

TW for Ep 3:

Racism

Mentions of slavery

Mentions of unethical human experimentation

Discussion of the plague

Mentions of nuclear warfare

Mentions of the holocaust

Karel Green 0:00

Welcome back to the POC squared podcast hosted by Sehher, Pruthvi and Karel. Today's episode is about decolonizing the STEM curriculum, but please be aware that the following topics are discussed: racism, slavery, unethical human experimentation, the plague, nuclear warfare, the Holocaust.

A transcript and show notes for this and all episodes can be found on our website, www.poc2.co.uk. That's www.poc then the number two [.co.uk](http://www.poc2.co.uk) and if you have any comments or questions, we can be found on Twitter and Instagram at [pocsquared](https://www.instagram.com/pocsquared), that is [poc](https://www.instagram.com/poc) and the word [squared](https://www.instagram.com/pocsquared) with no spaces. You can also contact us via email pocsquared@gmail.com. That's POC, then the word [squared@gmail.com](mailto:pocsquared@gmail.com). With all that said, we hope you enjoy the episode.

So what was it like? When did you first notice the problems? I guess in this, in the curriculum, Pruthvi?

Pruthvi Mehta 1:09

Okay. Erm. I guess I'm thinking about science lessons in like primary school or something. There were sporadic mentions of women, but they were all white. All the female scientists were white, I didn't hear a single, you know, either one single person of color who was a man or woman studying science like they, they were never mentioned in the curriculum. I think the the main example that was told to us in physics, especially was Marie Curie, and she was all we heard about, as the like single, like upholder of women in STEM, that's the only one, if you asked any of us in the class, she's the only one we could name and, you know, people of colour in STEM like, forget about it like that wasn't even a topic that was like, thought about or mentioned.

Sehher Tariq 2:06

Still isn't.

Karel Green 2:07

Correct.

Pruthvi Mehta 2:08

So yeah, like nothing.

Karel Green 2:12

Yeah, yes. So mine's pretty much identical. Because I know we said we're going to talk about three experiences of like science. And it's like, we don't have an experience because it's like we did not exist. It was just Marie Curie. It was just like vague mentions of ancient Greek philosophers who were on a load of drugs, apparently, just screaming, and then suddenly nothing happened. And then somebody like he was just human, and Einstein. And that's it. And then just maths and then you were told that everything's fine and everything's objective. This is all the science that's happened, all the science that is worth learning. I just went along with it because like everybody else, I didn't know any better. Maybe, it was more like I didn't know what I was missing. I think if I did hear about, say one black woman in science and then never hearing anybody again, I would have been like, wait, what's going on? That was really cool. Why am I Why aren't we doing this more often? But I think because it was such a universal constant like barrage of like whiteness, and no mention of anybody else that I literally didn't realize that anything was wrong.

Sehher Tariq 3:30

Yeah, same with me. I just did not notice it at all until very late into uni. So probably, my last year of pretty sure it's my last year because I every other kind of year was just I need to get through this year and just learn what, what I'm being taught like what I'm being taught. And like it was that like you've mentioned it before, Karel, is everything is just equations. That's all you kind of really noticed. So there was a lot of stuff where they mentioned, they mentioned a scientist's name and you won't even know if they were white, or if they were person who is like a person of color, so you won't even notice. And then later on, you find out and you're like, wow, I thought this person was a white person who knew and then you start figuring out of, there's something wrong, like, why am I thinking about this person? Why am I assuming that this person is white? And so that's kind of that's probably a moment that triggered me because there was one. I think it was Bose, like the Bose Einstein, that that scientist Bose. Yes.

Karel Green 3:39

I know who you're talking about, I remember it.

Sehher Tariq 4:49

Yeah. I didn't realize that he was, is it, was it, Indian?

Pruthvi Mehta 5:00

He was like tamil I think, he was like south Indian.

Sehher Tariq 5:02

Yeah, so I didn't realize that I just assumed this whole time that he was that whole time he was white. So yeah, that that probably triggered my... there's something wrong.

Pruthvi Mehta 5:15

Yeah exactly, it's upsetting how like... So my background is that my like my dad teaches physics and I remember when when I was like very young he would sort of make a big show about having you know, Indian scientists, like, and then and you know just, like, try to get his daughter, like, you know to, like, to know there are people in our culture who also achieve stuff. And it was weird to me because school, like, this our own edge like the actual education system. My school never talks by any of it right? And like it was only until dad was like, Oh, yeah, and Bose is Indian and his first name is Satyendra and he was Indian. And I was like, Damn, okay. Yeah, it's weird how like, it's so important for us as people of color to feel that sort of connection. As you know, scientists who are studying... Are studying the material, and don't see ourselves represented how important it is to have that connection with, with, you know, these people that created the work and how white students can take it for granted that they're being represented, right? We need the connection highlighted for us, and it's exciting that it isn't.

