

DOPE LABS

Transcript of Lab 025: Skin Deep

Titi: Welcome back, everybody. It's semester three,.

Zakiya: We have been gone so long. But let me tell you, we have missed you.

Titi: So much.

Zakiya: And we have thought of you every step of the way.

Titi: Right. And you guys have been in our DMs saying the same thing. So we're just happy to be back. A lot has happened in the first half of 2020. Six months in 2020 is the equivalent of ten years in actual time. So congratulations to all of you for making it this far.

Zakiya: Now that we're back, we're ready to dive right into what has been going on. The main thing that's happening in my life and on the timeline is Black Lives Matter.

Titi: Yes.

Zakiya: And that's all Black Lives Mattering. And, you know, I think a lot of people have been protesting in person, some people are protesting, giving, having digital efforts where they're spreading information or they're donating or raising money or providing supplies for other folks who are protesting. One of the things that I've seen is people are asking, how do I get involved? I don't know where to start. And I think the key is to understand that white supremacy and systemic racism are widespread. So it exists wherever you are. You don't have to look far to get involved. And you really can start right in your own backyard.

Titi: And our backyard is science. So we're pulling it up by the root and examining the long intertwining history of science and racism.

Titi: I'm Titi.

Zakiya: And I'm Zakiya.

Titi: And from Spotify. This is Dope Labs.

Zakiya: You hit the nail on the head. You know, you said this episode, we are gonna be looking at the intertwining history of science and racism. And I think we really got to tell people how we got here.

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Titi: So in 2020, some of the deaths of black people that have made national news. It started with a Ahmaud Aubrey, who's a black man that was gunned down by two white men while he was out for a run. Brianna Taylor, who was shot by police who entered her home at night and it turned out to be the wrong home. Christian Cooper, who was confronted by a white woman in Central Park who threatened to call the police on him. George Floyd, who was murdered by the police for allegedly using a counterfeit 20 dollar bill. Trans women Dominique Remi Fells and Riah Milton and most recently, Rayshard Brooks, who was killed by the police after he fell asleep in his car at a Wendy's.

Zakiya: And there are countless other victims who don't get media attention. And we may never know their names. So, Titi, how does this all connect to our backyard science? Why are we focusing on racism in science specifically?

Titi: I think for the simple fact that a lot of people don't know it still exists or know the extent that it even existed in the first place. Because I think a lot of people think that science is so objective and like it's rooted in facts. So how could racism permeate the scientific community if we're all like holding this this beacon of light up saying 'here's our facts and there's nothing else that's influencing it' but that's not true.

Zakiya: Yeah, the thing we know is that scientists are people, science isn't done in a vacuum and is always swayed by the politics of the time. You know, even when we think about this is not just a case for racism. This or this is not just the case for what we consider the interaction between race and science, even as we think about what is the next four of science. If you think back to stem cell therapy and then the U.S. government put a clamp on that. Right. And you so you see how politics influence science. This is not new. And so we're going to hold up our what? I don't know if we're going back in time here. It's a old school. Antony Val Leeuwenhoek microscope. We're going to ..

Titi: What???

Zakiya: To peer right into there and see what happened back in the day and how those things have effects on us right now.

Titi: What Zakiya is saying is we gonna to look real real real close.

Zakiya: That's right.

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Titi: What we know is, is a system is often dictated by its roots. So here we're digging up the soil to see how the theories and actions of the past led to us having tainted fruits today.

Zakiya: So let's get into the recitation.

Titi: So what do we know and what do we want to know?

Zakiya: I think we want to all start at the same place about understanding race. Like, if you stop and think, what are the races?

Titi: Also ask yourself how many are there? And do those categories that you think are race encompass everyone? The answer is probably no.

Zakiya: There are three main points we really want to think about. To help us really frame how we're what we know about race and how we'll use that information moving forward to understand the intertwined nature of racist science over time. So some of you may already know these things and some of you may not. Either way, we're not making any assumptions. First, there is no such thing as biological race. Genetics shows us there are no discrete categories of race.

Titi: Right. So there's no single gene that only appears in one quote unquote, race that doesn't appear in another quote unquote, race. Race is not a biological category. What most of us think as race is actually culture and language. And it's been long proven that biologically there are no distinct, quote unquote races as we understand the term now.

Zakiya: The second point is we're all members of the same species. We're all Homo sapiens in our roots can be traced back to Africa. Those visible differences that you see are due to founder effects, where a small group moves from the larger population and they lose some of that genetic diversity.

