

TW for Season 2 Ep 3 - Decolonising Science Lectures:

LGBT+ Phobia

Death

Racism

Ableism

Slavery

Panic Attacks

Karel Green 0:00

Welcome to the POCSquared podcast, hosted by Sehher, Pruthvi and Karel. Today we talk about how to decolonize science lectures, including why it's important and why it actually makes the science we do more objective and more efficient. Please be aware that the following topics are discussed. LGBT+ phobia, death, ableism, slavery, racism, and panic attacks. A transcript and show notes for this and all episodes can be found on our website, www.poc2.co.uk. That's www.poc2.co.uk, the number two dot co dot UK. We're also on Twitter and Instagram, @pocsquared, that's POC, and then the word squared with no spaces. You can also contact us via email contact@poc2.co.uk, that's contact @ POC, then the number two dot co dot UK. And finally, we'd like to thank the Royal Astronomical Society for their funding, as it was through this that we've been able to create the second season of podcasts, as well as do all of the other outreach activities that we are doing with the MC squared and keep them free. With all that said, please enjoy the episode.

Karel Green 1:33

Today is our decolonizing science lectures episode, which is not something that I thought we'd be doing, but I guess we are because here we are. It's it's something that sort of come up a lot in all diversity work. In that one on one side lectures are like such a big part of a degree. Right? Like, you know what, at least in a physics degree, it was, I wish, I wish I was like those history hoes who are getting like six hours of lectures a week, but that will us. So...

Pruthvi Mehta 2:09

I wish I had just one...

Karel Green 2:11

God couldn't be us. They were just like, here's a bunch of homework and three projects, which is like papers, and I just want to pass away. But anyway, we did that we died it was worth it, but not really.

Pruthvi Mehta 2:24

No no.

Karel Green 2:24

Also, on the other side, when talking about decolonizing and decolonizing, the curriculum and stuff like that, like we understand thoughts of how like saying, you know, say you were learning about, you know, Hubble's law, right, which you need in astronomy. And as we've said many times on this podcast in the past that Hubble's legit, racist, right? Like, we understand how it is not productive, to just shove your hand up in the middle of a lecture and be like, well, we're learning about Hubble's law, and I need to solve the age of the universe. Also, did you know he was a racist? Like, we understand how that's not something that's actually going to help or do anything? And yeah, this whole episode is going to be about how to actively and efficiently and productively decolonize of science lectures, something that we hoped people would go away and learn to do on their own because we aren't paid to be lecturers, but I guess not. So that's this episode.

Pruthvi Mehta 2:24

Yeah. So I think we should start off by just um, first and foremost, just sort of like talking about our experiences, just sort of recalling times where there was just, like, you said, a bit like big problems with lecturers, or people or the content we learned, or the stuff that was omitted and stuff that we should have learned but didn't learn. I think one big thing was the fact that like, you know, one reason why, like, we've managed to, like, realize this as people of color, like, you know, looking at our curriculum staff and looking at how white is right. And I can't help but feel that if we had more lecturers of color, they would also like, feel like, you know, see, like, see the same thing, right? If you know, because if you're, if a white cis het guy who's standing up in front of a bunch of people teaching, and they were like, and you were like, Hey, you know, this curriculum looks okay to me, because, you know, I don't see anything wrong with it. I think a person of color teaching would be more likely to spot issues with like, you know, lack of diversity of representation. It's not guaranteed, obviously, but I think having more like diverse lecturers and professors and postdocs or whatever would kind of fix this issue. At undergrad we had like, we only had like white women, or like, like one like, male of color, like professor or postdoc or whatever, right. Um, and yeah, I don't think like I just haven't had a Women of Color teach me physics in my entire like time in academia, which is so messed up. Um.

Karel Green 4:57

Yeah. I also think something else that like, it wasn't something that I like realized at the time, but like once I first got into decolonizing it also one of the first things I realized then, was how like, if you are thinking about an objective science as science is supposed to be, because they've moaned about decolonizing. Like, why bring politics into it? When in fact, economizing de-politicizes science, right. I'm just like, well, you know, take out the literal like historical facts of the world, in that, like, why people were just like conquering and enslaving and all of that stuff. Just on the sheer statistics of it, right? Every single civilization has done some kind of science, whether it's like navigation by stars, or just like biology via like growing vegetables and stuff like that. So even if you take out all of like, the actual historical facts, which

still affect science, which is also valid. The fact that the curriculum isn't diverse, I was just like, this literally doesn't make scientific sense. Because surely, you know, just on sheer statistics, every continent outside of Europe, must have done some science.

Pruthvi Mehta 5:08

Yeah. Definitely.

Karel Green 5:46

And that's, that's like, one of the big things to me, because I'm just like, well, all of these, you know, ancient Asian scientists had understanding of gravity before Newton. So why aren't we learning about them? Right? Why aren't they being my this is like, factually, this is the earliest that we've got in human history it was in you know, Iran, modern day Iran, like, a million years ago or whatever. But because of colonialization, and stuff like that, it's called Newton's law because he was a white man. Right? That's the kind of thing that I was thinking of, when thinking about decolonizing science lectures. Just, it's not a difficult concept. I'm very bitter about this episode.

Pruthvi Mehta 7:12

Exactly. So I think when when you have this kind of erasure as well as have other kind of civilizations doing science, you end up with these people who... I'm just thinking of ancient aliens on the History Channel. And they just think that everything to do with you know, in ancient civilizations, especially where it was like predominately people of color, everything that all the work that they did, it was just aliens, not...

Karel Green 7:54

I'm finding the meme.

Pruthvi Mehta 7:55

I'm finding it too!

Karel Green 7:58

You're too late. You're too late. I've got the Thank you. Thank you to Twitter user @guacamole who made this meme so much... Oh, actually, no, no, actually, it's got that she she got it from somewhere @thecolonial.meme.queens, they made this meme. So thank you to @thecolonial.meme.queens who make... go into our show notes perfume will create their own roster, but the aliens meme of

Pruthvi Mehta 8:35

Sehher have you seen it?

Karel Green 8:36

Or go look at this meme?

Pruthvi Mehta 8:37

Yeah, pretty sure I've seen at least two and there was one that is like just, yeah that's it.

Pruthvi Mehta 8:44

White people couldn't do so it must have been aliens.

Karel Green 8:48

Oh, God.

Sehher Tariq 8:51

I feel like that, that when you erase...

Pruthvi Mehta 8:55

Change our logo to this, change our logo to this.

Karel Green 8:57

I'm doing it. I'm doing it. Okay, I found I've also found the Instagram that this came from for because we of course must give credit where credit is due. Sorry Sehher, you were saying something we are still talking about memes?

Sehher Tariq 9:14

That's fair. I mean, memes are important. They need to be talked about. But it's just like the erasure of you know, that the kind of narrative that people of color and ancient civilizations did science. And, you know, genuinely had like, you know, I guess like an academic kind of culture. Erasing that and just replacing it with the Eurocentric narrative kind of leads to this whole thinking of like, Oh, look, these ancient civilizations were they must have been stupid, because they didn't have the technology that we have as you know, euro euro European cultures that you know, developed to this kind of stuff, we are the smart people, and therefore they couldn't have done this and therefore, aliens. So like, it's, it's just it has like a wider consequence. That it kind of it, it adds into the narrative that people think that these ancient cultures and also kind of in a way that just generally people of color are not as scientific and not as academic as European cultures. It's just, it's just stupid.

Karel Green 10:34

You're right. And it's like, like, we're literally forgetting how like, loads of ancient civilizations had like socialist, lovely, like civilizations and were like sharing resources and there was no hierarchical structures, and they were all crucially washing their ass. I will never ever forget. I think I've said this in the previous episode, how the goddamn inbred Queen of Spain took her unwashed arse to I think it was the Caribbean and actively told them to stop using.

Pruthvi Mehta 11:10

It was like, it was also like, I think he was like a because an islamic country or something because she saw how people had to like bathe, literally as part of the

religion, right? Yeah. And she was like, No, no, no, no, what do you mean, wash yourself with water? Cannot be you must...

Karel Green 11:24
Soap? Like...

Pruthvi Mehta 11:25
Colonized. And it was bad.

Karel Green 11:28
It was extra bad. It was..

Pruthvi Mehta 11:30
Like, I always never think it's Queen Isabella of Spain, but I always mess it up. I always give some other white girl name instead.

Karel Green 11:36
Have fun looking it up Sweetie, because I'm certainly not going to ruin it. It's also I mean, it's going to be in the show notes. So you're gonna have to, it's also extra bad like, Oh, god, what was I gonna say? Oh, yeah, like how, again, like, I remember one specific example is how like, ancient was it? I think was Mayan or income, I'm not sure. And I'm also not sure if they're the same thing. I'm sorry. The real receipts will be in the show notes, of course, had like literal back running sewer systems that like actually back where the water used was, like, cleaned organically and stuff like that, at the exact same time in history, when like the literal Europeans were busy throwing their waste their literal, like bodily waste in buckets out of Windows outside of their own home. Yeah, that's what's always been so strange to me is not sure if it's the Victorians or the Tudors. They're all the same in my head, but like just outside of their own windows, they didn't even go down the street. That's what's weird. But anyway, and just wondered why they got the bubonic plague like make that makes sense. Like God damn.

