

Science AMA Series: Hi, we're leaders from the American Association from the Advancement of Science, and we want to talk about identifying, confronting, and overcoming implicit racial bias in science. Ask Us Anything!

Recognize-Bias ¹ and r/Science AMAs¹

¹Affiliation not available

April 17, 2023

Abstract

Hi Reddit! Today, Science Magazine published “Doing Science while Black,” by Dr. Ed Smith, a native of Sierra Leone who studied and now teaches in the US. He writes “Being an academic scientist in this country with my skin color and accent has not been easy, but I hope that my resilience amid significant challenges offers a path for younger minority scientists.” Dr. Smith’s article fits within an important conversation around bias within the field of science. Many leaders from the science community have been participating in that discussion, including Dr. Shirley Malcom, the director of the Education and Human Resource programs of the American Association for the Advancement of Science (AAAS). Dr. Malcom works tirelessly to improve the quality and increase access to education and careers in STEM fields as well as to enhance public science literacy. The American Association from the Advancement of Science (AAAS) is proud to offer a platform for conversations around identifying, confronting, and overcoming implicit bias, publishing articles such as Carrie Arnold’s “Countering gender bias at conferences;” hosting panels that explore how to counter implicit bias in peer review; and presenting sessions at our Annual Meeting—including last year’s “Opting out? Gender, Societal Affluence, and 8th Graders’ Aspirations for Math Jobs,” and “Expanding Potential: Overcoming Challenges of Underrepresented STEM Groups.” We’re teaming up to answer questions about how implicit bias is manifest in the sciences (for example, in peer review, in accepting articles for publication, in promoting people to leadership positions), how individuals can identify and overcome bias, and how institutions can put smart policies in place to minimize the impact of implicit bias. We are: Dr. Shirley Malcom is the head of Education and Human Resources Programs at AAAS. Dr. Ed Smith is a professor of comparative genomics at Virginia Polytechnic Institute and State University in Blacksburg. Dr. Avery D. Posey, Jr., Ph.D.: I am an Instructor in the Center for Cellular Immunotherapies at the Perelman School of Medicine, University of Pennsylvania. My laboratory develops chimeric antigen receptor (CAR) T cell therapies to target human and canine cancers, including leukemia, myeloma, pancreatic, prostate, breast, and colon cancer, specifically by recognizing cancer-specific glycosylation. I am passionate about inclusion and diversity in academic science, from trainee through faculty. Dr. Caleph B. Wilson, Ph.D.: I am an industry scientist, co-founder of the National Science & Technology News Service (@NSTNSorg) and logistics director of the National Science Policy Group (@NatSciPolGroup). In addition to my career as a researcher, I advocate for STEM equity and inclusion through science communication, outreach and policy reforms. We’ll be live at 4 PM EST (1 PM PST, 9 PM UTC)—ask us anything! EDIT: Thank you all for participating in this AMA with us. We enjoyed it, but have to get off now.

[REDDIT](#)

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RECOGNIZE-BIAS [R/SCIENCE](#)

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Today, Science Magazine published "[Doing Science while Black](#)," by Dr. Ed Smith, a native of Sierra Leone who studied and now teaches in the US. He writes "Being an academic scientist in this country with my skin color and accent has not been easy, but I hope that my resilience amid significant challenges offers a path for younger minority scientists."

Dr. Smith's article fits within an important conversation around bias within the field of science. Many leaders from the science community have been participating in that discussion, including [Dr. Shirley Malcom](#), the director of the Education and Human Resource programs of the American Association for the Advancement of Science (AAAS). Dr. Malcom works tirelessly to improve the quality and increase access to education and careers in STEM fields as well as to enhance public science literacy.

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We are:

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[Dr. Ed Smith](#) is a professor of comparative genomics at Virginia Polytechnic Institute and State University in Blacksburg

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[READ REVIEWS](#)

I have seen some studies indicating that minority faculty tend to have [fewer publications](#) than white

[WRITE A REVIEW](#)

CORRESPONDENCE:

DATE RECEIVED:
September 30, 2016

DOI:
10.15200/winn.147514.49838

ARCHIVED:
September 29, 2016

CITATION:
Recognize-Bias , r/Science ,
Science AMA Series: Hi, we're
leaders from the American
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Advancement of Science, and
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The Winnower
3:e147514.49838 , 2016 , DOI:
[10.15200/winn.147514.49838](https://doi.org/10.15200/winn.147514.49838)

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faculty at comparable points in their career. What factors do you think have a role in this?

