THE PHILIPPINES

Fighting the Patriarchy in Growing Numbers

When Eloida Racelis decided to go into forestry research in the early 1970s, she knew she was entering a male-dominated field. Only a dozen or so of 200 forestry graduates in her class at the University of the Philippines campus in Los Baños, Laguna province, were women. Racelis spent much of her time in her first job as the only female member of a team trekking through the mountains of the archipelago conducting forest inventories for the government's Bureau of Forestry. "I did what the men did. I hiked with them," recalls Racelis. But Racelis had one big advantage in working with her male peers: She had graduated in the top 10 in her class. "Most of [the team members] were my classmates and they knew my standing in class. So they couldn't just order me around. They respected me."

Yet in spite of her positive early experiences, Racelis, now a member of the policy studies division in the Philippine's Department of Environment and Natural Resources, says some male foresters still think forestry is their exclusive turf—particularly field work. "There's a feeling, verbalized by men, that deskbound research is fit for women because it's not as tough as being out in the field," says Racelis. She also says that when she headed a research section, she heard remarks from her male staff about "being patient with me because I am a woman." She adds: "They think that we are moody and whimsical, subject to a lot of mood changes."

Racelis' career reflects two sides of the situation of women in science in the Philippines. On one hand, women, who already predominate in some areas of science, are branching out into previously male-dominated fields at a high rate. At the same time, these female scientists live in a culture where machismo is strong and the idea of "woman for the home" is reinforced by Catholicism. The result of these conflicting imperatives is that, although there are many Philippine women in science, they have difficulty reaching the highest levels and most powerful jobs.

Nevertheless, in recent years individual women have begun to make breakthroughs, reaching the top jobs in research and policy-making hierarchies—jobs where they are often the first woman to have held the post. Amelia Angcog, for example, is the first woman undersecretary at the Department of Science and Technology (DOST), the country's chief science policy agency. Angcog wanted to become a doctor but says "my family couldn't afford to send me to medical school." Instead, she went to law school, a less costly alternative in the Philippines, and later obtained a doctorate in public administration. She spent 8 years as a DOST consultant, eventually joining the agency's staff as assistant secretary. In January 1993, she was named to her current job, just one step down from the department's top rung.

Angcog describes herself as a "channel" between the nation's scientists and its policy makers. "Scientists need someone to express their ideas in language legislators understand. I know the language of bureaucrats and scientists. I am their channel." Angcog argues that women in science in the Philippines "are better off than our counterparts in Southeast Asia." In her travels to other countries in the region, she says, she does not remember meeting a female counterpart. "We seem to have greater opportunities to rise because of the educational system," as well as the "extended family system where relatives can act as surrogate parents while career women work and pursue advanced degrees."

Another indication that women have begun to crack the existing structures of male dominance is that, like forester Racelis, they are changing the pattern in which women were confined to fields thought to be suitably "feminine." It isn't easy to quantify this trend, since there are few data on women in scientific disciplines in the Philippines, but scattered data points suggest that women, though still concentrated in "female" fields, are moving into fields where men predominate.

There are many women in Philippine science, but they struggle against the concept of "woman for the home"

The membership rolls of the National Research Council of the Philippines (NRCP), a government organization that supports research in the natural and social sciences, shows the areas in which women have gained the most ground. The council has 2500 members, including 1100 natural scientists, all senior researchers. In biology, pharmacy, and chemistry, women predominate: 210 of 361 members in the biological sciences, 79 of 86 in pharmacy, and 125 of 175 in chemistry. Among the fields where men predominate: mathematics (52 men of 86 members), physics (36 of 46), and engineering and industrial research (108 of 154).

It is remarkable that women appear to predominate in fields such as biology and chemistry, but even in mathematics the number of women seems to be increasing. For example, the number of female students enrolled in graduate mathematics programs is growing, according to figures from the DOST postgraduate science education program.

The same trend can be seen at the country's premier scientific secondary school, the Philippine Science High School (PSHS), in Metro Manila. The school has 931 students. The majority—553—are male. But there are 418 female students, and "the girls are catching up," says Vicenta Reyes, the school's director. "Their survival rate is higher because they are more conscientious." Graduates of PSHS are the nucleus of the country's next generation of scientists, since most pursue science majors at the country's chief undergraduate training center, the University of the Philippines.

As Filipino women enter fields that were once male turf, they make their way in spite of a series of cultural barriers. Ruby Jess de la Torre, a

ALBERTO GARCIA

ALBERTO GARCIA

Pathbreakers. Forester Eloida Racelis *(above)* and government official Amelia Angcog are among the first women to hold the kinds of positions they occupy.

Women in science in the Philippines are "better off than their counterparts in Southeast Asia."