Pruthvi Mehta 12:44
Yeah. Apparently, apparently, was Queen Isabella in Spain, I've managed to get the name right for once, and she only bathed twice and her whole life...

Karel Green 12:52
The hypocrisy was that she actually bathed before her wedding. So she's acting like you shouldn't she actively did not want people to bathe then bathe before what is arguably one of the most important times in her life. Yeah, so I'm just like, what's the truth, sweetie? What's the truth? Like, clown hours. But I did want to this has been like a great tangent, because we've got the meme in real early.

Sehher Tariq 13:16
Yeah.

Karel Green 13:17

I did want to circle back to like our experiences in actual lectures, and absolute mess that they are.

Karel Green 13:27

I found a lot of lectures to just be like, unbearable. It was the first time in my life, where I realized I was dyslexic, because they were so long that I couldn't remember anything, which is like, I could, you know, get by in college and in school and stuff like that. But also just like how unforgiving they are, just like hours upon hours just sitting in a room. And some lectures, were just awful people who would just come into a literal course, you had effectively paid 9000 pounds for it the time now it's 9250 pounds, that I remember, it might have gone up because of miss Rona. And just then been like I haven't made any lecture notes, you know, nothing's being recorded. And if you don't come to every lecture, we're literally going to kick you off the course. And that's just all ablest In my opinion, what that is, is really bad. It has no sympathy there we go for people who are like chronically ill who have to get into hospital as on when they can or just like everyday life like sometimes you need to go to like the bank which is open for like 14 minutes a day. Or oh, you know, something goes wrong in your house. You have to stay home for like an emergency, like somebody to come and fix it on an emergency like he has no ability to like care for people in that way. And I just think lectures are awful and just extremely ablest I'm just gonna keep saying it. Usually.

Sehher Tariq 14:58

Yeah. It was the worst when they didn't have like, good lecture notes as well, like they just forced you to talk. Like you had to talk to other students to get your notes. And in I don't know in one sense, that's fine. But also another sense why why do why are you doing like, not everybody has the ability to come into lecture all the time. And you're purposefully, you know, kind of trying to make people fail in that sense. Like, some people don't even learn in that in the like, in the way that you want them to learn, like, you need to be more aware of the people having different learning styles. And that you need to kind of learn how to teach people in different ways. Like, I don't know why when, when I was learning, my preference for learning is writing things out over and over again. And like doing questions or working through problems, just repeatedly, so I can understand the method. But, like, listening was never the way of me learning I couldn't like, if someone's telling me something without like, demonstrating it. Or like me having something that I can refer back to, I won't be able to, I wasn't able to learn that easily. Like, I needed something written out. And writing notes during lecture that never went into my brain like that. Nothing about that made me learn anything.

Pruthvi Mehta 15:30

Exactly. And like, half the time, it's like, they were like, those lectures, were writing off their notes, right? Which might be the same or like worse than the ones that are like

given to you online, right? And yeah, it's like, half the stuff didn't come up in exams, like, more than half, all of it.

Karel Green 17:02

I've also, I also found it really hard to like write stuff down that sounded important whilst I'm speaking, because you either have to be like, I'm either going to listen, or I'm going to write this thing down and miss a chunk after what they just said, Yep, yeah, it was just all for them doing my live maths was bad. Like, because they always got something wrong. And there was no time for me to sit down and understand it. I was just like, I guess I'm doing this later.

Pruthvi Mehta 17:26

But there is there is no time because what do you know, it's like before like nine to six, like, you know..

Karel Green 17:32

9 til 9 til 10 til 10 exam times, remember how we used to stay in labs, get there at like 2am. But I'd get there at 10. And I remember leaving at 10. And we spent 12 hours a day, it was awful. I also just wanted to mention that our uni specifically every lecturer had like the same plot, which I now know, they all definitely recycled. Because, you know, having made plots in my life, nobody makes a plot that already exists. Because they why would they do that when they could just paste a PNG. But like they showed that plot of like, the correlation between the people showed up to more lectures versus the people who passed. And I just wanted to just express how much fake and terrible you could be with statistics. Because again, our uni specifically if you were not in enough lectures, right, and you didn't have quote, unquote, extenuating circumstances, which again, I'm just like, what if like, your house flooded, and you had to, you know, that takes, that's not like a one day fix. That's something that goes on forever. You know, life just happens to people... That and extenuating circumstances aren't even very, they're not very flexible. So you could have somebody in your life pass away. And if it's with, say, I can't remember the exact time the exact dates, but say if it's like a month, if they passed away, like six weeks ago, they'd be like, Well, no, it's outside the month, so you could just choke like, it's just insane. So they just kick people off the course who don't show up to lectures. So I'm just like, so you actively failed people. You can physically make it onto campus even though you took their money like because they didn't give back the money I want you to know that they did if you fail that of course you did not get your back portion of the nine grand back just failed. So I just I was just like, why would you show that why would you be so mean? It's all why would you be looking for like

Pruthvi Mehta 19:29

people literally like cannot go to lectures or because in going to uni for like extended periods of time because you don't know their life situation. Right? I literally dislocated my kneecap and literally missed all of like second semester, right? And

there was like, I want everyone to know this. There was no video conferencing for any of my lectures aside from relativistic waves and quantum fields where you can only see half the board in the video capture.

Sehher Tariq 19:57

I remember people saying that that that lecture was absolute, like, insane, like, just incredibly insane. Just the physics was so hard as well. So the fact that you're only seeing half the board like how is that doing anything for you?

Pruthvi Mehta 20:14

It's not unlike, I can tell you that I bought a in that module. I didn't talk a single lateral dumb question. Thank you. Thank you. But yeah, it goes to show that it's complete BS, right?

Karel Green 20:24

Yeah.

Pruthvi Mehta 20:25

And what you need is like, you know, even though the lectures were absolute hell, the questions and the working out was clear. And you had to learn that. And, you know, just use your head and that was, you know, that was that, but it definitely wasn't showing up to lectures. You know, I would not have done better had I like, I mean, I probably would have been better without all those pain meds but you know, you know, I mean, right now the...

Karel Green 20:46

The pain meds made you better, pain meds that made you better at maths. That's what that means.

Pruthvi Mehta 20:52

Um, but yeah, like, you know, if it's always really crappy to be like, Oh, you can't turn up to lectures, I guess you're gonna fail! Because literally life happens, people have chronic pain, people have illnesses, accidents, people cannot just cannot just go in, for whatever reason. But it's so rude.

Karel Green 21:13

You have, exactly you're right. What, if you have like a chronic pain condition where you wouldn't need to go to like a doctor or hospital because you've had it your whole life. You just have to wait for it to go.

Pruthvi Mehta 21:22

Yeah.

Karel Green 21:22

And then they're just like, so you were just in bed all day? And yes, so. So it doesn't count. You know, I'm sure that happens to lots of AFAB people who have periods who were just like, I had a bad period this month. Like you don't get any kind of respite for that. But when you're when you when the cramps hit when the cramps hit, you ain't moving. Yeah, so like, I just it's awful...

Pruthvi Mehta 21:46

Especially for like people who have like endometriosis or something where like, your entire month is one big cramp like...

Karel Green 21:53

One huge cramp. And we all know how like, chronically undiagnosed that goes especially in because in uni or just about getting out of your teens, right? You're still in there a little bit when you start unit 18, don't you? Yes. And we all know that just nobody cares about teenagers for no reason. So lots of teenagers will be finally for the first time going to the doctor and being like, Oh, yeah, I have this like massive pain and like, nobody took me seriously. But now I'm at uni, I'm just gonna come to this doctor. And you know, so you're at the beginning of that stage in your life. I know this because literally everybody who's sick, I know now did that, including me. So much pain. I also wanted to like, change gears slightly to talk about like lecturers.

Karel Green 22:46

Two sides to lectures I wanted to speak about the first half and don't let me forget this guys is the is how, like, lecturers who aren't white men, white men who are assigned male at birth, specifically, there's been studies that how they just get treated worse, especially in the STEM fields by undergrads. So I'm just gonna get about that in a minute. But also, I wanted to talk about how, like, in academia, a lot of the time, lecturers are sort of forced to teach as part of their jobs. In the UK, you don't have tenure, as much as it's, I think it's just a lectureship, which means you get to like, do your research you're in a university, you have like a job now, that just won't leave unless you decide to leave. But you have to teach so and it's like people will like see being a job for literally 25 years, right? People will off the decades will just move to do less lecturing, because nobody wants to do it. Because it is bad. And it just is really saying because, you know, people will go to university to do teaching. And it's like, they're two completely different jobs. Yeah, you can't just do like, I know this, because I'm doing a PhD. And technically, because even though you do a bunch of postdocs, you don't actually get like another qualification for doing postdocs. So technically, when I finished this PhD, I should be as good as any lecturer. I know that's not how life works. But in the eyes, the eyes of the law on paper, I would be.

Pruthvi Mehta 24:23

Yeah.

Karel Green 24:23

And it's like, you can't explain so much for some of the bad lecturers we've had. Because you suck is to hold us different jobs. How can you just be like, you've never taught in your life teach the highest level of education that we give, it's how people get bad PhD supervisors ist'show like these things happen. And I just want to talk about how that's a thing as well, because I'm just like, this should not be I also shouldn't be.