One possibility I've seen proposed by an African American post doc I work with has to do with committee membership. He has noticed that the black faculty seem to get asked to serve on more committees than white faculty, possibly due to a desire to have committees have a diverse makeup. However, as a consequence of this, they have less time to spend on writing grants and running their research lab, which impacts their publication frequency. Does this match your experience, and do you think this could be a contributing factor in the publication and grant differences among minority faculty?

[kerovon](#)

SM:If this is not highlighted/emphasized during their graduate study this could be a problem; you do what you are comfortable doing and experience success in doing this.... Too many programs emphasize degree completion and not also the skills needed to supporting post-degree success factors.

It is very easy for Black faculty to get drawn into too much committee work, either because of their own concern about the outcome of the committees, perspectives needed within the committee or because of the expectations of the department/unit for diversity. But then, having that same unit/department judge that faculty member on publications and funding record. I warn early career faculty to avoid the "too many committees" temptation. But departments need to start articulating what their expectations are for ALL faculty to share the departmental citizenship work.

I have seen some studies indicating that minority faculty tend to have [fewer publications](#) than white faculty at comparable points in their career. What factors do you think have a role in this?

One possibility I've seen proposed by an African American post doc I work with has to do with committee membership. He has noticed that the black faculty seem to get asked to serve on more committees than white faculty, possibly due to a desire to have committees have a diverse makeup. However, as a consequence of this, they have less time to spend on writing grants and running their research lab, which impacts their publication frequency. Does this match your experience, and do you think this could be a contributing factor in the publication and grant differences among minority faculty?

[kerovon](#)

@HeyDrWilson - Are we talking about first authorships or all authorships? Trainers and department chairs should be reviewing interdepartmental collaborations. Are those collaborations diverse? For example, my postdoctoral PI actively brought me in on collaborations with other research teams. That boosted my publications. Are all PIs doing this for their trainees?

How constrained do you feel by societal expectations and (for a lack of a better word) political correctness in your research? If, for whatever reason, your data showed a greater productivity in a homogenous group over that of a diverse group, could you even expect such a paper to get published and taken seriously? Are the conclusions being drawn based solely on the data or can it be influenced by popular sentiment and "common sense"?

As an anecdote, I only had a professor give a lecture that mentioned why, mathematically, black people were better at running and white people at swimming (it has to do with the ratio of torso and leg length). The atmosphere in the room was very uncomfortable. But was that right? The professor was up there sharing his theory, backed by his data, and the audience seemed to have dismissed it entirely because it didn't conform to popular sentiments and PC culture. Granted, it was an audience of undergrads, but I wonder if a similar phenomenon happens at a higher level as well.

[Mountebank](#)

SM:I do not do research in this area, thus, I cannot respond to your comment on that. I read research across a range of views. The best way to get into a mental "cul-de-sac" is to only read or watch things that align with my thinking. I look at the data and re-examine my views when there is a mismatch, including looking at methods, populations, etc. I find I can't depend on "common sense" since I find it to be uncommon. As scientists we are skeptical of "common sense" until we see the data.

Re: your professor...Interesting. Did anyone ask him how much it costs to get lots of practice running (as a kid growing up) vs. how much it may cost to swim? As a kid growing up in Birmingham, Black neighborhoods tended not to have pools, and for sure, not clubs or swim teams. The question of whether Jesse Owens' heels, etc. gave him an advantage was the subject of a scholarly paper by Dr. W. Montague Cobb, anatomist and physical anthropologist.

How do you plan to address the [double bind](#) that Asian American women face in STEM?

"The percentage of Asian women employed by colleges and universities who are tenured or who are full professors is the smallest of any race/ethnicity and gender." For comparison, Asian American women make up to 20% of these academic positions vs 30% of Hispanic American women as the next highest percentage.

Many articles in the past have cited Asian Americans as earning a higher average income than other ethnicities, however according to the [Initiative on Asian Americans and Pacific Islanders](#), " a larger-than-average subset of Asian Americans are also living below the poverty line and experience significant obstacles towards higher education and income. This produces a greater-than-average chasm between the richest Asian Americans and the poorest Asian Americans than we might see in the population at-large; yet, because of the high visibility of successful Asian Americans, this wealth gap goes largely unnoticed."