Karel Green 6:29

Whilst you two were talking, I was googling Bose, and I am going... The name I will butcher. So, I found his Wikipedia. and correct it says here that he was born in Calcutta. And he's most known for like bose-einstein, like statistics and condensates, but also bosons was named after him. Yeah, so literal Bosons, Pruthvi you're a particle physicist, are named after this man. And I did not know any of this like I've heard of Bose Einstein condensates and...

Pruthvi Mehta 7:11

Well, yeah exactly and when you think... When you think of both on you think of Higgs right?

Karel Green 7:16

Yeah.

Pruthvi Mehta 7:17

I even I like I think I knew I just forgot because how often Higgs and like Boson and global whiteness around particle physics, especially particle, this is just insanely white and like just like people who literally came up with the things that are things like and then he named off the brown people and how you don't see them anywhere but no you know... never see this dude's face. But you see Hague plastered everywhere like, God...

Karel Green 7:41

Exactly agreed. Like, I didn't notice until, like, I think it was literally like you guys who told me just like in passing be like, Oh, he was an Indian man who was like a brown man who's done stuff and I was like, Oh damn, that's cool. Or you'd tell me about... Especially, I remember you, Pruthvi, telling me... We were seeing in the lecture together, and they were teaching us about... I can't remember who it was and I don't care. And you were just like, yeah, this guy was super racist, just out of nowhere. And I'm just like what... what? Screaming, but also silence because it was the middle of a lecture. And that's when things started to connect. I was just like, Wait a second, what is going on? Because, of course, they're racist, if like, a white man from 300 years ago, they are racist, whether they were active or not just from the time that they were living in it, you start to realize, and then I was just sad for a long time, only after hearing about Bose or Chandrasekhar. And even then, because these are all men, and they happen to be, I think is Chandrasekhar Indian specifically. I don't know... I should know this.

Pruthvi Mehta 8:58

I think... So I think both he and Bose are like South Indian.

Karel Green 9:04

They're both South Asian but I didn't know if they were Indian, we will we confirm in a minute. But even then I've heard about no black people ever. I am a PhD student, I have been in STEM, for literal decades, did a whole degree in it, literally doing a PhD in astrophysics. And I have yet to hear the name of a black person mentioned, like, formally in any kind of academic space. Any black scientist I have ever learned about has been on my own. And, you know, you spend more than a minute thinking about it and you realize how messed up that is. So those were our experiences with the STEM curriculum, but like, Why is that a particularly bad thing? Many people

listening to this will be like, yeah, you know, it's not great, but like, you don't go into science to hear about the people you go in to do science and as long as like the maths is right? What is the problem? So it is it's actually, like a bad thing. Why is it bad for the actual science?

Sehher Tariq 10:15

Erm, well, one thing is that it kind of gives you this kind of illusion that white people are the only ones who can do science when that's not true. because historically, so many cultures have further developed science. And then, by only giving recognition to people who are on the western side, the European side, then that just gives an impression that minorities aren't good at science, which just completely isn't true. There's so many people who... Who've done so many good things when it comes to physics and other sciences that are people of colour, but not recognizing them, and just not acknowledging the work that they've done it. It kind of leads to a bit of a hierarchy, I guess, when it comes to science. It's a bit... Kind of leads to elitism I'd say. I kind of... So, like there's, there's people like Ben Shapiro. I have to mention it, because he, he, he, he talks about how, how white people are... The Europeans are the best at science, because it's just, it's basically just in their nature. They've already always been best at science, but that's not true. Even Well, a lot of the science that we have probably off of the backs of people from minorities. For example, a lot of the Science from the medieval Islamic period, that... that has been taken by Europeans and improved upon because they did such good work. But there's never any mention of that. And obviously there's probably other examples I can't think of it off the top of my head. But yeah, I think you get my point.

Karel Green 12:25

Yeah, I mean, like you say improved upon, I'd say they didn't even improve upon. They just stole it and made it worse. In some cases, you're talking about specifically was quoted as the Islamic Golden Age, where Islam basically invented astrophysics, I'm going to say it and nobody can tell me any different. Just doing it, doing it correctly, thousands of years before everyone else, and just ignored or stolen. Just one of those things that it's terrible and also quickly want to mention I googled it. Chandrasekhar was born in it was called British India but is now Pakistan. So this man is Pakistani, and Bose was an Indian person. So there we go, that the specific... specifics that I should have known when mentioning them. The idea that science did not happen outside of the West is entirely fabricated. And the fact that that's how it's taught as a standard in schools is very, not only mean and damaging, but it's

literally wrong. And science is supposedly all about objective truths, and they're literally not teaching it that way. So it's a whole mess.