Pruthvi Mehta 24:48

Also want to say that like, you know, you get a literal so when you're teaching in a school, right, you get a literal like, you know, qualification called a PGCE. Right? Yeah, which it should literally qualify you to teach people teach students.

Pruthvi Mehta 25:03

Yeah.

Pruthvi Mehta 25:03

Again, like Karel said, you don't get that at your, you know, for teaching, you know, university level students, even though there was technically no difference between an 18 year old who's like in an A2 classroom and an 18 year old who started University and in a university lecture, right.

Karel Green 25:17

And there's a six weeks holiday in between actually. So you can choke.

Pruthvi Mehta 25:22

Yeah, like, that's not like, you also need a qualification, you also need to know how to teach, right? It's not just like, just because one is once someone is technically an adult, doesn't mean they don't deserve good teachers and people who actually willing and wanting to teach them. Like he said, so many University teachers, like University lecturers don't want to lecture, they want to do research. And it explains how like, you know, at universities, where you have, like, some of the quote unquote, highest research outputs, you have some of the, you know, worst, reviewed lecturers, because you know, it's a completely different skill set, right? Being able to sit at a desk and code really well and make really cool plots, and write really cool papers is a completely different skill set to standing up in front of a class of literal babies and teaching them

Karel Green 26:10

And making sure they understand.

Pruthvi Mehta 26:12

Making sure they understand and making sure they are happy and comfortable and learning stuff. Like that's complete different skills that they just don't get taught. There's no University equivalent for PGCE. Why?

Karel Green 26:21

Yeah. Exactly.

Pruthvi Mehta 26:24

I'm losing it.

Karel Green 26:24

I just did, I'm in so much pain, like, I just I don't know how they let this get away with it. And it's also like, and you can tell with degrees and stuff, because without your, all of your lectures on this, you know, you're doing your specialized lectures, but my Astro lectures were a lot smaller, because everybody did Astro, right. But like, the main courses, it's just like 300 people in a room go. Like, they there's no way that they can make sure that everybody is effectively learning and this because they don't care. They just need you to get that qualification. So you can go on and do whatever else you need to do, right. And it's just like, No, nothing like that is ever done in the lower stages of education, because like they literally have, like training. And they're just like, that's not an effective way to teach anyone. They're already upset the classrooms have 30 people in them, I went to a school where classrooms regularly have about 32 people, which is very large for the UK, per teacher, right. And they, you know, ideally, that would be smaller, but they just don't have enough teachers because they get severely overworked. But that's a different podcast episode. And it's just like, they've actively done the studies. And they're just like, people learn better when it's like a couple people per teacher, right? I'm sure I'm sure one on one is great, but I'm sure there's like a sweet spot between 30 and one person was like maybe like 10, 12 because like the social aspects of having other people just helps bring down anxiety. You know, yeah, look that up yourselves, lads. But yeah, by these massive lecture halls, they're just like, Well, we've got this one lecturer who's got a lectureship, which means that we can't fire them, as long as they don't do anything extremely horrific. And they're just here doing their research. And we're just going to make this as efficient as possible shove all of you into this one room. And I'm just like, Why? Why, like, how could you possibly think this could be anything except for bad for everybody involved? Nobody likes lectures. No, none of the undergrads, none of the lecturers.

Sehher Tariq 28:31

I think on the other, like the opposite end of the scale, as well as like, lecturers aren't interested in that they're more interested in their research, rather than teaching. It's very rare to find jobs where you can be like a lecturer without having the research part of it. Like I know, there are, there will be people who want to teach at that level, and have the skill set to teach at that level, like, surely somebody who's done a PhD would be able to go on and be be a lecturer who can teach, but maybe they just don't want to do the research side of it. Like, can't if, if there's, if there's clearly an issue of people wanting to focus on their research more than teaching, and because of that, that's, you know, lowering the reviews of of the lecture, lowering the actual exam results that people are getting, then surely, their solution would be

to actually get somebody who's interested in the teaching side, rather than the research side. Like their job is literally to teach and, you know, actually give them training on how to do that. But I know that in other countries, it's possible to get a job like that, but I know in the UK as well, as far as I know, it's very rare for that kind of position to even be available.

Karel Green 29:58

Yeah, I've heard I've heard as well like, Well, generally they're considered worse jobs. Like everybody is like, Oh no, like I could never work there. Like I've heard from people like so there's like a, there's like a sister TM university to the University of Nottingham called Nottingham Trent, which has a higher BAME population, the call and I can guarantee you it's because it has lower entry requirements I remember because I was considering going there as a backup for Queen Mary, if I couldn't get into Queen Mary, because it was like the only place in the whole of the UK that did astrophysics specifically, but it wasn't like A*AA because Queen Mary, I think was a BBB and then they were a bit lower. And that was it. And I know as well, a lot of the time the lecturers in that uni and there's like, there's a few equivalents, I can't remember many, but one that comes to mind is like Southampton Solent or something, which is the sister universities, the University of Southampton. And it's like if you if basically if you're working there, they're just like, Oh yeah, you're just teaching, you barely get to do any kind of research you're just teaching. And it's not. It's like considered like the sort of like, look down on it here. And it's just like, I understand because, you know, I've done enough tutoring in my life, too. And I will say this with my full chest, I never want to be a teacher. It cannot do it. They are such a difficult job. I just don't have I cannot do teaching, right? I absolutely hate teaching. But like, I just don't understand why there isn't like in the UK or just any country, why don't you don't have the the humans who literally went to university to get a teaching degree, why not just have them both? He said Sehher doing lectures, and then have the researchers doing research like why Why? Why are those two things the same thing, like the make them two different things? Like, I'm sure there's people who've gotten a PhD in a field, who would just love to teach, right? If I just it's just such a weird, it's such a weird thing. And I just I wanted to again, just bring it and bring it back to like our experiences. I remember going into lectures, especially by one specific white man who is his name is bleeped out in our show notes. But like some lecturers are just so been for no apparent reason. We'd have like three hour lectures and we've had to like formally put in the work the feedback form that like breaks, they were just skipping breaks. I remember I had one fluid dynamics lecture. Who just talked for three God damn hours.

Karel Green 32:47

Oh.

Karel Green 32:47

I just like, my dyslexia brain was just like, you're in so much pain

Karel Green 32:51

I just started yelling. Like, I just clicked out.

Karel Green 32:54

I did. We did. And he was just like, we're gonna have a two three minute break. Don't leave that like, Oh, God. I don't know how some people like that I called the other end of the spectrum from how I live, I just cannot. There are some lecturers who didn't like people being on my technology. And it's like, I understand that it can, it can be rude. But also like grow up people have things to do, especially if we have in a physics degree like literal... I remember once I got a timetabled having a nine to five day that didn't have any breaks in it at all. Just lecture after lecture after lecture, I literally had to ask to be moved into like a different time for one of my things. I remember people didn't realize, so that there was a bunch of people who have my old timetable who were just like, yeah, every Thursday, I literally don't have any breaks in between. Was it for two hour lectures? And yeah, it was just crazy. I was just, you Why didn't you move out of this group, and they will just think I don't know, no time to think by and they switch. And these lectures will just be mean for let's talk about mean lecturers.

Pruthvi Mehta 34:11

Speaking of mean lecturers, I like like, I would run out of fingers to count on if we had to think about every single lecture that would just flip out the time someone came in like a second late. And I spend like 10 minutes, I'm thinking particularly of a particular EMF lecturer in first year, who would literally spend like 10 minutes at the beginning of each lecture and then you know, 10 minutes during why not to like yell at whoever came in and make a big deal about them coming in late and then some when someone's on their phone, and he and he sees them on their phone and then there's just another 10 minute rant about why you shouldn't use your phone. And so you know, there's like, you know, a half an hour out of this like two hour lecture has just gone has just been wasted. And it's all his fault.

Karel Green 35:02

Like, yeah. And it's like not to be dramatic, but not to get into too much detail, but like some of the toilets on campus have just been destroyed some days.

Pruthvi Mehta 35:13

It's true.

Karel Green 35:13

So like, my ass would just walk across the campus to like the basement toilets have knocked us, you know, 17 buildings over to not go in a room that is literally just covered in filth. And so I'd be late, like, God forbid, a human being needs to use the loo. We will get on public transport because there was nowhere to park. So if the buses were they as they are, we went to university in London, the London Transport is bad. That is a fact. Like, you know, it's not like, I don't understand how people take it

so personally, what and it's just I don't know why. But where is the? Where is the training? Why will they be like this, people would come in late being like, I have to go to the loo and they go, why didn't you go earlier? And it's like, people would get their period and stuff like that. Or they'd be asked, like, why were you late? And you know, it's private. Like, well, if you're having a flare up of chronic illness, and you don't want to tell everybody.

Pruthvi Mehta 36:13

Yeah.

Sehher Tariq 36:14

Yeah. The the garbage lecturer that we've got in the notes bleeped out. That's what he did to somebody as well. Like, I think they came in 15 minutes late. And then they just stopped the lecture, pointed them out. I was like, Why are you late? And she actually had to say, like, I rather not say in front of everybody. Like, what kind of like, Do you not have any shame that you're asking somebody to? Like, just publicly announce why they were late, like it could be private? And then I'm pretty sure he was like, Well, why not? Something like that like your, your, like, it wasn't she... I wasn't even, like, embarrassed for her. He was trying to embarrass her. I was embarrassed to him because that is just pathetic.