According to the National Science Foundation, Asian American women also report the highest unemployment rate of all men and women in STEM [here](#). Are Asian American women included in your diversity initiatives?

[jeriatrik](#)

SM:In working with universities on issues related to "women of color" in STEM as well as in our own (AAAS) committee work we do include issues related to Asian American women. I am also concerned that differences across different Asian American population groups also get lumped and obscure the situation for these populations, as well as women in these populations.

In my high school debate team one of the topics we covered was affirmative action. The most common argument I encountered against affirmative action policies was that they introduced doubts about whether a person in a marginalized group made it to their position on their own merits or due to affirmative action. This often cast these group members in unfavorable light.

As a whole, do you think that affirmative action is beneficial to people in marginalized groups? Do you think that affirmative action programs are part of the solution to the racism and sexism in the sciences? If not, what types of actions can be taken to help remedy these issues? Thank you in advance for your answers!

[pjokinen](#)

SM:If I show up in a room as "the only" woman or minority (and trust me, that I have had significant

experience in this) I will be considered an AA appointment. But in settings where I was the only scientist I was not so labeled. And I found that intriguing. I didn't have the doubts—others did. And I have learned to love being underestimated.

AA has been critical to opening the doors of opportunity for many individuals where they are able then to share their talent and demonstrate their capabilities. While it may get us in the door, it does not keep us in the room if we don't perform. AA is a way to ensure that we think about the make-up of groups (on committees, of applicants) before just rounding up the usual suspects/folks in our networks. It says, "look harder."

Not sure if this falls under your focus, but what have you found in regards to bias and accent? Like a US southern accent?

[FuriousArhat](#)

SM:People can cue in on any feature that makes one "different" and where they may have stereotyped views of the people with those features. When I entered a university in the Pacific Northwest, I had a very strong Southern accent. I didn't know it. I just thought everyone else talked funny. In speech class, when I taped myself, that was the first time I had ever heard myself.... Being Black and female in the sciences, I figured I didn't need anything else for people to cue on; so I worked hard to dampen that accent. I figured it was better to have them focus on what I had to say than how I said it.

Studies have shown that diversity in STEM decreases starting from middle school and into undergraduate degrees.

Additionally, two years ago, conference organizers received backlash when only a few women speakers presented, with the vast majority of speakers being male. The conference organizers released the list of who they invited to speak and it was 50/50 male to female. Females chose not to participate.

If there are fewer women and minorities that are participating in STEM by the time I can hire them or invite them for a conference, how can we promote equality?

[Agwtis27](#)

Shirley Malcom (SM):The talent pool is most full/and most diverse at the beginning. Access to advanced course work and to higher education can reduce the numbers. But there is still high interest among minorities and women at the undergraduate level. It may differ by field, but it is still comparable for students going into higher education. Since I don't know what field you are in, I cannot say what conference you are talking about and what the expectations were. In a field with fewer women, the same people may be getting asked over and over again and are just opting out... But I have heard of cases where conferences in the life sciences show the same skewing of speakers. In this case it is harder to make the case that "we can't find any." Or are different criteria being used? We will only invite superstar women and solid, but non-superstar men? We are all pushing to give you a bigger talent pool, but then they need opportunity.

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Avery Posey: As one comment notes below, the 50/50 male to female invitation ratio should be commended. I'm not privy to the field, and the participation of both genders in the field, but generally, there are more female trainees (graduate students and postdoctoral fellows) now in the biomedical sciences than male trainees. The opposite is true for higher level and faculty positions. If 50/50 ratio was used for speaker invitations, I'd be curious if more junior females were invited than junior males. If so, one possible explanation for the low attendance is availability. In reference to underrepresented minorities, there isn't enough time in the year for faculty to attend all invited meetings and still be productive. That's because there is a lack of faculty of color across the board. At my institution, the 2% of African-American medical school faculty has not changed in 30 years.

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[Agwtis27](#)

This is an important observation, but probably not one you can use as an excuse to stop inviting female or minority scientists. At Tech we have group seminars specific for some disciplines. The other day I went to one on a Friday at 9 AM (I get up at 5, so that is not the problem), the discipline was physiology. Anyway the speaker, a young faculty did not come because her son had fallen sick the night before. I will return when she is rescheduled to speak which I encouraged the organizer to do. Ed

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[Agwtis27](#)

@HeyDrWilson - Support and sponsor STEM programs starting at the elementary school level.