Pruthvi Mehta 13:48

I would say that. So, another like really big problem with this sort of association with, you know, whiteness and science is that you end up kind of excluding a lot of like, current like, current day scientists of color from like the main, like the mainstay of academia, right? So, you end up having a lot of experiments in countries that people of color like live. So like, you know, the, say for example, South Asia, Africa, you know, basically non European countries sort of like being underfunded and falling by the wayside.

Karel Green 14:34

Yeah.

Pruthvi Mehta 14:35

Also, I'd also say that, you know, a lot of the, like, the main language in which you know, a lot of academic stuff is published is you know, is English. All the kind of journals and like online archives also in English as well. Like it's, it's, it's got to the point where you kind of have to know English to survive in academia, right and to kind of rise above like ranks? I think that's a really toxic thing which is directly linked to how we view science is being based in Europe.

Karel Green 15:08

Yes. Just the example that that reminded me of was I was reading a bow that I've written about on the websites, check out our website. A scientist called Sameera Moussa. And she, if I'm remembering correctly, was Egyptian and both Arabic, like was her first language and then like English was one of... She spoke many languages and English wasn't the first one is the point I'm making. And she did a lot of work into doing nuclear science in medicine mostly to like treat cancer and stuff. And she did really, really good work and a lot of it is just, you're not able to find because it was written in Arabic, which was her first language and has never been translated and it's just like in a cupboard somewhere. And it's really difficult to find them and I'm really upset about it. But yes, that is a big problem. Because again, if it's not written in English, it just doesn't get like read as much, which is a really big reason as to why we don't hear a lot about current and present day science. A lot of these experiments actually a lot better than the ones that you learn about because as you said, they get less funding, they literally have to be more efficient with the money they have to complete the work that they want to

do. An example that comes to mind is the is ISRO, Indian Space Research Organization. Literally got a satellite around Mars, literally on one eighth of the NASA budget. So, if NASA just did what they did, or collaborated with them, they could either have eight satellites around Mars or one mega satellite, eight times the size because that's how it works, everything's linear, around Mars to do planetary science. So, Pruthvi, you wrote what was probably our most popular post on the website about the Mars Orbiter Mission, which is what I was just talking about. And I wanted to say that they actually employ a lot of Indian women.

Pruthvi Mehta 17:20

Yeah.

Karel Green 17:21

That's a part of that mission as well. So not only are they literally more, more efficient and doing better science, but they are literally better on gender diversity, which is like the only diversity that is like spoken about at length and commonly in the West. So

Pruthvi Mehta 17:41

Yep.

Karel Green 17:41

Like they're just failing on every single turn... They're just garbage garbage all over.

Pruthvi Mehta 17:48

And listeners, I'd like to also point out that we have an article on how the BBC reported on...

Karel Green 17:55

Oh God.

Pruthvi Mehta 17:55

The Mars Orbiter mission and the interviewing of like one of the women that was involved. Erm and asked the most, you know, the bizarre questions like oh, what's it like, you know, looking after so many children and barely like asked her like about her work or anything and it was it was just like one of the worst interviews I've ever...

Karel Green 18:15

Asking her husband things.

Pruthvi Mehta 18:17

Yes.

Karel Green 18:19

Irrelevant. It was such a mess. But I yes, please, please go and look at that. That's one of my favorite posts on the website. Not going to spoil it, but it's done in like a fun way. And it was just the way that they reported it was actually horrific. I completely forgot about that. And it was bad.

Sehher Tariq 18:37

I mean, it is British media. You can't You can't expect anything less than that.

Karel Green 18:43

Well, forbid I wish the BBC was slightly better than they are. You know, clearly I was asking for too much. There's this whole side about how science is not... It's not only something the West did throughout history, many sciences done very differently in other countries and it was done especially differently, like throughout history, and just the way science is treated. Because like these other cultures treated as more like I guess maybe more socially, I take the way that we treat and teach science now, a lot of it is just like not even recognized. I'm thinking about things like how many sort of Polynesian and indigenous cultures spent loads of their time, just on boats and things a lot and just a big part of their culture was, traveling the sea, and how these cultures managed to travel massive distances navigating literally by stars, so therefore, there was some kind of like astronomy, teaching in the culture. And...

Sehher Tariq 19:52

You know it wasn't, it wasn't even just stars. It was... I was watching a documentary the other day and they even used the waves to find out where landmasses as well. So like it was the wave patterns, they could... in the wave patterns they could tell when land was close.

Karel Green 20:11

That's amazing. I had no clue.

Sehher Tariq 20:12

So it was like the stars and it was like the wave patterns.

Karel Green 20:15
So, literal Geographers...

Sehher Tariq 20:18
It was interference and stuff like that, so they would literally use interference.

Karel Green 20:21
Wave physics, oscillations, astronomy, geographers all out here, literally thousands of years before they did it in the West. Just because it was part of their culture, but because they weren't sitting around in classroom doing busted maths. I'm remembering when we did waves and oscillations and it was not fun if they did not teach it, you know, in that specific way, therefore, it must not be science when clearly you know you. You think about it. Like you said, I had no idea about any of that and it's literally all the same stuff. Just taught practically and taught in a different way because that's the way their cultures did it. And, it's just completely not recognized and there's no reason for it.