Pruthvi Mehta 37:01

It's just pure. It's just really like, petty and pathetic. You could like they have some kind of vendetta, right? Yeah. And it's not really about the issue. It's about making the other person feel like insignificant and bad. And it's awful. I remember the same same person. It's gonna go all in on. Wow, I remember they like set like a terrible like they would routinely set terrible problem sheet homeworks. Right, which made no sense um..

Karel Green 37:33

Mood.

Pruthvi Mehta 37:34

And then would like, get mad when people would like..

Karel Green 37:40

Oh, my God, oh, I remeber.

Pruthvi Mehta 37:43

Everyone has a way of accessing the archive. I'm going to I'm going to recommend that every university student looks up archive answers, because let me tell you lectures do not care enough to post different questions every year. They just do not care. Okay.

Karel Green 37:58

They will change the number if you're lucky. Sometimes they literally didn't.

Pruthvi Mehta 38:03

Sometimes they yeah, sometimes they would have two sets. And they would just alternate each year. So maybe check the year before and the year before that as well.

Pruthvi Mehta 38:11

Exactly.

Karel Green 38:11

We would just download as many as we could get.

Pruthvi Mehta 38:13

Tips. But that's the thing, right? So these these answers, by the way, they weren't fully fleshed out so that they didn't have all the working out and stuff, right. So you still need to use a lot of brainpower to figure out what the hell the algebra was in between these lines, right? That was like enough for concrete answers. So people did this because it's a natural thing to do to want to just not give nothing in and not give like bare bones awful answers, invite. And try and understand them. But God forbid we did this because we all told off for doing this. And they were like, Oh, you you're cheating and you're not meant to go on the archive and look at the answers like literally I was like, I learned more looking at those answers and figuring out how to get between the lines right? Then I ever gave many of our lectures. So what's the truth?

Karel Green 39:02

Exactly? Literally, we learned more from doing that. And also, if they didn't give you lecture notes, you have to rely on your homework for to revise from. So like you. I remember being like, Okay, let me do this properly. Because at the end of the year, I would literally gather up all of my homeworks. And because I done them and I'd see the algebra, I'd be able to understand what I'd been doing. Like it made me it will start it will suffer that that maybe understand how to be like, okay, we're in this regime, so I can just assume this. So I can cross out these three terms and therefore, you know, it simplifies back down to x , y and z right? Yeah, that's what the homeworks did. And I will just and I will say right you know, I'm not gonna bash anyone we will all in this together. We didn't go to about gross Imperial or somewhere that the rank students Best Worst. Like just to kill Imperial whilst we're talking. Right? Some people would just literally and yet again, I don't know people's circumstances it could have been a bad week, they just copy it down and hand it in and wherever. Definitely, because I've done that for a couple questions I didn't understand, I'd be like, let me just get these, because it's for us as well, the homeworks are usually worth about 20%. And technically to pass, all you needed was 40% in the module. So that would really bring down the exam anxiety, which was a real problem, right? Exam stress is real. Yeah. So we go in, and we'd be like I've

got like 18% overall, only need to get 22% in this exam to pass this right. And everything else is a bonus. But anyway, like, a lot of the time, we would actively because again, these lecturers don't care enough to write up for. I mean, I'm the same, would I be doing? Like a 17? part? integration by parts? No, no. So a lot of people would be like, here is the answer. I'm going to do this properly. Because there are no lecture notes, or a no past exam papers, there's nothing, I only have this homework. So I'm going to have it line by line. So when I go to revise, I know what I've done, right? And this man came in on the first week and had a list of people in front of the whole front of the whole group. And this was a compulsory lecturer. So the whole year was there. And he started yelling out names being like, you guys are all under investigation for cheating on this. Listen to me, we all cheated. We all cheated. But some of us, you know, took the time to actually do the algebra. And I'm not bashing anybody.

Pruthvi Mehta 41:34
Yeah.

Karel Green 41:35
But like, he never did it again. Because there was one guy who got really upset because yeah, some people actually did some of the questions on their own. Like he'd be able to do maybe one or two of the questions a bit, I actually did this one without looking. And then you know, that's a serotonin for the year. Like he got one guy got really upset as he should have. And then you saw it, he never did it again. I don't want to make people feel bad and which is a lie. I don't want to make people feel bad and this guy was like, how dare you? And I remember sitting in that lecture be like, if he says my name, I will actually just dematerialize.

Pruthvi Mehta 42:14
Thanos snap.

Karel Green 42:17
I'd snap myself. We were sitting next to each other, we we both knew we cheated.

Pruthvi Mehta 42:23
And digging your fingers into each other's thighs out of fear. It's so funny.

Karel Green 42:29
But looking back, it wasn't even cheating. It was so small. It was literally read papers now to do the exact same thing. So what's the truth?

Pruthvi Mehta 42:36
Exactly? Like, here's like, here's the thing, why there's this obsession in throughout all of academia, school, wherever, wherever, there's emphasis on grades and passing. And it's literally detrimental to the point of learning, which is like, you know, happily understanding stuff and going at your own pace. That's awesome. That's what

learning is, right? Can't do that, if you're scared all the time. Like, I cannot express to you...

Karel Green 43:02

The point of research, loan crime free in papers, and I see that they don't, okay, this is what we did is the final answer at the end. But I have the ability to get from x, you know, x to z, or A to Z, God, from reading that paper now. And that's the point, like, I'm not gonna, I'm not gonna be able to publish papers that other stuff people have already done. Unless I'm doing something better or different by you. If you do the exact same thing, then they're gonna be like, why would we publish this? It's already been published, I literally... They don't care when it was published. I've read papers in the goddamn 70s. And they're just like, it's been done. Don't do it again. Like, so? What's the point?

Karel Green 43:02

There's no point there's no point it's just a really bad, you know, bad way of teaching and that's what that's what this like education system does to you. It's it just makes you scared of learning the stuff that you actually want to learn in the first place. And it's so terrible.

Karel Green 44:00

Because there's no standardized teaching, they just don't get in any trouble for it. And that's the worst.

Karel Green 44:09

So, to go back to what I was saying before as well about on the on the flip side on the flip flop, I wanted to talk about like lecturers just get well... Also I just wanted to quickly say as well, lecturers who'd spend about the entire year I'm remembering specifically elementary particle physics teaching garbage and none of it comes up in the exam deserve a special place in hell. I'm just in so much pain. I want you to know that we spent years learning like Feynman diagrams and all this kind of stuff. The was it the CM, that something matrix CMS is something?

Pruthvi Mehta 44:46

CKM Matrix.

Karel Green 44:47

CKM matrix you literally wanted elementary partical physics, the only particle physics.

Pruthvi Mehta 44:52

Module there was.

Karel Green 44:53

Module, and Pruthvi literally is a particle physicist. So this is literally all she had. And it was just like to spend all the time learning all of that, I can tell you right now, if you are anybody with a memory, right with any kind of memory, you could have memorized the Wikipedia page for particles and the different quarks that they are made up over pass that module. And I will never forgive her for doing that. And I just want to say that, overall, I found that white women naturals are just as bad as white men. And they can choke.

Pruthvi Mehta 45:24

It's true. Like, there's just like, you know, like that a part of us took the brunt. Why? Because, like, I think the year after us was even worse for these students.

Karel Green 45:35

God.

Pruthvi Mehta 45:37

You know, I'm not I'm not gonna, like, obviously say anything. But, you know, there was a lecturer who was clearly not in the best place to be lecture like teaching because like, she is just very high up in an experiment. And has a lot of responsibilities I personally know this. Right. And she was also like, this goes back to like being made to teach when you don't want to, she was like, made to teach elementary particle physics, which again, reminder is the only particle physics module in our old institution's undergrad curriculum, and she straight up just had a like, whole panic, panic attack episode, like, night nightmare moment in front of this entire classroom of students, right. And then, like, they just didn't have a lecturer they just had they just straight up did not have a lecturer because she was just continuously sick. And there's no like system, like cover teachers, right, like you have in school. So they just didn't have anyone. And like, I don't know what happened, I don't think the module got canceled. But it just it was basically it was really messed up. A lot of I know, I know that a lot of students who wanted to do particle had to, like, change the change the module, because it was just like untenable for them. Right. And the fact that this was like, you know, again, no, no, tea, no shade to the woman who taught it, right. Because, like, again, she is constantly under a lot of pressure. But it just goes to show how messed up the entire system is. Because that shouldn't be something that allowed to happen in the first place. You know, considering that there are definitely particle physicists who wanted to take that module and wanted to, you know, progress in that field. This module is the wanting to show, you know, like, you know, other people that have got an accreditation in particle physics, right, this module is early module they have they can't afford to let that go. They cannot. Right. And they were put in a position where they might have to, and that's really scary. And really bad and it shouldn't happen, it shouldn't happen.

Pruthvi Mehta 47:47

Um, what what are students paying like? 9000 pounds for if they can't even do the modules that they want to do?

