

Interview

“The more inclusion we have in science, the better outcomes we’ll get.”



Illustration by Shonagh Rae

Congresswoman Eddie Bernice Johnson spent five decades in public service, during which she ushered through landmark science and technology legislation and helped to advance opportunities for all Americans.

It's hard to name a single person who has had a greater impact on US science legislation in the twenty-first century than US Representative Eddie Bernice Johnson, who recently retired after more than 50 years in public service. A Democrat who represented Texas's 30th congressional district for 15 terms, Johnson is the outgoing chair of the House Committee on Science, Space, and Technology. Under her leadership, the committee helped enact several historic pieces of science policy legislation including, most recently, the CHIPS and Science Act and the Inflation Reduction Act. Over her career, Johnson was involved with thousands of pieces of legislation and is credited with authoring and coauthoring more than 170 bills that became law.

Underlying the magnitude of Johnson's contributions to US science is a clear and consistent focus on the future, combined with her enduring view that science should serve everyone. In her leadership roles in crafting not just the recent CHIPS and Science Act but many other pieces of legislation, big and small—such as the America COMPETES Act of 2010—she has worked to make science more inclusive, expanding opportunities for women, people of color, and Americans from every part of the country. As a member of the Science Committee since 1993, Johnson is often praised for her bipartisanship and reputation for valuing all perspectives. This skill made her an effective legislator, even as technology, society, and the environment in Congress changed over time.

Growing up in Waco, Texas, Johnson wanted to be a doctor from a young age, but was discouraged by teachers who said girls could only be nurses. Nursing schools in Texas were segregated, however, so she traveled to Indiana to attend a nationally accredited program. After becoming chief psychiatric nurse at the Veterans Administration hospital in Dallas, she became involved in civil rights activism and then ran for the Texas legislature. With that election, she became a “first” everywhere she went: she was the first registered nurse in the Texas State House (1972), the Texas Senate (1986), and the US House (1992). She was also the first woman and the first Black legislator on the House Science Committee. Johnson recently sat down with *Issues* editor Molly Galvin to discuss the 15 minutes that determined her career in politics, how the semiconductor chip transformed Dallas, and her hopes for the future of the scientific enterprise.

You were a nurse for 16 years and had risen to the position of chief psychiatric nurse at the Veterans Administration hospital in Dallas before you decided to run for statewide office. How did you get involved in politics, and what was that leap like for you?

Johnson: After work and on weekends, I did a lot of volunteering with different neighborhood and community organizations doing medical screenings—for glaucoma, polio, and tuberculosis. It was really that volunteer work that got me involved with people who were active in the community and led me to join a group that was trying to expand opportunities for office. I was also involved with attempting to open opportunities for women. [She was active in a local YWCA chapter that formed a group called “50 Sensitive Black Women” to boycott Dallas department stores that put race-based restrictions on customers.]

We were meeting at homes to discuss how we could open accommodations and equal opportunity. In the midst of that came a lawsuit to make the Dallas City Council represent the diversity of the city's residents. I participated by going door to door to help collect some money to fund that lawsuit. That really gave me the opportunity to join others to discuss how we could create a better environment and more representation, and it just took off from there.

I had some reservations. The year before I ran, I had ended a 14-year marriage. I was really concerned about how I would provide for myself and my son. I finally decided at the very last minute to file for office. As a matter of fact, I was sitting at home 15 minutes before the filing deadline when I got a call to remind me to go. I didn't have the filing fee, which I think was \$50 at the time. But they gave me 30 days, and I was able to file, and I was off and running.

It was very new and very different, especially for this community, which was predominantly non-African American. They had never seen a woman, let alone an African American woman, do a “man's job.” I did have four or five very loyal volunteers. We had to plan day by day and hour by hour.

My campaign manager developed a plan to knock on 40 doors every day as a minimum. I would leave work and go knock on those doors. When I reached 40, I was ready to stop, but if it was still light outside, the campaign manager said, “You can get 10 more in.” I was working with a statistician who had identified the registered voters. I had three male opponents. We went into a runoff, and I won.

We had the largest number of women ever elected to the Texas House that year—a total of six women in the Texas House. That included Sarah Weddington [the attorney who represented “Jane Roe” in *Roe v. Wade* before the US Supreme Court]; we got the ruling on *Roe V. Wade* a few days after we started the session that year. It also included Kay Bailey, now Kay Bailey Hutchison, who became a US senator and ambassador to NATO. It was a very engaging, very energetic, and very supportive community.

You have served on the House Science Committee since you were first elected to Congress. You became ranking member in 2011, and of course, you left as outgoing chairwoman. Why has science been such a high priority for you throughout your career?

Johnson: Firstly, I was in a science field, in a health field, as a nurse. But secondly, I was living in Dallas, and Texas Instruments was based there. I knew all the founders and worked closely with them throughout their careers. When that first semiconductor chip was developed, it really changed things so dramatically and so quickly. All of a sudden, we went from calculators to computers to portable phones—even though those early phones looked like briefcases, they were still portable telephones. You could just see the differences happening before your eyes. In the healthcare profession, for example, there were computers to collect notes, when before we had to write it all down. Now, there are more extensive health records.

We've been able to see how this technology has dominated the world. But from the beginning,

pandemic with us all working from different locations with the aid of those chips. It is exciting and fascinating to imagine, where will this take us? We don't know yet.

For example, in rural areas, people can visit remotely with their physicians. That has improved health care delivery tremendously for so many people. Eventually, I think technology will make things much more inclusive and provide many more opportunities for a broader group of people. And we do know that it's going to be the human beings that got us there.