Pruthvi Mehta 21:07
That also like, segways quite nicely into one thing I was thinking about which is sort of like the reason behind why like, like POC cultures and you know, people in the West saw like them their reasoning behind why they wanted to do the science right? I know all humans you know, I know like the whole thing is that okay, humans do science because they want to learn and they want to expand their knowledge right but there's still different motivations for different people. Erm and I've noticed that you know, when I look back on the you know, scientific and technological achievements, in quotation marks, of typically like people in the West, etc. A lot of it has been for like scientists in the West, a lot of it has been driven by you know, warfare, stuff like that, right? You think about literally, so for example, on stuff like when they would during... The during the period of slavery, you'd have a lot of developments in my navigation for naval ships in Europe so you know these like outsourcing slaves? Yeah The thing is that you have the development of the you know, hydrogen bomb etc a lot of... A lot of... So like the whole process of enriching uranium and the using a what do you call it... The machine that sort of filters the uranium like separate them?

Karel Green 22:21
I can't remember.

Pruthvi Mehta 22:22

And I've forgotten. Anyway...

Karel Green 22:23

I don't know.

Pruthvi Mehta 22:25

Words etc. It's like, um, you know, you don't I mean, like a lot of development to do with you know, the you know the atom bomb everything around that, you know, fission all the all the atomic, a lot of atomic science came about due to you know, developments during the war...

Due to this need to you know, bomb the hell out of another country. And there's always been a lot of violence with the learning. And then on the other side, you have, you know, cultures in the East etc. who've always had a certain amount of spirituality to their to their, you know, desire to understand the universe, right? There's always been a strong connection between religion and science something which is looked down upon by people in the West, right? And if you're an atheist TM, you can't use religion if you're a scientist, you can't be religious, right? Yeah. But you know, our people TM knew that there wasn't this sort of this, you didn't have to have this divide. And now a lot of, you know, scientific achievements came about through, you know, looking towards spirituality looking towards you know, the heavens trying to figure out those of connection to the God in the world that we're living in. And that's completely fine. That's a completely valid way of doing science and not something to be ridiculed...

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Karel Green 22:45

Yes.

Isn't it and correct me if I'm wrong, but isn't like one of the main things in Islam to like, learn throughout your life. Like if possible, try and learn things. It's literally like one of the main rules of the religion. It's like if you are in a position where your life is going okay, whatever education is there, like do as much of it as you can, because it's good to know things.

Sehher Tariq 24:05

Yeah.

Karel Green 24:06

Exactly as you're saying the reasons behind doing science are completely different. I worked at the Greenwich Observatory for a while. And a lot of that was about helping ships navigate at sea, because that's why the observatory was built. It wasn't built to do science, it was built to help ships get in and out of London without crashing. And throughout my literal job, I found out that the... I can't remember which King it was, but there was the equivalent of like, 100,000 pound prize to make a clock work on the ocean. And it was because they were, quote, unquote, losing cargo at sea. And then I had to look into it more because I had to, you know, understand the background to teach people and they were literally losing slave ships, and they were upset about that. So therefore, it was the only time that we should build an observatory and get people to be able to navigate places, because we can't be losing all those slaves that we've got. This is never talked about in any stage of education the... The reasons behind why scientists did what they do, or how they were able to do what they do. These issues aren't just like, morally bad, they lead to mass loss of life. As you said, you were talking about that the literal atom bombs and things like that. And literally, the facilitation of slavery is probably like the biggest like, attempted genocide of all of human history. And, you know...

Sehher Tariq 25:43

Like the medical experiments on black people.

Karel Green 25:47

Yeah.

Sehher Tariq 25:47

Especially like the secret ones they did in America that they wouldn't even tell... They wouldn't even notify that they were being part of any kind of experiment. They just did it.

Karel Green 25:57

Exactly they just straight up gave black people syphilis, to see how it spread throughout the body, such a hypocrite move because they were saying the time you know, black people aren't as good as white people, they are some subhuman people. But then they were good enough to be experimented on to see how syphilis grow... Grows like whatever... A whole mess... It's affected them. So the Indus Valley, so they had literal sewage and filtration systems for all of the people who live there. So, there wasn't any sort of class hierarchy... To keep the area clean because they knew that you can't live in dirty areas and expect to survive. And then, at the same time, or even further on in history, you have the Victorians and things like that, who were like living with chamber pots and you weren't bathing, and were literally like throwing their feces out of the chamber pots to their... To the streets below their own windows, which is like they didn't even go away from their own homes to throw these things out, they did not care. They threw out their own windows, and then wondered why the plague happened. What did the plague do, kill off what 80% of Europe? I can't remember the numbers. Let me find out..

