

- F1000 created an Open Research publishing model that has transformed scientific and academic publishing. So on its 10th anniversary, I'm delighted to be joined by managing director Rebecca Lawrence, one of the founding team of course, to look back on the last 10 years, not just of F1000, but it's been a decade of rapid change in scientific and academic publishing. So we'll be exploring some of the key changes, and challenges of course, and looking ahead at the trends she thinks will be shaping the landscape in the next 10 years. So, good morning Rebecca. Congratulations, and happy birthday.

- Thank you.

- Can I start by just taking you back 10 years to that moment when F1000 was forming? I'd like to know a little bit about yourself and what it was that attracted you to F1000.

- Certainly. I came from a background of having originally qualified as a pharmacist and then I'd moved into pharmaceutical-based research. And one of the things that really was attractive to me around those kind of areas was the practical application of that work. And this is what I think really drew me to the elements around F1000 research and the Open Research Publishing which is about thinking about the practical application and impact of all the research that the knowledge makers are doing and how we actually make sure that it has maximum impact for society.

- So were the kind of frustrations of yours, if you like, when when you looked at the research and the research you were doing, what was it that F1000 offered you at the time, you think, that was so exciting?

- I think part of it was the opportunity to really rethink how the scholarly communication system worked, to speed it up so that the knowledge that's made has much more rapid impact on society. And also to really lift the lid and bring transparency on the whole process, on the peer review process, on the data that underpins the findings so that there's real reproducibility and rigor around the content that's being published.

- So all that sounds great, but I know when you're starting off as an organization there are bumps in the road. Again, let's just go back just those years, those early years, what were the main challenges, if you like, in getting F1000 properly up and running and establishing itself in the market?

- There were some interesting questions at the beginning because we very much wanted to be fully open, fully transparent, so you know, full open access, full open data, full open peer review. But these were all things that were really largely unknown at the time. And so there was a real question about whether to go full out with everything or whether to do it step-by-step. And we ended up deciding that actually it's quite hard to defend if you've only done part of it and actually you really need to do the whole thing. And we found that the advisory board and the community that we'd set

up behind the F1000 search platform really backed us on that in the early days when we did have pushback, as you might imagine, from researchers saying "What do you mean sharing that all of our data?" And actually they said, "No, stick to your guns." Explain why, why this is important, important for research but also actually real benefit for researchers themselves. And what we did discover is actually many researchers really did understand the benefits and the reasons for it, and then did share their data.

- Was there that moment where there was that big breakthrough you're "Yes, it's going to work."

- I think the biggest turning point actually was the collaboration that we established with the Wellcome Trust, that was unknown in the community, the idea of a publisher partnering with a funder and providing a publishing platform for a funder wasn't done at that time and actually really showed buy-in from what I think are some of the most important members of the research community, the funders themselves. 'Cause they have real influence on what researchers do and our researchers behave and how they share their research. So I think that was probably one of my biggest turning points.

- And looking then at the whole landscape of those 10 years if you like, and what have been those critical trends you think that, if you look, F1000 got right? Lots happened in 10 years, what are those big drivers, if you like, and has actually grown over the last 10 years?

- I mean, we've certainly seen a huge growth in Open Research but certainly open data, we see now mandates starting to come through. They've been growing mandates about data management plans. Now we see the big NIH mandate around sharing of data. I think such a huge step forward and I really hope many other countries follow suit. Open peer review. There's been a huge growth in open peer review, not so much in terms of reviewers signing their names, and I do think actually that extra step is really important, but we've really seen an upswell in that.

- So what is it about Open Research then? I mean firstly what is it, and secondly what is it sort of magic if you, what is it? Why is it so important to you and why also should we, the public, care?

- It's really about having openness and transparency in all sorts of aspects of the research. But fundamentally the point of Open Research, is not Open Research in itself, it's about what it's trying to achieve. It's trying to accelerate progress in knowledge and converting that into benefits for society. And of course as we know, there are many very key challenges for society and for humanity at the moment.

- And are there any risks around that level of openness? Obviously there are critics of it and there are always risks, and how do you mitigate against those?

- There are challenges around making sure that research and community get the appropriate credit for the work that they've done and the work that they've contributed to that. And I think that's some of the nervousness around it. And there's also challenges in ensuring that when somebody comes across some content or some data or whatever it is, they understand the level of validation and hence trust that they might put into that content. And that's something that actually, across all of society, we're having an increasing challenge with, is really understanding "How much can I trust this that I'm reading or looking at and how much has it been checked?" And so that is something that we are actively, together the rest of the community, really trying to think about how to make that clear so that you have a sense of how much you should really believe what you're looking at.

