

TW for “How to get a paying job in STEM- Dr. M. Phillips”:

Institutional Racism

Mental Health

Academic Drinking Culture

Pruthvi Mehta 0:01

Hello and welcome to the POCsquared podcast. This week's episode is going to be part of a special series of episodes with one episode a week for the month of August 2020. These episodes are interviews with people of color who hold PhDs in the STEM field about what it's like to get paying job in STEM after graduating. This week's guest is Dr. Monifa Phillips, the first black woman to graduate with a PhD in Physics from the University of Glasgow, and currently working as a patent attorney in electronics engineering and Venner Shipley LLP. Please be aware that the episode will contain mentions of the following topics: institutional racism, academic drinking culture and mental health. As usual, the transcripts and show notes for this and all episodes can be found on our website www.poc2.co.uk. That's www dot POC and the number two .co.uk. And if you have any comments or questions we can be found on Twitter and Instagram at pocquared. That's POC and the word squared, no spaces. You can also contact us by email at POCsquared@gmail.com. That's POC then the word squared @gmail.com. With all that said, we hope you enjoy the episode.

Karel Green 1:13

So our first question is the obvious one is that we would like you to introduce yourself and say who you are, what your current job is or what you did during your PhD and stuff like that.

Dr. Monifa Phillips 1:24

Sure. Okay. So my name is Monifa Phillips and I am currently training to be a patent attorney. And I did my PhD in Physics in Glasgow, and it was in material physics and I was looking at memory storage devices. And it was quite an experimental based PhD. And so I did a lot of thin film deposition and yeah, basically a lot of time spent in the lab, trying to create these multi layered, thin film devices and they would work based on redox reactions occurring at the interfaces between different layers. And so, if you were able to design your multi layered structure well enough, you can essentially push in cool oxygen out of and into adjacent layers. And that would allow you to change the resistance of one of the layers and that change in resistance from that high resistance state to low resistant state gave you your, your data storage, one zero memory storage, like fundamental so it was it was basically looking at... Yeah, the chemistry there at those interfaces. So I did lots of electron microscopy and electron energy loss spectroscopy and so yeah, just yeah. So just look at where our oxygen was and where it wasn't. And, and yeah.

Karel Green 3:10

It sounds like you did a lot of chemistry in a like it wasn't just a physics PhD like it was a lot of chemistry in a physics PhD.

Dr. Monifa Phillips 3:18

Yeah, yeah, it was right on the borderline. Like when I signed up for uni, initially, I did sign up for chemical physics, but then I switched to physics because the chemical physics course there were only three other people on it. And I was like, I'm going to hedge my bets with a course that's a little bit more established I guess, where there's more students and more support. So, I was always interested in maybe... Yeah, that that boundary between the two. So yeah, this this, this material PhD is very much on like in between.

Karel Green 3:57

So next question is that you said you training to be a patent attorney. Could you just explain like what that is?

Dr. Monifa Phillips 4:05

Sure no that it's perfectly right, that is what I'm training to do. And basically, patent are what you use to protect ideas that you have when those ideas relate to, like, technical inventions, basically. So they, yeah, they allow you to protect that intellectual property that you come up with, or you spend money investing and time, perhaps as well. And, and so, a patent document, basically can be very dry and can be very dry like when you read the application because you really are very thoroughly explaining exactly what this invention is. And so the patent attorneys, typically scientists who have then gone to train in intellectual property law. And so they're, they're using their fine skills. But they're also like gaining these legal skills and relying heavily on their, like comprehension and writing skills to do this job that just sits right at that boundary between like business and research and law.

Karel Green 5:23

Yeah, so that's really interesting. And yeah, I really wanted to ask myself how you got into becoming a patent attorney? Because like you said, it has to do with like, some of the bottom lines like business science, and stuff like that, but like only on the surface of it, you wouldn't really think that, and law even... So business science and law, like you wouldn't really think that other scientists would suddenly go into being an attorney like that, like, you know, my extensive knowledge is law of law is How To Get Away With Murder, the TV show. That's all I know. But yeah, you wouldn't really have like, that would not be the first thing even for me a PhD student in physics would think to that, like you could do after doing a PhD? So like, were you thinking about it, or did you like just find it? Or how did how did that happen?