It might as well have been 80%...

Plague number of deaths... So 25 million people from the great plague of London from 1665 to 66. So in London, specifically 70,000 people died. And over all of Europe, it was approximately 25 million. And you can imagine this was back in the 1600s. So there was not that many more people around like they're literally just sabotaging themselves. By not like learning about any kind of sanitary and like there's, there's literally no reason for this. As I keep saying, like, I didn't learn any of this at school and learn about any of the background to science or how to actively be unbiased in schools because again none of the science we learned about is actually...

Sehher Tariq 28:05

Indus Valley is essentially India...

Karel Green 28:08

Sorry, I'm on the Wikipedia for the Black Death but it's just such a nightmare...

Pruthvi Mehta 28:12

What I learned about is like the buboes and that's something that's stuck in my mind forever like those giant black postules that people would get because we see like you seen in the past or whatever the the the bacteria in that causes it... Yeah the buboes, the big swellings and like literally we didn't learn about how like this could have like... We obviously learned that you know washing was important and they didn't wash right but they didn't say that it was like you know primarily endemic to you know certain people and like generally based in the West and stuff and like you just it's like all so gross and messed up and they don't take any like the blame for it, you know what I mean... don't wanna sound mean or anything but you know what I mean, right. It's like you cause this thing that basically decimated the world's population. And they don't own up to it. It's like oh, that happened, that happened. No one is to blame.

Karel Green 29:05

Exactly. You're right. You're right.

Pruthvi Mehta 29:08

No one country was to blame.

Karel Green 29:10

No. Never heard of her. So okay, just to just to fix what I've said before, as well, I'm on the Wikipedia because apparently the the National Geographic web page and the Wikipedia have two different words. And like two different data about it. So we're just going to go with Wikipedia because why not? So estimates that 75 to 200 million people in Eurasia, peaking in Europe, from 1347 to 1351 died. There was three different types of plague. Okay, so there was more than one septicemic, pneumonic, and the most common, bubonic plague. So the Black Death was the first major European outbreak of the plague. And then there was a second plague pandemic, which had his own second secret Wikipedia page. So you read about that. And I'm just so upset. And then it says that the Black Death estimated to have killed 30 to 60% of Europe's population. An estimated a 475 million people were just taken out in the 14th century. And it took 200 years for the world's population to recover from the previous level. And it says the plague recurred as outbreaks in Europe up until the literal 19th century. We are in the 21st century, and we are only in 2020 so...

Sehher Tariq 30:40

They keep saying it's going to come back.

Pruthvi Mehta 30:43

If I see anyone with a bubo and I'm shooting them on sight, I'm like it's not...

Karel Green 30:48

Do it. Do it. Out here just trying to start everything again? I'm just I'm so upset...

Sehher Tariq 30:55

Let me... Let me have a look... I'm pretty sure that they said that the plague is going to return because something to do with like the dead bodies still have the infection. And... I can't remember, but let me let me Google it.

Karel Green 31:09

Please do.

Pruthvi Mehta 31:09

Also, do you know about plague plague doctors? Like...

Karel Green 31:13

I've seen the masks... I've seen the masks.

Pruthvi Mehta 31:16

This is... This was... This was west... Western medicine folks.

Like a bird furry.

Karel Green 31:26

The Furies will save us, not even the literal... Every any science book that you read, even the bad Western ones that we've all read, the number one way to prevent disease, no matter how rich or poor you are, is to regularly bathe with soap. Only thing and they not only did the West, and by the West, I mean Europe and the Europeans who've moved to other countries so the white Europeans in America and the white Europeans in Australia because, lest we forget, any white person who set foot on either of those continents are not from the continent, they are European. Okay. Actively went to these places and prevented them from washing. Wasn't it... The Spanish Monarchy who are regularly known to be the most inbred of all monarchies which is such a crown to carry, went to North America where all the brown people lived and not only murdered them and actively told them to stop watching.

Pruthvi Mehta 32:39

It was like Queen Catherine of Spain or something she only bathed twice in her life and she went when like, you know, Spain, kind of like colonised like Islamic countries, she would go there and then just be out and like just be absolutely disgusted at the fact that they were bathing because as part of their religion, and like tell them, motivate them. They were like no. We'd rather die.

Karel Green 33:02

Then they got killed. Out here murdering people. What I can't remember when the second time was but this woman actively went to these countries and told them not to be but then took a... Her only ever bath before her wedding. So she was just like no bathing is bad, arguably the most important day in her life as a monarch in like whatever century she lived in, she took a bath before so completely just being a hypocrite for everything that she used on the atrocities that she told others to do.

Pruthvi Mehta 33:39

Oh no it wasn't Catherine, it was Isabella. Isabella of Spain, yes.

Karel Green 33:43

Making up names go for it.

