Where SCIENCE Meets STATECRAFT

Norman P. Neureiter, interviewed by Charles Weiss

In the past few decades, advances in science and technology have revolutionized the ways in which states define and pursue their goals. International relations is no exception. From controlling the spread of disease to encouraging the spread of information, foreign-policy makers must continually contend with issues that require a firm grasp of this rapidly changing field. Government often lags behind the rest of society when it comes to understanding the impact of scientific trends, however, and the foreign policy community in particular has tended to see such things as being outside of its realm of responsibility.

In order to close this gap, the State Department acquired its first full time science adviser in September 2000. Over the past year, Dr. Norman Neureiter has built relationships with the private sector, created ties to the scientific communities in Russia and India, and looked at ways to keep Foreign Service officers on top of important scientific developments, among other things. He has worked on getting better information technology to embassies around the world—and making sure that the information stays where it belongs. In short, his work has been

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Editor's Note: Dr. Neureiter is the Loewy Memorial Lecturer for 2001 of the Edmund A. Walsh School of Foreign Service Program in Science, Technology, and International Affairs.

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sure proof that science now lies at the core of U.S. foreign policy interests.

This fall, Dr. Neureiter sat down with the *Georgetown Journal of International Affairs* to reflect on his experiences after his first year in the post, the current state of the sciences at the State Department, and his plans for the challenges ahead.

GJIA: Why does the State Department need a science adviser?

NEUREITER: That was brilliantly laid out in a study done by the National Academy of Sciences (NAS).[1] In it, they examined the sixteen stated goals of U.S. foreign policy, and found that thirteen of the sixteen goals involve science, technology, or health. But when you looked around at the department and what had happened to science here in recent years, it became obvious that we really did not have adequate numbers of people equipped with relevant backgrounds to effectively address these issues. There are some real pockets of strength in science within the department, particularly in environmental issues, arms control, and our geographic unit. Nonetheless, at the heart of the department, at the regional desks and the regional bureaus, there is very little scientific expertise. The State Department has a culture of history and international relations, and as one former science adviser to the president said, it is one of the most "technophobic" cultures around. On that basis, there was a feeling that we did need to strengthen our capability, so one of my key roles is to upgrade the scientific and technical literacy of the department in order to deal with the issues of the twenty-first century.

GJIA: How do you intend to make these changes?

NEUREITER: A key part is building an outreach network to the scientific community so that we can draw some of them into the picture, ask them for advice, and hold roundtables. But our most important job is simply bringing more people with science backgrounds into the department. Last year, the department had scientific interns for the first time. We also had more AAAS (American Association for the Advancement of Science) fellows in the department, and we have our first fellow from a professional society. Furthermore, we are discussing a program proposal whereby professional scientists from universities could come to work for a year or two in various capacities. Of course, there are money issues, there are organizational issues, but we are working on all of that. I think that by having people in the system, we will be able to gradually change the culture of the department, and recognize that science and technology are very important and relevant. Furthermore, it will help put scientific facts behind some of these broad political and foreign policy issues.

GJIA: How do you pick your issues?

NEUREITER: My basic method is to look at the issues on hand and then select two or

three that seem to be inadequately addressed. For instance, I took on the United States-India Forum, a proposal that had been around for the past three years to create a science and technology forum for improved and intensified relations between the United States and India. Also, we are trying to deal with the death of the Gore-Chernomyrdin Structure (created by the joint U.S.-Russian Commission on Economic and Technological Cooperation), in the hopes of getting something started again, because I think that our present bilateral cooperative relationship with Russia is very important for our long-term future relations.

GJIA: What are some of the current issues with which you are dealing?

NEUREITER: We get inquiries on a tremendous range of issues. One that we are getting very involved in now is cyber security. The administrative and bureaucratic challenge is the fact that the State Department is not driving the cyber-security process for the U.S. government. On the other hand, there is a major international dimension to it. Now, with these latest terrorist attacks, we have discovered that the department chairs the Intergovernmental Working Group on Counter-Terrorism. There are co-chairs from the Department of Defense, Department of Energy, and the FBI, but the State Department really set up this committee and chairs it. So we are making links through that group to the outside, particularly through the NAS, which we have not done before. This also responds to the NAS's desire to help the government with what has become the frightening issue of terrorism.

GJIA: Are you in the position to make scientific recommendations to the secretary of state on specific issues?

NEUREITER: You don't make policy in an institution like this by whispering in the secretary's ear. There are twenty-two bureaus in the department, and for specific issues, we often set up a special council to address matters. For instance, we set up a space policy council to deal with all of the relevant issues relating to space policy. I was actually picked by the eleven bureaus that are involved to be the chairman of this council, because I was a neutral party among all their interests. But this council must also interface with the National Security Council on the whole complex of issues around space and space policy. Again, things do not get resolved by whispering in the secretary's ear. They get resolved by working the system, by looking at the papers, by having meetings, by trying to reach consensus, and then, if you cannot reach consensus at the various bureau levels, you have to escalate it. If you cannot reach consensus among agencies, then it eventually goes to the deputy secretaries' level for discussion and resolution, and if that fails, it goes to the president as a split decision.

GJIA: How does the role of the science and technology (S&T) adviser to the State Department compare to that of other countries' S&T advisers?

NEUREITER: In general, what has happened in the world, especially since the end of World War II, is that the U.S. investment in S&T across the board has made it pretty much the leader, so we tend to be the model for others. Granted, the research committees are highly developed in both Europe and Japan, but

the Japanese structure is somewhat different than our own, and only recently did they create an office that is something like our own Office of Science and Technology Policy (OSTP). At least in this area of scientific advice, I think Americans have generally tended to lead and the others have tended to follow.