In the case of that conference, I wonder who was on the speaker selection committees. I bet you a draft of your favorite beer that women were not represented on the speaker search committees.

Do you think double blind submission eliminates bias in reviewing and accepting papers?

[DoorsofPerceptron](#)

@HeyDrWilson - As soon as you get into the references it would be clear who the paper/grant submitter is, right.

Do you think double blind submission eliminates bias in reviewing and accepting papers?

[DoorsofPerceptron](#)

Avery Posey: I think double blind submission is an impossible concept to implement.

How do you (or how should it be) define what is a 'fair representation' of minorities within STEM (or other fields)?

For example if a minority represents 1/10 of a population should they represent 1/10 of the population of the field in question (obviously assuming some sort of margin as a group will rarely be split exactly 50/50)?

Follow-up question: Regardless of how a fair representation is defined, when that proportion isn't reached do you believe the course of action to 'fix it' should focus more on trying to determine underlying causes (IE: group A has less people in field X because they have little exposure to it during their upbringing)?

[BroaxXx](#)

Avery Posey: Great point that was also addressed in another question. Yes, fair representation can be measured by representation in the general population. I think there are definitely many courses of action. One is to change the way we recruit faculty in higher education: see (<http://hechingerreport.org/five-things-no-one-will-tell-colleges-dont-hire-faculty-color/>) Another is to address the feeder pool for STEM fields, starting in early education. I advocate for changes in how we fund education, which is currently disproportionate.

Do you think affirmative action for college as it exists now helps or hurts minority students trying to get into science?

If it hurts, do you have ideas of how to do affirmative action responsibly to make sure those students have equal chances to succeed as their white classmates?

Background: A family member of mine was trying to get into science and engineering and went to the best school he could get into, but felt really behind everyone right from the start (shitty public school education for my family). He would have done fine at a state school where most people had the same education as him, but it was nearly impossible for him to compete with a ton of his class because their education was just so much more advanced from the start. It feels like this tends to happen to a lot of people with public education, especially in hard science. My worry is that one reason that minority students don't get into science is if they're far below average in the quality of their high school, they're competing at a disadvantage from the start (like my brother), which usually translates into bad grades because of the curve. Do you think affirmative action needs programs to ensure equal footing to start?

[WaywardCatholic](#)

It is unfair for an institution to consider that their responsibility to provide opportunity has been fulfilled by simply admitting a student-- there is also the obligation to support the success of students that have been admitted. Do the football players start on an equal footing or is academic support provided even before they enter so that they can retain eligibility? I came from an under-resourced school (segregated) and spent my time catching up while keeping up. but the longer I stayed the better I got. I almost failed chemistry lab, but you seek help, you find community that believes in you. I am better off, having had to struggle in a really challenging environment than going where I could do okay but not have access to the opportunities I had... We all make these tradeoffs. Besides, since I received my PhD, no one has asked me about my undergrad GPA.

Dear Professors,

Thank you for your time today, and for your efforts in researching biases in the sciences.

I am an academic in a field (philosophy) that is one of the few remaining humanities with an underrepresentation problem that is on-par with the underrepresentation that plagues STEM fields.

Only in recent years has any work been done by academic philosophers to address this gap in representation (cf. [Implicit Bias and Philosophy Saul, et. al. Eds \(2016\)](#) .) However, their work has come under fire by certain influential scholars within our field who are skeptical about the existence and/or effects of implicit bias (notably: [Leiter \(2014\)](#); [Sesardic & De Clercq \(2014\)](#).)

Specifically, Sesardic and De Clercq accuse "proponents of the discrimination hypothesis" of "tend[ing] to present evidence selectively." They state that they are not denying the possibility that bias causes the gap in representation among philosophers, but rather are claiming that "the information available does not support the discrimination hypothesis."

As a philosopher, I am not a scientist: I am a theorist. Because of this, I feel somewhat ill-equipped for the task of defending or countering any issues concerning empirical evidence or scientific methodology. So, I thought to reach out for a bit of help, today.

As experts in this area of research, your comments on this issue would be *greatly* appreciated. Specifically, I would be grateful for:

1. any commentary on the paper written by Sesardic and De Clercq, and/or,
2. any advice on how to go about defending the current body of evidence offered in support of the discrimination hypothesis, or alternatively, how to go about collecting evidence that would be less easily dismissed.

