Round Table – Research Assessment

Roundtable participants:

- Jean-Éric Paquet, Director-General of DG Research and Innovation, European Commission
- Maria Leptin, President of the European Research Council - ERC
- Marc Schiltz, President of Science Europe and CEO of the Luxembourg National Research Fund - FNR
- Michael Murphy, President of the European University Association - EUA
- Bert Overlaet, on behalf of the President of the League of European Research Universities - LERU
- Thierry Coulhon, President of the High Council for Evaluation of Research and Higher Education - Hcéres

Animator: Paul de Brem (scientific journalist)

Animator: A few months ago, open access was made a legally mandated requirement for all projects funded by Horizon Europe¹. Three months ago, the European Commission published a report called ‘Towards a reform of the research assessment system’². One month later, the European Commission released a Call for interest³ in order to create a coalition on reforming research assessment. Jean-Éric Paquet, how many signatories did you get?

Jean-Éric Paquet: It is still ongoing, but we are way beyond 160 in a matter of a few weeks. I expect that to mushroom now and that we will have many more. We hope to rally as many actors as possible in Europe around that call, and across a spectrum of organisations. We want researchers and the organisations that represent them, universities, evaluation actors in the national systems research centres and research funders, to be part of it. We need this participation across the spectrum, and we already have a wide range of actors in the 160 plus signatories so far, so this is really looking good. We have a few non-EU countries already represented, but we now largely have all EU member states. We do not have all of them yet, but I think we are above 22 out of 27. I have no doubt we will get there.
There is amazing momentum behind open science. The assessment of research, the assessment of research organisations and the assessment of researchers themselves is very much at the heart of a systemic change in open science practices, which is why it is so important. Beyond that, we have seen in the pandemic management that open science is an absolute must. The impact that open science has had on scientists around the world, particularly in Europe, in making a difference has been amazing. The Commission, together with the European Molecular Biology Laboratory and other organisations, created a data platform through which thousands of researchers shared their data and viral sequences. This accelerated the knowledge sharing around COVID-19. Also, publications behind paywalls were made available in immediate open access. With open science the world has moved remarkably fast in dealing with the pandemic, and the vaccine is one example. It is therefore a necessity, but it is also a process which is decades old. There was a lot of frustration at the lack of action, as open science is a systemic effort with many different components which largely need to move together to be relevant and impactful, which explains why it was so difficult. The European Commission can have an impact in terms of policy frameworks and funding, but we cannot do it in isolation. Today’s momentum really started with cOAlition S about open access to publications, which created some momentum, including for research assessment.

It started with ministers agreeing that the European Research Area needs a new momentum. A key component for ministers is indeed open science and, within that, they identified research assessment as a critical component. It is very clear that when you look at research assessment this is not just about looking at and grading individual scientists or labs or institutions. It is about fundamentally looking differently at how we are producing science and how we are organising ourselves to do so. The Commission did a rather deep dive into the issue in the course of 2021 and produced a report at the end of last year setting out the key elements of a process which could lead us collectively to really change the way research is assessed. That was then the basis for a call we launched on 16 December 2021, which now has real momentum.

The idea of working together is to produce a coalition agreement in order to make proposals for concrete reforms of research assessment, and the Paris Call is a direct contribution to it. It calls for organisations to come together and commit to research assessment reform, and to helping us to produce this coalition agreement. We will use last year’s report as a strong starting point, and we are now working with Science Europe and the European University Association to start putting a text together. The Paris Call will be a key input into it. We will of course
make this work available as it progresses, and it will be a work of co-creation with many actors participating. I hope we will have it by the summer of 2022, and we will then have a very strong basis to start, act and deliver.

This coalition should certainly be open to participants beyond Europe, which would be fully aligned with the UNESCO open science recommendation6 released a few months ago. The hard work starts with like-minded European players, but we are open to see key players from around the world join. It makes sense because science is global. There is no doubt a need to have players from beyond Europe joining. I think the work will be strong enough to attract big players from outside of Europe, especially given the concrete and practical step-by-step delivery process.

