

Participant #5

Field: Physics

Rank: Research Fellow

Q: Why did you decide to become a scientist?

A: Did I decide or did it just happen? [laughs] I think I just got the bug for it when I was a kid, visits to the Natural History Museum, things like the dinosaurs got me into various bits, and I got books as a kid and even as a teenager and read them all. So, I wanted to study things and found I was good at it and off I went to university and found it was going kind of okay. I spent the best part of a year in industry and went mmm academia is for me. I get to do what I like doing, which is a variety of things but all related to stretching my brain.

Q: Why physics in particular?

A: I know that when I was 16 I had the option of studying biology A-level and I decided in my GSCE biology exam not to study biology A-level, because I found writing essays boring. I do a lot of writing of course as a scientist, but I didn't enjoy the writing of essays at the time and I did enjoy the maths, so.

Q: How would you describe what science is?

A: Science is what scientists do, which is not quite a tautology. There is the demarcation problem in science, which is where does science stop and where does it start. And often you will say that I see that as science and I see this as not science, but the demarcation problem is not in itself important for most working scientists. And so, I come back to the scientist that people who call themselves scientists generally do science, which involves measuring, theorising, studying the literature, communicating with other scientists, there are a whole bunch of other things that go with it, there is no one scientific method, there is a body of knowledge associated, which is more or less that you can take one subject and then link it to a related subject and that goes from maths which you can actually often [intelligible] in sciences, physics, chemistry, biology, they link in together in many ways and there are other subjects that link more or less well. So, for example, psychology links pretty well to neuroscience. So, my original definition of science is what scientists do is not quite tautology and does add to the body of knowledge.

Q: How would describe scientists then?

A: I'm going to be tautological and say they are people who do science.

Q: When you are getting ready to publish, how do you decide which journals to publish in?

A: It depends on exactly what I have to publish. Sometimes I got to publish a technical advance, which is best often in a journal that allows me the space to publish everything I need, so that means there isn't a page requirement. Other times I've got a result, which I think is of a general interest and therefore ought to go into a journal which is widely read, so I aim for a journal that is widely read and often the journals that are widely read are high impact and are short on page numbers. So, then you have to write the article in that style. So, it depends on the result I have to communicate.

Q: You mentioned high impact factor journals. How important is high impact for you?

A: Well, it again it depends, if I am publishing a technical advance then I want it to journal where I can write what I want. There are some journals where I think the content is better than others and I would like to publish in them, but they are not always the ones with the highest impact factors. The article I got in the highest impact journal I've got in I thought the journal was pretty poor quality and had a large number of poor articles, which is why I thought I could get away with the article that I did and it worked. So, sometimes I look for a journal that is high impact, but poor quality to get away with a high impact publication. So, I do not correlate quality with the impact factor of a journal, but I do make the decision of if I can get away with a high impact factor journal and if the result is appropriate for it, I'll go for it.

Q: Do you feel within your department or field that the high impact is required or needed sometimes?

A: I think there is a feeling of yeah, Nature or Science papers stand out on a CV and to get the big fellowships and lectureships and things and professorships it does make a difference to have those big results on your CV. So, yes, people care about impact factor. But it is not the only thing. Everyone I've talked to about it, for example, that is involved in requirement will always say, 'No, we don't look at the impact factors,' but whenever you talk about picking, you're often asked to pick your five best papers or something, they are not always the ones coming out of high impact factor journals, they're not always the ones that are most cited, there are personal reasons why you might be particularly proud of a paper. Or it might be research, so there are no citation data to tell you. So, yes, there is a certain amount of emphasis on publishing in high impact factor journals, but it is not the only thing. When you read someone's CV it doesn't make a difference.

Q: Do you not feel pressure to publish in high impact factor journals then?

A: I do feel the pressure to some extent, because my CV is lacking in these high impact factor papers and that would make it a lot easier to get a permanent job if I had a couple of these high impact papers. But it's not something that dictates how I do my work.

Q: Do you feel you'll need to have high impact factor journals to progress in your academic career?

A: I haven't got a clue and I'm not sure that I care, because I don't see what getting promoted in academia gives you. It gets you from lecturer to professor makes a difference, because it gives you slightly more power over how your department is run but other than that, and a bit more pay, I don't really see what it brings. It brings responsibilities, a little bit more pay, and if promotion is dependent on high impact factor papers, then, okay, that's something I would feel pressure on if I wanted to be promoted. But I also don't have a permanent job and I really only care about the next step. And maybe when I get a permanent job I'll start to care about getting promoted.

Q: Gaining a permanent job is a very understandable next step to be focused on.