Karel Green 47:53

9250. You're right, yeah. It's, and then this is a perfect segue to talking on the other side.

Karel Green 48:07

A bit earlier about how so there have been like studies. So I want to talk about how I lectures lectures are bad for lecturers, right? And want to say like, as somebody who has like severe stage fright, and like, literally has gone to therapy for it, I want you to know that the idea of lecturing to me is just like, absolutely horrific. Like I don't want to teach because I just... to learn more about me is fine in like, smaller groups. So like, I've done tutoring and stuff in schools, and I just know that I actively don't like the career of teaching. And that's fine. But the idea of like, if you want to be a scientist in the, you know, classical research way, and you eventually have to just lecture from all of these disgusting white boys, like name a worse hell, like, I just cannot imagine one. I just quickly want to say as well there's also been like, studies done that show how, again, if you're not an AMAB or a passing trans male who's white you like just the students will treat you systematically worse, some white women get treated or AFAB, AFAB and passing trans white women get treated worse than men and then like men of color get treated worse than white women, you know, women of color or two of them get treated worse than everybody else and so on and so forth. If you're if you're like visibly LGBT plus or disabled or anything else. It's just a nightmare.

Pruthvi Mehta 49:39

It's like I had like a little microcosm experience of this when I because I had to like do in person like you said pre-miss Rona I had to do in person tutorials. So I used to like have to like, you know, go into a tutorial classrooms and whenever like students put their hand up when they're doing the tutorial. After a brief introduction by the actual lecturer, like, you know, go around and help them, right, whenever they put their hand up, you have to go over their desk and help them out. And it's just like, I will say, only I'm just gonna call you all out only white man did this right? Well, so they put their hand up, like a group of I mean, we were in physics, where else would they be? Right? But, you know, there was a table of like, you know, five or six, undergrad boys, and they would all just like, you know, be working on stuff, if one of them put their hand up, I'd come over, they would keep me there for a whole five minutes before actually turning to me and like, you know, asking me a question. Like, they would just carry on doing their thing. Until, you know, until I coughed, or like, I went at it, I have to interject, be like, hey, um, you know, and they definitely saw me there because I was literally right, like, standing right over them, and they were sitting down, right. And, like, they would just continue, like talking about the problem, they were literally stuck on and asked for help with amongst themselves before, you know, acknowledging my existence there. And I will tell you, like, you know, the table of girls, I would, I would go to because, you know, you know, how we all like, clustered, right? Like, all the girls would like, stick together and all that, because that's just you

feel you feel comfortable amongst your own and whatever, right. But anyway, like, the table of girls, I used to, like, go to, they would literally just put their hand up, and like a normal person, like normal people, you know, be you know, they would just, they would accept the help. And they would sit and listen to me while I talk. Right? They wouldn't talk over me. They wouldn't talk to someone else while I was mid sentence. Like, I was so tired. Oh, and like it? Might they might have been a bit maybe a bit too quiet. Right. But I'd maybe like say, you know, did you understand that anytime the table of girls would just be like, silent, I would have done the same. Right.

Karel Green 52:03

You did do the exact same?

Pruthvi Mehta 52:05

I did do the exact same so why lie right?

Karel Green 52:06

You have, you did? Yeah.

Pruthvi Mehta 52:09

And that's, that's completely fair. Right? The fair that's preferable to like continually talking over me. Or like pretending I'm not there. When you ask for help. Like,

Karel Green 52:18

I couldn't fathom a single reason. If, if I did not want to talk to somebody, I simply would not ask for help. Like.

Pruthvi Mehta 52:27

I never asked for help in tutorials, I would just be like ermmm...

Karel Green 52:30

I mean, I asked for help. But like when they came over, I'd be like, let me listen to them as intently as possible. So they can leave ASAP. And get away from me as quick as you can.

Pruthvi Mehta 52:40

Yeah.

Karel Green 52:42

I could never, I could never. And would they do this to a white man at any stage or something? They not even like a lecturer. I don't think they do that to literally, like, a Masters, even like a master's student white man, right? It's just bad is just bad. I just, I can't believe they do this. I just, and it happens all the time. Again, Mike, like you said this poor woman had a massive panic attack due to the stress put on her shoulders. A lot of the time, like the anybody who isn't like a straight white man will

get forced to do the tick box exercise that is the Athena SWAN charter. So they have to do all of that stuff. Again, if you could be any kind of good scientist. But if you have any kind of stage fright as I do, but literal actual, like performance, anxiety, you can draw stroke, sweetie, you can't do the job because nobody wants to lecture. So you have to like is just horrific. And again, there has been, again, I'm not sure how many studies have been done on all of the different kinds of sub groups. But I definitely you know, male versus female, it has it's definitely just been like you can choke the women. And I also want to just talk about, like, bug why boys derailing lectures by like, trying to get into an argument about the science that they knew better than a lecturer, which is just no, and it's just like, you know, they get away with it for so long. And again, I don't see any kind of like, white woman, the rest of women, or like men of color doing this, like or getting away with it. It's just not an absolute nightmare. And again, they're more likely to challenge not white men, lectures, and so you'd be trying to teach and there is like a white boy constantly trying to one up you in your own lecture. Like what is that? Like?

Pruthvi Mehta 54:38
Exactly exactly.

Karel Green 54:40
That was like microaggressions and microaffirmations. It's just bad.

Pruthvi Mehta 54:44
It's real bad, right, like so there are a couple of examples that I think I mentioned for this. So do you both remember that scientific skills module? I do, which is like a pass fail thing like just have to turn up and that was it. And there's Like one guy, and I remember because it was like literally one of the first modules we had, like, cannot imagine any new undergrad being so bold as to do this, but what the hell? He was just like, oh, why don't you get the point of being here? Like, imagine having the gumption to say that to like a grown lecturer, as like, a third week as an undergrad in a new university.

Karel Green 55:27
Just, like a grown ass adult that you've paid money to be there. Like...

Pruthvi Mehta 55:32
It's pass fail.

Karel Green 55:33
Just show up and fail.

Pruthvi Mehta 55:34
Yeah, exactly. If you have a problem with that. Like, it's the easiest module we had why are you complaining?

Karel Green 55:39

Yeah, we'd go there and do other homeworks for different modules, everybody would get their friends to sign them in. Right? Somebody would just they sent around the register, everybody would have it for 20 minutes as they signed 69 different signatures that we've all memorized of our friends to like to say that we're in, right. I just Oh, God, I just why would you do that?

Pruthvi Mehta 56:02

There was also a physics Ambassador interview. So like physics ambassador, our old institution was like just a role where you'd help out with certain events relating to the physics department, like interviews and stuff. There was this one time where so the actual interview process to become a physics ambassador, was a train wreck. And I remember in the like, interview cohort cohort that I was in, we were given a task regarding what was it... it was, like, if you had to describe the concept of friction to someone, you know, come up with like a presentation about it in like five minutes. And then the next thing was to like, give your presentation to like the three individuals who are like grading us, right. And there was like a kind of focus group where all of us would have to, like, talk about it to kind of discuss how to best present this. And there was someone overseeing and like, grading all of us individually during the discussion. So obviously, everyone would like try and be as loud as possible, because, you know, that's you need to get a voice heard to get through this section, which is a mess in itself. But anyway, there was one white guy who he was like, completely wrong about a certain thing. And everyone was like, you're wrong, you're not right. But he was he would continue to like yell and walk over others and stuff. It's the funniest thing is that he just he didn't get through to become a physics ambassador, because I remember like, looking around when when we got through, I remember looking around or the rest of the people who were in the interview in my particular interview cohort who got through and he was not there and I was just like, wow, God, by Gods are real.

Karel Green 57:42

All a billion of them

Pruthvi Mehta 57:47

They came through one time and that was it.

Karel Green 57:51

Then they broke your kneecap.

Pruthvi Mehta 57:54

While I was a physics ambassador there.

Sehher Tariq 57:57

Oh my God.

Pruthvi Mehta 57:57

But that's a story for another day.

Karel Green 58:04

Pain that as so bad. God, I just that was awful. My I was a physical Ambassador before you because I want to say it was that one of the only jobs that they gave you that was paid so I needed it way earlier. I was just like, I need an income and it wasn't enough. But anyway. And yeah, I don't know why they decided to do that because my day was bad enough as it was and it was just such a mess. That's that.

Karel Green 58:35

I don't know how I you know, I'm not putting this past anyone. But I don't. But I remember I was at like this group thing for like BAME people we were just trying to live. And this did not happen in like a STEM lecture. But I just wanted to say that like some some lecturer said, like a slur in context, specifically a white guy said the N word in context to talk about, like the history of it or something. And whilst I don't know how this will come up in a STEM lecture, but again, I'm not putting anything past them. And also, the N word is not the only slur. There are many and you should not say any of them. I just want to specifically say about like lecturers saying slur in context can actually choke. I mean, I'm going to put something in the chat. And I won't say I think it's like the disabled R slur. So I know that's like a literal thing in chemistry. So that that thing again, it's the R slur against disabled people. It's like an actual thing in chemistry, cuz I remember learning it in GCSE chemistry. And I'm just like, so you know, it can happen. And I'm just like, just don't say it. Just to be like, this is a slur so I'm not going to say it.

Pruthvi Mehta 59:53

Exactly.

Karel Green 59:54

Like, what are they gonna do? The people who wrote the paper aren't gonna you know, appear through the ceiling, but horrible idea and stab you in the face like, you're gonna be fine. I just like there is no such thing as saying a slur in context you can just choke to death. Yeah. And that is it. Just just choke, just choke and pass away painfully.