There will no doubt be roadmap elements. This is not just a declaration of principle. We need to move beyond that to delivery, which is challenging because it is very broad as an effort. It is disruptive and it will change practices, habits, and the positions of actors. It is not something which is neutral at all. It is a deep disruption for the better, but it requires us to create a large coalition and genuine ownership with the actors of that coalition, and that we then have a real practical way forward with well-planned steps and strong momentum within a reasonable timeframe. With Horizon Europe we will play our part by changing the way we assess proposals. We will move away from the use of journal impact factors in particular and look much more at the content of research.

**Animator:** Maria Leptin, the essence of your organisation, the ERC7, is to select excellent researchers who will get fantastic grants over a period of many years, and they will be able to create their own teams and pursue their own scientific ideas. I guess that every scientist in the world would like to have an ERC grant and I guess that you must be challenged as an organisation as to how to assess these candidates and the work they have done?

**Maria Leptin:** It is indeed a challenge. First of all, a logistics one, because there are thousands of applications coming in each year and only between 10% and 15% of them can be funded, so the selection is very tough. The ERC relies on top experts in all fields of academic thought and research, so we need a large number of experts. The challenge is of course how to identify the best. We do rely on experts who look at the science. They spend a lot of time. They read the grants in detail. We get external assessments as well, expert views on details. They meet to discuss them, and they meet again to interview the short listed candidates. It is a huge amount of work and a huge amount of intellectual input.
The ERC really looks at the content and not so much at metrics. The ERC has been a signatory of DORA since last year. We have completely banned the use of impact factors. Their use has been discouraged for some time. The committees are told not to look at other metrics, such as whether researchers work in glamorous institutions or whether they have a high h-index. They are really encouraged to look at the essence of the work. There are a number of things that matter that have not actually come up in some of these discussions. For example, not only the impact factor of where you publish but the overall output can vary a lot, and it can vary a lot depending on the location where you are. If you are in a very supportive huge centre of research, it is easier for you to be productive and to train good people, because the good people flock to these places, than if you are in a smaller place. We urge our panels to pay attention to that and they do.

The Scientific Council, which has 22 researchers from throughout Europe and which represents all fields, can monitor the way panels assess these researchers by sitting in on the panels and listening. They are not allowed to say anything. They are not allowed to influence. They sit in, monitor, and get feedback. They thereby collect evidence from the panels and then report it back for discussion and review, so we constantly self-criticise and get feedback. Some people may fall into traps, but reminders are given to try to prevent that. We make use of narrative CVs. Researchers are allowed to choose individual papers they want to highlight and to tell the panels and the referees what to use. But there is still room for reform. As a researcher myself I would never say what I do is perfect and ready. It never is. It has to evolve.

There is still a lot to be done in an organisation such as ours for research assessment. When we talked about this before, we were talking about open access. We are now talking about research assessment. They are very different. What is happening right now, and I really welcome this, is that we are getting feedback about what we are not getting right and where we can do things better. We are about to set up a task-force within the ERC Scientific Council to also look into this. When it comes to open access, which I fully subscribe to, the ERC demands publication in open access. In other words, any work funded by the ERC has to be published in open access venues. However, the entire community still needs to look for additional solutions.

I welcomed yesterday the highlighting of Diamond publication. Diamond Open Access is defined as a method where the researcher does not pay to publish and the reader does not pay to read, which means that somebody else has to pay. There are very good examples of that, but they are restricted to researchers who are funded through particular venues. What about all the other papers out there? If we want global open access, we need to find a way of doing that. These are big issues that remain to be
solved, but it is good to see an impetus going in that direction. I do not know how things will pan out with what we and the community come up with in terms of recommendations for research assessment, but I am sure there will be similar logistical issues and possibly also financial issues.

If the Scientific Council decides so, it would be possible for the ERC to, for instance, response positively to the Paris Call and join the coalition, as we already signed up to DORA. We have created a taskforce, that is not fully formed yet, but we met in preparation of this meeting. We will look into what the Scientific Council thinks, with feedback from the panels, about what is needed for and works for the ERC. Once we have formed a view of the best way forward, we hope we will lead in implementing the reforms that will come from the consultation with the community.

**Animator:** What about open science and partnership between the academic and private sectors? In other words, how to reconcile open science with the incentive to file patents by certain research institutes?