Dr. Monifa Phillips 6:19

So I think similar to you, I didn't think of it. So I never came across this career until about two years into my PhD. And I only heard about it from other PhD students who had heard about it from careers events that they went to run by SUPA, which is the

Scottish Universities Physics Alliance, and it's just all the physics departments across Scotland. They, yeah, they just, they run sort of skills, workshop events for all of the students and maybe postdocs as well. And so it's pretty... Yeah, that is pretty like obscure. Yeah, honestly, yeah never came across my... It was just by chance, basically. Well, no, not by chance, SUPA did run those events. And I heard it indirectly that way. And when I, when I first heard about it, I did actually think that sounded really boring. I was like really? You guys want to do this job and my friends are like, yeah, yeah. I was like okay, and then I went to an open day. And so what I think what's good about this industry is they have a lot of open days, a lot of big firms will run these in various cities. So you can usually sign up in advance. Yeah, you can usually sign up for this one day and get there and have a conversation with patent attorneys at various stages in their training or partners in the firm. And I went to one of those with one of my PhD student friends, and we just had a really nice time. And I, I just really enjoy the challenge of finding the right words to explain something, or, and because it's essentially puzzle solving because there's because there's so many ways to describe any one thing... You, you do have to think about your use of language. And after doing Physics for so long and focusing on STEM subjects only for so long, you don't really, you know, you're quite you... Yeah, you're, you think in a particular way, so I quite like the fact that it was challenging me to use these skills like I haven't done English since GCSE and I haven't done you know, I didn't sociology at a level or anything but not that includes it, but it's just if I appreciated that it had a bit more to do with you know, law does have two people you know, you look... People reference case law for instance, so case law tells us how cases work out in the past how people applied law in the past in different cases. And so you see this interaction between people and law. And it's really interesting. Basically, I quite liked the fact that I wasn't focusing on this really abstract idea, as I have done in physics for so long. And now I was, yeah, really gaining these other skills as well.

Pruthvi Mehta 9:25

It must have been quite hard getting used to a lot harder exactly, but sort of getting used to like a very different environment from what like academic research is probably is like, like I'm getting used to a sort of more corporate, I guess, environment, like do you find any sort of difficulties in transitioning into something that's quite different to sort of how weirdly formal and informal academia be?

Dr. Monifa Phillips 9:52

Yeah, for sure. I did definitely find it difficult to adapt to like a 9-5 working structure, it seems so simple and like people take it for granted. And it's not that when you're working on your PhD, you're not working hard, but you do kind of get to work... Like listen to your health a little bit and work your own schedule, and whether that means that you work 'til 11pm every night. Like that, like, I know some people do like, sometimes when I was writing my, when I was writing up my thesis there were some nights, I was just like, I'm inspired I have to write right now. Um, but it was all very much on my timetable. So it felt a little bit more natural than like, I just need to be up and I just need to work at this particular... Between these particular hours and I just

need to be productive, which is, I think what you'd find with like any, any work environment, and coming when you're coming out of research. It depends though, I definitely felt like I was completely in control of my own time during my PhD. And if I had a meeting or something, then yes, I needed to be there within these regular hours, but otherwise, but yeah, if I'm using equipment that's dangerous and somebody else needs to be there... But other than that I was master of my own time, but now I've got to be quite productive in the day.

Karel Green 11:28

Yeah. Like it's nice to hear about how like, a careers fair has been successful for once because usually, like we hear about people who have gone into a postdoc, and that is, like networking and like talking to people and hoping and getting lucky. Whereas this seemed like, like an actual standardized process that has worked, which is just nice to hear for once. It's something that isn't as taxing yet all the time to like, get into but something like... Yeah. So I really wanted to ask about how like, so you clearly decided not to do a postdoc and was that like an active decision or did you, like you said, because you went to these open days and you, not open days, job. I'm so used to university.

