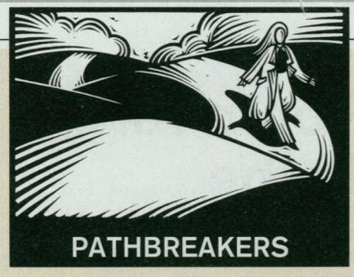


A Thoroughly Modern Marriage

It's not exactly unheard of in science for a younger woman to marry an older, better established scientist in her discipline—often one who has served as her mentor—and thereby benefit from his experience and advice. It's not so often, however, that it happens the other way: a marriage where the wife was the mentor and senior scientific partner. But that is the case for geologists Diana and Bob Kamilli. "People are amazed at our sort of role reversal," says Bob, a 45-year-old economic geologist with the U.S. Geological Survey (USGS) in Tucson, which has its offices at the University of Arizona.

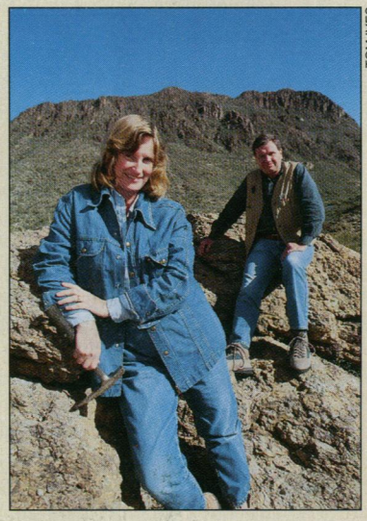
The Kamillis' unusual two-career marriage has now lasted 23 years and the couple has had to be flexible enough to survive some setbacks. Perhaps the most serious was when Diana failed to win tenure at Wellesley, where she had been chair of the geology department. They have survived, however, and both say their lives are rich and they are pleased with the way their careers have developed —even though, as Bob says, "we don't expect to be elected to the National Academy of Sciences."

Bob says he is proud of the fact that Diana, 51, was "most definitely my role model." She was 5 years ahead of him in science when they met in introductory geology at Rutgers University, where Diana was a graduate student lab assistant and Bob was an undergraduate. She was impressed with him as a student, and played an important role as a mentor: "She introduced the idea to go to grad school," says Bob. "In my family, I was the first generation to go to college."

By the time Diana earned her Ph.D. from Rutgers in 1968, the pair were planning careers in tandem. Diana taught geology at City College in New York while Bob finished his bachelor's degree and applied to graduate schools. Then, at 26, Diana was offered the chair of Wellesley's tiny geology department, and Bob was accepted at Harvard; they got married and moved to Cambridge.

After 6 years at Wellesley, Diana was denied tenure, partly, she thinks, because her mentoring activities—teaching, taking students on field trips, and running the department—left her little time to publish. She recovered by adapting her training to a different scientific niche. She and a colleague received a National Science Foundation grant to do research in archeological geology through both Harvard and the Massachusetts Institute of Technology. Having learned the importance of publishing the hard way, she published extensively on the composition and provenience of Mesopotamian potsherds, helping strengthen a theory that the pots were made by traveling potmakers, who used local materials rather than carrying the pots with them along well-known trade routes.

Meanwhile, Bob had finished his doctorate and accepted an offer with Climax Molybdenum Co. in Colorado. "It was his turn," says Diana. They moved to Colorado, where she tried archeological consulting—analyzing artifacts and materials at archeological sites. When he had a chance to join the USGS in 1983—in Saudi Arabia —the pair decided to go. "I was off the job ladder, and we had a child by then, so it was a good excuse to take time off to be a parent," says Diana. When they returned to the United States in 1989, Diana re-established her consulting business.



TOM IVES

Role reversal. Geologist Diana Kamilli was mentor and senior role model for her husband, Bob.

It's worked out so well Diana says she sometimes feels her unusual job strategy is "cheating." "Deep down, I sometimes feel I should have a more structured job, with my training." But, she says, "I don't think this would work if we both wanted structured jobs. This way, I can do science fairs with my daughter, feed the kids' rats, and work at the microscope." And those are all things Diana Kamilli expects to keep on doing, thanks to some unusually flexible roles.

–Ann Gibbons

actually harder but provide more cooperative and hands-on experiences) to the way the faculty interacts with the students," said Paula M. Rayman, director of Wellesley's Pathways for Women in the Sciences program and an associate professor of sociology. "It's the model department here." As a result, says Rayman, women not only stay in chemistry but frequently switch into the program once they begin taking chemistry classes.

Keeping women in science through college isn't necessarily enough, however. Although Wellesley's retention rate among science majors is higher than the 53% achieved by its neighbors Harvard and Radcliffe, a survey of recent graduates turned up a surprise: 20% dropped out of science within 6 months of graduating. "This was a shock," said Rayman. "We know the attrition rate is high after college, but we didn't expect that the biggest drop would occur almost immediately, before getting to the so-called chilly climate of graduate school."

Rayman found some factors that predict who's going to go on in science after leaving Wellesley, such as having had experience in a faculty member's lab. Yet it's hard to escape the conclusion that the culture of science itself may also have something to do with women's lack of interest in pursuing a scientific career.

"One of the characteristics of the ideology of science is that science is a calling, something that a scientist wants to do, needs to do above all else and at all costs," says Sheila Tobias, a consultant on science education with the Research Corp. in Tucson. "Another is that both scientific talent and interest come early in life—the 'boy wonder' syndrome. If you don't ask for a chemistry set and master it by the time you're 5, you won't be a good scientist. Since far fewer girls and women display these traits than boys and men, you end up with a culture that discriminates by gender."

Tobias argues that until the culture of science is rethought from the ground up and scientists begin to change their notions of the preferred behavioral characteristics of a scientist there will continue to be high dropout rates for women. "The next step is to have some self-examination by the scientists themselves as to what a scientist really is," Tobias says. Until such a reexamination takes place, the best alternative will be programs that aim to provide the kind of environment in which science seems a natural thing for a woman to do.

–Joe Alper