Titi: And the third thing is that wherever there are multiple groups of people and one group is oppressing another group, there is a system in place. So it doesn't necessarily have to be race related. It could be religion, class, politics. And what we find is, is that history often repeats itself. And racism is one of those systems. And even though we know there is no biological basis, it still affects us because it affects our interactions day to day.

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Zakiya: So now that we've all set the playing field here, we're all working with the same set of information. Let's jump into what we want to know this episode.

Titi: One of the things that I want to know is when did the concept of race and race science first originate? Whose idea was this?

Zakiya: And then I'm wondering if we know all of these things like race is a social construct. and It has been debunked. Why are people still looking for these same types of groupings using these artificial categories? Is it just the guiding of time? Have we all been brainwashed?

Titi: And I want to know, what are some of the foundational scientific theories in science where race, like, played a part? Who are some of the major players in science whose work was predicated on race science?

Zakiya: Oh, you naming names. One of the classic examples of racism in science is eugenics. And eugenics is a system of ideas and practices aiming to genetically, quote unquote, purify a population. I want to know who were the early proponents of eugenics and what were their motivations?

Titi: I love that question. I also want to know, where do we see racism in science today?

Zakiya: Everywhere.

Titi: Because I feel like a lot of people are going to say, oh, that must have been during another time when people, you know, weren't as informed and we didn't have the Internet. But I know for a fact it still exists today. And I want to know where it is,.

Zakiya: Just like we look back in shame on eugenics in 50 years what will we look back on today and say, oh, my gosh, I can't believe that was happening?

Titi: Yes, because I think that looking back on myself, I wonder why tweezed my eyebrows so much?

Zakiya: Those pictures of you in undergrad. I understood it. I, too, tweezed my eyebrows as thin as a.

Titi: Razor thin.

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Zakiya: Razor thin.

Titi: I had six six eyebrow hairs on each side and I thought I was killing it.

Zakiya: Well, I'm glad they made it back then.

Titi: In quarantine they all back.

Zakiya: All the hairs a back. OK. And I think the final question is, are we doomed to repeat ourselves over and over? Understanding this, what can the scientific community do to change course?

Titi: Let's get into the dissection. This episode, we're talking to Angela Saini, a science journalist who tackles the issue of racism in science, exploring how the two have commingled over the years.

Angela Saini: I'm Angela Saini. I'm a science journalist based in the United Kingdom. And I write books really that look under the skin of science. So exploring the reasons why people study what they do, what research tells us the impact of funding and bias and politics on science, looking at both gender and more recently, race.

Zakiya: So to start, the dissection is important for us to figure out how and where race, science and the concept of race started.

Angela Saini: Race, of course, as a word has been around for a very long time, though, meaning that it has. And the way that we use it now is obviously not the way that people have always used it in history .

Zakiya: In Superior Angela notes early uses of the term race dating back to the 1500s were used to refer to groups that were related. So a family or tribe. It wasn't necessarily tied to physical characteristics which are literally skin deep.

Angela Saini: So the way that we use it now to define races like black, white, brown, no, you know, these kind of big continental groups is relatively recent and it dates from around the time of the European Enlightenment when naturalists and thinkers were starting to categorize. This is

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in Europe, European thinkers we're starting to categorize the natural world that we're looking at flora and fauna and drawing up these taxonomies. And they did the same with people.

Titi: The age of enlightenment in Europe was from the 17th to 19th centuries, and it was a time in Europe when a lot of intellectual and philosophical advancements were being made. Modern sociology, politics and science emerged during this time and specifically in the scientific field. The biological taxonomy was developed. Taxonomy is the science of naming, defining and classifying groups of biological organisms on the basis of shared characteristics.

Zakiya: If you have some background in biology, you may remember the taxonomic classifications of genus and species. This is a two name system. So think *Homo sapiens* for humans, that was ushered in by Carl Linnaeus its a well known and recognized system. We still use it today. While I was taught that Linnaeus was the father of taxonomy, I did not learn that he was the pioneer of race as a categorization for humans. Did you know that?

Titi: No girl.

Zakiya: He started with four races based on geographical location and skin color.

Titi: And other scientists built on what Linnaeus was teaching. And you have to remember that we're talking about way, way back in the day. So you couldnt just hop on a flight and check out Asia or check out South America to see what the people were like. Information was being exchanged about people purely on hearsay and for a lot of scientists of that time it was a lot of guessing about what people were like in other countries.

Zakiya: So we have these Categories that were developed many, many years ago since then we understand that race has no scientific basis or remember at the top of the episode. We talked about that. And the question now is, why is race still rule everything around us?

