White House Office of Science and Technology

■ Joni Sue Lane, center, holds the Bible as Vice President Al Gore, left, swears in her husband, OU Alumnus Neal Lane, as the new director of the White House Office of Science and Technology Policy.

The Science Guy at the White House

Presidential advisor Neal Lane urges his scientific colleagues to have a real dialogue with America.

by GREG D. KUBIAK ■ Having just returned from viewing the Space Shuttle Discovery launch that carried U.S. Senator John Glenn back into orbit, presidential advisor and OU alumnus Neal Lane was buoyant: The October 29 event was thrilling for the country and full of purpose for science.

"The nationwide excitement surrounding the lift-off proves that the frontier spirit is alive and well in America," Lane says. That same excitement and spirit drive this Oklahoman to do his best in a demanding job.

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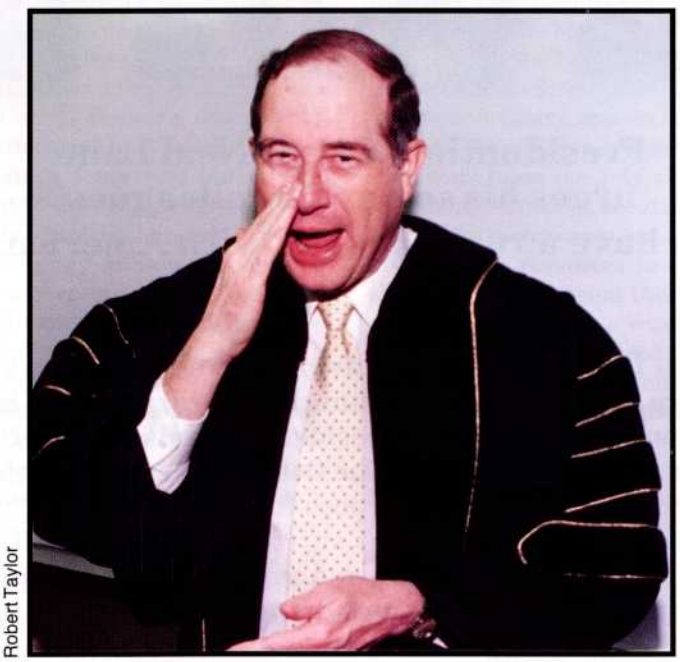
■ National Science Foundation Director Neal Lane, left, now White House science and technology advisor, adds a 1995 honorary doctor of humane letters from the University of Oklahoma to the bachelor's, master's and Ph.D. degrees in physics he earned as a student on the Norman campus.

As director of the White House Office of Science and Technology Policy, Lane makes such field trips from time to time, though not usually with the president and first lady and nationwide attention. Most of Lane's time is spent devising ways to coordinate the American investment in science and technology—through education, research, funding and international cooperation. In addition, as the chief advisor to President Clinton on scientific issues, he must be an ardent student of a variety of subjects, from space exploration to genetic cloning to global climate change.

While some critics of government spending and the space program claim the Discovery mission with Senator Glenn was more about public relations than science, Lane is quick to take issue. "It really is good for science. There were 80 scientific experiments on this mission—really an unusual amount of science getting done. Senator Glenn's participation will contribute to our knowledge of the aging process, important data for a nation studying how to cope with a population that will have one in four of its citizens over age 65 by 2040.

"We have already learned that some of the things that happen physiologically to the astronauts, while they're in orbit for an extended period of time, are very similar to what happens to people in aging," Lane contends. Some influences include loss of muscle mass and bone weight, effects on the immune system and sleep disorders. Many tests and experiments with the senator sought knowledge about that process.

But space is not the final frontier for the scientific community so far as Lane is concerned. One of the most controversial issues will be the scientific and ethical implications of genetic cloning. After the successful cloning of a mature sheep, "Dolly," in Scotland in 1997, Lane was one of the first to applaud the accomplishment—but with caution. As then-director of the National Science Foundation, he commented, "What we know is that a sheep named Dolly has written a whole new page in the history of our knowledge about genes." But he also expressed hope at a National Press Club speech: "Let us not be naysayers about new knowledge, nor timid about technology. Stopping that process of civilization is not an option, but we must direct it, as best we can, always toward beneficial ends."



Robert Taylor

■ Well acquainted with the effects of the Oklahoma sun, OU Alumnus Neal Lane applies sun screen before joining fellow honorary degree recipients at 1995 Commencement Ceremonies on Owen Field.

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A year and a half later, Lane is just as hopeful for the good use of science with new discoveries and technology. After noting the president's executive order after the Scotland cloning to prohibit the use of federal funds for human experimentation, Lane said, "We don't want to miss the opportunity to cure people of terrible debilitating or fatal diseases. And we don't want to close the door on the research that might lead to improving people's lives—saving people's lives." However, in reflecting on the "serious religious and moral questions that people have on their minds," Lane expects that "this will be an issue before the American public for quite some time."

The merging of technical and public issues in all of science underscores Neal Lane's current tenure. He states simply, "Scientists must get out and have a real dialogue" with the American people. He draws from the birth of our nation to find our heritage for support and interest in science. "Jefferson was passionate on the subject, and Franklin was a scientist." From World War II through the Cold War, "America called on the scientific community to help protect us during the days of external enemies," he wrote in a recent article.

