

Participant #9

Field: Physics

Rank: Lecturer

Q: Why did you decide to become a scientist?

A: I was always interested in science and engineering growing up and in school, so I went to a technical university and I got the research bug and enjoyed it so I continued on.

Q: Why physics in particular?

A: Well, in our research group here is quite interdisciplinary. [Identifying information cut] It's not necessary that I had end up in a physics department.

Q: What sparked your interest in science when you were younger?

A: The main thing with how I ended up being a research scientist and an academic was a research experience when I was an undergraduate. I actually had one experience I didn't enjoy so much, and then I had a second one which really got me going and had me going that had to do with measurements and really enjoyed it and decided to continue with academics. When I went to grad school I wasn't thinking that I would continue on with academia, I thought I would get some further training and have some sort of public service type of job but you never really know how it's going to go. Twenty years ago I wouldn't have expected to be a lecturer in a physics department.

Q: How would you define or describe what a scientist does?

A: They come up with new ideas, and ask questions about the world, and develop strategies to address those questions. Then, of course, communicate what they found to the rest of the community and the public.

Q: How would you describe the characteristics of scientists?

A: I think the most important thing is natural curiosity, determination, maybe the motivation to stick with it and answer your curiosities.

Q: When you are getting ready to publish, what criteria do you look for in a journal when deciding where to publish?

A: Well, it really depends on the kind of work I want to present, so if it is a very new and exciting finding then I would try to do quite a high impact factor journal and a quite short

paper. If it's very technical, then I would try to get a longer paper in those types of journals. It really depends on what I want to present.

Q: You said that if a finding was exciting you want to publish it in a high impact journal. Why is that?

A: Well, really just more exposure, more people to see it. If you think it could have an impact on what people are doing, then you'd want to share that with people that could benefit from that idea. It's also good for your career.

Q: Do you focus on high impact if it's an exciting finding?

A: Well, as a scientist, you're always motivated by important, new questions, and so often when you start a project you think it could be a high impact factor paper. Sometimes it doesn't always turn out that way, sometimes it does, sometimes the things you'd thought would be boring turn out to be quite exciting. So, I guess, on the outside you might think every project as at least going in that direction.

Q: Do you think that high impact factor journals publish both the most exciting and best science?

A: Well, my perception is that they want something really new, they want to challenge what people's perceptions are and maybe sometimes something that is quite controversial. So, you can find a lot of good science there, but you can find a lot of good science in other journals as well.

Q: Do you feel pressured to publish in high impact factor journals?

A: I wouldn't really say that I feel pressure, but I do know that I can benefit from those publications. So, I guess not direct pressure, but sort of indirect pressure to establish myself as a scientist I know it would be very beneficial to me.

Q: Do you feel a pressure to publish in any kind of journal?

A: Yes, absolutely. It's an important part of being a scientist.

Q: How does it make you feel that you need to obtain publications and perhaps high impact publications in order to move forward in your career?

A: Well, one thing that I find about the UK, but maybe it isn't accurate, is that, for example, the fact that the REF exercise you can only select a few papers, so in some ways the quantity is still important, but in some ways it lends itself to higher quality papers. You're not just

focusing on racking up the most papers, but you're also focusing on having high quality impactful papers.

Q: Do you think that within your departments others focus on quantity over quality? Or focusing on just doing quality research and publications?

A: Well, I guess, most of the talk is about the REF, so I'm trying to plan my submission to the REF in a few years then I want to make sure I have a few good papers to put in there.

Q: Do you think that the REF is changing how you and/or the university is working?

A: Yeah. People are very conscious of it, so they're certainly responding to the REF. If the REF is changing, then they'll want to respond to that as well.

Q: Do you think these changes are good or bad changes?

A: Well, I guess, we were talking about impact, various kinds of impact, which in the UK also is quite important, applications for your research and not just the blue skies research. With the kind of work I do it is impactful, so it's kind of a good thing and also outreach and sharing with the public is important, so I like that. So, overall, I think it's a good thing.

Q: Are you familiar with Open Access?

A: Yeah.

Q: What do you think the role of Open Access is in science?

A: Well, just allowing more people to get at the research so instead of having to pay for these subscriptions and anyone can read anything.

Q: Have you published or archived your publications Open Access?

A: Yeah.

Q: What's your motivation to do that?

A: It's not always Open Access is the goal. There are some really good journals that are Open Access, so that'll be one factor. As a scientist you're not always impacted by it, because you're university always has subscriptions, so officially it doesn't really matter if it is Open Access or not. But the research councils are all trying to emphasise Open Access, and so we have to conform to that.

Q: Are funding agencies or research councils the main reason you have published or archived Open Access?

A: Yeah, I guess, it's the funding agencies.

Q: Do you think those funding requirements are changing the way that science is being shared?