Pruthvi Mehta 33:44

They're all the same name. Okay.

Sehher Tariq 33:47

I honestly just can't imagine how dirty that water is. Would have been black. Like gross.

Karel Green 33:56

I'm so upset.

Pruthvi Mehta 33:57

What had we talked about before all of this?

Karel Green 34:00

Does it matter? Does it matter?

Sehher Tariq 34:02

Oh yeah by the way the bubonic plague, it's still around.

Karel Green 34:07

Oh.

Sehher Tariq 34:07

People have gotten the plague.

Karel Green 34:10

Oh my god... Oh my...

Sehher Tariq 34:11

They've had like cases in China. Because like there was one case where a guy... like a hunter ate a... ate a rabbit that was infected

Karel Green 34:24

Oh no.

Sehher Tariq 34:27

And then it says the plague is extremely rare only a couple of thousand cases are reported world... worldwide but it's still... It's still here it's still around.

Karel Green 34:36

Really again not only is it morally wrong to not talk about non Western science also not speaking about how the science that we do learn about was done under like terrible conditions and was not done for the right reason actively impacts on the science we do. Because like we said it has literally led to death and we are literally out of some, like, elitist mentality are literally holding ourselves back from being able to do more science. So, yes, before we talked about the entirety of the Black Death, that was, that was the reason we were making people talk about the humanities and the arts, and be like, yeah, we can see the issues here. This racist comic from the 1930s is not good, and you can talk about there, but many science... Most of STEM will just immediately remove themselves from this conversation under the guise that science is objective and apolitical and is literally neither of those things. So that's the end. That's all I could think about.

Pruthvi Mehta 35:43

Just need just help just help. I think because I think we only need when we have like, you know, wrote down stuff to discuss this podcast, we came we kind of talked about a possible solution for I think we should, you know, we should let's say on here, just to try and mend the complete suffering this episode has been.

Karel Green 36:01

Valid.

POC Squared 36:05

Solutions.

Karel Green 36:06

So our first idea was to include the names and faces of people of color both past and present in your lectures or in your like science lessons, not only to diversify your curriculum, because again, science has been done by literally every culture all throughout history, but also you need to legitimize it to all students. Because whilst some will probably be very receptive, there will be some who moan. And if it's the teacher who's teaching this it needs to just be like everyday science. So like, learn about them alongside all of the regular science that we already learned about. So that is the main thing just if you have time and most of you do, because I've been in so many lectures where like, nothing has been relevant. And I know you have time. Put some in. If everyone you've talked about is exclusively white. And this includes your single mention of Marie Curie, okay? It's not good enough, put in the science and work of people of color.

Pruthvi Mehta 37:16

I would also say like, basically was the first of all stop putting white scientists up on pedestals stop thinking that there's like, you know, the greatest human to have ever lived and the smartest person to do anything. You know, take them off the pedestals and like sort of analyze their problematic behavior, right? I don't care whether it's relevant to the course material. Right? You know, if if Eddington was racist, make sure you put in somewhere. I don't give I don't give a damn where. Just put it in. So sick of especially in physics, having some of these people just deified to the heavens. It's absolutely disgusting. And it takes away you know, from the fact that scientists are human and they are able to contain prejudice and it stops, you know, the future scientists, you know, our generation from looking at their work in a completely, you know, fair and unbiased way. And that will definitely affect the world, even if you don't think it's like related to the decolonization aspect, like, it's really important.

Sehher Tariq 38:18

We've actually seen like, when we did the exhibition. So in our last year at Queen Mary, and we did an exhibition that had people, people of color, you

did really great work for science. And we had one person actually, who, who is an academic who teaches and does lectures, he actually emailed us and said that there were so many people on that... In that exhibition that he'd never heard of, and he's going to actually make an effort in to... I don't know if he's actually done or not, but I feel like because he has kind of mentioned how Newton was a very great person like he does that in lectures. So, he says that he's going to make an effort into actually like learning about these people and hopefully trying to implement that. So if you actually show people like that, there are people who have these amazing achievements, then they going to talk about it as well. He was so surprised that he never heard of these people. So...

Pruthvi Mehta 39:29

Yeah.

Karel Green 39:30

Yeah. I think that's a really good idea. But yeah, I completely forgot about that. It was a really positive response. So, if you want even just like printing out the pictures of the scientists with just like a small like three bullet points underneath, talking about what they did, for like, what their culture did and stuff like that, and maybe putting it up in universities or have display boards and they are all bad. So you might as well put, right, you can really make a difference.

Sehher Tariq 39:58

And you can use your resources from the POCSquared website.

Karel Green 40:01

Go to our website please.... POCSquared... POC and then the number 2 .co.uk. Please go to it. So many things were not done for the right reasons. And not only were these morally bad, but you'll find that a lot of the time, they were not good science, like how Pythagoras wasn't the first to use his own theorem. We said how many improvements to navigation were made only because they were literally losing slaves at sea. I can't remember his name, but the person who made the gas that was used to gas Jewish people to death and the literal Holocaust.