Pruthvi Mehta 1:00:13

Exactly. It's like, again, this isn't something that like, affects like... Well, then, we haven't particularly had an example in our lectures where this happened by remember the event you're talking to, it's very common. I feel like literary literary fields and political science and history, where they're, like, you know, might be like quotations or texts or stuff that will use these words. And it's like, but you know, what, like, a modern common sense applies to it. Like if you do not have the if you are not in a position to use that slur, or claim it or whatever, right? Don't say it just don't say it. It's it really is not that hard, like you're not devaluing the text or taking away any

emphasis, because it's literally a word that you do not have to say, which has a lot of connotations, which can be very, very hurtful for students who are literally sitting in your lectures. Don't say it, don't say it. Paid money to be there.

Pruthvi Mehta 1:00:13

Paid money to be there. Don't say it.

Karel Green 1:00:37

Like I said, there's so again, there's something in specifically chemistry that I learned in goddamn, in a literal school I want to pass away in GCSE chemistry there has a like a literal slur in it. And it's like, so it's like, I'm, I'm sure there are more that I've just happened to not know about. But just like, yeah, it can happen. And it should not. Also just forcing students to talk about things I remember again, this didn't happen specifically in a STEM lecture. But I can imagine with decolonizing, they start trying to do this, and I just don't want it to happen, but like, expecting BAME students to talk about stuff. I remember once again, in like a different event for like, decriminalizing that I was at a student was talking about like a history lecture, and a lecturer and looked to her to talk about slavery. And she's a literal, like, undergrad. And whilst it's and she was bream, official soccer, I think she was a black Muslim person, I'm not sure if it was black or Asian, my memory fails me, but it was bad. And also, it's like the double idea of how like, I remember seeing on the news, two women were on the news. And she was just like, yeah, like, first of all, there's the obvious, like, bad reason of why would you expect us to do this, we are literally not lecturers. And also it's like, they don't necessarily know about this stuff. Like, I remember these these two girls on the news, who were just like, Yeah, I don't know about the literal like, you know, massive like attack on women that's happening in the East Africa, just because I happen to be East African. Like, I don't know, any more than the white guy next to me. Why would I want both from England? Yeah. So like, it's not, it's not built into my DNA. So it's just like, don't do that either. The idea of looking and again, I can imagine with decolonizing, they'd suddenly start being like, okay, here's all the maths, let's look to singular, you know, woman, or singular black in the audience to talk about the decolonizing section of this science lecture. And I'm just like, don't even don't even try it. Don't even try it. Like, don't do it.

Sehher Tariq 1:03:19

This this used to happen to me in school. Something like that, anyway, but like, in RE when we talked about like, Islam, because I was literally like, I think, what was it? I was, I was the only Muslim in like, my year and then wait, it was only two Muslims in my school when I was in like, year 10 and year 11. But most the time, I was basically the only brown Muslim person in that whole entire school. And whenever it came to learn about Islam in RE, they'd be like, so what do you think? It's like what? Why are you putting the burden on me? I don't want to speak in front of all these people. Oh my god. And then I also had like this one thing that happened to me as well where I had a there was this girl when we were talking about Islam in RE and we have this one girl who put her hand up and then blatantly went so why are they terrorists? Oh,

and you know what, the teacher did not say anything is in like he he said like, no, they aren't all terrorists you know, did the whole spiel and then didn't notice the fact that I was like, crying in the back. You know? I just got this really. It's just ridiculous, but...

Karel Green 1:04:40

It's awful and stuff like that can easily happen. And it's all Oh, God.

Pruthvi Mehta 1:04:46

Yeah, that's awful.

Karel Green 1:04:47

I am in so much pain. I'm in so much pain. Time to go on to solutions. I'm so sorry. But thank you for telling us because that is literally like the exact thing that will happen. And you can't do that you cannot do that. Oh my god, just that's just, yeah, they just traumatize a child.

Sehher Tariq 1:05:09

Like, they just, they just don't realize that this kind of stuff it just, it can really upset people. And yeah, it's like I was obviously upset and nobody asked me anything like, are you okay? The only the only people that asked me if I was okay was literally like my friend next who sat next to me and my friend who was sat behind me. And that was it. Like, the teacher didn't ask anything.

Karel Green 1:05:34

I can tell I can guarantee you that that teacher saw you and just did not want it did not want to deal with it. Which again, coward, like, I just...

Pruthvi Mehta 1:05:42

If you're out there a coward. Like...

Karel Green 1:05:47

We all hate you even more. Like, if that's even possible.

Sehher Tariq 1:05:51

But the girl that said it, I already hated her anyway. But this just, you know, I hated her for you know, just reasons of like, Oh, she's really loud and disruptive. And, you know, like one of those people that just always disrupts the class, but then I genuinely had a reason to hate her after that.

Karel Green 1:06:08

Yeah, I mean, you usually get the vibe, by there's been plenty of people who I thought was just like annoying and awful. But then they turned out to be an actual bigot. And I was just like, I knew it. I knew.

Karel Green 1:06:25

So the first thing I want to talk about is going way back to the beginning of this episode in terms of solutions, and it's just like, do the actual research, right? So like I understand as a little tiny, you know, black girl with a lecture, because I never did this, I understand putting my hand up and saying that Hubble was racist, when learning about Hubble store is not going to do anything, right? It's not gonna accomplish anything, it's gonna make everything awkward for everybody. You know, I'm the least likely person to do that. Because like, it's gonna make me like, the spotlight. So I don't understand why people are always like, well, that's not gonna do anything. It's like, we know that, which is why we haven't done it right? Like, but I do want people to do the actual research. And this is what my decolonizing lectures are. Right? So I'm not talking about just saying that and he was a racist, or blah, blah, blah. But you could talk about like. So, you know, do the actual research be like? Well, the first fact is that the earliest known evidence of human beings understanding gravity was found in like ancient East Asia, because of like Islam. And there's like these carvings that show like moments of forces and blah, blah, blah, because that's a literal fact. And then you say the words, but you know, our classical understanding comes from, you know, the Greeks, and then white Europeans because of racism, and how and then you could be like, so that racism has made the science actively worse, because somebody already do this for 5000 years ago, before Newton was born. And had he been taught this, he could have used his big brain to figure out something else, because he would have already known about gravity. And we could have had Gravity 2 Electric Boogaloo or something like that. Right. And you go, and that's how you decolonize lectures, because not only are you putting more facts in by finding where the actual science was first found, but then you talk about how science that we do now has been made worse by racism. And it's just like, it's not that difficult. And some science was found by white men in Europe. And if you know, if it was then good for you, you don't have to change anything. Right? But not all of it was so like, have a Google goddamn. So that's my first solution have a google.

Pruthvi Mehta 1:08:43

Yeah.

Karel Green 1:08:44

And it gives you something to fill a three hour lecture with, because I got God knows that you've filled it full of like garbage now, and it's not good.

Pruthvi Mehta 1:08:52

Exactly. I'd also like to say, like, leading on from that, as long as well as like, including diversity in terms of the scientists who did the work, like, look at maybe experiments, which aren't just in Europe to talk about, or like, you know, areas of interest and scientific, like discoveries and stuff, which weren't just made in Europe, because the whole world exists, you know? Like, if you're, for example, just taking, like, just taking thoughts from my own like field of particle physics, you know, don't just talk about

CERN if you're talking about particle physics, talk about hyperK, superK, T2K any any other experiment, which isn't just in CERN. Please, I'm begging you. If you're teaching like astrophysics or astronomy, don't just blindly state that there are these, you know, telescopes in Hawaii, maybe talk about maybe should they exist. That's all there is NASA. And this, these telescopes shouldn't be there.

Karel Green 1:09:53

Sometimes we get a brief talk about ESO and that's it. ESA even and that's it. I'm in pain. But yeah, like you're literally right, like Pruthvi wrote what is probably our most popular post, but also please go look at it, about the women behind the Mars Orbiter Mission, on our website, we have a whole blog post on them, it's really well done, please go look at it. And it's just like, on top of it being outside of Europe, they literally used less money and resources because they literally got less funding to get a satellite around Mars. And I'm just like, if you literally just copy what they did, like, you could have had more around Mars, because wasn't their budget, like one sixth?

Pruthvi Mehta 1:10:39

One tenth.

Karel Green 1:10:40

One tenth. So it's like they either could have had one huge, thick, 10 times as big because everything scales linearly, don't at me, orbiter around Mars, well, or you could have had 10 like, you know, just, you know, take take take the racism out of it. That's literally better science. It's literally more efficient. Like, that's a fact I'm in so much pain.

Pruthvi Mehta 1:11:08

like, Oh, well saying about like, the telescopes in Hawaii that shouldn't be there. Like maybe talk about the ethics of putting telescopes on like a sacred mountain to Hawaiian people and why maybe we shouldn't be doing that.

Pruthvi Mehta 1:11:21

Perhaps.

Pruthvi Mehta 1:11:22

Like I wrote, like a, I wrote an article physics world about the morality of doing so. Because that was the 30 meter telescope project, which aims to build like a huge telescope on the on like Mauna Kea, which is like most sacred, sacred on peak in the Hawaiian mountain range, right? And how this is not a good thing and how it's just really just like, there's been a lot of protests by like, by indigenous Hawaiian people over this and how we, you know, you shouldn't be doing stuff like this because it's literally harmful to cultures. And again, it's there are plenty of places to put this telescope there are plenty of places to put it, which aren't, you know, directly disrupting the culture of a whole bunch of people who are begging you not to put it there. Like literal sacred elders are buried on that mountain. Like imagine

having imagined someone just building an experiment against your wishes when you're like, literal, great grandfather's like, you know, grave.

