at the European level to research and that domain. And in particular, we have contributed to a flagship project of the European Union on quantum technologies. And and I would think that our lab has made important contributions there. And now it appears that we will be cut off from the ability to make these contributions in these projects, even though that we've invested many, many years to contribute building the community and bringing this project on the map and making it progress.

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Therefore, the feel of quantum has been hit badly. Katharina is, in a sense, luckier. In her research, she's interested in molecular signals and sperm that are relevant for a heritable disease risk. In her ERC project, Katharina's team will use custom made tools to degrade stress hormone receptors in sperm to prevent effects of stress on the offspring. Yes, she will work on the ERC project, but now it's financed by the Swiss State Secretariat for Research and Innovation.

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I think one important aspect here is that it's not only about building networks through those grants or even before having such a grant in order to apply. It's also about having this benchmark and then having the opportunity to also build your career based on those grants. They are transferable, meaning that once you have the grant, you could still during your assistant professorship or then later on go to another university and take the money with you. So you have a big advantage having one of those grants. You can take it with you. You're very attractive on the job market. And of course, this is now one issue for those grantees who are not able to take the grant within Switzerland that even though they get the subsidiary grant from Switzerland, they will not be able to be that attractive in the competition on the European market. But looking at it from the Swiss university point of view, it's also a problem because they cannot attract those top researchers in other countries of the European Union holding such grants, bringing in this money. So it's a financial component, but also this intellectual potential that they don't have access to anymore.

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I ask Andreas how the full stop of Horizon Europe grants affects his life as a researcher?

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I think there is a financial component to it, of course, because we receive funding through that project, which was significant. It's been a large project for us, but the funding can probably be replaced. What worries me most is the problems that we will have in keeping the contact to our European colleagues on that same project. So I think these European projects are very good at establishing a good setting for collaborating with others in the EU around a common topic that we identify and that we receive resources for together. And and now that aspect is going to go missing and we have to see how we maybe maintain or re-establish some connections along other paths. But my feeling is that it will be much more difficult than it is now, and I could give some more examples on what that feels like currently.

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Can you give us one example?

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Yeah. For example, we have worked on this project for three and a half years. It comes to an end and now all our partners plan the next phase of this project, which should be starting later this year. And we're just excluded from being part of that project for the next phase, even from the discussions of what that could look like, despite the fact that we had made important contributions to the project.

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So it is a brain drain also on their side to bring innovation forward collaboration is necessary.

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If you look at the challenges we are facing in the field of climate or the energy transition or the agricultural food transition, which we are all facing, this requires the mobilisation of the very best brains of our continent, and that means working together in partnership to tackle those ground societal challenges I just mentioned. And there should be no borders or no no barriers to such cooperation between these best brains. And that's why it is essential that our politicians get over the political discussions on often a lot of technicalities and really allow association to take place.

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Katharina wouldn't leave ETH Zurich because of the difficult situation.

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definitely is an excellent institution with all the equipment and infrastructure that I need for my team to do the type of research we do. And also a running lab is a running lab, it's producing and each time you move your team and stop your research, re-establish everything from scratch is something that we simply cannot afford, especially if you're just starting out and time is really precious.

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Actually, she already left the country once before because politics shifted many things, including science. Katharina left the UK because of Brexit.

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It's a bit a haunting theme. Yes, that's true. I also have a family. I have two children and a husband who also is a scientist. And science is also hard business. It's definitely difficult to find a long term position. And even though UK also has an excellent environment there with Cambridge, Oxford, London, with Imperial College, London, it did frighten us that we would not know what the status would be in the future. Would we still be treated like UK citizens? Would we be able to vote there? What would be the situation for our children? And that's why we decided rather quickly that we wanted to go somewhere safe in that sense. So I would say it was rather an easy decision also because Switzerland has such fantastic opportunities for science as well. So there we are very lucky. I think if you're not coming from Switzerland or if you don't have some ties to Switzerland and its different options, then it's probably harder to take these decisions. But yeah, it's, it's coming back. It's haunting us. Still, I feel confident that staying in Switzerland was a good decision. Staying at ETH is also a good decision and it will work out in the future. Nevertheless.

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Is working together with the UK an opportunity like to build new ties, or is that just a very naive thought that I have?