Pruthvi Mehta 40:40

Oh, Fritz Haber.

Karel Green 40:41

Yes. Thank you so much. He, he was doing other science and it actively took time out of being a different scientist to go and kill off Jewish people in the Holocaust and went back to it. Like that is not only like morally horrific but also is actively a bad scientist. Hubble spent most of his time with his garbage wife actively writing to universities about how black and brown people were. And then you look at Hubble's law, and it's like a really bad fit. And it's like, maybe if he spent less time being a racist, he would have had time to sort out his own science, but no, so like, scientific efficiency and the way that these people acted, actively impacted on their work.

Pruthvi Mehta 41:27

So you talk about Haber, like, Fritz Haber. Yeah, like, basically a lot of European like scientists, who are like, like, you know, like German origin or like Heisenberg, for example. I think Heisenberg, was German, but he... I remember like, he... I remember like reading where he had pretty much... He held like Nazi beliefs. Right. So the Heisenberg of the Heisenberg Uncertainty Principle literally just God damn Nazi. I'm just gonna double check that because I don't want to say something that isn't true.

Karel Green 41:57

It's fine. I'm looking it up. So keep. Yeah.

Pruthvi Mehta 42:00

Yes. Oh, geez. Oh, yeah, you

Karel Green 42:07

Nazi on his wiki page lights up, so I'm just crying.

Pruthvi Mehta 42:12

Yeah, like I... Oh, yeah, it's all it's all really problematic and the fact that we just were taught to worship these people, without any sort of consideration of their like morals is disgusting.

Sehher Tariq 42:26

They always just say like, you have to separate their work from the work from the person.

Karel Green 42:33

No.

Sehher Tariq 42:34

You don't always have to do that.

Pruthvi Mehta 42:36

Exactly.

Karel Green 42:36

You shouldn't because the person impacts the work and the work they did, was made worse because they were a bad person. Like I said, there's always the moral side. But if you don't even want to talk about morals, the... Them being bad people made their work worse. It literally impacts on the science that they were doing. Also, just to speak more about who was it. I've already forgotten his name. Heisenberg. Apparently he worked a lot with Max Born, who was a... Physicist... No but Born was a Jew, a German Jewish physicist. And then when the Nazi Party came to power, was suspended from his professorship, and then obviously how to run for his life. So there you go, they were bad for white men as well, this literal poor Jewish man was just wrecked. So none of us are safe.

Pruthvi Mehta 43:30

Like academia is not above the like, social, you know, and political divides of the time, it's going to affect people like to think that it's completely, you know, objective is completely ludicrous. Like, yeah,

Karel Green 43:45

If possible, you can have, like scientists of colour do talks and employ them in your university. The lack of ethnic diversity, even today is a big issue. And a lot of scientists of colour aren't getting talked about as much and they're not cited as much and things like that.

We are going to talk about media recommendations. Because as we are all, especially on this podcast, we all specifically women of color, and we are in STEM, a big problem in STEM is like overworking and having to always be producing to survive. And there has been a big push towards self care which we both appreciate and endorse. So we always talk about things that we do that aren't stimulated to relax.

Sehher Tariq 44:32

I've got a recommendation for once.

Karel Green 44:34

Nice.

Sehher Tariq 44:36

I would like to recommend the Quotas Full podcast which is on Spotify, YouTube... And I think there was one other place where they have it but I don't remember. It's basically....

I can't remember. I just mainly listen to it on Spotify. But it's basically a podcast, which is like based on comedians who are for mino... from minority backgrounds. So it's a UK based podcast usually bring in people from from the UK. And the main host is Kurdish, they always have regular, regular comedians come on who are black. And it is mainly men, but that is because the, like the comedy scene is very male dominated as most things are you know. But it is very funny and they do talk about a lot of the political issues and kind of the same issues around representation as well, but that they're very funny. So I recommend that.

Pruthvi Mehta 45:53

I'm going to be terrible. Just recommend the video game.

Karel Green 45:57

As long as it's not... Go for it.

Pruthvi Mehta 45:59

It's not that. So I'm recommending... Shush... I'm gonna recommend Solaris.

Karel Green 46:08

No, I think you've already done Solaris in a different episode, you have to pick something else.

Pruthvi Mehta 46:12

Excellent.

Karel Green 46:13

So proud of you.

Pruthvi Mehta 46:15

No I thought I did... I did it in the... Ok erm... Either one... Just gonna go for it. I'm gonna recommend, I'm going to recommend that I recommend Okami. Okay. Please ignore some of the problematic aspects of it... It was made by Capcom which also made Bayonetta and we all know why Bayonetta is problematic.