Dr. Monifa Phillips 12:14

Yeah, no, I did go for open days for like, I did go for open days for patent firms and yeah, job fairs at university. I think it's, um, I honestly have always, I had never considered doing a PhD until I got to my final year of my undergrad. And I've always considered university to be really about making sure that you're eligible for these, like x pack of jobs, for instance. So I never, I think it's like a cultural thing. Perhaps, you know, when our parents they want us to do, you know, they want you to do well at university so that you can get a job they're like, are you going to be a doctor? A lawyer or? There's like five jobs that they're like really happy with. And so I think from my understanding at that point, that was basically what university was all about, like, we were all here because we had like, some career path in the distance, and we were just trying to access it basically. So I never... Yeah, so I only considered doing a PhD when I got to the end of my undergrad and I noticed that a lot of like my white peers who have the same grades as me, like definitely like they were like, no, Monifa, yeah I'm going to do a PhD. And then I just, I guess I just took a bit of time to think about whether or not I was unknowingly limiting myself and like, I just realized that I had just not even considered it for myself, when actually I'm just as eligible as these people here but they have considered it for themselves. So I decided at that point to apply for PhDs. And but before that I was planning on becoming a teacher. And I signed up and had gotten an offer from Teach First. And I'd applied to that a year in advance, so I literally had my eyes set on getting a job after uni to the point that I had my job set up a year in advance. So I'm pretty career-sy, like I love career chat and everything to do. And then whilst I was doing my PhD, that there was that SUPA career, but then, for the years I was there, they didn't run it. So I mean, me and my friend who also loves careers chat, we decided to run our own at the university. And so we did what you guys have done and just contacted, loads of PhD

graduates, whether they were already on the graduate school like register for being happy to be contacted or they were just random people with PhDs. And then we brought them all into the University on one day and did like this speed dating thing. So we've got multi disciplinary groups of students, and rotated those students around the speakers. And it was really good, because you just got, yeah, just a range of random industries. It was really obscure jobs that you've never heard of, unless like you actually just spoke to somebody. And, and yeah, I never for the same reason I didn't consider doing a PhD. I also didn't consider doing a postdoc. I guess I've just, I still, I just think after a bit of time doing a PhD, I just realized it's not really what I want to do. So I was pretty clear about being very interested in careers and that event, that career speed dating events, I ran for two years out of the three and a half years. I was pretty, pretty, like, set on leaving academia.

Karel Green 16:05

Yes.

Pruthvi Mehta 16:07

Did you have any sort of internal sort of like, you know, this is what I don't like about academia, etc, etc, sort of making you change your mind or was it purely just, you know, academia is fine but I want to do something else like were there any sort of things you'd pick about academia that you didn't like all that much when you were doing a PhD and wanted to avoid in your like later career choices?

Karel Green 16:31

And is there anything you miss? Like anything you like that you missed?

Dr. Monifa Phillips 16:35

Like I've... Yeah, I think erm... I don't know because it's a mixture of things. I think doing like research is not doesn't necessarily... Yeah, it's not the be all and end all for me because I actively spent my time like committing to like events, planning and anything else I can do as a PhD student. So I already sort of knew that it wasn't as what's that word? It just, it didn't... It wasn't, I didn't have that sense of fulfillment from the research itself. And actually, I liked all of... like employing all these other skills as well. So there was that. And I, yeah, I just wanted to, I think in that same way, like I wanted to develop my other skills, I also just, I just felt like doing a postdoc was just really like narrowing. It was so specific. And yeah I just, yeah I dunno it's just too specific for me, I quite like being able to, like, go out and about, and when I was doing my PhD, actually, I think the area of research that I was doing, it wasn't what a majority of the other students in the group were doing. So, I never really... The only person to speak to about my work was like either the PhD student he was there before me on the same project or my supervisor, or like one postdoc who is really good at electrical engineering. Um but I think perhaps if I've done research in a group that focused on sort of memory storage, or whatever I had decided to do, if I, if the whole group had been a bit more uniform, I might have had a different experience, because there would be like a great back and forth maybe between

other PhD students or whatnot. I was very much looking at some film and memory storage and Redux reactions, as most other people are looking at magnetism. And so I think maybe that also played into it. And I'm in... Yeah, I wasn't as excited. I suppose as I could have been if I felt a bit more like I could go to this conference and like speak to people who really wanted to know what I was doing, and rather than saying, oh, let me start from the start because yeah, just this random person with this random area.