Titi: R.R.E.A.M

Angela Saini: The weird thing is that we still live with these categories now. We still use them. We have laid these enormous sets of meaning on top of these very what we're always arbitrary categories and given them a power that they never had to begin with. So the way those categories were defined in the first place were very much informed by the politics of the time, by slavery, by colonialism, by this belief in European superiority. And the categories themselves formed a hierarchy in the minds of these European thinkers in which white male Europeans were at the top

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and everybody else was kind of slotted below. And that became the basis on which modern day Western science was done.

Zakiya: Considering all of this, we have to ask, why do people still believe race is a thing even though it was debunked decades ago?

Titi: Is it because it was something that was said over and over again for a long time and people just accepted it?

Zakiya: Angela, explain to us why is so difficult for people to change their mind,.

Angela Saini: Even though in the last 70 years or so, scientists have shown quite categorically and it's very easy to do this because, like I said, these categories were arbitrary to begin with. So it's not, you know. It doesn't take a genius to then unpick the biology and figure out that it's nonsense. But even though scientists have done that, they still have so much power even now because of their political value. They still have political value. There are still people who would like to be able to make the case that the inequality that we see in society is natural, that it's not because of historical factors, that it's there because it was always there and it always will be there.

Titi: There are similar systems that uphold these hierarchies, like there's class in the UK, there's caste in India and religion well everywhere, all over the world.

Zakiya: So now we have an understanding of the earliest iterations of race to classify groups of people and how those classifications upheld the politics or agendas of European men during the Enlightenment age. And we know that this is when Western science, you know, as we know it was born. So you got a little baby science in the crib and his favorite plush stuffed toy is racism.

Titi: Yes. So race is that little baby's lullaby to go to sleep at night.

Zakiya: So considering in scene at the birth of Western science, we asked about some of the foundational scientific theories and where race might have come into play.

Angela Saini: If you take into account the fact that modern day Western science, enlightenment science was predicated on this belief that there were races. Number one, which we know now biologically is not the case. And number two, that there was a hierarchy between these races. That meant that some people were in some ways even less human than others, certainly less

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intelligent. In the 19th century, the idea came along with Darwin that somewhere were even maybe less evolved than others. So if you take that as a starting point on which the science of human difference is built. So biology, all of biology is predicated on that assumption for at least the first hundred to two hundred years. Then everything that came afterwards was guided by that.

Titi: And if you're thinking, well, surely they saw the error in their ways. Not really.

Angela Saini: In the 19th century when science became professionalized, these ideas didn't go away. All they did was they became more codified and and layers of meaning became built around them.

Zakiya: It was the case then and it's still the case today. Using scientific language to describe something or to validate your idea or belief always makes people take you. Just a touch more seriously.

Titi: Right. Not many people will argue with someone who is purporting information that is, quote unquote, scientific fact.

Zakiya: Race science at the time, lent credibility to these awful, incorrect ideas about superiority. And one of the well known and documented executions of these legitimized, sinister ideas is eugenics.

Angela Saini: Eugenics, really, for me, is the kind of manifestation or almost the technology that comes out of race science. If you want to think of it that way, because it's essentially saying we know that this well, we think we know that these differences exist. Now, if some people are inferior, genetically inferior to other people, then what can we do about that? How to improve the human stock or the quality of the race? And Francis Galton, who is a cousin of Charles Darwin...

Titi: Like his actual cousin not his play cousin like me and Zakiya.

Angela Saini: Was the man who came up with this idea among many things, he also coined the term nature versus nurture, which I think is one of the worst in scientific history, because nature, nurture, not two separate things, are completely intertwined. Anyway, that aside, he also coined the term eugenics and came up with this principle that people superior people, So the smartest, most beautiful should be allowed to breed more. And those who are inferior should be

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discouraged from breeding. And if we do that, then we can improve the stock of, in his case, a British race.

Zakiya: And you have to ask who set the standard who who's considered superior? Who's the smartest? By what measure? what's beautiful?

Titi: Right. Is it big eyes? Is it freckles? Is it long legs? I know what you're thinking. I'm describing my friends, Zakiya.

Zakiya: Those are moles, not freckles. But I'll take it,.

Titi: But it's all really subjective.

Zakiya: And let's be really clear. These ideas were popular. This wasn't just at the fringe. The outsiders thinking, 'oh, yes, eugenics is the way to go'.

Angela Saini: It was completely mainstream on the right and the left. If anything, socialists were more excited about it than anyone. Virginia Woolf, Bernard Shaw, you know, our big kind of intellectual, progressive heroes. Many of them were eugenicists and very firmly believed in this idea and were behind it.

