Being a Black Scholar

James West, as told to Hilary Kates Varghese

Editor's Note: This interview is adapted from one given to Acoustics Today intern Hilary Kates Varghese as part of her series that appears on the Acoustics Today website (see acousticstoday.org/meet-asa-presidents). After reading the interview, it occurred to us that much of what Dr. West said is very much related to other "Sound Perspectives" essays in this issue about Black scholars in the Acoustical Society of America and STEM. To see the full interview with Dr. West and learn more about his extraordinary career, please visit our website.

James West (**Figure 1**), Acoustical Society of America (ASA) president from 1998 to 1999, has had an exciting and important scholarly career. Throughout this career, Dr. West has been an advocate for underrepresented minorities in science and engineering. Among his many honors include the Gold Medal from the ASA, induction into The National Inventors Hall of Fame (see bit.ly/JWestHOF) for his invention of the electret microphone, the National Medal of Technology (see bit.ly/wesnational; **Figure 2**) for his technology contributions, and multiple honorary doctorates.

Figure 2. *Dr. West receiving the National Medal of Technology from President Bush in 2006.*

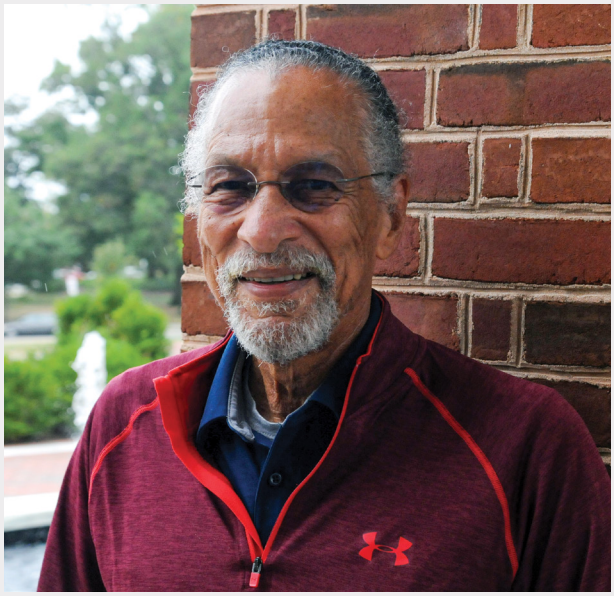

Figure 1. *Dr. James West outside Johns Hopkins University.*

Tell us a little about your career path and journey to where you are now.

I started at AT&T Bell Labs in 1957, an intern in their summer program (see bell-labs.com/connect/internships). I found Bell Labs to be among the few places that I felt, as a Black male, that I would have a comfortable and prosperous career. I measured and monitored this in terms of the number of underrepresented minorities and women that I saw in roles that I might eventually want to be a part of. I turned down the lower level management opportunities because I did not see a clear ladder of progress in management as a Black male. I remained in the lab and retired in 2001 at the highest rank of nonmanagement, a Bell Labs Fellow. From there, I joined the faculty at Johns Hopkins University (JHU), Baltimore, MD, in 2001, first as a research fellow in the Department of Electrical and Computer Engineering and most recently as a full professor.

I would say I have a profession as well as a strong side interest in improving diversity in the institutions that I've joined throughout my life. At Bell Labs, we formed a number of organizations primarily aimed at improving diversity for both women and underrepresented minorities (W&URM). I was instrumental in starting what was called the summer research program that was instituted throughout the operating companies of AT&T. Upward of 3,000 university students received summer internships throughout the AT&T network. This turned out to be a

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very significant program because many W&URM found out what careers in industry were all about.

We formed an offshoot to that program called the corporate research fellowship program that paid for and mentored roughly 600 successful W&URM as PhDs. The attrition rate was better than any school in the country, mainly due to our ability in matching mentors and students.

What inspired you to run for Acoustical Society of America president?

The short answer to that question is that it was suggested, and I was nominated by a number of people in the Society who asked me to run. But let me capitulate a bit. I was a member of many societies and technical organizations where I gave talks early in my career as I looked for the best home for the direction in technology that I was taking. The ASA turned out to be the most welcoming of all the others. Of course, when I say welcoming, my colleagues at Bell Labs were always there so there was that level of comfort, but at meetings, you don't make progress unless you talk to people outside your circles. I found that the ASA was open: people talked to me, discussed their work, and accepted me as a normal person, not one of a particular class. This was very interesting to me. I saw this as a Society I could probably work for, so I joined a couple of technical committees that I eventually chaired (e.g., Engineering Acoustics).

The opportunity to feel the freedom and feel accepted was very important, and it was very much a part of the reason the ASA became my home. For example, in pointing out the lack of diversity in both W&URM in the Society, we pushed through several fellowships. The one for underrepresented minorities is now named for me (e.g., see essay by Scott on page 77). Women have made tremendous progress. They make up about 50% of the population nationally but only represent about 15% of the workforce. So there is still a lot of work to do there. Underrepresented minorities are even worse off. They make up roughly 25% of the population but less than 5% of the workforce. (For more information, see nsf.gov/statistics/women). With all that we are doing, it's really a penance to what is necessary and needs to be done.