**Maria Leptin:** I would simply say that question is not for the ERC to answer. Researchers at the ERC are free to publish whenever they like and whatever they like. They are also encouraged to consider patenting and bringing their research to the next level of application. I think human curiosity is the driving force of discovery and invention, so it does not have to go anywhere. However, researchers are encouraged to think about that and are helped to do that. There are specific grants that help people to get patents. Then there is the great transition to the EIC<sup>9</sup>. Proof of concept is within the ERC, but then there is a different agency, the European Innovation Council, that does the next step.

**Animator:** Marc Schiltz, Science Europe<sup>10</sup> is an association that brings together many funding agencies. You have 38 member organisations from 29 countries. You told me that when it comes to reforming the assessment system, we know what we do not want anymore, but more difficult you say is what we want to replace it with, because the question is so complex and because we are trying to assess people engaged in so many various activities. How are you going to compare all these people?

**Marc Schiltz:** I think that we should not, and we will not replace a narrow, simplistic and monolithic evaluation model with another one. The question is not so much what the new evaluation system will be. I do not think we should go for a unique new evaluation system. I think that is the wrong question. Here I can make a reference to open access. With cOAlition S, one of the reasons we started on that was to liberate
the scientific community from a monolithic publication model, but we were not saying which one should be the new one. However, we needed to be liberated from those chains and, as we heard yesterday, there is now innovation in the publication industry. With research assessment, it is the same. We need to be clear on what we do not want and what we wish to abandon.

Where we can agree on a future assessment system, and this is what is written in the Paris Call, is that we should recognise that researchers’ activities, for both individuals and institutions, are much broader than what is measured through some current narrow metrics. That is the first principle. For example, in the COVID-19 crisis many researchers have advised governments and many scientists have been on TV and on radio. This public outreach and scientific communication have suddenly become extremely important. That is just one example of taking a broader view of what researchers do and what should be valued.

What we also need is what is called research on research. Because I think if we are going to introduce new ways of assessing, we should also give ourselves the means to assess these new methods and these new approaches because we do not want to introduce new biases. We have to be very careful. We know that our current system is heavily biased, but we need to be careful that evaluation systems or methods involve critical self-reflection. My funding agency (the Luxembourg National Research Fund) has introduced narrative CVs, as have others, but we are now collecting feedback on that. We need to assess the impact and effect of narrative CVs to make sure that we are not making things worse. We must experiment, and I do not think there will be a one-size-fits-all evaluation method. Different institutions will adapt it to their needs. We can be creative here and it is the community itself which should mainly define these things. But the question is what we value in science, and it is more than just publication. We have to take care of the science system itself by being open, by sharing results and by caring for each other, including actions like training, mentoring and reviewing. The individual institutions know more or less what they want, but we have to get rid of these chains which we have put ourselves into. The ERC is a very good model of not looking at simplistic metrics and its participation in the coalition would be welcomed.

Jean-Éric Paquet: One element to note is the diversity of research activity, which Marc touched on. What we really need to value more and reward more is the work which scientists do on data, which also includes software, and then making it available to the community. This is never looked into. It is very, very time consuming. It requires a lot of resources and if we do not reward it and assess it this will never bring us to where open science wants it to be.
Animator: In your opinion, can you lock in the increased openness in scholarly communications that we have seen during the pandemic? Is there the political will in your opinion?

Marc Schiltz: There certainly is from the funders’ side. The planned policy is to make everything immediately open access. Publishers – even legacy publishers – have agreed that this is the case for everything related to COVID-19. Then we can arguably ask why just COVID-19? Is cancer research not as important? Why should cancer research be locked up behind a paywall for 12 months? I think publishers have in a sense admitted their defeat because what holds for one topic necessarily holds for the other. We cannot have an artificial hierarchy on what deserves to be immediately open access and what not. So we will see what happens, but certainly the funders in cOAlition S have always supported immediate open access without embargo for everything – not just COVID-19. So we will stick to that.

Jean-Éric Paquet: The funders do not allow anymore publications not to be immediately accessible. Under Horizon Europe, any research funded will need to be in open access at publication.

Animator: Michael Murphy, do you have the feeling that universities are ready to think and create this research assessment system that we are looking for, a flexible one of course, not a monolithic one? Do you have the feeling that they are eager to have such a system reformed?

Michael Murphy: I do, because we have lots of evidence to justify reform. The EUA and specialist groupings of universities, most of which are in the EUA as well, have been working on the Open Science agenda for well over a decade and we have been monitoring the evolution of the application of open science within the sector. Visiting here for the past day or so one can see the consensus among the breadth of society represented here and the enthusiasm to move on this agenda. Open Science is a moon-shot, something we do not because it is easy, but because it is hard, and it is something that our species needs to do.