Titi: And eugenics was not like a few years of bad behavior. It was more like 70 to 80 years. We'll put some resources on our website that can give you the deep history. We could spend an entire episode on this.

Zakiya: Eugenics was first used to create the, quote unquote, perfect family. This means having families without disabilities or deformities. And the idea was that they would just eliminate these individuals that they deemed unfit.

Titi: Again, subjective.

Zakiya: And those efforts weren't only in Britain. They were quickly adopted by scientists in the United States, not just ideas, but action.

Titi: When we talk about eugenics, I think the first things that pop into folks mind are Hitler, the Nazi Party and the Holocaust. But Hitler actually took his cue from American eugenics.

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Angela Saini: Sterilizations in the US were adopted as policy in many states. And they then became an inspiration for Adolf Hitler.

Zakiya: And this didn't stop in the 1930s after the war. These scientists just rebranded, you know, like your favorite influencers.

Titi: All right. We're going to take a break. And when we come back, we'll look at racism in science today.

Zakiya: We're back and we've already looked at racism in the past. But what about racism in science today? We asked our guest expert, Angela Saini, what will we look back on in 50 years as a whole?

Titi: And we're not talking about those Jenko jeans you're wearing during that emo period of your life in 2002.

Angela Saini: I see it woven right through medicine. I mean, so many medical studies that take race as a biological variable completely inappropriately. I mean, it happens routinely that, you know, in my view, I wrote this for a piece for the medical journal Lancet the other week, Medicine is almost keeping race science alive.

Titi: And Angela tells us it's not just direct action that's a threat either. It's also people turning a blind eye.

Angela Saini: You know, it comes down to what are you willing to excuse when you are not the victim of somebody else's hatred? Then it's quite easy, actually, to excuse that kind of behavior when you are the victim. It's impossible. And I think that's a problem. Science looks the way it does, because all the people that can excuse that kind of behavior stay and all the people who can't leave. And that's why science looks the way it does.

Zakiya: Yeah, that is so true. There aren't a lot of people in the scientific community that look like, well, us.

Titi: Yes, the scientific community is not a reflection of the general population.

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Zakiya: People are so invested in things being innate. And I think that lets us get comfortable with the systems that exist and continue to marginalize different groups. Are we doomed to repeat ourselves over and over? I really hope not.

Angela Saini: It does feel that way and I certainly feel that way sometimes. I mean, the number.. My book came out about a year ago and the number of times I've had to explain from first principles why race is a social construct, even to journal editors and science editors and scientists again and again and again. And what frustrates me is that this was debunked decades ago. You know, I'm not the first person to come along and say this. I am maybe the ten thousandth person to come along and say this. Lewontin did it. Gall did it. Even before that, there were so many scientists that did it and there've been so many more since there've been declarations made by genetic groups all over the world. This is a mainstream scientific consensus now. Race is a social construct. And yet we have to keep justifying that and because we have to always start from these first principles whenever we have this conversation, we never move forward.

Titi: So speaking of moving forward, what can the scientific community do to break this repetitive cycle?

Angela Saini: One. I do think representation matters just because then you don't get silos of viewpoints. And we know historically that silos of viewpoints lead to mistakes in science. That's how race science emerged in the first place. That's how sexism in science emerged in the first place. The other thing is to break down hierarchies. I think this kind of strict and immense power that people at the top have and most of these people at the top tend to be white men. If you concentrate power in one person, in any situation, they have more opportunity to abuse it. And they do abuse it. We know that because we are now in the last couple of years with Me Too particularly, we are getting stories of harassment and discrimination coming out. We need to have mechanisms that allow people to complain without fear of losing anything. People need to be held responsible for their bad actions. I would like to one of my big things at the moment is pushing for the teaching of history and social science within scientific education. If we had a better idea of where our ideas come from, then we are better placed to correct them when we know that mistakes are being made. And I would also like to see the social sciences and science, biology in particular, working together a lot more so that we can understand the social determinants of inequality as alongside biological factors.

Zakiya: This is tough.

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Titi: Yeah, I think what's difficult for people to grasp and understand is that this is something that isn't actual science and grasping the fact that, you know, part of our scientific journey as science was being developed isn't rooted in something that's objective. It was rooted in something that actually wasn't fact. And to push the the agendas of a subset of people who wanted to explain their superiority or what they felt like was superiority. And I think for most people, when they think about the scientific community is just not a part of their train of thought. They make those assumptions that everything that's coming out of the scientific community has to be fact because that's what we're charged with, being objective in a world of subjectivity.