- I'm just interested in digging a bit into the relationship that F1000 has with the scientific community. How would you describe that? What is that relationship you have with them and how is it again, you help, what is the role if you like, the F1000 plays with the academic community?

- We see ourselves very much part of the academic community as very much as partners and service providers. And we think that really our role is to co-create solutions for them and services them to support where they're trying to shift. And I think that is critical, because actually the major challenges that we all face, none of us can solve on our own. We have to do this collectively and that's what makes a lot of this difficult. You know, trying to shift research culture and trying to shift towards more Open Research practices is really challenging. And I think one of the reasons why it's taking so long is that a lot of entities either... You know, the stakeholders in the community, either sort of say, "Well it's not me I can't do it" or try and do something on their own. But actually if the whole community don't move together and don't collaborate on that shift, we won't be successful.

- So it's been two nearly three years now since F1000 joined Taylor and Francis. Can you sort of take me back to that moment if you like and in what ways has it had helped or hindered if you like?

- I think it's brought huge benefits for F1000 and came at pretty much the right time for us. It's given us exposure to the whole world, which you can't do as a small little startup team and really built awareness of the model around the world but also has brought in many partnerships that we wouldn't have otherwise had. So particularly with societies and institutions which are sort of more traditional partners for big publishers, where we have growing partnerships for example, with the American Nuclear Society, we're very excited about a partnership that we're just coming out there who are a longstanding partner of Taylor and Francis. And then also, partnerships with many research institutions, but in a different way. So not just in terms of selling subscriptions, for example, but actually in them partnering on the venue itself and helping work with us and influencing those policies that were on those venues.

- How do you see it evolving over the next few years?

- I think collectively we're in a pretty unique position to be able to provide researchers who are all in different situations, in different cultures, different contexts, with a whole range of different offerings and different services that best meet their needs, depending on where they're at, at the moment. It also enables us to think on a much bigger scale as to how to bring more Open Research practices to scholarly communication. And again, I think that's quite a unique opportunity that we have working together with T&F.

- So this drive to this trend towards Open Research that we've seen, do you see that continuing and where does it end if you like?

- So I think that the drive to Open Research I think will continue but I think we also do need to remember why we're doing it, because I think we won't succeed if we focus singly on trying to achieve Open Research as opposed to trying to maximize the impact of the research which is what Open Research is trying to deliver. The broader goal is fundamental and critically important that we achieve and that we really work together as a community to think about how we really ensure that we maximize the ability of researchers to spend time conducting their research, but at the same time getting their outputs as quickly as possible to those that need it. Obviously other researchers, but also other parts of the community, to policy makers, to commissioners to the public more broadly. There's a whole raft of different communities that need access to that research and need it in a format that they can understand.

- And there's some sort of promising signs, if you like, in terms of thinking funders, institutions and so on. And what are the big trends that we are going to really be experiencing for the next 10 years?

- There's a real shift and I think it's really important to move towards more interoperable systems and part of that is about making it much easier for researchers to focus on what they are there to do which is do the research and not have to worry so much about all the administrative tasks that they have to do in terms of being able to share that research most effectively. I think there's also a real need to move towards much more efficient mechanisms to evaluate and validate that research and think in a much more nuanced way about what we validate, how we validate those findings, so that it's manageable but equally so that we have better understanding of the trust that we can place in the content that we're looking at. I also hope that we have really done a better job of solving how we make research more equitable, particularly the showing research and more equitable for the researchers in terms of... And the services that the publishers provide. And a sort of better recognition understanding of what that is, but equally, makes it more sustainable for funders and for institutions who are also trying to balance a whole variety of things. And I think that's a real challenge that we've all got to tackle together, but really important if we want to move to a much more equitable situation.

- So look, I'm going to take you on another 10 years, if you don't mind. We're going to look back at this moment and I'm going to ask you, what are the things you have that you would be most proud of having achieved, if you like? What's that really big challenge that preoccupies you that you think,

"If we could just get that right that would be a real contribution, that would be." What's that thing you really want to have nailed if you like or have achieved?

- I think it's really the normalization of researchers in sharing their outputs in a much broader range beyond simply the big narrative research article. Being able to share what they've discovered, quickly and efficiently, get it out there so others can build on it. And the normalization of sharing the data that underpin it of conducting peer review in a much more transparent way. We're not quite there yet, but there's certainly huge growth in adoption, not only by researchers but by others also implementing similar systems and increasing policies we're seeing around the world, from governments and funders and other organizations that are really pushing that direction. And also from having worked with such amazing partners, obviously Wellcome were the first pivotal partner for us but the Gates Foundation, the European Commission, many others who really are fantastic partners to really figure out where things are going and help develop those next solutions.

- Rebecca Lawrence, Managing Director F000. Thank you very much.

- Thank you.