Thank you again for your time today, and thank you in advance for any input.

[mindscent](#)

Avery Posey: You'll find two articles here that speak to bias in grant reviews and funding from the NIH (<http://www.nature.com/news/racial-bias-continues-to-haunt-nih-grants-1.18807>). The evidence supports active discrimination of institution and of individual.

As a black male, I have been inundated with pdfs, statistics and bell curves all pointing to some form of genetic inferiority regarding IQ with blacks being at the bottom of the totem pole.

- Is there any validity to such claims?

- If so, is that a core determinant in those who are able to hack it in the sciences?
- Is such research considered taboo in the general scientific community?

[mach-2](#)

SM: No research should be taboo... One should never be afraid of the truth. No.... no genetic inferiority. Opportunity for excellent and rigorous education from excellent teachers who believe in you! Opportunities to see people who look like you achieving in science despite what they may have been told, where they come from, how much or how little they have.

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[mach-2](#)

Avery Posey: There's absolutely no validity in that work and it reflects overt racism within science. Careers have been made through genetic correlations of intelligence, just as was the case with phrenology; neither of which stood the test of time or ethics.

I've seen the statement. "Diverse groups are more productive, more creative, and generate more innovation."

- What scientific evidence suggests that extra efforts should be made to increase the success rates or submission rates for research grants / journal publishing for some groups?
- If the causes of these disparities are cultural is addressing that potentially detrimental to any advantage given by the cultural differences given by members of a diversity group?

[Pukudo](#)

Avery Posey: Forbes had a great article on this a couple years ago and linked to several studies. This is a great place to start. <http://www.forbes.com/sites/ekaterinawalter/2014/01/14/reaping-the-benefits-of-diversity-for-modern-business-innovation/#b7876e26476e>

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[Pukudo](#)

@HeyDrWilson - Let us change "Diverse groups" to Interdisciplinary science teams. Does anyone not believe putting smart people of different disciplines make for better science? That is what diversity is,

right?

To what degree do you see a discrimination against parents within science? Is it enough to impact future decisions regarding academic positions or is it the effect negligible? Two examples:

- As a father I rarely see offers for childcare when attending the big meetings such as SfN.
- After my friend accepted a PI position she was told that she should not have children within the next 2 years.

On a more personal note: Realistically how much power has the AAAS in "enforcing" recommendations regarding countering biased decisions within academia? I don't see any impact of the NIH guidelines regarding IDPs, most PIs I know don't care even though all of them have an NIH grant. So what could we expect from your findings?

[Schlitz](#)

SM: I hope that people will not leave science academia because the science community has not caught up with other fields re: parenting. With regard to professional meetings, we are all becoming more attuned to addressing this concern of childcare availability. And to the extent that male members start also asking about this, the childcare options are likely to improve. And someone actually told a PI she should not think about having children? Has that person ever read any of the policies re: employment laws?

Obviously no group can force institutions to do the right thing. But we need to praise those that do. I expect that with all the visibility around implicit bias and outright harassment, we will begin to see a shift in agency responses.

I hope to ask you about a different 'type' of diversity.

Social psychologist Jonathan Haidt has given TED talks and written articles about the lack of conservative voices in academia, specifically the social sciences and within his field of psychology, where roughly 9 in 10 identify as liberal as opposed to conservative. Haidt brings up the hostility conservatives go through and how their more liberal colleagues discriminate them because of their political views.

In fact, HERI's (Higher Education Research Institute) long-running survey [shows that universities have increasingly gained a strong liberal bias in almost all fields of education; their latest numbers from 2014 show that 60% identify as liberal/far left, 28% identify as moderate, and only 12% identify as conservative/far right.](#)

In an age where 'diversity' is one of the more celebrated qualities an institution can have, do you find this concerning? Does diversity of ideas factor into your fight against biases at all, or does it take a backseat to more pressing forms of diversity (in your view), such as diversity of gender and race?

[ShavingApples](#)

So this is a very intriguing question and one that I have pondered quite a bit even before this. It is also a bit similar to the question others have asked about the nature of "diversity other than race and gender." As a geneticist, I will ask you to think about how being a conservative affects "your survival" or "your fitness" as Darwin put it, especially in America. If you showed up some where, will the crowd stop what they were doing even before you said a word? My boys both played competitive soccer all through high school and in college (one at Emory and the other first at Colgate and now Washington and Lee): I can tell you, I am the only one that the parents of the other teams will always ask "where are you from?"