Pruthvi Mehta 19:14

Yeah, that's a really interesting point, um, you need to... Something I've sort of found out through like... and I've talked to other people about is like, you know, a there's big sort of impact being connected makes in academia in terms like whether you want to like stay on, um, and I think it is it is obviously a important thing. There's a lot of good that comes with being in part of a collaboration I guess... Like a really important point you've touched on/

Karel Green 19:46

So I um I just wanted to say, just because like you have been, of course, very humble and very lovely to talk to, but we must mention that you have proudly, as you should have, stated how you were the first black woman to graduate from University of Glasgow, with a PhD in physics. That is an amazing achievement and I'm so proud and I'm so happy for you. And this is just excellent. And... But yeah, I just something you said, which really, like, stood out to me and I thought was really good advice, in general is how you saw that your white peers were... Had the same grades as you, whatever grade you got, and were applying for PhDs. And you're just like, yeah, I should apply for PhDs and like you took a moment to like think of it as opposed to... Because like you said you literally you had found a job a year in advance, and then didn't do it. And a lot of people wouldn't like to do that, especially if they planned it so much. So that was just I just wanted to say that that was really excellent. And I just love like what you said there and I was, I thought a really good advice and I'm just, I'm really glad you did, because you've done so well. And it's just really lovely to see so...

Dr. Monifa Phillips 21:02

Thank you so much.

Karel Green 21:05

But yeah, so I wanted to ask, our sort of generic ending question, which I actually really like is that so like, if you had advice for anyone doing a PhD, or if you could like go back in time and talk yourself when you first started your PhD, you know, if you were going to do anything different, or you would all do something the same, for example, that could have been something that happened to you just like this is really good for me, I definitely would recommend that everyone does that. Like any just general advice on how to get through a PhD and like how to again, like further your career, get into a job doing what you like, and just, you know, be happy with

the work that you're doing right now. Is there anything that you would say to a PhD student or to I said, mini version of yourself, like three and a half years ago? Wow.

Dr. Monifa Phillips 21:55

Yeah, I think I would..z. I probably helped myself to just check the support that's available at university because, whilst this, you know, I always feel as not... I don't feel conflicted, but I've just been trying to find the words to like, explain to explain my thoughts on it, but, um obviously like when you put yourself in that position, like if you're the only, you know, if you're the only black woman or the only something something doing something, it is not necessarily the most supportive environment to do it in. And so you might just find that need to find support basically from other areas. So one thing I didn't notice before I went to university was whether or not it had like, any resources for you know, black students, basically.

Karel Green 22:51

Yeah.

Dr. Monifa Phillips 22:51

I realised after leaving that it didn't even but just stuff like that. So yeah, if I was to apply again, I might look a bit more at the types of support there is. And because the PhD can be really tough, and you need people to talk to, and you need to be able to raise issues and whatnot, and it's so hard when you're the only person. And so I would also advise people to like, look at the city and like, make sure that you're not, you're not spending all of your time doing research, because if you're moving city or country or whatever, you still want to have that life experience that goes along with it, like it's still your own time. And it's, there are loads of different ways to be happy, other than what you do for your studying or your work. I think sometimes PhDs are like, communicated as like pure pursuits of passion, maybe. And so some people get very absorbed in just their research, but it is good to also, you can also think of it as just something that you know, it's a qualification that you can get. It's like work and study, but it doesn't like it's okay to do it... It's okay to pursue a PhD if it's not, if you don't feel like it's your main passion, like you can also do other things alongside it, basically. So just try and make sure that you're getting, like, you're having fun outside of work, maybe you're having fun at work as well. But like, Yeah, not spend all of your time in the office because there's so much yeah, there's always loads of stuff to do wherever you are. And, and other advice... Hmm, I would say it's really good for for STEM students within minority groups to probably engage with students in the social sciences, because they often have got really good vocabulary and to like loads of like I wouldn't have been able to explain lots of things to my department, or understood the significance of certain experiences if I didn't like go to events on anti racism or whatever run by the social sciences, students and departments like just across the way, I think often STEM students are not as prepared like to, they're not as well prepared just because yeah, we literally stopped studying, and all those, all those stuff in social sciences, basically when you're like 14, 15, 16. So there's some value in that to make sure that you go out and whether it's run by the

university or run by local community groups. Those are really good to go to. Um I don't know what else would be good advice... I think those would be the main the main the main pieces of advice I would give. If you are already started, if you already applied for the PhD, you're probably doing that just fine. Yeah.