A: It changes how you do your research. I got two and a half so years to run on what I'm doing and that means, for example, I can't take on a PhD student, because it's too short of a time scale. I can't realistically apply for grants. My research is very constrained by that. If I had a permanent job it wouldn't be. So, if high impact factor papers would get me a permanent job, then yes, I do care about that. Once I have a permanent job I can do the research I want.

Q: How do you feel high impact publications matter in getting funding?

A: I'm not convinced they matter very much. I think most of the funding in the UK is run by the research councils and they have an explicit agenda for "excellence," whatever that means. As well as impact. They want the research they fund to be really good research, that's the way they put it. And I kind of believe them, and I take them at face value, and to prove that you have to have a really good idea, and you have to prove you have the track record to do it. But to prove you have the track record to be able to do stuff is that you have the technical abilities and you got the technical advances under your belt. Those technical advances come out of your low impact factor journals, so you don't ever have to have high impact factor journals to get at least UK research council funding. For fellowships and for EU research it might be different, but the primary source of funding doesn't really care about high impact factor papers.

Q: How much do citations factor into how you perceive the success of your publications and your success as an academic scientist?

A: I slightly obsess about how many citations that I have. So, I do look it up and I know the results from Web of Science every Thursday. The bonus of that isn't egotistical is that I get to see what people are doing, which links from what I'm doing. So, I'll actually find sometimes some good, interesting research based on the people who cite me. But it is an ego trip, really. I much prefer, I find I value myself more on the comments of my peers and people slightly more senior than me. So, I'll go off to some department visit and give a seminar, etc. and sometimes I'll get some really good comments back, often very complimentary comments, often people just asking scientific questions because they're interested. In both cases I feel much more valued as a member of the scientific community and I feel more highly valued as a scientist. Citations are another way of seeing it, but seeing how it isn't going in my favour at the moment I prefer the other metrics, the metrics which aren't actually measurable.

Q: Do your colleagues may value you based on your publications and citations?

A: They will all tell me they don't, but they will a bit. It's not everything though. When I talk to me and they give me these compliments about my work, it's not about my citations, it's about their own judgment of my work and my papers. It's the quality of the article that a lot of scientist will judge.

Q: Do you believe then that an article should be judged based on the research and not where it's published?

A: Absolutely. The only where it's published that would make a difference of where it's published is either the format or how many people read it. If you find an article in a journal it's been peer reviewed, it's been selected by editors. If you use that to judge the article, that's a proxy for your own judgment. You're saying, 'I don't know how to judge this article. I will believe it's a good article on the basis of what these people are saying about it,' which is that the journal has agreed to publish it. If you're evaluating research outside your field, it's very helpful to have the journal has a label, but if it's in your field, you should really be judging it yourself.

Q: Are you familiar with Open Access publishing?

A: Yes.

Q: Do you participate in Open Access publishing?

A: Yes, I do, because I know the REF 2020 is coming up. To summarise in case you don't know, REF 2020 is the kind of prototype the next assessment of research in the UK and at the

moment the policy is that all articles submitted to REF 2020 will have to be put into a repository within 3 months of submission for publication, which is ludicrous, but laudable in the sense of wanting all publicly funded research to be publicly available.

Q: Do you know if the pre-print that you are required to deposit in a repository can be later replaced with the post-print version after peer review?

A: Yes, of course it can. Whatever the rule, it's nonsensical for it to be put in a public repository within three months of submission. It doesn't make any sense. 3 months, 6 months, 12 months within acceptance is agreeable. The difference between publishing gold Open Access where the actual published version is public and green Open Access where it's in a repository, I really don't care about the difference I must admit. I've tend to publish gold Open Access in the last couple of articles I've had been in a journal that wasn't Open Access but I paid for the Open Access option. In fact, the university has paid for the Open Access options. And I was actually very annoyed by this. The process of Open Access publishing requires the payment of the university to go through to the publisher before publication happened, and the university as a policy sits on all invoices for 30 days. So, the publication was delayed by a month because of choosing Open Access. Not because of the publisher, but the university's rather stupid policy.

Q: Would that experience impact your future decisions about publishing gold Open Access?

A: No, it would impact my future of way of interacting with our library services. As soon as I submitted I would get on the phone and harangue them before waiting a month.

Q: You mentioned REF 2020. Is that the main source for knowledge and motivation for Open Access?

A: Well, within physics archiving is pretty common as in the arXiv, it's pretty well known. I think every single article I've published is been on arXiv since 2006, so that's a fair number of articles. But then actual gold Open Access publishing, it doesn't make a lot of difference to me if the journal is Open Access or not. I actually use arXiv, because I want the results to be available even before peer review. My more recent stuff has come through much faster through that. I've done the archive, emailed it to a bunch of people, and I get really interesting responses immediately.

Q: Do you think that's unique to the field of physics?

A: I don't know. I haven't been in other fields. I don't collaborate with other people in other fields and I don't have any multidisciplinary research.