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No, I think we're in the process of building new ties also with the UK. I think the UK science minister visited Switzerland very recently and this was a topic of discussion how to strengthen the ties between the UK and Switzerland. I know also in the current situation there's discussions with the United States to strengthen the ties and both of those discussions have quantum science also as a topic. So Switzerland will look for other opportunities and that's probably good to do in any case. But we shouldn't miss out the opportunity for collaborating with our neighbours, who are both physically close and also in many other ways may be much closer and where we're are much better set up to collaborate. I think an important aspect in all of this is that we have now many, many years of understanding how we collaborate on European Union projects. Maybe we don't like every single aspect of it, but we know how it works. Everyone else knows how it works. All our neighbours can continue to benefit, but in some subject areas we can't. I think it's maybe also important to note that Swiss scientists can participate in many collaborative projects on the EU level still. Maybe not as a leader of those projects, but there are a few subject areas which are considered strategic on the European Union level and I think space subjects are among those. But also quantum science and technology is part of that. And in those areas we're not at all allowed to participate, even if Switzerland would pick up the bill for this.

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Many scientists started an initiative called Stick to Science.

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It's a very nice petition. It's a plea, a public plea from the science community in all European countries towards Bern, towards London and towards Brussels. But please stick to science. You know, let scientists not be the victim of all kinds of political problems you are having between yourselves. Let scientists do their work, let them collaborate, let them work in partnership across and beyond borders. That is more or less the plea. So associate Switzerland to the UK to Horizon Europe. That is the key message which is being given.

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And the problem of the exclusion of countries of Horizon Europe, how can that problem be solved and by whom can it be solved?

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Well, it only needs one thing political will, political will to get over this and to really associate these countries. So it's purely a matter of political will. Is it a political willingness in Bern, in London and Brussels to say, listen, we are not going to have this divide in the field of science innovation. We're going to join forces. We let these countries, UK and Switzerland join Horizon Europe as associated members. So it's all about political will and it's possible. It's not the first time that the political will was there to sort things out.

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And are you optimistic?

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Uhm, no, I'm not. I was optimistic. But the clock is ticking. And the longer the clock ticks, the more difficult it will become, because you see that all kinds of other reasons then come to the table. Well, then there is this issue in this field with Switzerland, the UK, and we have to sort out this with regard to Northern Ireland and we still have to sort out that. So the longer we wait, the more of these issues will come to the table. And at a given time, you know, we are halfway Horizon Europe and it's not worth anymore for countries to become associated because, you know, the majority of the programme or the budgets have already been allocated. So I had really hoped and that was my hope with regards to the Stick to Science campaign, that with the power of the ones signing the petition and making it clear why it's important that the countries are associated that by the summer before the summer things will be sorted out. I'm a little bit more pessimistic now, but as again, as I mentioned, given the enormous trouble we have on our borders, which is awful and illegal war in Ukraine, it's now time more than ever for politicians to really, you know, get over the differences and unite. And notably in a field which is so non-controversial as science cooperation, you know, don't politicize that. Let people work together there. So although I'm a bit pessimistic, I hope that politicians at the most senior level in Europe and in Bern and in London will get over things and go for quick association. This is not the time now to be divided in our continent, is not the time now to constantly discussing all kinds of technicalities. This is the time to unite and to show that we are partners and notably in the field of science innovation, where we have so much to offer to each other.

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Katharina, what are your hopes for the future?

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I do hope that we get back on track and with that I mean that we get re-associated. I also agree very much that spreading wings and building new ties with other non European countries is a great opportunity, but it does not substitute the European Network and the Horizon program.

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I do hope that Switzerland will find a way together with the European Union, to unite behind this research and education program, which is Horizon Europe, and I think many of my colleagues think the same way. So I think this is the preferred option. We would like to get this back. Also, we are looking at other options to strengthen our ties with with other countries, with other research programs. And I'm overall optimistic. Switzerland remains an excellent place for education and research and ETH Zurich is also an excellent institution, but we should still make sure that it remains this way, and I think it will lose a little bit of its attractiveness if there is really restrictions in the way how we would collaborate with with European partners.

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With regard to the situation we are facing now regarding the association of the UK and Switzerland, putting this in a more global context in which we are living, of course the war which is going on in our borders, I think we should really get over differences, technical differences, small political differences and really, you know, get together.

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What can scientists do concretely?

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I think be vocal. Talk with your members of your parliament, talk to your ministers, talk about it in the press, talk about it in conferences. You know, be vocal and make it clear that you are not happy with the situation. So there's also a big responsibility on the science community to keep on talking about this and to make the case why it's important to overcome these hurdles and to have the countries again associated. So the science community should continue to talk about this, to make petitions and at events make it clear that we are partners and we should be partners in the fields of science and innovation. And that the politicians, the decision makers in Bern, Brussels and London have to really sort this out as soon as possible. So keep it on the agenda. Keep talking about it. That's, I think, crucial.

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Let's keep the conversation going. Thank you for joining the ETH podcast. I produced this episode together with the Audiobande, a joint venture for Sound Adventures. Share us like us, post us and thanks for doing so.

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