Pruthvi Mehta 26:14

I think that's a really lovely point you made that because I mean particle... Well physics students in general are just very insular sometimes. And you're right, like, a lot of advice regarding stuff like you know interact with people outside of your sphere. Because that's the only way you'll grow as a person and like scientists or scientists and everyone need to grow as people. So that's a really good point that you made.

Karel Green 26:37

Yeah.

Dr. Monifa Phillips 26:39

When you do you might find there are all these, there are also all all of these other careers open to you. Like I think never feel like you've wasted time because you usually haven't. So, like, you know how you like you might think, yeah, I would never do law because then am I using all of this science knowledge that I've just gained after all this time. But there are, I think when you step out of that sphere and meet other people who've done other things, like you just learn a lot more about what you could potentially do, and it makes... It takes I feel like it takes a lot of pressure off of just following a path because you have the qualifications to follow that path. It's makes you just think a little bit more about what maybe you want to do and that broadens your horizons a bit. And yeah,

Pruthvi Mehta 27:32

I think the point you made about how PhD is literally, it is a qualification at the end of the day and is like, it's a stepping stone and not just a stepping stone into doing more research. That's a really, really nice way of like stepping back and looking at the whole picture like holistically. That was excellent. Yeah.

Karel Green 27:50

Yeah. Talking to people outside of the physics sphere a very good idea. We literally started this because we did that, unknowingly, but we did that. It worked out great, so yeah, lots of actual good advice, which is not something that we are used to being within an institution.

Dr. Monifa Phillips 28:10

Yeah,

Karel Green 28:11

I have one secret secondary last question that I will put out.

Dr. Monifa Phillips 28:16

That sounds good.

Karel Green 28:18

I just need to ask, just personally, because I am also black. I just, how did you actually find out you were the first black woman to get a PhD from uni of Glasgow. I'm interesting because I would like to know where I stand at my uni.

Dr. Monifa Phillips 28:33

Yeah I don't it doesn't have to be secretly, you're welcome to include it if you want. I just literally, I just contacted the person in the department who was like, who who was identified as a person who was comfortable speaking about diversity like if you had any issues, like related to inclusivity that was the person that people referred you to. So I just contacted her and asked her if she could check. And she just checked for me. And they had this... They had like this data, but they couldn't see any numbers below five, basically. So they got back the data that said less than five, but then they went and looked around the department and none of those academics, you know, academics stay in the same place for a very long time. None of the academics could recall any black people, and there was nothing. So that's what they said. But they also didn't come back with any black men either.

Karel Green 29:37

Oh wow.

Dr. Monifa Phillips 29:38

Yes. So and the thing is, I don't feel don't feel any which way about asking. So I was like, should I ask or is it really weird for me to ask. It's not that I, it's not that I necessarily want to be the first one I'm asking. I just want them to acknowledge that this is quite an important thing to keep track of. So, it was just interesting that you could go through your entire PhD for nearly four years there... And, like, it's just so off the radar to the department that they wouldn't have even thought, hey, like, there aren't usually any people of this demographic here, like no, basically just no, it just didn't know one clocked. And it's a really weird experience that I had in Glasgow because it was one of the first places I felt like, like, I was needing to explain to people that I'm black. I'm a black person, do you regularly see black people here? And they're like, wait a minute. And you know, it's so weird because it's like, instantly recognizable. I'm obviously a black person. And, like, it's just so weird, but it's sort of unspoken and nobody really necessarily pays attention. So just, you can just contact and ask for the data. And hopefully it's the person on the other side who will listen, and it's not that if you have any academics that are on your side or are happy, happy to talk with you about any issues relating to inclusivity, they should also be happy to like, send that email on their behalf with their like clout or whatever and get that information because it is just something that they should know, I think... I feel like it's... Or the Diversity and Equality team at that university, they should maybe contact them directly.

Karel Green 31:31

But yeah, and that's everything we basically have written down and it's been lovely talking to you and so much nice advice. From somebody who is like I got to not to drag anyone else but like most people sound unhinged and dying and you sound actually put together and happy which is good... Really a breath of fresh air this Sunday.

