

## Lone Star State

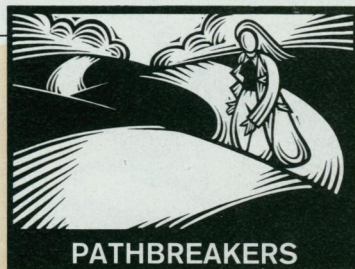
Mary Osborn's career has been nothing short of stellar, but she's not resting on her laurels. She's fighting to make Germany, her adopted home, more hospitable to women scientists, and she's got her work cut out—because Germany has one of the thickest glass ceilings in European science.

Osborn, 52, is a world-renowned cell biologist at the Max Planck Institute for Biophysical Chemistry in Göttingen. Her pioneering work on cytoskeletal proteins (which help to give the cell its form) has led to new methods for classifying tumors. That work has also made her one of Europe's most frequently cited women scientists in the 1980s, according to the Science Citation Index. In Germany, however, Osborn is a rarity: Though women earn 28% of science Ph.D.s in Germany, they hold fewer than 3% of the full professorships. "Germany is at least a decade behind the U.S.," Osborn says. "And it's improving much too slowly....I've seen that it's not enough not to discriminate. Things won't get better without positive action."

Osborn didn't always think this way. Until a few years ago, she says, she considered gender a "non-issue." Early experiences in her native England prepared her well for life in science, first at a girls-only high school, where "you find out young that you can do science and math," later at the University of Cambridge, where she studied mathematics and physics. "At Cambridge, your grade for the entire 3-year course depends on one set of exams. It prepares you to face any pressure. If you can survive that, you can survive anything."

These confidence-building experiences behind her, Osborn didn't worry about being one of the few women in a nearly all-male community as a graduate student in biophysics at Pennsylvania State University or later as a postdoc in Jim Watson's lab at Harvard. From there she went on to work at some of the world's best labs—the MRC Laboratory of Molecular Biology in Cambridge, England, and then Cold Spring Harbor. It seemed to her that women were being welcomed into science, and she describes those years as "very positive experiences for me." "In those days it was probably an advantage to be a woman."

Osborn retained this optimism when she moved to Göttingen in



**Focus on improvement.** Mary Osborn thinks "positive action" is needed to get more women into senior science positions in Germany.

1975 with her husband, biochemist Klaus Weber, whom she met at Harvard. Although she saw that women hadn't advanced as far in German science as they had in the United States, she says she "assumed that there was just a lag...one only had to wait and it would get better." Eighteen years later she says: "Time has certainly not solved the problem. Very few women have moved into senior positions."

What's especially frustrating to Osborn is that the male scientific establishment often seems blind to the question of sexism. She points to a 1991 report by the Max Planck Society (MPS), which concluded that the main obstacles facing women in the 64 MPS research institutes are child care and the long working hours.

What the report didn't do, she says, is cast a critical eye inward and ask whether the institutes' practice of choosing directors without allowing candidates to apply might exclude women even when no gender bias is intended.

Osborn says that when she raises this question within the MPS, "the standard answer is that 'we appoint based only on merit.' But then you have to question why only 1% of MPS directors are women. Especially in the biological sciences, it's hard to accept the argument that you can't find any other highly qualified women."

It is discussions like these that led Osborn to conclude that the absence of active discrimination isn't enough and that "positive action" is needed. For women scientists to have an equal chance, she says, organizations "must make sure they always ask if women have been properly considered, whether it's for a job, a fellowship, or to speak at a meeting. They should also fund positions specifically designed to increase the pool of women eligible for top

jobs. And they should set goals—not quotas—for improving the situation, with a time limit attached. Most important, they must monitor the results."

Osborn is determined to help female scientists in Germany break through the glass ceiling and stay in science, she says, because despite the difficulties, "science can be a wonderful career for women...it's challenging, stimulating...and it can be great fun."

—Patricia Kahn

closely with Leakey and his ape ladies. Leakey, Smith says, "trusted women for their patience, persistence, and perception—traits which he thought made them better students of primate behavior."

Leakey himself was perceptive enough to see those qualities in each of the Trimates, whom he met over a span of more than a decade. Goodall came first, shortly after she arrived in Kenya from England in 1957, aged 24. She contacted Leakey, curator of Nairobi's Coryndon Natural History Museum (today the National Museums of Kenya), on a friend's advice. Leakey offered her a job as a secretary but soon afterward confided that he had bigger things in mind: If she was willing to go, he would find funds to send her to Tanzania to study chimpanzees there. Goodall accepted with alacrity.

In June 1960, she stepped into the forest at Gombe Stream on the shores of Lake Tanganyika, where her determination and skill in watching quickly produced results. Only 3 months into her study, she observed behaviors no researcher had ever reported: chimpanzees feasting on a wild piglet they had killed; chimpanzees hunting monkeys; chimpanzees using tools made from twigs to extract termites from their nests.

That last finding blew apart anthropology's conception of primates—and human beings. "I was at the meeting in London in 1962 when Jane first came back and made that amazing announcement about chimps making tools in the wild," says Alison Jolly, a primatologist at Princeton University. "She essentially redefined what it is to be a human being. We'd all been