A: Yeah, I don't know. I don't know the impact of it really is. Yeah, as I was saying, as a scientist in the UK I can pretty much access anything that I want, so I have to think about other scientists maybe that don't have these university subscriptions or more people that are outside academia, so I'm glad they have more access.

Q: Do you feel your publication record is a big part of your appraisals or reviews?

A: Yeah. I mean it's research in general and then publications.

Q: Do you think there's a greater focus paid to publications rather than other aspects of your job, such as a teaching?

A: They are interesting questions actually. I haven't really, you're just so attuned to what the situation is rather than trying to say whether it should be changed. Of course, some people have strong opinions. But I think it's reasonable and fair the way the appraisal judges publications and research.

Q: Do you think a scientist can be respected even if they aren't publishing?

A: Yeah, of course. The example that spring to mind is someone that is maybe a bit older that has published a lot and now they are a bit slower about publishing and still have a lot to offer and new ideas, so they would still be contributing and be a respected scientist.

Q: When you got your first publication, how did that feel?

A: Yeah, it was really exciting. A lot of work went into it. Yeah, it was great.

Q: Do you feel the way we quantify research by citations or the h-index is fair?

A: Well, it's not ideal, I suppose, but people want something quantitative they want to look at. It's hard for them to not have that. It's probably not entirely fair, but if people keep that in mind and not just having numbers that are ranked and not just cut off somewhere. They have to be used appropriately and recognised for their shortcomings.

Q: How do you evaluate yourself personally as an academic scientist?

A: I don't really value myself based on the number of publications. It's more like if I have a new idea people pay attention to or if I can change the way someone thinks about something. That's what makes me feel like I'm contributing.

Q: Why do you think universities use metrics to evaluate scientists?

A: Well, I think it's sort of easier. Just assign a number to someone. And without a lot of knowledge about the topic it's hard to judge those contributions, so hopefully it's just one factor.

Q: Did you feel the pressure to publish when you were doing your PhD or postdoc?

A: Not really, no. Obviously you want to publish. It wasn't like 'You have to publish this year.' It was more like 'You need to do work that is of high enough quality to publish.'

Q: When you were younger and considering going to university to study science, did what you thought scientists do match up with what you do now?

A: Actually when I went to university I didn't even know what a PhD was. I didn't really have this background of scientists in my family or anything like that. As I was saying, I wasn't really picturing being an academic. I was picturing being an engineer or something like that.

Q: Do you feel like other parts of your job represents what the job of a scientist is?

A: Too much emailing really. I want to be a bit more hands on in the lab.

A: If I had thought more about it I would give slightly different answers.

Q: You can take as much time as you need, if you think of something else you can bring it up in reference to a previous question.

A: As I was saying you're in this situation and you've learned what this situation is like. It's been 10 years, you've been through multiple postdocs and you know what's needed to be successful, so you're sort of conforming yourself to that. You can imagine things being different, but in some ways you just need to be like, 'okay, what do I need to do?'

Q: How does it make you feel knowing you have to conform in order to progress or maintain your career?

A: It isn't necessarily all bad. The situation isn't the right one or it isn't producing enough science, it's probably this way for some good reasons, too. Some ways are just kind of shortcuts. And maybe I get older I may realise some ways it should be. It's very competitive to get the academic posts.

Q: Do you think that the way you conform to fit academia has changed how you view yourself as a scientist?

A: The training to become a scientist is very long. It just takes a long time to develop those skills and so while you're in development, you're learning whatever the cultural norms of your field and everything, and, I think, in terms of high impact papers, is about if you're a high quality scientist but other times you're just lucky right, your research turns out really well and someone who had just as much of a good idea and it didn't work out very well.

Q: You mentioned cultural norms in academia. Are there any positive changes you would like to see in the norms of academic scientist in the next ten or twenty years?

A: I don't know... I mean, I guess, starting to be a teacher it would be nice for that to be more integrated into the process of becoming a scientist and maybe the act of science.

Q: How do you feel about the phrase "publish or perish"?

A: It's kind of grim, but it's also kind of accurate. It's all linked. If you're not publishing, then you're not doing good work and that wouldn't be good for science if there wasn't people who were doing good work and publishing.

Q: Okay, final question. What's the most stressful part of being an academic scientist?

A: Well, maybe as a new lecturer, maybe it's teaching at the moment. That'll probably change. Probably like making sure you have funding is quite stressful. Juggling everything.

Q: Do you think there's more pressure on getting funding than getting published?

A: I'm putting a lot of emphasis on funding, partly again because I'm a new lecturer and trying to build up some new research. Both are important. You have to have so many publications and you also have to fund a postdoc essentially to get promoted. Both are important. Obviously unless you do some cheap kind of research you have to have funding to do the research and publish.