Ed

Socioeconomic background has been a driving force that hinders minorities from participating in STEM. As a woman coming from a low income family, I personally had struggles as the expectations of my family were as great (or even greater at times) as the expectations of my advisers. It was only when I started actively including my family in my career (i.e. giving them lab tours and inviting them to my talks) that the familial pressure began to relax. That said, I got a LOT of weird looks from my peers. Even still, my partner, who is from a lower income family but does not include his family, still receives active criticism about his career choices.

What role do families play in promoting equality in potential STEM researchers?

What resources exist that I, as a scientist, can use to guide my lower income students through a very intensive, stressful, time-consuming career knowing that they have additional familial expectations?

[Agwtis27](#)

SM: For minority students, family support is crucial. While they can't necessarily help you with experiments they can help you with encouragement, belief and pride in your work. Goodness knows it's hard to move forward if they are constantly wondering if you'd ever finish school (a question from my Uncle Jerry), when would you go out and get a job (another question from my Uncle Jerry), or if getting all that education would narrow your possibility of marriage (a concern from my grandmother). But my parents' response (MYOB) shut that down. Have a letter or video that let's parents know what you are doing, how it connects to their kid and why it's important for the family and community. Or let some of us parents talk to them!

@Caleph B. Wilson, Ph.D

What are the proposed solutions to address the gender-equality paradox[1]?

To explain, it has been noticed that women are more likely to pursue STEM degrees in countries with lower economic development. Their reasoning is, that in a poor country, having a high income means one is less likely to be truly poor. Thus we see more female CS graduates in Iran or Turkey than in Germany or Norway.

I hope no one here would try to claim that Turkish or Iranian men are less sexist than Germans (where the age of consent may be 14, but they've never had a prime minister like Erdogan who married his wife when she was 15)

Whereas in highly developed countries, no one is truly poor, and thus even a degree in a field which isn't as highly paid as the technology sector enables one to avoid being really poor, and thus women, being innately oriented towards more people-oriented pursuits, tend to avoid studying engineering?

[Evidence supporting this:\(link\)](#). Note that countries with high shares of female engineers are all in the developing world.

[1]: Norwegian state TV made a [good documentary on that topic](#).

[Elohssatcaf](#)

@HeyDrWilson - I do not understand the question and rationale for it. The question is: How do we think that gender gap will be closed by using the same gatekeepers?

Does affirmative action work in getting more people involved with science?

How would you respond to its critics?

[n60storm4](#)

@HeyDrWilson - Let us look at this question in another context.

In an effort to move military veterans into education, training and jobs, there are efforts made to identify and recruit veterans to fill openings. In turn the number of veterans increase in those opening because of an effort to do so. No one actually complains...Why? Because we like to provide opportunities to veterans. We also do not think of a veteran getting a position as also keeping some other qualified person from getting a position.

This points out a key problem in providing opportunities for under-represented minorities. Too often providing opportunity is viewed as putting someone less qualified into a position at the expense of a white male or female.

Now, rather than going down the "does affirmative action work" road, I view it this way: Are we making sure that our young people have educational, training and job opportunities. Those opportunities need to be extended to more young people than it has in past. That means that young people in the Mississippi Delta region, rural Southwestern areas, Indigenous communities and Appalachia should have opportunities extended to them.

From Carrie Arnold's article:

Although women make up 55.5% of those at U.S. colleges and universities with undergraduate degrees in the sciences, their presence dwindles as they move up the academic career ladder. Women make up 50.6% of those receiving a Ph.D. in the sciences, but only 44.2% of junior science faculty positions and only 28% of senior faculty positions

Women make up well over half of all science degrees earned, up to the PhD level. Is this attributable to gender bias against men? If not, by what token can you claim that the faculty position rates are due to gender bias?

[Cyralea](#)

@HeyDrWilson – As a country we decided to support more women in STEM from k-12 to undergrad to PhD. So, an improvement happened.

A more direct question is this: Why are we training so many women to only deny them faculty positions after they are trained? Also, what are the compositions of the faculty search committees and are administrators insuring that women and other groups of URMs are in the application pool. A department at Princeton took this approach and you saw an increase in women faculty.

Also, I would like to see the comparison of start-up packages for women faculty vs. men.