Zakiya: And, you know, the crazy thing is that it's not just biology. You know, I knew some of these things from my thesis work, you know, I was really heavy into DNA repair, mutagenesis, so I already knew, like James Watson and what he was saying. But I don't know all the statistics and comparative anatomy. I didn't know it was behavioral genetics. All of these other fields, too.

Titi: Right.

Zakiya: And so you start to see how widespread and prevalent it is. I think it also is tough, right? Because sometimes when you talk about this kind of stuff, people say you're anti science or you do or you don't love science like they do. And really you just want science to be better.

Titi: Right. And the thing is, is that science does not exist in a vacuum. It informs policy and it informs our politics. So if something is being pushed through the scientific community, it will eventually show up in various ways in our laws. And that's a huge impact.

Zakiya: Yeah, we've seen it happen before. So I think we really have a duty now to say this is where I draw the line. This is where we get inequitable health policies. Right. And I think if there's anything I want folks to take away from this is I want you to think if I know that race has no biological ground to stand on, then racism is for what? For what you know, like, you know, racism only exist because race exists and the scientific community has supported race and I think there's is time to really make it canon that we know this does not. This is not real.

Titi: Right. And like Angela Saini was saying, it limits the growth that we can have as a society if we can't get past that first hurdle. That race is a social construct. It was something that was created by a group of people to create this system, this structure that made them superior and other people fall below them. If we can't get past that first hurdle, how can we get to the other stuff?

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Zakiya: It reminded me and I was looking for the quote just now of this Toni Morrison quote, "This is the function, the very serious function of racism is distraction. It keeps you from doing your work. It keeps you explaining over and over again your reason for being somebody says you have no language, So you spent 20 years proving that you do. Somebody says your head isn't shaped properly. So you have scientists working on the fact that it is. Somebody says you have no art. So you dredge that up. Somebody says you have no Kingdom, so you dredge that up. None of this is necessary. And there will always be one more thing." And that keeps us from getting to the good part, you know,.

Titi: And we're not here saying that we're colorblind. We absolutely see everyone's differences in color and culture and background, and we respect it. But we do know for a fact that race does have an impact on all of us, even if it doesn't exist.

Angela Saini: Well, I think we've just lived with this idea for so long. It does shape how we live. You know, race, Just because something is a social construct, that doesn't mean it doesn't have a profound effect on your mind and on your body from the second that you're born. It completely defines how society works in the same way that other social constructs like democracy or capitalism or communism or what ever system that you're living under, race is a system that we're living under. And when you understand it that way, then you can start to understand why it is so difficult to shake.

Titi: That's it for Lab 25. But we have so much more for you to dig into on our Website, dopelabspodcast.com. So head over there.

Zakiya: On our Web site you can find a cheat sheet for today's laugh, along with a ton of other links and resources in the show notes. It was hard not to get carried away with this one.

Titi: And if you want to stay in the know about what's going on with me and Zakiya and dope labs, don't forget to sign up for our newsletter on the site, too.

Zakiya: Special thanks to our guests expert Angela Sanie. Her book is called Superior: The Return of Race Science and you can find a link to it in our show notes.

Titi: If this episode blow your mind, then you've got to get into the book. This was just a taste.

Zakiya: A tiny morsel.

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Titi: Of the full entree that she presents in her book. So make sure you pick that up.

Zakiya: Yes. Also, we love hearing from you. What did you think about today's lab? Do you have ideas for future Labs? Call us at 202-567-7028. And let us know.

Titi: You can find us on Twitter and Instagram @DopeLabspodcast.

Zakiya: Titi is on Twitter @Dr_TSho.

Titi: And you can find Zakiya @Zsaidso.

Zakiya: Follow us on Spotify or wherever else you listen to podcasts.

Titi: Dope Labs is produced by Jenny Radelet Mast of Wave Runner Studios.

Zakiya: Mixing a Sound Design by Hannis Brown.

Titi: Our theme music is by Taka Yasuzawa and Alex Segiura with additional music by Elijah LX Harvey. Dope Labs is a production of Spotify and Megaphone Media Group.

Zakiya: And it's executive produced by US.

Titi: Titi Shodiya.

Zakiya: And Zakiya Whatley

Zakiya: Go, go, go, go. Who's next?

Titi: Who's next?

Zakiya: Did you see the one with the heel toe? Girl, that man came out there and that karate suit. He had the stank face on. You know, he was getting ready to tear it up.

Titi: It's so good hip hop Harry. Oh, my goodness.

Zakiya: Hip hop Harry had vmoves.