Society as a whole is embracing on sustainability. The UN Sustainable Development Goals effectively encapsulate our societal and sectoral objectives and open science is a critical tool for achieving the SDGs.

Adoption of open science principles and practices should be one of the sector’s contributions to the UN SDGs by 2030. I think one of our failures to date is that we are afraid to set targets. The targets have to be realistic and that is why I am looking
at 2030. Yes, the universities are committed, and we have strategies and in most institutions we have policies, but the implementation gap is what we now really have to focus on.

The question now for us is how do we close the implementation gap between our aspirations and what we need to do? We are working as a sector, and with all the societal partners who have influence on our sector, to adopt collective approaches to reform academic assessment as an enabler of Open Science. The Paris Call is a wonderful example of collaboration. We have a tough job ahead of us because of the complexity of the matter. It is critical that in our work with the Commission, a key partner, we arrive at agreed implementation principles among all the actors and that we are realistic in the timeframes that we adopt.

In addition to accommodating complexity, we need to accommodate diversity. The needs of people in various disciplines are not the same regarding research assessment. Whatever frameworks we adopt, we have to be sensitive to that diversity. If we are to be fair in rewarding people, we have to make sure that our methodologies exhibit equity, which will be very difficult because the metrics in STEM can be very different from those in the humanities. But many of the measures that we will use are common to both. We also have to recognise that countries differ in terms of available resources, regulatory frameworks and opportunities to exhibit leadership.

EUA released a refreshed open science agenda a few days ago covering 2022 to 2025. It sets out our open science strategic priorities and addresses assessment reform as well. It begins with an endorsement of UNESCO’s open science definition. This is quite important as the open science agenda spans the globe in its application. The challenges that we are trying to face are global and require that we engage talent everywhere in the world to combat them. Having a body such as UNESCO aligned with what we are trying to achieve in Europe is really, really important. Some countries and some institutions have been braver than others in the steps that they have taken. We as global bodies, or at least pan-continental bodies, have a responsibility to try to make sure that the gap between the leaders and followers does not become a disincentive to the latter to keep on pushing. It is critical that we are all in this together.

**Animator:** Bert Overlaet, you were the lead author of a paper published recently. What does it say?

**Bert Overlaet:** LERU has been dealing with research assessment for some time and trying to move forward. We exchanged all these experiments and novel ideas we had
about that and turned it into a sort of new framework that is described in the paper that was launched last week. It is a way of trying to create a picture of the future of the assessment of researchers. We are not complaining about what we did before. If we want to go forward then we need to have a multifaceted and much broader perspective in assessment, which means that we must go away from the single-minded and very narrow measurements often used today. That is one element of the paper, and it describes the complexity and the variety of the duties of a researcher today in a university.

The ERC is here today. Another great European institution is the European Institute of Innovation and Technology, where you have these networks of sometimes 400 partners trying to move research forward in the European context. We need researchers who are able to work inside these kinds of coalitions. Networking is becoming so important. In the COVID-19 era it has become clear that leadership, collaboration, and innovation are topics that are coming much more to the foreground. It is not sufficient anymore to be a good researcher. You are also expected to be a good teacher in universities because we do not only produce patents and papers. Most importantly we produce people. We produce young people with research training, who are well trained to play a role in society. This diversity is therefore described in the paper along with the experiments we are doing in LERU.

Some universities have used narrative CVs for as long as 15 years, but we are still working on them, making changes and trying to improve the format because every format has its advantages and disadvantages, and it is difficult to strike the right balance. The aim is to be precise, efficient, and also nonexclusive. If narrative CVs are too long, then there are complaints that they take too much time to fill in. If they are short and concise then the risk is that those with a typical profile will be more easily remarked on by the panels than those with an atypical profile. At the heart of our paper and our endeavour is that we want to recognise and reward all the different contributions people now make in the research area, which is much more than just publishing. We want people who stimulate progress in their field of work, and they can contribute to that in so many different ways.