In short, how can we do a more effective job to retain women in STEM?

Do you believe that the favourable hiring of women and minorities fosters an environment of equality or do targeted hiring strategies work to alienate those who are not a part of the favoured minorities?

[Aivias](#)

SM: What are you seeing with regard to hiring of minority faculty? Not the advertised statements, but

the outcomes? Look at Dr. Donna Nelson's data by institution, by field, by race and sex, and then tell me that minorities are being favored.

Thanks for coming today! What do you see as the areas where we can make the biggest strides in bringing more underrepresented groups into research science? Do we need to start with childhood classroom science learning? As a university professor, are there any specific things I can do to help prevent the loss of talent, hardwork, and creativity from members of groups that historically have been underrepresented in academic science?

[p1percub](#)

@HeyDrWilson - Maintaining an interest in STEM is very important. Part of that will require visibility of STEM professionals that are from URM groups.

In regards to equity in the STEM field, how much do you believe is bias, and how much do you believe is the individuals personal choices leading to the so called "gap" (whether racial, gender, or anything else) that we see today?

[My_Big_Fat_Kot](#)

Caleph B. Wilson (@HeyDrWilson) The gap is systemic. Here is a professor actually saying it plainly, identifying problems, giving solutions and challenging the system to change.

[\[https://www.washingtonpost.com/news/grade-point/wp/2016/09/26/an-ivy-league-professor-on-why-colleges-dont-hire-more-faculty-of-color-we-dont-want-them/\]](https://www.washingtonpost.com/news/grade-point/wp/2016/09/26/an-ivy-league-professor-on-why-colleges-dont-hire-more-faculty-of-color-we-dont-want-them/)

What are the best current practices for white male profs teaching undergrad science courses to improve multiculturalism? I know enough to be aware of my own biases and try to mitigate them to the extent I'm consciously possible, and I try to discuss bias and its effect, but what else should I be doing?

[forever_erratic](#)

@HeyDrWilson - 01.) Start or join a trainee ran newsletter as a writer and/or editor, 02.) Engage in social media chats, and 03.) associate with science communication and outreach communities.

What are the best current practices for white male profs teaching undergrad science courses to improve multiculturalism? I know enough to be aware of my own biases and try to mitigate them to the extent I'm consciously possible, and I try to discuss bias and its effect, but what else should I be doing?

[forever_erratic](#)

@HeyDrWilson - In general a great place to start is Chris Edmin's work on helping to effectively educate a diverse nation [<http://www.pbs.org/newshour/updates/what-white-folks-who-teach-in-the-hood-get-wrong-about-education>]. It starts with knowing who you are teaching and respecting the perspective that they bring to the classroom.

As we move into teaching STEM to a diverse range of students I would start with learning what Historically Black Colleges and Universities (HBCUs) are doing. As a point of reference, HBCUs are 3% of US higher education institutions and produce 17% of US black STEM graduates. They are doing

the job of diverse STEM education very well. Check out this report from the Center for Minority Serving Institutions at the University of Pennsylvania. [

<https://twitter.com/HelmsleyTrust/status/779413149560676352>]

(Disclaimer: I am on the advisory committee of the Helmsley Trust's grant.)

Just from reading the comments I can sense the resentment that you dare suggest that such a thing exists.

How do people who acknowledge the presence of racial bias in science and who genuinely want to effect change, convince their peers who are convinced it doesn't exist?

Is there much opposition?

[Princess Princess Pr](#)

@HeyDrWilson - I would first determine if department chairs and other administrators believe in the existence of gender/ethnic bias. Some colleagues are going to resist it forever. So, having people on board that can implement change give weight to the effort.

Yes. It is about to be 2017 and race and gender are still issues. Honestly, why are the issues not being called out as soon as they present themselves? Is it a fear of confrontation, power dynamic, or a fear of unemployment that allows our culture to suspend disbelief into a normalization of deviance?

What would you say are good ways to confront these issues as soon as they arise? I have been playing a thought exercise about teamwork modeling in a mid-sized company scenario where everyone works in pairs that consist of opposite race and genders.

[jfouasse](#)

@HeyDrWilson - People that call it out in many spaces are not around very long after doing so. Retaliation happens.

Also, bias starts as early as preschool [

<https://www.washingtonpost.com/news/education/wp/2016/09/27/yale-study-suggests-racial-bias-among-preschool-teachers/>]