Lane believes, however, that a new environment exists today in which science must have a "more public and civil persona." He notes his colleagues serving in their communities, writing op/eds for newspapers and "speaking to Rotary Clubs" on the current issues and importance of science. Lane contends that such outreach will help the public better understand science, comprehend technology's relationship to the economy and jobs, support funding for research and, perhaps, inspire young people to pursue science as a vocation.

No one had to convince young Neal Lane to pursue his love of science. He motivated himself by digging for fossils and dinosaur bones in a gravel pit at a neighbor's house in Oklahoma. Later he acquired a chemistry set and a microscope, and secure in his love of science, Lane eventually landed at the University of Oklahoma.

He left OU with three degrees in physics and began a distinguished career in academia, science and government. A physics professor and provost at Rice University, chancellor at the University of Colorado at Colorado Springs and director of the physics division at the National Science Foundation (NSF) were the preparation he needed for his first presidentially appointed position, director of the NSF.

Lane praises the people at the NSF, with whom he shares credit for his successful tenure at the agency. His objective was to "keep the nation at the cutting edge in science and technology and ensure that the programs we have at NSF were the very best they can be." And helping ensure that quality control came by listening to the best advice of the NSF staff and the scientific community who "form a national team." Lane served as NSF director from October 1993 until he took his current position.

The conversations about the White House assignment started between Lane and administration officials in early 1998. "The president did decide in February, after he'd done his checking, and determined that I had the knowledge and the vision that he wanted for the job. I was honored and feel very privileged" to serve the nation this way, Lane says. And though his unanimous confirmation by the U.S. Senate on July 31 came quicker than usual for a presidential nominee, Lane would have preferred to be on the job much sooner.

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Robert Taylor

■ On hand to introduce NSF Director Neal Lane, left, at the pre-Commencement luncheon for recipients of the University's 1995 honorary doctorates was his best friend from Oklahoma City Southeast High School, Doug Sauls, of Norman.

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■ **NSF Director Neal Lane had OU stories to share with guests at the pre-Commencement luncheon for recipients of the University's 1995 honorary doctorates.**

The confirmation process generally runs slowly, according to Lane. In fact, his and other nominations were stalled for a short time by a Senate parliamentary hold that boiled down to a dispute over the length of Mississippi's duck hunting season. (Lane's wife, Joni Sue, gave him a wooden duck decoy that sits in his office as a reminder of Washington politics.) Still, Lane sailed through the rigorous White House and Senate checks. Sighing with his best professorial deadpan, he theorizes, "It may be that I've led a very dull life."

However, Lane's favorite hobby is hardly dull. An enthusiastic snorkler, he, his wife and mother recently traveled to Grand Cayman Island, where Lane observed such creatures as a two-foot Caribbean lobster. "He looked delicious, and he knew that I thought that, so he didn't stick around," laughs Lane. Unfortunately, Lane could not stick around long himself. With a packed schedule and the need to be available and accessible at the White House, he jokes that the only time to get away is perhaps "part of August and maybe New Year's Eve."

The demands appear to agree with the hard-working, soft-spoken Sooner. With his long day starting at a 7:45 a.m. senior advisors' meeting, Lane is up with both the chickens and the owls.

Education and science literacy are top priorities for Lane and the administration. "The president is very, very concerned about improving the education of all of America's young people—whatever city they come from, whatever their ethnicity may be." And more than just a desired appreciation for his own field of work drives Lane in this campaign.

"All jobs are becoming more to rely on science and technology, and so all people need to learn more about science and technology if they're going to have fulfilling jobs and be able to contribute to the larger society in ways they want." Acknowledging that U.S. students "don't measure up well in the international tests," Lane sees helping teachers as a key component to science literacy.

An acclaimed educator himself, Lane knows the value of good teachers. An important mentor to him at OU was physics professor Chun Lin. "He never missed an opportunity in the classroom, or in informal interaction, to get across the excitement of the physics." Sharing enthusiasm for his work and expertise in the field are the twin abilities that his mentor possessed, and that Lane holds himself. Still in touch with Lin, now at the University of Wisconsin at Madison, Lane recalls, "He was always there for us—the students."

Lane obviously learned the value of being an accessible and giving instructor. Twice he was awarded Rice University's George R. Brown Prize for Superior Teaching. Among many honorary degrees and awards, he considers his recognition as a teacher the highest honor of all. And the second most satisfying accomplishment? His graduate students. "I've been blessed to have outstanding students," who have gone on to make great contributions to science and teaching.

But when not working or playing, Lane combines the two interests in his reading. With both fiction and nonfiction on his reading list, he claims to have about five books going at once, "two by my bed and three downstairs." Currently, one of the five is *Antarctica*, a futuristic fiction set after the term of an environmental treaty expired. The intrigue and interplay of environmental, political and industrial interests and its potential for reality have captured the reader's interest.

And lest you have an earlier image of Neal Lane as a pocket-protector-clad physics student as an OU undergrad, think again. He had a typical experience on campus, including reverence for the fall fascination. "You couldn't be an OU student and not follow football," Lane says.

More notably, he actually wore the crimson and cream on Owen Field—not as a football player, but with the Pride of Oklahoma Marching Band. And his instrument? "The tenor saxophone." However, he has not had the opportunity for a White House jam session with the resident sax player.

Lane is not planning a career change anytime soon, but he does see himself back at a university someday—not for quasi-retirement, but because he loves the intellectual stimulation of academic life. "It keeps you young," he says. And if intellectual stimulation won't, "the students will."

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