**Animator:** How do we concretely get around university rankings driving us back to a monoculture?

**Bert Overlaet:** Ghent University was mentioned earlier. Ghent is the closest competitor and colleague of the University of Leuven. The difference between the two is that at some point in time Ghent decided that the quantitative criteria for funding used by the Flemish government should translate into the assessment of the researchers
themselves and they got a bonus for each publication they made because they got bonuses from the government. This is the trickle-down principle that was used there. This is something that Leuven has never done. There is a Chinese wall between the funding of the university and the assessment of the researchers. We do not want the same criteria to apply. At some point, Ghent reformed and returned to the old situation because they came to see the trickle-down effect as destructive for the quality of science, the culture and the organisation. I am sure that if you have a good assessment process, you will achieve a collective form of excellence that will lead to good funding, but I think it is a devastating strategy to couple them directly, which has been shown in some places.

Michael Murphy: Rankings are like death and incomes taxes. They are inevitable. It is regrettable that those with the most influence are copper-fastening the importance of metrics that we are now trying to abandon in this reform agenda. Universities as a sector must encourage the evolution of a ranking system or ranking systems that deliver support to open science and our broader agenda. One that exists, that goes back to the last French Presidency, funded by the EU, the U-Multirank, is I think the closest to that objective, though it too needs to evolve. It behoves us to work to support and evolve a methodology that helps us attain our open science agenda.

Marc Schiltz: To the rankings, we also have to be careful that we are not ending up again in a situation, as with open science, that we give our very precious data away to these entities that establish these rankings. That’s what is currently happening: we give all this data over when it would be much better utilised for our own research on research purposes.

Bert Overlaet: There is one dimension I would like to mention as well, which is elaborated on in the paper and was already mentioned by Maria here. It is contextualisation. Today rankings, individual assessments of researchers and metrics are happening in a vacuum. If you are in a very good environment, it is easier to get publications than when you are in another institution. We have avoided contextualisation so far and one of the elements that we would like to focus on more in our assessment of research in the future is how to deal with this contextualisation without getting in a situation where you cannot decide anymore. We still have to make decisions about hiring and promotions, but how can we incorporate this context more than we do today?

Animator: Thierry Coulhon, you are President of the High Council for Evaluation of Research and Higher Education (Hcérès). It is an independent public body in France which is in charge of assessing institutions, universities, national
research bodies and so forth, but you do not evaluate people. How do the open science principles apply to an organisation such as yours?

Thierry Coulhon: The world is changing as far as research is concerned. There is a movement at the European level. There is a French movement as well and we are fully on board. How are we concerned? As you said, we do not assess only research. We also assess institutions and curricula. This means that we can ask the institutions whether they have an open access policy, whether they have an editorial policy, whether they have repositories and so forth. Also, as you said, we do not evaluate individuals and we do not evaluate research projects. Nevertheless, I think that we have to be coherent with the evolutions of the funding agencies and the institutions that hire and promote.

How do we work? We evaluate ex-post. That is the first thing. We evaluate every entity on a five-year basis, with the country divided into five geographical waves. We set up guidelines for each category of entity, namely the institutions, universities and national research bodies. There are guidelines for curricula and for research teams. On the basis of these guidelines, we ask questions about the open science strategy of the entity. Then the entities write a self-evaluation report. Then we set up a committee and the committee writes an independent report.

How do we comply with the open science movement? First, we hunt down impact factors in order to replace them with an assessment of the quality of journals and productions. This is not the most difficult part. Also, we tend to cover all the aspects of research activity. Of course, we do ask for research outputs, but all the kinds and categories of research outputs. We also ask for information regarding connection with society, outreach and so forth. We are also keen to take care of the diversity of disciplines. For each set of disciplines, we have a guide of products and activities of research outputs. These guides are elaborated by the communities, and they heavily depend on the discipline. Finally, we tend to move from quantitative data to qualitative analysis. Of course, we ask for quantitative data, on which we build the peer review. We recently started this for the current wave. We ask research teams for a portfolio of research outputs they want to set forward and the experts read them and assess them.

Let me insist, finally, on two things. We also have the mission of taking care, through a specific office, of the issue of science integrity. It is fair to say that France has been late on this issue and that we are trying to catch up. We host the French Office for Science Integrity and it has a scientific council. They try to disseminate good practices and to animate the community of scientific integrity throughout the various
institutions. This is one thing. On the other hand, I wanted to emphasise the fact that we not forego quantitative analysis at the proper level and the proper level is the integrated level. In the High Council we have a Science and Technology Observatory\(^8\) and they recently published a paper on the French scientific position\(^9\). At this level you can certainly count publications and study scientific profiles and so forth.