—Amelia Angcog

1993 graduate of the University of the Philippines in applied physics, teaches basic physics courses while attending graduate school. She says she has little difficulty with her male colleagues at the university; but the same is not true in the outside world. When she orders equipment for the lab by telephone, she says, deliveries are delayed. "But if my male student assistant calls, the deliveries are prompt. Probably they don't take me seriously."

Furthermore, says de la Torre, her first love wasn't physics at all. She wanted to go into electrical engineering, but was told by her classmates that "males are usually preferred by industry." The conclusion that women wind up in academic science because they are kept out of industry is echoed in a recent report by Olympia Gonzalez, former president of the Women's Association of Scientists in the Philippines, and Sonia de Leon, president of the Women Inventors Association of the Philippines. Although they do not offer systematic data, the authors conclude on the basis of their own observations that the proportion of female researchers is higher in government than in the private sector. Male scientists, they say, are attracted to higher paying jobs in private corporations, which in turn prefer to hire males.

ALBERTO GARCIA

Culture critic. Maria Patrocinio de Guzman assails the "double standard culture" of the Philippines.

The preference of large corporations for male technical employees is just one element of a patriarchal network that belies the bright picture offered by the high proportion of women in science. Maria Patrocinio de Guzman, deputy director of the Food and Nutrition Research Institute, a government agency that recommends policies on food and nutrition issues, wrote in a 1990 study of Philippine women in science that the "double standard culture" of the Philippines assumes men are "superior intellectually, physically." "Men," Guzman wrote, "are traditionally believed to be [the] main breadwinners"; she added that "the biological role of women —to bear children," as interpreted by the culture, reduces women's "marketability and bargaining power for jobs."

That reduced marketability translated into a slower beginning for women's scientific careers, de Guzman found. Both male and female scientists in the Philippines tend to start out as research assistants, instructors, or office staff. But men, she found, tend to occupy these entry-level jobs for a shorter time than women do. Women's careers were also more likely than men's to stall before reaching the top; female respondents were largely confined to middle management. Asked why they thought their careers plateaued, almost all the women said that trying to combine the roles of wife, mother, and professional had made it impossible for them to compete on an equal footing with male colleagues.

Perhaps the most concrete way that this inequality makes itself felt is in the forced absences from the office professional women suffer because their household help is sick or on vacation. Most middle-class Filipino households employ live-in helpers, and when those helpers are not available, the female scientist has few options to fall back on, since organized day care is uncommon in the Philippines, and relatives, though supportive, often live some distance away. "There are extra pressures on women—especially if there are no helpers. Day-care centers will be very useful," says physicist Linda Posadas, executive director of the Philippine Council for Advanced Science and Technology Research and Development, an agency that coordinates basic research.

Emmeline Verzosa, gender and development consultant to the Senate policy studies group (a group that advises the president of the Philippine senate), says the patriarchal system is embedded in cultural institutions that radiate from the family: "It starts with the family, where the male is usually considered head, because he makes most of the decisions. This extends to the community, where the males are usually leaders while women are involved as volunteers and work around issues that are extensions of their household interests."

These distinctions are perpetuated in education, says Verzosa. In spite of the gains made by girls at the elite PSHS, boys are generally seen as better in mathematics and the sciences, while girls excel in language and literature. Verzosa argues that teachers are frequently imbued with these stereotypes and often don't encourage girls to pursue science. These influences extend to the general community, "where women are not viewed as capable scientists." Religion also helps to shape the patriarchal system: Beginning with the Catholic wedding ceremony, women are advised to be subservient to their husbands.

As the numbers show, female scientists in the Philippines are bursting through some of the barriers erected by patriarchal culture. But in that effort, they aren't yet receiving much help from the government, partly because of the state of science itself in the country. In a developing country such as the Philippines, where resources are tight, science often takes a back seat to economic concerns. The DOST budget, for example, is far below allocations for debt service, defense, and public works. Among the 30 main government agencies, DOST ranks twelfth in appropriations.

In such an environment, the specific concerns of female scientists may seem remote. Posadas says most government and academic institutions look at national priorities "without particular attention to women's needs." She adds: "There is no conscious effort to look at gender issues."

There are hints, however, that this situation may be changing. The current secretary of DOST, Ricardo Gloria, who is said to be more sympathetic than his predecessors to concerns of women scientists, has given support to plans for enhancing the participation of women in science and technology. A government "development plan" is currently being updated. In addition to a call for a database on women in science, the plan includes "gender-sensitizing" seminars for the science and technology community, particularly those in planning and decision-making, as well as for parents and teachers. The plans sound good—but because of tight budgets and the lack of attention to women's issues, they may be a long time being realized. In the meantime, Philippine women in science are relying on their own energy to overcome the hurdles they face.

–Marites D. Vitug

Marites D. Vitug is a freelance writer living in Manila.