SCIENCE, TECHNOLOGY, AND SOCIETY

Furthering Cross-pollination among Academic Fields

What are the possible social consequences of genetic research? How do emerging technologies shape the way elections are run? How have technological advances changed the definition of human rights? These and other questions reflect our increasing concern about the interrelation of scientific and technological systems with social and political life. Addressing the conversation from an academic perspective is Bard's new Science, Technology, and Society (STS) Program.

STS provides a foundation in the fields needed to study this interdisciplinary subject in conjunction with a primary divisional program. The program allows for study in a number of areas that span the academic divisions—such as nonfiction science writing, film and electronic arts, or developmental economics and technology—and promotes scholarship that confronts the key issues raised by contemporary science and technology.

Students in STS follow, in conjunction with their primary program requirements, a challenging curriculum that includes one two-course sequence in a basic science (biology, chemistry, computer science, or physics) and two additional courses in the Division of Science, Mathematics, and Computing; two STS core courses, along with two more STS cross-listed courses; and one methodology course, usually in policy analysis or statistics. Starting this spring, STS offers paired science and technology courses that are linked by a common theme and anchored by an introductory science class: for example, an introductory course in epidemiology paired with a course in the history or anthropology of disease.

The idea behind the paired courses, according to Gregory Moynahan, assistant professor of history and codirector of the STS Program, is "to create an immediate logic of why science is in society and society is in science. Our vision is not to reduce a subject to a very specific subfield, but rather to show all the ways in which a topic like epidemiology or biology opens out into these other issues. For example, a Biology Program course in epidemiology might pair with a course in

the history and anthropology of disease. Science students start thinking about public health, for example, and history students start thinking about how we have come to understand the biology of disease."

Another goal of STS is to create a bridge between those who have not studied or taught science at Bard and those who have. An unexpected outcome of the success of the College's Science Initiative is that this gap has become clearer. "I don't want to say 'Balkanized,' necessarily, but it's been hard for students in the other divisions to find a point of entry," says Jacqueline Goss, assistant professor of film and electronic arts. "In some ways the science division has been the last frontier. We'd like the STS Program to be a bridge that helps students from the sciences come to our divisions, and vice versa."

Both Moynahan and Goss feel that Bard's relatively small population makes STS more viable than it might be at a larger school. "At a small place like Bard we can work to create connections between the sciences and the social sciences in a way that our society as a whole hasn't," says Moynahan. "That becomes a productive aspect of the program; a small community can become a model that can't be developed at a larger place." Adds Goss, "At engineering schools, and at places like M.I.T. and R.P.I., the STS programs are like little cells inside much larger organisms. At Bard, STS can take on a much bigger role and have a larger function."

In the 2006–07 academic year, Noga Arikha, a visiting assistant professor in First-Year Seminar, will teach an STS course titled History of Medicine and Psychiatry in the West. "Liberal arts colleges are places where the humanities need to be practiced rather than just preached," says Arikha. "Because we're living in a world where science rules a lot of our lives, it's the responsibility of a liberal arts college to actually try to under- stand where we are in regard to science. We need to take stock of where we are; we need to find the tools and concepts to understand how to ask the right questions regarding the relationship between humanity, ethics, and the sciences. A lot of people talk about interdisciplinary curricula, but few practice it. A liberal arts college like Bard, where there's also a lot of free spirit, is the kind of place where good things like STS happen."

Moynahan echoes Arikha's description of Bard's curriculum—his term is "classic"—when he differentiates the STS Program from those at other schools. "What's different about our program, and our curriculum, is that it's more rigorous in terms of requirements," he says. "This is in keeping with the classic curriculum that Bard emphasizes: students need to learn a field, and a methodology, well. Precisely because Bard is so tightly knit, it's a new way of creating a dynamism on campus around thinking about science."

STS students came to the program from various disciplines and backgrounds, as is the case with their peers in other programs. Some had considered double majors; others became interested in a new subject and conveniently learned of STS at the same time. "STS attracted me because it allows me to formally extend my study of the social and political consequences of scientific knowledge and practice that the traditional Biology Program doesn't officially promote," says Parris Humphrey '06, who is concentrating in STS and biology. Humphrey's post-Bard plans include pursuing a degree in medicine as well as a master's degree in public health. Tenzin Lama '07, who is studying history along with STS, came to the program from another direction. "During a year away from Bard, I took a class at the New School in New York City entitled Science and Empire," she explains. "The class was very enlightening, an interesting synthesis of science, history, and politics. Looking through the Fall '05 course list when I came back to Bard, I saw that similar classes were on offer. STS is a very useful addition to Bard's academic programs. Now students can take classes that combine technical and theoretical knowledge in a meaningful way."

Possible future STS offerings include a chemistry course linked with a history course on the second industrial revolution in Germany; a course on the social science issues involved in simulation and modeling in computer science; and a course that studies how mechanism in the 18th century can be studied to help us understand our own problems with technology. Moynahan seems to be confident that STS has a long future ahead of it; he cites several on-campus projects as evidence that applied science is alive and well at Bard. "Students are putting biodiesel into buses, for example, and they're making their own radio transmitters," he says. "Bard students are singular in that, when they're interested in the material, they're willing to do the extra work—even outside of their regular course work. At other colleges where I've taught, students were just focused on whatever got them good grades. What's exciting about Bard is the community aspect and the freedom that students have to become energized about projects like these. I feel that the STS Program has enormous potential here."

—Kelly Spencer

Left to right: *Noga Arikha, Gregory Moynahan, and Jacqueline Goss*