Dr. Monifa Phillips 31:58

It's taken long time. Like I think it has been difficult... It has been a difficult year after my PhD, but it's now like one and a half years later and I am in a much better headspace. I think it's just yeah, it's just a hard thing to do but yeah, two years later, you'll be fine.

Pruthvi Mehta 32:19

Cannot wait, cannot wait.

Dr. Monifa Phillips 32:21

Yeah. Make sure you're nice yourself are like after your viva because I think there's a lot of pressure on feeling very happy once you pass your viva, I actually didn't feel very happy, I felt really stressed. And so this is like, make sure you like, give yourself if you're, like stressed during the writing period, be sure to allow yourself that space to have that cooldown. And for me, it was like a year after my PhD.

Pruthvi Mehta 32:49

I think like the whole viva party thing was like... Like in my head off my viva I just wanna like go and lie down somewhere. I don't wanna enter a room where everyone's like eyyyy I'm just going to be stress pacing everywhere. I'm not going to be calm.

Dr. Monifa Phillips 33:03

Exactly. And you've got to do, if you've got any corrections to do, you've got to do them so it's like

Karel Green 33:09

Yeah.

Dr. Monifa Phillips 33:10

You're still not quite finished but yeah.

Karel Green 33:12

For the vivas, if you need to dress formally for them then I'm not going to be happy ever dressed formally. I'm going to be upset.

Pruthvi Mehta 33:22

I'm turning up in this shirt and my pajama bottoms I have on.

Dr. Monifa Phillips 33:24

Yeah if you've been working on something for ages, you might as well be comfortable.

Karel Green 33:31

Exactly. There we go.

Pruthvi Mehta 33:33

Is there anything you want like, like just like rep or whatever?

Karel Green 33:39

Yeah.

Dr. Monifa Phillips 33:40

Who me?

Karel Green 33:41

Yeah. Like your own thing, we like clout, so...

Dr. Monifa Phillips 33:48

I have like, I don't really use Twitter that much. I haven't really been tweeted, on it tweeting on it. I have created like I've been doing in Instagram, a public Instagram. What's it called? There's a public intstagram for black homes in the UK. So, it's @blackhomesuk. And it's a really nice collaboration of the different people in the UK's homes, so all of their account holders are black. And that's been a really nice thing.

Karel Green 34:17

I've just opened it! Oh!

Dr. Monifa Phillips 34:19

Yeah! So it's literally, there's about 20 of us on this big group chat, and a few of us like run the account, but it's just like a nice it's just, I don't know, and a nice way to, like, allow people to engage with the black community because as you know, obviously with the Black Lives Matter movement, a lot of people have, have like realized how they don't really yeah, I guess on the Instagram or whatever they don't do engage with people from different demographics. So this was, we just thought, let's just highlight ourselves and have this home interior. So that's the only thing I would, I would plug. Yeah. If anybody likes homes. Then yeah...

Karel Green 35:08

And I want to say personally that it's very smart that you don't use Twitter because it is a mess and I wish I could leave but refuse to.

Dr. Monifa Phillips 35:16

I feel so old. I'm like I don't get it.

Karel Green 35:22

Great. It's fine. This is really nice I like the... Just if any, well people will be listening, but the the third, if you scroll all the way to the bottom the third picture that you've got on this Instagram is of this really cool light that is circles and spheres and I like that. In the shownotes and stuff, we'll link this instagram. This instagram is actually very good and very nice.

Pruthvi Mehta 35:57

And that's about it for our guest episode of Dr. Monifa Phillips. Be sure to follow her on Twitter @monifa_monifa. The POCSquared podcast was written, recorded, edited and posted by the POCSquared team. It will always be available for free in some form. If you wish to support us, please consider becoming a patron on Patreon. Patrons get special perks like having a shout out at the end of the podcast episodes or getting episodes a week early. There are other perks and these can be found on our website www.poc2co.uk, that's [www dot poc then the number two.co.uk](http://www.poc2co.uk). Please share the podcast, tweet about it and email us. Our intro and outro music is called Bliffy Trance by Kevin Macleod. Find it at incompetech.com licensed CC BY creativecommons.org

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