Karel Green 1:12:34
Grave.

Pruthvi Mehta 1:12:34
Exactly. Like, don't don't do that. Maybe. Don't. But yeah, stuff like, this just isn't talked about. And it's just, it's awful. It's awful.

Karel Green 1:12:45
And I'd like to doubly say and you can literally say in your science lectures, it makes the science worse because of course, these people were protesting. So they can't build the telescope because there's human beings literally in the way of their like diggers trying to dig up the telescope. So it's double dumb, because they literally can't do any science. Like, it's not it's not rocket science. We know this because we literally did rocket science, right? Yeah, it's just like, it's morally wrong and actively makes the science worse. Like what more do you need?

Pruthvi Mehta 1:13:15
And then also like mention, how like, so like, what I was talking about the beginning stuff, like emitting stuff, because it's just not you know, the right time or place talk about stuff like this? Well, when is it right? That mentioned how like this if you're gonna talk about the science, the scientists did, maybe talk about them as people. So there are plenty of examples of like racist scientists throughout history and please, please check out the media page of the site because I have put so much effort into including a whole bunch more information on like racist and problematic scientists throughout history. You know, Eddington, Eddington was racist. Arthur Eddington who like, verified the whole concept of general relativity. And then Einstein, who did a lot of stuff, as we all know, was also racist against Asians in his travel diaries. Hubble was just straight up like anti black and didn't think black people should have an education in the US and so did his racist wife.

Karel Green 1:14:16
No, no, I just wanted to double quickly say about, again, the hobble as well, like, he was such a mess. And also, I just like to specifically talk about how Hubble's law is actually really terrible. It's really difficult to get the age of the universe from Hubble's law. All of these different experiments have, like come up with like this perfect line of what the Hubble constant should be. And none of them agree they're just outside of each other. So it's like stacking Legos next to each other constantly.

Pruthvi Mehta 1:14:47
The constant ain't constant.

Karel Green 1:14:49

Exactly. And it's like really difficult to do. So his his science is really, really bad and the actual fit on the speed of recession diagram is also really bad. So it's like and he actively, you don't spend a lot of his time campaigning against black people going to university because they were quote unquote, biologically not wired to be smart. So what's the point, and if he actively wasn't racist, he could have spent more time working on this terrible, terrible science, instead of being a bigot. And like that wouldn't again, he literally made his science worse. So each time you talk about these people, you know, you decentralize whiteness, because, again, these white boys have no shame. And it's just been awful for all of us involved. So it stops them from speaking, which is always a plus, it's like makes BAME people feel more included, because they'll understand why they're not featured in the curriculum that we are taught now. And also the fact that it was all lies, and that they can do whatever they want. And it literally, I cannot stress this enough, it literally makes the science better. Like I don't know how else to keep saying this. So it's just like, you know, do that now, we've talked about this so much on different episodes, but like it bleeds into today. Where people just hemorrhaging cash, for no reason. Like, I just in so much pain.

Sehher Tariq 1:16:10

Yeah, I think it's, I think it's important that universities introduce, like, at least, like, a module dedicated on ethics in science, like, I know, I'm pretty sure that in medicine, they have like, they must have modules around ethics, but they don't have that in like physics, because apparently, physics is perfect. And I don't know about chemistry, or biology or any of any of the other sciences. But learning about ethics isn't, isn't something that is exclusive to medical fields or anything that's, you know, like science is about how humans themselves perceive things and how, you know, humans are trying to figure out how the world works. So when humans are involved, there will always be issues about, like related to ethics. So you know, like the fact that Eddington Hubble and Einstein were had, they were racist, and you're having issues with, you know, white, European based scientists wanting to... and America, like USA be scientists trying to build a massive telescope on a sacred mountain and like, these kinds of things need to be discussed, when you're in your degree, like, when are you going to start discussing that when you're down the line? And you know, you have absolutely no knowledge that this is something that could be unethical, like, yeah, if somebody becomes a physicist themselves, and they don't understand the ethics side of physics from like, the start of your, your academic journey, then that's not going to carry on like, it's going to take time for people to learn that if they want to learn that that's the thing like this is about ethics, when it comes to science is about when if people want to learn about it, but this is something that needs to be taught. And these people need to learn about it. So it needs to be introduced as soon as possible.

Pruthvi Mehta 1:18:28

Yeah.

Karel Green 1:18:28

Exactly.

Pruthvi Mehta 1:18:29

And I think that one of the goals of like, our thing is like, eventually to get something like what we talked about taught as a compulsory module.

Pruthvi Mehta 1:18:38

Yeah.

Sehher Tariq 1:18:38

Yeah.

Pruthvi Mehta 1:18:39

And UK institutions, it'll be like, an excellent thing. Anyway, someone, please give us money. So we can do this. I think like a final like solution point. And I think that's something that I've literally, like talked about with people is that a lot of the literature that's circulated in STEM academia, comes from European universities is always written in English. And...

Karel Green 1:19:05

Yeah.

Pruthvi Mehta 1:19:05

Like the actual archives and stuff are, like were created in the West and also written in English. So there's a lot of gatekeeping, of papers and language and stuff like that. And that's really messed up because there's a huge language barrier for some people who come to the UK to study or people who just want to walk in their own institutions, and publish there like, there needs to be a better way of there needs to be a way of getting documents, which are papers that are created in non Western countries in other languages, translated, because it means that the scientists will literally get less citations just by virtue of being born in another country, of being a person of color and going to a different institution outside the West. So that's not good. And like an example of this is that it was actually a professor, my current institution who told me this. But the there was a spectral spectroscopy scientist, famous, famous guy called CV Raman, who wrote one of the main key features on spectroscopy and light absorption. And, like, it's really weird that the original paper that he wrote back in like the 19 somethings early 1900s hasn't got as many citations as the papers that have cited him. And that's just really that's just really weird. Like imagine, like, Einstein's literal paper on the theory of like, you know, insert anything here honestly, not getting citations. Imagine like, Peter Higgs' literal paper on the Higgs was on not getting citations, but other people who cite him getting more citations like make that make sense.

Karel Green 1:20:53

Exactly. It doesn't make any sense. I also want to bring up another example on written by one of our science writers who we paid with real money.

Pruthvi Mehta 1:21:04
Yeah.

Karel Green 1:21:05
To write for us.

Pruthvi Mehta 1:21:06
Yeah.

Karel Green 1:21:06
That went up to the mon... like today? Yesterday. So we're recording this on February 24. Went up on Monday, the 22nd. Everyone check it out.

Pruthvi Mehta 1:21:16
It's great.

Karel Green 1:21:18
Written by the excellent, excellent Joe Lewis. And it was on literal Nobel laureate Tu Youyou she was she is she's still alive. God. She's a scientist who literally has a Nobel Prize in biology, because she saved that many lives. A Nobel Prize in Medicine, because she used she was, it was, I think, it was an anti malarial drug wasn't it? She was going through a some of these ancient texts on traditional like, it was like, traditional wasn't specific, even though she is Chinese or wasn't specifically Chinese. It was just ancient traditional medicines, in general, looking for like a better drug to use, because guess what people have always been doing science. And she literally found one in an ancient text, right. And she just did what it said, the main thing was, especially when they had to, like, it was like using some kind of SAP or something from this plant. And they found a way to like extract what you needed out of it at a low temperature, because we extract our high temperature denatures it and it's not as effective. And that's where literally said in the ancient text in the ancient texts also, leave it leave these leaves in some cold water for like a week, and then come back and drink it. Right? And instead of just being like, Oh, that's all medicine, they will just like no, it's actual science and did it and guess what saved literally millions of lives. And she has one never gotten like any kind of like doctorate degree, she was just employed a scientist, right? And two literally has never post, like, posted any of her papers in English.

Pruthvi Mehta 1:23:02
Yeah.

Karel Green 1:23:03

Because guess what, she doesn't speak it. Or she didn't speak it. Like god forbid. And if, God forbid, you pay people who like love to do translations. There are linguists out there who's like, I've memorized 17 different languages, because I just love to do it.

Pruthvi Mehta 1:23:16

Yeah. Right. Who would like a job? Like...

Karel Green 1:23:19

Yeah, God forbid they get a job, like, but I guess we can choke. Right? Yeah. And like had people not taken heed of her word, and had they not bothered to translate her work and just do what she said, right? Because even though it wasn't in English, I cannot express to you that literally millions of people will not be alive. Probably more because again, all of their descendants wouldn't have existed. Like I just what is going on? What is going on? So yeah, do that. But diverse scientists just translate their work. I don't understand why you wouldn't do that. Just just just translate their work. They require every person on the globe to speak English. When you yourself, don't speak anything else.

Karel Green 1:24:13

I am going to bring up is a movie came out in 2017, starring Dev Patel who's just next on that called lion. And it's so good. I just easily I watched it on Netflix a couple years ago. I'm not sure if it's still there, but you can find it. Three please watch this movie. It's so good. Don't let the the movie poster deceive you. Because it's like it's not like a romance. It's got like a picture of death term, like a white girl representing the it's based on a real life story. So representing the man's wife, and she doesn't actually have that much to do with the story. He just he's just like, yeah, I was doing I'll explain in a second. He's like I was doing this thing for like 20/30 years. Of course, I met my wife in that time. So I don't know why she was there, but whatever. But it's about this guy. And it's based on the real story in the man's story. I think he's actually only like 40. So I don't know why I said 30 years but whatever. And he's from I think it's Calcutta in which is in India. I should know this.