Already we can see that we need talent. We're trying to reach out and look for that brain power. For example, one of the scientists who helped develop Moderna's COVID-19 vaccine, Kizzmekia Corbett, came from a small town in North Carolina and then went to the University of Maryland, Baltimore County. It just goes to show you that talent can be found anywhere, and we don't want to miss that talent. We want to broaden opportunities, decentralize, so that inclusiveness can be felt in every part of the country. The more inclusion we have in science, the better outcomes we'll get.

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I said, “We've got to make sure that women and minorities are involved in all this excitement.” Once semiconductors became a part of practically everything, you could see the potential for the elimination of human talent, as well as many opportunities for the growth and addition of human talent.

And this has come full circle for you. You're ending your legislative career on a high note by helping to steward the CHIPS and Science Act into law. Your committee contributed several important pieces to help shape that act. How do you see CHIPS and Science influencing the future of science?

Johnson: Well, I think that it makes it much more inclusive and opens up many more opportunities for a broader group of people. It is absolutely captivating to see the possibilities. But we can also see that unless we broaden this to be inclusive for every mind, every way of thought, every location in our country, we'll miss many opportunities.

You can't even calculate the impact of technology. It brings people together. We just got through this

We will never be able to be the best until we involve people who have actually experienced some challenges in coming up with brilliant ideas. If they're not at Harvard or Yale or some other large school, they might get overlooked. We don't want that to happen. It's nothing against Ivy League universities, but it is about being inclusive to include more brain power. The more brain power we have, the better progress we make.

You have had quite a track record of success in the legislative arena even as the political environment has become increasingly polarized. How did you personally, and as the leader of the committee, manage to work in such a bipartisan way?

Johnson: I tried to focus on the science, on solutions, and on progress. I try to give the respect to the other members that I want to get from them. I try hard not to condemn anyone before I know them. On our committee, I've tried to reach out and be inclusive and listen to ideas, and just emphasize that our work is based on science. Let's work toward getting the scientific outcomes. Everybody's important. We need all your thinking. We cannot decide

one side knows it all. We've got to use our knowledge and try to come up with the best solutions. We owe that to our nation and to the world. As a leading nation on science, we cannot do anything less.

During your political career, have you seen a difference in how the research community engages with policymakers to advance their goals?

Johnson: The science community stands ready to join us with ideas and innovations. They just need to know that they are appreciated, and there are opportunities for them today, and that we need them. We can't sit in the halls of Congress and think about all the ideas that are being tried and tested in the same way they can. We've got to embrace the science community, and they must educate us. That's how we moved to where we are now with the CHIPS and Science bill. We're there to help them try to see that the opportunities are there, but we don't claim the brain power.

You have been advancing the cause of increasing diversity, equity, and inclusion in science, technology, engineering, and mathematics (STEM) for your entire career—in fact, you sparked many National Academies studies and activities, including a major study on anti-racism in STEM that will be released in the coming weeks. If you had to give a grade to the STEM community on their progress, what would it be?

Johnson: I think this is a work in progress. We had to do a lot of background research to convince even our committee members in the House that this needed to be done. Our society has gotten into a rut of doing it the way we've been doing it. Not much imagination has gone into how to expand opportunities and expand outcomes.

If we make science more decentralized, you will get, for example, NOAA [the National Oceanic and Atmospheric Administration]—a unique agency that performs cutting edge science but is also rooted in providing critical environmental service and stewardship. And NOAA's work on predicting the weather is incredibly useful to everyone in every part of the country, because now they have time to prepare for storms. But you can't get that kind of transformation and such useful science if you do all of it in California. You can't do all of that in Massachusetts. You can't do all of that in Mississippi. You have to look at it where innovation is happening and bring these minds together. This involves much more inclusion, which will include race and include gender, but it should also include lived experiences.

What can be done to accelerate change on these fronts?

Johnson: We have so much more communication now with new technology. When you think about the past, a big inspiration was space exploration. It has become a worldwide endeavor and has really expanded our knowledge base, and experience base, and diversity base. And I think that space exploration has stimulated the minds of many of our young people who never gave much thought to the universe except the block where they live, or the downtown where they live.

All of that is important. When you think about history, most of the real inventions that helped farmers, for example, came from farmers who were doing the work, including African Americans. To bring that knowledge to the table to advance technology—that can still happen today.

That's how we get improvements. People who are on the job, doing a job, can find a way to do it better and more efficiently. We've got to be inclusive. We've got to include geographic diversity and we've got to include many types of backgrounds. We have had some of the greatest scientists who come from other countries. When we mix that talent with American brains, there's no stopping us.

You have seen a great deal of technological change throughout your lifetime, and at the same time, so much social progress and change. Do you think that those two things are interrelated?

Johnson: They have to be. It's very difficult to bring about change without people feeling it and sharing it, without people being able to talk with each other and getting to know each other—crossing cultures, crossing races. It has to make things better. We're in a position to make the best of our democracy and make the best of all our talent, to include and encourage it. That's why I'm so concerned about getting this message out to our young girls. We have proven through our research that they have not been greatly welcomed in some of these STEM areas, but it does not mean they should walk away from those fields. We're trying to make sure to broaden those opportunities for them.

Given your experience and everything that you've been through in your career and in your life, what would you say to encourage a young person who is interested in getting involved in politics or policymaking or science?

Johnson: This is your day. You own as much of this world as everyone else. You have the freedom to think, to study, to research, to learn, and to do. Don't let anyone take that away from you because the world is waiting for your talent. We need it.