Things have to become collective in order to make the reform of the research assessment system happen. All French actors have been coordinated by the French Ministry, which has done a terrific job on this issue. We elaborated the Paris Call together. That is one thing. Second, at the European level there is a strong push by the Commission, and we discussed things with the people from the Commission. All this is happening at the same time. What I meant is that we have to be coherent. The High Council does not have the most difficult part. The most difficult part is when you hire and promote and there you should not take the easy solution of just counting and looking at easy metrics. However, of course when we do evaluate the ones who hire and promote we should be coherent with that. That is what I meant by the idea of moving all together, albeit maybe not at the same pace. I am fairly optimistic.

We are at the beginning of a landslide. I must say it is a matter of age also. I spent most of my career in another world when one used to count the h-index and the number of publications and so forth without asking questions, and I must say that a few years back I was still sceptical about some things. The model of diffusion of scientific knowledge would change, but one did not know when and how. Also, yes, the assessment system could change, and it did change. One can observe this at the French level and at the European level. It is now inevitable. It is being done.

**Animator: Your job is to evaluate research infrastructures. They are key players in implementing open science concretely. These research infrastructures are key players. Could you say a few words about your ambition concerning the evaluation of research infrastructures?**

**Thierry Coulhon:** Let me emphasise the fact that it is relatively new for us. We were not in charge of evaluating research infrastructures, and the recent law on research gives us this mission, so we are working on it. We already evaluated research infrastructures at the European level inside a consortium called ERIC\(^{20}\). I therefore will not be able to give many details since we are currently working on it. However, it is of course extremely important because research infrastructures collect a lot of data and the question of openness of data is crucial at this point. It is very much connected to what we are talking about today, but more is to be seen.
Animator: A question from Tunisia for Mr Paquet: ‘We are from a data-engineering and semantics research unit at the University of Sfax in Tunisia. We have an idea of innovating research assessment through the use of open knowledge graphs. Can we contribute ideas to the coalition now’?

Jean-Éric Paquet: Tunisia is a research and innovation country and system which is very closely interacting with us. They are absolutely welcome, and any instrument is certainly worth looking into. Yes, please look up the call for expression of interest, which is on the website of the European Commission, and then connect with it to the effort.

Animator: People in the comments provide support to the Open Research Europe\textsuperscript{21} initiative. Could you explain this initiative?

Jean-Éric Paquet: This is essentially a publishing platform which has been put in place by the European Commission to help researchers under Horizon 2020 and Horizon Europe comply with the obligation to make their publications immediately open access. We do not prescribe those researchers where they should publish - and some will still want to publish with legacy publishers, which have great journals but not open access yet. And so, these researchers could still publish there but they also need to make the article available in open access. So Open Research Europe, as an open access publishing platform, is a facilitation. Moreover, I think there is no doubt also that the ambition to use our publishing platform is for all its other aspects of open science. As we move forward, it might also become a useful place to help with changes in research assessment.

Animator: We have seen yesterday that publication bias, that is non-publication of negative results, is a longstanding issue in science. How could researcher assessment tackle it?

Bert Overlaet: One idea that we already apply in some of our universities is that we ask candidates for promotion or for hiring to say something about one of their failures, because maybe you tried something, and it failed. What did you learn from that and how does it affect your future project in science? How does it affect you as a scientist? This is the innovation that I mentioned earlier that is missing. We are all looking at the past and the outputs that have been produced in the past, and we can make that broader and anything you want, but we also have to look at what the potential of the person is for the future. That is what we base our decisions upon.
Maria Leptin: I think it is a wonderful initiative and all these kinds of different assessments are great, but negative results are not failures. They are work done with a clear outcome, and if it is important I think that can be rewarded. It should be published and there are repositories. Of course, it seldom goes into a high-visibility journal, but it should be put into the repositories and cited. That is perfectly clear.

Michael Murphy: In this regard there is a responsibility on university leaders to make sure that, within their institutions, there has been pre-registration of all studies and prior publication of the protocols. Ethics committees within universities too must follow up on all studies that have been examined for ethical compliance to ensure that publication has taken place. Publication of all results is an ethical requirement in the conduct of research.

