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Our chat with a trailblazing climate scientist

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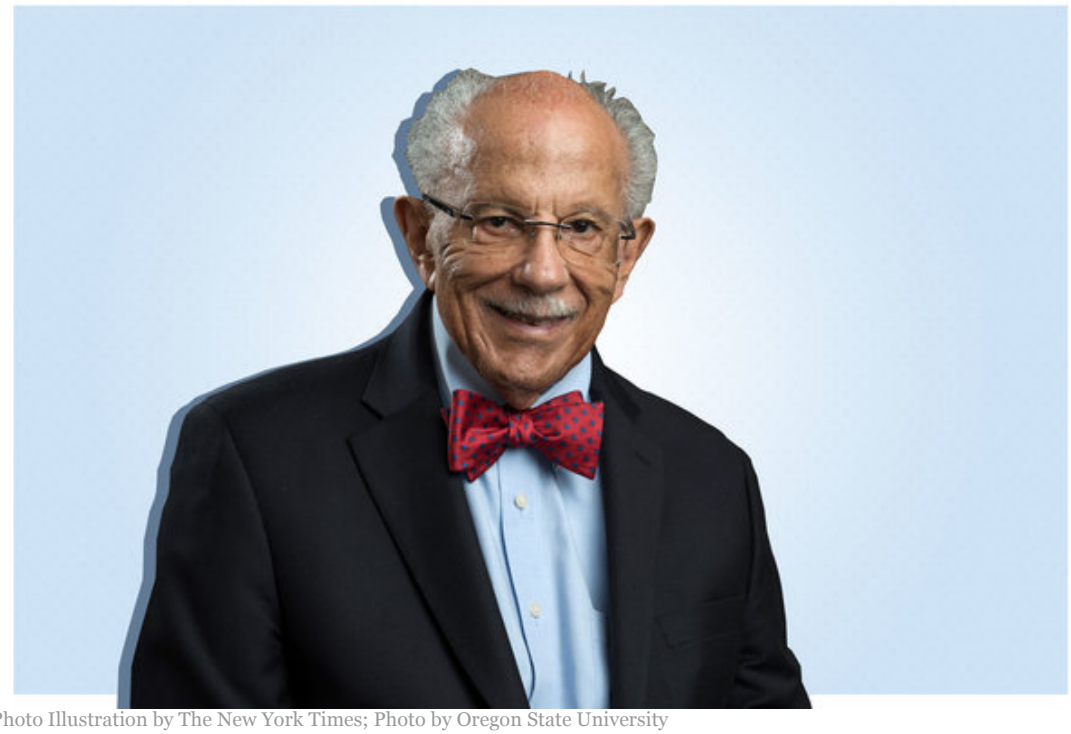

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It was the summer of 1959 and Warren Washington, then a physics student at Oregon State University, was spending his summer working as a mathematician at the Stanford Research Institute.

“They were working on some kind of atmospheric model,” he recalled, “and I said, ‘Gee, where can I go to get a Ph.D. in this field?’ ”

He had become enamored with climate modeling, or using computers to simulate the global climate. That interest would propel him to earn a Ph.D. in meteorology from Pennsylvania State University, making Dr. Washington one of the first African-Americans to earn a doctorate in the discipline. With Akira Kasahara, he developed the first generation of global climate models, which are still the basis of the models scientists use today.

This week, Dr. Washington, 82, was awarded the Tyler Prize for Environmental Achievement, which is administered by the University of Southern California and recognizes the achievements of environmental problem-solvers. Dr. Washington is splitting this year’s prize, which includes an award of $200,000, with the climatologist Michael E. Mann.

I spoke with Dr. Washington in the days before the announcement. The following interview has been condensed and edited.

What was the original interest in climate modeling?

Our first getting into this was to see if we could simulate the present climate. We were just trying to make the model, make the winds blow in the right direction, precipitation in the right areas, and all the other things that you look for in trying to have a global climate model. How to use these models for climate change experiments came a little bit later.

Even though we didn’t have a complete model, it was still a very useful tool even in the early days to give us some concern.

How has climate modeling evolved?

Oh, it’s great. Satellites have given us tremendous amounts of data to compare our models with, as well as ocean observations and sea-ice observations. We can measure so many things very carefully from space, and these measurements told us where our models needed to be improved.

And there are more people doing the work. When we started we had a small group of, like, five or six people, and now when we have meetings we have hundreds of scientists who are involved in improving our models.

A lot of people are worried that we're running out of time to act on climate change. Do you wish we had started sooner?

I think I'm a little pessimistic just because there's this long time scale, the fact that when you burn a molecule of CO_2 it's going to be in the atmosphere for almost a century.

I spoke to George H.W. Bush's cabinet in 1989. Cabinet officers started inviting me to come and have secret meetings with their staff away from the White House, saying that they wanted to do more to deal with this problem.

If we would've started taking steps in 1989, it would've been a lot easier to deal with it. Because now we have to have to do a certain amount of catch-up.

Part of the responsibility of scientists like myself is that they should offer advice to the government as well as speaking to the public directly as part of their responsibility. I've been a strong believer in being honest about what our science is telling us and even talking about our shortcomings. And these shortcomings shouldn't deflect us from trying to find ways to cut down on emissions, because we do know what the root cause of these changes are in our system.