Pruthvi Mehta 1:25:11

Yeah. Yeah.

Karel Green 1:25:11

Was Calcutta. Yes, thank you. And basically, when he was he grew up in extreme poverty, him and his siblings. So one day, and I don't know where his dad was, I just don't think his dad was in his life. So one day, he went with his eldest brother to where he was working, he was like working on the trains and stuff. And basically, he got lost. And he ended up in Australia, just from being lost on the streets for several months, and then like, picked up by a charity. And when they asked him, like, Where's your family? What's your parents name, and he responded, my mum's name is mum, like, he didn't even use that young, he didn't even realize that your parent has like a name. And they are your parent, right? And it was just so it was so sweet.

And he was, he was like, I was fine. He was adopted by white people in Australia, but it's fine because they'd like loved him and nothing like their son, because he was their son. adoption is equivalent, you cannot change my mind. But he had a like, he had like this like lightbulb moment where he went to like his friend's house. And his friend was who was also Asian, I'm not sure if he was specifically Indian, but his family had made like this Indian food. And like he smelt it. And he was just like, that was like my first memory. But I literally remember being like home in Calcutta and smelling this and he was stood there. And he was just like, I'm actually lost. And this was happening at the same time that Google Earth was just becoming like a thing. And he spent like a decade going through Google Earth images, because he was just like, I couldn't remember anything but remember that I lived near a really small train station. It was perpendicular to this to where the road went. So two trains went across the one road that went into the station, and there was a water tower next to it. And he like rented out like a, a storage unit, put up a bunch of like a huge map of India. And he literally went through India like square by square looking for it. And he found it after literally like a decade of going through square by square because he was just that obsessed. He found it. But then he just booked a flight and he went home. And his and his family was still there. His mum was literally still there. His mom used to pick up rocks for a living pick up and break the rocks for a living. And whilst a lot of people in the city had moved because, you know, life and you know, just things have happened. Cities get bigger over time. His mum had stayed there, and he'd forgotten the language and everything. But he when he was young, he fell over like a watermelon and got us are in his head. And his mom remembered the scar on his head. And she pushed up his hair, and I was crying. I'm crying. I watched the movie and I was crying. I'm crying. His family. Yeah. And his, his sister became a teacher, his brother can't remember what he was doing. I think he was an engineer of sort. But they spoke English, they were able to translate literally found his family. And it was such a good movie, because he was just like, yeah, you know, I see her all the time. Now I send the money back. But also my adopted parents, even though there was still like my actual parents because they have treated me right. So it's just such a good, such a good feeling. And again, it's based on a real life story because the guy wrote a book and then they made the movie of the book, and you could find interviews with the actual man. And I just I love it. It's such a good movie. But it is a bittersweet ending because the reason he got lost and spoilers, but you know, I've just told you the whole plot. The brother that he went to work with did actually pass away he got hit by a train. So also because his eldest brother died, obviously, he wasn't there to take him back home when he was just that small that he couldn't make it himself. So his mum was busy picking up rocks, to literally feed them because that's what she was willing to go through as a parent. So he just got lost and I just it was such a good movie. I would only accept that it didn't win an Oscar because it was the year that moonlight won an Oscar when they tried to be like lala land won an Oscar because the two old people who read the thing are racist and you cannot change my mind. They were racist and homophobic. We all remember that. Because they picked up the thing that clearly said Moonlight.

Pruthvi Mehta 1:29:23

How can you forget to read like?

Karel Green 1:29:25

Me suddenly, I'm Mariah Carey, but that was the year it was up for an Oscar and I'm okay because Moonlight is also excellent. But yeah, please watch Lion. I'm crying is such a good movie. I know. It's bittersweet, but it's such a good movie and it's even better. That's a real life thing. And he's like, he sees his mom and he sees his siblings. He's learning the language again. He's like I went back to school to learn anyway. And it's good enough on its own. So please watch Lion 2017 starring Dev Patel. It is so good. It's so good.

Pruthvi Mehta 1:30:02

Let me just wipe away my tears before recommending anything.

Karel Green 1:30:04

I'm not cleaning mine up. I'm leaving mine on my face.

Pruthvi Mehta 1:30:07

Okay, wow, um, yeah, I'm amazing. I'm definitely watching out and then crying for a whole week.

Karel Green 1:30:13

Yeah. Oh, sorry, can I just say it's called Lion because the guy's name in the language translates to Lion. I can't remember what his adopted parents called because he didn't know his own name. Although I think he did. He did. He remembered his own name. And then if you I think I'm not sure what the language is, I think it might be Hindi. But if you translate it means Lion, so that's why it's called Lion and everyone could watch Lion. I'm thinking about I'm gonna re watch it now.

Sehher Tariq 1:30:48

I can just tell it what if I like like if when I watch it, I'm just gonna be crying like really? ugly, ugly tears like, full on snot coming down my face. Is it gonna be mega red and puffy. That is the kind of film it is, I can just tell.

Karel Green 1:31:05

Exactly the only two good white people being his parents who weren't like, iffy about him going back to his biological mother. They were just like you know what you need to do? And we literally love you because you are our son that so this is fine. It was... The scene the scene, the ending scene and the scene where he gets the flashback because he's smelled the Indian food just will rip you apart.

Pruthvi Mehta 1:31:35

I'm gonna go on to my recommendation. While Crying I'm still crying is so my recommendation is YouTuber called Cosmonaut Variety Hour. So what I've noticed

about a lot of media critics and pop culture critics on YouTube is that they're like, overwhelmingly white. But this is like a this is a black guy, I think about our age, who lives in the States and he just like has a huge YouTube channel where he like, reviews and critiques a bunch of like nerd culture, pop culture, sci fi, fantasy stuff. He's big into D&D, he also just does he's done like some really excellent funny really funny reviews of the Star Wars franchise how bad the rich how bad the sequels were the prequels, even how good the original trilogy is. How like, messed up like all the Harry Potter films are in different ways. And like he did like a, he did like a Christmas review of the Harry Potter films, because you know how they're always on on my TV at some point at Christmas, just on repeat. So he was like, I'm just dropping this now. And they're just, they're just so they're just so good. And yeah, that's basically that's basically the guy I'm recommending. I'm just fed up of seeing so many just white youtubers talk about sci fi and fantasy topics. And I would just like some, like more representation, please, in my critiquers. So go check him out. You won't regret it. He does produce very good content, very high quality stuff. Check it out. •

Sehher Tariq 1:33:17

I actually have a recommendation because I was thinking through like all the documentaries that I've watched, and I remembered one that I watched it wasn't it wasn't too long ago actually. But it's a it's an art documentary. And it's it's a BBC one. It's called Art of Persia. And it's basically they have a journalist called Samira Ahmed, and she's, she basically goes to Iran, and she talks through like the history of Iran and Persia, and she talks about how, like, the art kind of evolved from, like, the different kind of stages of history. And, like, I've always been really fascinated by like, Persian art, and a lot of the architecture in Iran is just so beautiful. And she just talks about, you know, there was a lot I learned a lot about there was a there's like a religion that is based in that area. And it was like a very ancient religion and it was used to be quite bit big, but it's quite a kind of dying out now. It's just becoming really, really, it's becoming less popular, but it's, it's called Zoroastrianism it's like Zoroastrianism. Like, wait, let me Google.

Sehher Tariq 1:34:45

Zoroastronism I think so it's like yeah, about the elements. Is that the basis of that religion? Yeah,

Sehher Tariq 1:34:51

I'm pretty sure. I just remember some of the ceremonies that they were talking about, and there was one like those based on fire And I need to watch this watch this again, actually, because it just, it was a good documentary, like I just loved looking at, like the architecture and the art style and seeing what kind of, you know, what were the influences on the art and you know, just looking at, like the different type of craft that they have. And I'm sure there was a, I can't remember if it was this documentary, but I'm sure there's something about the calligraphy as well. And like poetry, and it's just, they're just all the different types of, of art they kind of go into and just really fascinating because you don't really learn about, you don't really

learn about that kind of stuff here. And I just love learning about about different like art styles and different cultures and stuff like that, that you wouldn't typically learn about. So I'd highly recommend it's very educational, and very cultural. So I think, go and watch that.

Karel Green 1:36:06

The POCSquared podcast was written, recorded, edited and posted by the POCSquared team. We would like to thank the Royal Astronomical Society for funding us, which keeps the podcast free. We can be found on Twitter and Instagram @pocsquared, that's POC, and then the word squared with no spaces for both. And we can also be found on our website, www.POC2.co.uk. That's [www dot POC the number two dot co dot UK](http://www.POC2.co.uk). Please support the show by leaving a review wherever you're listening to us. And our intro and outro music is Blippy Trance by Kevin MacLeod. Find it at incompetech.filmmusic.io. Thanks for listening.

Karel Green 1:37:03

Is there anything else or are we gonna leave on me saying the word choke...

Karel Green 1:37:07

Yeah.

Karel Green 1:37:07

Before we go on to media recs.

Transcribed by <https://otter.ai>