The reason I talk about all of this is because the ASA had open minds to this kind of thinking and valued the things I valued. By being president of the ASA, I had the opportunity and full-fledged support to advance these ideas further.

What was the biggest challenge you have faced in your career? And as Acoustical Society of America president?

In life, racism was my biggest obstacle. I always felt like if I was white, would I have had a better life? I don't know because I really do have fun. But I had to pay attention to things that more directly affected me than others. For example, I got an email from a colleague a few days ago that said basically I wish I hadn't accused you of conspiracy theory as much as I did. We used to have lunch together and talk about the disparities between the races, and now he finally understood why I was so upset by getting continuously stopped by police on my way to work through an all-white community.

Now more people understand why the fear is there. I've feared police all my life; they were not there to protect me, they were there to kill me. This is what I was taught in order to survive. That outlook hasn't changed for any Black person. There was always a lot going on in my life, but when you worry about a big problem, the little ones get flushed and you don't see them as clearly. A concern of safety was always foremost in my mind.

In what productive ways do you think Acoustical Society of America members can contribute to the current human rights movement?

My mother was one of the Hidden Figures (see bit.ly/2GWilxj), a human computer. She is mentioned a number of times in the book. She went from teaching math in high school to working at Langley Research Center and was also an active officer in the National Association for the Advancement of Colored People (NAACP). This role eventually got her fired from Langley because Senator McCarthy viewed the NAACP as an adverse and communist organization. This really ended my mother's productive life; she couldn't get over it. So the topics of systemic racism and the increase in and acceptance of diversity have always been at the forefront of my mind. I've been involved in this sort of work for over 20 years. Let me tell you what I am doing that may work for you.

I joined the board of a program in Baltimore called the Ingenuity Project (see ingenuityproject.org). The program serves Baltimore City Public Schools but really focuses on and nurtures students in the Advanced Placement (AP) program. When I joined the board six to seven years ago, the program was 90% white and 90%

of those were white males. In vetting me for the board, I said, "this statistic is very unsatisfactory as it does not represent the demographics of the city of Baltimore. As a heads up, if you put me on the board, I'm going to change the way things are." They put me on the board anyway and without changing the requirements of the program, it is now about 80% W&URM and 70% of those are women. So, the complexion of that program has changed. What makes this so significant is that Hopkins is very selective of accepted students. Last year, seven students from the Ingenuity Project were offered a place; five accepted and two got better offers from schools elsewhere.

To make a long story short, the funnel was empty, and the funnel needs to be filled, at least partially, with qualified W&URM people that want to enter STEM. If you can increase and open that pipeline that will only bring positive change. How can you help? Find and mentor qualified W&URM students in your local area and improve their training so that they have the opportunity and potential for a future in STEM.

The Acoustical Society of America is constantly growing and evolving. How has it improved and changed since you were president?

I was the only Black active member of the Society for a very long time. There were also only a few women scattered throughout the organization. We have now had a number of women presidents and officers, underrepresented minority presidents and officers, and committees and parts of the Society that are populated and controlled by women. As much as things have changed, as much they still need to change.

How do we do this? Well, I think why we were able to change the ranks in the Ingenuity Project so easily was because we gave the students examples of successful W&URM in many important careers in and around Baltimore and Washington, DC. The ASA can do this too: provide role models and successful examples of W&URM in acoustics.

What attributes about yourself have helped or hindered you in your career?

My race hindered my advancement in industry; all of the examples I've shared before modulate that. I think that if I were white, I would have had a totally different career. I'm not saying it would have been better or that I would have been more satisfied. But I'm an extremely competitive person, and mobility is very important. I probably would have enjoyed the opportunity to see where things could have led.

What is one work hack that you learned or found over your career and would recommend to others?

I think the important thing for women and minorities is to stand up for your rights no matter the stakes or what you think the consequences might be. This is the way I maintain my sanity. If I let things build up, then I really want to go out and hurt somebody. Have I suffered from that? Yes. Have I prospered from that? Yes. So it's a tradeoff.

What advice would you give to a young Acoustical Society of America member about getting involved in professional groups, such as the Society, and the role these professional organizations may have on their lives?

Professional organizations are very important to your survival in STEM. It improves your quality of life, provides opportunities to get your personal work out, and does wonders for your career. When I look at my career path and what I was able to accomplish, I believe my activity in all of the societies I participated in was very fundamental in advancing my career. It is extra work, beyond a doubt, and it may drive you nuts at times, but the benefits are definitely there.

Selected Publications by James West

Busch-Vishniac, I., and West, J. E. (2007). Acoustics courses at the undergraduate level: How can we attract more students? *Acoustics Today* 3(2), 28-36.

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