Animator: Mr Schiltz, you have shared your interest in research on research. Is not now the time to set up an initiative on this topic? The Research on Research Institute\textsuperscript{22} has done a great job assessing the impact of COVID-19 on open science.

Marc Schiltz: We are joining the Research on Research Institute, as have a number of other funders and members of Science Europe. For instance, the Swiss National Science Foundation\textsuperscript{23} and the Austrian Science Fund\textsuperscript{24} have already been members since phase one. There will be new members now. We at the Luxembourg National Research Fund\textsuperscript{25} are part of it in phase two. Europe-wide, this is probably the major initiative to move forward because here again it is also about sharing our experiences and sharing data. Take again the narrative CV project, which funders have to some extent set up and tested independently from each other, but most of it is based on the narrative CV model that was issued by the Royal Society\textsuperscript{26}. I think most of us have taken that up and then have tailored it to our own needs. However, now that we have experience with this model for one or two years, we should all sit together and discuss what lessons we take from that.

It is, however, more than that. The Research on Research Initiative is really also about conducting research, so having projects where we trial new methods for evaluation, but we do it in a scientific way so that we put this whole process and these methods on more of an evidence-based approach. It is interesting that we are scientists, but when it comes to our own peer review and assessment methods, we have not really based them on any scientific evidence. There is virtually no evidence that things such as journal impact factors really are valuable and correct assessment methods and yet we continue using them. It is more a religious belief in a sense, so we need to move away from that as well.
Animator: What exactly is a narrative CV? What do you expect from it?

Marc Schiltz: The narrative CV is where we do ask the researcher to describe much more broadly the contributions, not just to the scientific field, but also to the scientific community because that is something which is valuable, like mentoring people, like sharing data, participating in open science initiatives, reviewing, which are services to the scientific community. Then the third pillar I think is service to society. How do you engage with society? Of course, it is more important in some fields than in others. If you are in the field of medical research, you should engage with patients and patients’ associations. If you are involved in more theoretical physics maybe that is less important, but still there are other aspects. It is not just engaging society. It is also communicating. It is public engagement, communicating about science, teaching the wider public. It is largely left open to the research institute to decide what to put into a narrative CV. To some extent we leave it to them. It is therefore not just a long list of publications. We have probably all had a 60-page CV with a long list of publications in front of us, which most likely no one reads.

Bert Overlaet: The advantage of this narrative is that it is open-ended. It is not predetermined. It does not tell you to do this or that. We started by asking people what the five most important publications are. That was 30 years ago. Now we ask people what their five most important achievements are. Achievements can be totally different things, and people can immediately focus on their strengths. It also means that it is not necessary to have 60 criteria and that the committee has to grade all of them for every candidate. However, the major advantage is that the candidate can propose himself or herself in the best possible way.

Marc Schiltz: COVID-19 again is an example. Our government at some point decided to set up a scientific advisory mechanism and, even beyond that, really a taskforce to provide them with modelisations and simulations. Some of the scientists spent lots of their time, and at some point they asked questions: ‘I have now put aside my normal research, and what I am doing now will probably not end up in a high-level publication, so will it hurt me in my career?’ These are the kind of questions which we no longer want to see. If you can contribute to solving such an important topic as the pandemic, as a scientist you should not have to ask yourself, ‘Is it going to hurt my career because I have set aside my other research’?

Michael Murphy: When you examine a CV or an application for a grant, you are looking for evidence of excellence. But you must also look for evidence of what a person is doing or what a group are doing to sustain excellence, and the evidence that they adduce to show sustainment of excellence.
Animator: One recommendation of the Initiative for Science in Europe (ISE) is to engage researchers in all decisions regarding changes to research assessment. How can we do that? Does Europe want this as well? In the Paris Call they say at the end that all researcher organisations should be involved of course.

Maria Leptin: I fully subscribe to that. We have had our careers and it indeed does not matter where my next papers are published. It really does not matter for us, but it does matter for the young ones. We are sitting here pontificating. We have to engage. I will therefore encourage the taskforce at the ERC to talk to these communities. There is Eurodoc, there is ISE and there is the Young Academy of Europe. All these groups should think for themselves and let us know. I mean they should obviously contribute on our webpage, but we will specifically listen to them.