GJIA: How does your experience in the private sector help you in this job?

NEUREITER: What private sector experience does is give you an additional merit badge on your resume. In other words, it's another kind of experience that you had and from which you benefited. I think that many government people are a little in awe of the private sector, which they shouldn't be. But they are somewhat afraid at times because they don't know as many people, and they don't know how to approach them. So I think I bring the ability to recognize the strengths and the weaknesses, the power, but also sometimes the narrow-mindedness, of the private sector. I know where to go to find people that can help us, and when we need to draw on these people for advice, I feel comfortable doing so. The second part is that there is an efficiency and a need for efficiency in the private sector—the administrative support, the functionality of computers, and so on—that puts government to shame. So having had that experience in the private sector, one can at least be a voice, if not a force, for improvement in those inefficient areas of government.

GJIA: How do you deal with the mix of government and business aspects in the scientific issues that face the department?

NEUREITER: In this administration, "public-private partnership" sure is a winning phrase. The more an idea is framed within the public-private partnership context, the greater its chance for success. It's really not a problem, but you do have to be careful of conflicts of interest, so there are lots of rules. You shouldn't be meeting with just one person from industry, you should meet with several, and there are rules on how much a meal can cost if someone else pays for it. All of these restrictions are there to avoid undue influence and conflicts of interest. But the industry side of so many of these areas is very important, and if you're not interacting with that segment of the population, then you're just missing something.

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GJIA: Is the State Department improving its use of information technology?

NEUREITER: It was remarkably bad for a long time, but we are trying to improve things. Secretary of State Colin Powell has managed to reverse the past trend of a shrinking budget for the department this year, so he did get a couple hundred million dollars to start the process of upgrading the computer systems across the board. All of that is underway, not just here inside the department, but also around the world, which is very costly. There are countries where even if you

upgrade internally, unless you build a dish on top of the embassy, you will not have a link to the outside world. The secretary is determined that we will have, within a reasonable length of time, Internet capability on every desk in the department and around the world. Early on, he gave a speech to the entire department and said that he lived on the Internet. So now that we have a secretary who really uses a laptop daily, the most important step needed for the cultural change has already been taken.

GJIA: Do you think our science attache program should be revised?

NEUREITER: Yes, and I have a long-term plan for that. The major question at hand is whether the old model, where we put people from universities in as science counselors at our embassies, is the right method, or whether the present model, where we have more senior Foreign Service officers with some science background assigned as attaches, is the right one. My model, I think, is a mixture of the two. What we need is a continuous infusion of people from outside for short-term assignments, between one to three years. We have our first S&T adviser now in Australia, a woman from NASA, and so NASA has contributed her and is paying the expenses. But we also need more people with scientific and technical backgrounds, who don't want to be bench scientists, coming into the Foreign Service. Lastly, we need increased training for those who are already in the Foreign Service and don't have much of a science background. That is why we are doing more training at the Foreign Service Institute, with the help of AAAS.

On most newspaper front pages, our work has been obscured by the war in Afghanistan, but there was a period before September 11 when you would literally pick up *The New York Times* and every third article on the front page related to all of these technical issues, whether it was stem cells, cancer research, infectious disease, AIDS throughout the world, the energy problem, or the global warming problem. Every one of those issues regularly features in the daily news today, and unless people are somewhat comfortable with and have a little bit of background in those subjects, it becomes very difficult to be an effective diplomat, because those are the things that people are talking about globally.

GJIA: What future issues do you see coming down the pipe that aren't on the immediate agenda?

NEUREITER: The National Intelligence Council (NIC) released an unclassified report this year titled "Global Trends 2015."[2] The report stated that the government does not have the ability to predict the future fifteen years from now. But the report did define seven drivers that the committee believes will shape the world by 2015. One of them is science and technology, which has four subcategories that they consider critical: information technology, nanotechnology, material science, and biotechnology. These will impact trade, security, terrorist threats, and defense capabilities. And certainly, space is a big issue. You can begin to get an idea of future space policy implications from the report released by the committee formerly chaired by Secretary of Defense Donald Rumsfeld.

GJIA: Where would you like the department to be in the next five years?

NEUREITER: I want a combination—of a more scientifically-literate Foreign Service and a continuous influx of shorter-term people from the professional scientific community—broadly arrayed throughout both the bureaus in the State Department and our embassies abroad. I think it's important that we establish some momentum in that direction. There are people on Capitol Hill who will be very supportive of this move. There are also people in the department who I think would agree. As you get to questions about careers, such as how narrow the top of the pyramid is and the "selection out" process if you are not promoted within a certain time period, you get into complications about making careers for scientists in the system. So, when we are trying to recruit people with more scientific backgrounds into the Foreign Service, we ask ourselves, "Gee, will we be able to lay out a career path where these people can work as scientists?" Presently, we don't have a scientific track, but I think a scientist can build a very satisfactory career here, and at some point transfer and become a more senior economic or political officer. With this background, there's no reason why he or she could not become a deputy chief of mission or an ambassador.

NOTES

1 National Research Council, *The Pervasive Role of Science, Technology, and Health in Foreign Policy: Imperatives for the Department of State*, (Washington, DC: National Academy Press, 1999).

2 "Global Trends 2015: A Dialogue About the Future With Nongovernment Experts," National Intelligence Council, 2000. Full text can be found at <http://www.cia.gov/cia/publications/globaltrends2015>.