Karel Green 46:36

Yeah.

Pruthvi Mehta 46:38

It's basically like... just ignore that... but it's basically kind of... so it's like a kind of like, Japanese, Japanese style, art style video game where you basically play as a wolf deity, who can paint their way through the game. And that if that doesn't draw you in and what will. So, there are some problematic aspects with regards to how it views like like your characters. I mean you know it's kind of a Capcom game you're going to... It's going to sexualize whatever they wants but, and the emphasis is on the but, please please play the game just try to like ignore that and enjoy being the nice wolf deity. That's is all I can say.

Karel Green 47:27

Not as good as Sehher's recommendation but we will take it. My recommendation is going to be worst of all because I'm out here recommending you play The Legend of Zelda Breath of the Wild on Nintendo Switch. And I'm... Even though Link is like white, I'm going to swing this by saying, first of all, he's some weird elf creature and race doesn't exist in the Zelda universe even though there are whites and like brown people with black people, but race is a construct and shush. Also, me... It is on the Nintendo Switch, which is made by Nintendo, which is a Japanese company. So, only brown hands have touched this. So there we go, therefore it counts. But it is an amazing game. It's like on the Wii U if you are suffering the most, and you play as Link who has to save Zelda, as you do in all Zelda games. But it's like a really huge open world game. It's, it's regularly like praised as the best. It has a map one and a half time the size of the Skyrim map if that means anything to anyone, it meant nothing to me because I've never played Skyrim but it's huge. You have you have so much, it has DLC and and it has a second game coming out which is the only thing keeping me alive. And you can you can buy a house and you can have a horse and you can name the horse and you can put flowers in it's hair and I'm just so happy.

Pruthvi Mehta 49:02

Yeah, yeah.

Karel Green 49:03

And my... Yes and my biggest problem with the game was that... So spoilers... At the end defeat Ganon but nothing changes in the game you just get like

a little star next to save file and everything's still the same. And that's fixed because there's a sequel coming up so the story's fixed. So, there's literally nothing wrong. It's perfect game. So please buy it. Please. Please. Spend like £300 on a Nintendo Switch.

Pruthvi Mehta 49:32

Nintendo if you're listening, please sponsor us. We need the money.

Karel Green 49:37

60 pounds for the game, and another 20 for the DLC. That's all I have for you. Like 500 pounds worth of... worth of stuff for one game, but it is worth it. So that's everything. Thanks for listening.

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Thanks for listening.

Pruthvi Mehta 50:53

I love how Sehher's recommendations are actually good.

Karel Green 50:55

It just got worse.

Pruthvi Mehta 50:59

Hey Karel, we have to stop recommending video games... We have to stop like all games are bad.

Karel Green 51:12

Look, I'm not gonna stop. Oh, I love the switch so much. My next recommendation is Pokemon Shield so nobody stop me.

Pruthvi Mehta 51:20

Where's the POC... Aside from the fact it's linked to Nintendo, where's the POC in that?

Karel Green 51:25

There... You... Eat my ass. There's now character customisation.

Pruthvi Mehta 51:32

Is character customisation the only link to POC?

Karel Green 51:39

I am in the game and I am black cuz I made myself also in this game, so in Sun and Moon and in Ultrasun and Ultramoon, every single player character had the same mother, default mother who was ethnically ambiguous brown lady, so therefore you're basically determined by whoever your daddy is right? With two teams in this game, your mom is the same ethnicity as you. So I played as a black character. And then my mum's model in the game was a dark skinned black woman, so get wrecked. And, and this new region is based on the UK. And the main characters are two ethnically ambiguous but definitely dark skinned brown men. And if that's not good what else is because they look... The Japanese people who make make Pokemon came to the UK, and they were just like, yes, a UK man is a brown man and I'm just like, hell yeah, you are right. So...

Pruthvi Mehta 52:44

okay, can you believe yourself? You think you're living.

Karel Green 52:55

I'm so upset.

Pruthvi Mehta 52:56

We have to delete half this podcast.

Karel Green 52:59

It was so bad. I've been laughing so much I'm crying. I'm gonna go to take a sip. Regain the tears that I've cried out.

Pruthvi Mehta 53:11

My water was empty, then I cried into my glass and now I have water again. Magic.

Sehher Tariq 53:16

Rehydrate yourself with your own tears.

Karel Green 53:23

Technology is failing us.

Sehher Tariq 53:25

It always happens.

Karel Green 53:27

It's fine we can edit this out maybe we just...

Pruthvi Mehta 53:31

No, we gotta keep it in.

Karel Green 53:35

This entire this entire bit. This entire section of us being upset about the feedback of microphones, we are keeping in of course. It's gone now. Okay, is it me? Maybe we'll just blame you and call it a day.

Pruthvi Mehta 53:52

Excellent.

Karel Green 53:53

Nice.

Transcribed by <https://otter.ai>