Jean-Éric Paquet: They are part of the coalition now. The very construct of the coalition entirely covers associations of researchers. I mean without them this cannot happen properly. You need ownership and you need input. That is the way this is structured and therefore again, individual scientists and associations at national level and at discipline level should join up for the coalition.

Marc Schiltz: Yesterday we had a presentation by Cherifa Boukacem that I found very inspiring, about the study that she has conducted on early-career researchers. It is very clear that they have a feeling that they have to play the present game of journal impact factors and so forth, but they are profoundly opposed to it - or at least it - does not align with their own values. That makes me very optimistic in a sense because I think we can build, and we must build on them.

Michael Murphy: Just a thought reflecting on the conversation: it is all about the positive steps that we must take to achieve open science. One subject that we have not touched on is avoiding the creation of new barriers to open science. It is very important that national governments, regulatory agencies, and the Commission should “open science-proof” any new legislation or regulations. An example I am thinking of right now is the Digital Services Act. The Act has the potential to create new barriers to what we are trying to achieve, and it is really important that the Act is “open science-proofed” in the remaining weeks in legislation development.

Bert Overlaet: If you are looking at the Paris Call in terms of assessment or researchers, it is important that we avoid mechanisms that lead to all kinds of box-ticking bureaucracy. One of the things that always strikes me is that if you look at the last 15 to 20 years we have made a lot of progress, and recently we have included general equality plans in the Horizon Europe application forms. These are all steps forward.
However, if you then finally get a financial audit on your project, and if you have invested in educating your young researchers it is rejected because it is not research. We have to make sure that the institutions get sufficient support in different forms for these efforts that they are making in experimenting with new ways to assess researchers. LERU wants to call upon the Commission to have a more active role as a sort of facilitator than was initially projected. If we want new tools to be developed, I think we need some European support in order to avoid them being given out again to commercial players. There is still a lot of work to do there, and we would ask for stronger support from the European Commission in that respect.

Jean-Éric Paquet: The Commission is indeed positioning itself now as the coalition is progressively emerging as a facilitator and that is the way we should position ourselves now. Obviously as the coalition comes together, as we draw out the coalition agreement and move to implementation there should be no doubt that we will move into executive mode as well. We will be available for that.

Animator: Mr Coulhon, France has published a decree about research integrity\textsuperscript{31}. The High Council, over which you preside, hosts the French Office for Research Integrity too. Is this office also connected to open science?

Thierry Coulhon: As I said earlier, it is very helpful to have this French Office for Research Integrity inside the High Council because it does have influence on our guidelines. This institution could be and probably will be independent someday, but we host, develop and nurture it in the meantime. It influences us in a positive direction.

Animator: Mr Paquet, do you have the feeling that Europe is taking the lead at the moment on open science?

Jean-Éric Paquet: Yes, we are. I think we are leading on science generally and I think we are also leading on open science, starting with cOAlition S and now moving on research assessment, of course benefiting from global frameworks, which are a very strong foundation, but moving I think in very practical implementation. We are leading, and we will obviously only be able to lead if we really come together in this coalition, so, for the third time now, please join it. We all agree and now that we need to engage and commit time, resources, and attention. There is always a step between the two. You asked Thierry earlier about whether the landslide is happening. I think the landslide is indeed probably happening. We do not see it yet, but it is happening, and therefore the Commission will put very significant resources in terms into supporting the building of the coalition as a facilitator and then supporting what we will construct together.
Animator: Are you all confident that the open science principles will be broadly put into reality?

Michael Murphy: Everybody in the system needs to have a good understanding of the purpose of Open Science, how it is going to happen, how they can contribute and how it is going to impact them. There is a lot of communication work to be done and a lot of leadership development and informing to be done. We all need to have a common sense of what a realistic timeframe is and commit to it.

Marc Schiltz: It is to some extent a culture change that we are implementing. Culture changes cannot be dictated. I am very optimistic, but culture changes take time. We must discuss and discuss and discuss again with all those involved. Culture changes are successful if there are leaders, but they must be co-created by these leaders and that is the way we should embark on this.

Animator: Co-created is what we are looking for, and we can see here on this panel and more broadly that stakeholders are sticking together, rising up and working together in order to propose a concrete implantation process. It is now happening, part of the fate of science is at stake here and I understand that failure may not be an option.
References