EDITORIAL

The first but not the last

After 2 years in Washington, DC, Alondra Nelson is returning to Princeton. A highly decorated sociologist who has written and studied extensively on the intersection of genetics and race, she was appointed by President Joe Biden as deputy director for science and society in the Office of Science and Technology Policy (OSTP) in 2021. The following year, when Eric Lander was removed as the head of that office, Nelson stepped in as its interim director until Arati Prabhakar was named permanent director 8 months later. I recently spoke with Nelson, about a range of issues, from scientific publishing to artificial intelligence. She clearly leaves behind a legacy of science policy-making that encourages equity.

In the world of scientific publishing, Nelson may be best remembered for a memo that set out requirements for providing public access to research findings that have received federal support. The "Nelson memo," as it is commonly referred to, offers different pathways to this end. A scientific paper can be published in an open access journal; alternatively, authors can deposit a paper that has been accepted by a journal (but not yet published) in a public repository. Nelson told me how making "the knowledge ecosystem more equitable in different ways" requires a multifaceted strategy that considers low- and middle-income countries and minority-serving institutions. Options that don't involve article processing charges (as most open access journals do) remove an insurmountable barrier to young researchers and institutions with less funding.

Among her many professional accomplishments, Nelson's academic scholarship and her tenure at OSTP have both served to place science in a social and historical context. "I hope that one of the lessons learned by all of us is that you can't have effective science, or technology, applied science, or innovation, without actually thinking about the use cases," she told me. "The context in which these things will be disseminated and circulated" includes considering "the folks that you need to talk to upstream if you're going to have the downstream outcomes that you want in a particular process, or with a particular product, or scientific output. I would say to scientists...researchers, and engineers who don't have a particular social orientation around their work...that even if they simply care about having efficacious science, it's going to increasingly require them to engage with the social context and the social implications of their work."

Unfortunately, in the United States, the training of scientists has been slow to make room for contemplating the sociology of science. I asked Nelson if she thought there was any hope for getting courses on the social impact of science into undergraduate and graduate education. "I think there is a kind of powerful force, particularly among the new generation of scientists and of researchers...who really understand that the curriculum needs to change, needs to broaden," she said. Nelson noted that the histories of some fields have not been equitable and in some cases have caused harm. Creating policies that "the American public deserves" requires turning this around.

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> Alondra Nelson

Nelson has been the first Black woman to do so many different things—director of OSTP, head of the Social Science Research Council, and dean of Social Science at Columbia University, among other achievements. I asked how she manages to remain optimistic about the future of science after overcoming the obstacles faced by women and people of color. "The barriers are real...and I would say that science and technology can be more challenging still," she said. "Being the first obviously has its challenges. But I am the first because I go about my work knowing that I'm never going to be the last. Anybody that works with me knows that I go in as the first to just clear space for others.... And so you're the first, but you're not the last...making a change, sometimes too incrementally and too slowly, but it's certainly making a change."

While resuming faculty positions at the Institute for Advanced Study and Princeton University, Nelson will still keep a foot in Washington, DC, at the Center for American Progress to develop ideas about science and technology policy that can be leveraged to improve all of the issues that she has explored throughout her career.

It's likely that we've not heard the last of Nelson being the first.

–H. Holden Thorp

H. Holden Thorp
Editor-in-Chief,
Science journals.
hthorp@aaas.org;
@hholdenthorp

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