The Boy Scientist

Roger Hart

When I began teaching junior high science more than thirty-five years ago, I found *The Boy Scientist* on the bookshelf in my classroom. I read it and was impressed by the interesting stories about famous scientists—mostly men—and the clarity with which the author explained the fundamental laws of physics. I was puzzled, however, by the absence of any "girl scientist" book on the shelf and wondered in what ways such a book might differ from the boy's text. I looked for *The Girl Scientist* in my room, in the school library, and at the town library but could not find a copy, so I called the publisher. The woman on the other end of the phone told me there was no girl scientist book.

"Doesn't that seem odd?" I asked.

"No," she answered. "Girls aren't interested in science."

I asked if she'd ever heard of Marie Curie, Lise Meitner, Barbara McClintock or Rosalind Franklin. She said no.

That was my introduction to gender inequalities in the classroom. What, I wondered, were other ways that I might be sending the wrong message to my students beside the books I kept on the shelves?

In an effort to answer my question, I began informal classroom research. I observed that the boys were quicker to answer questions and, therefore were more likely to be called upon. Boys were also more likely to answer with authority, even when

they were wrong. Girls frequently ended their answers on a rising inflection that made it sound as if they were asking a question. I also noticed that when students were paired up with lab partners of the opposite sex, the boys usually took charge, mixing chemicals, measuring items, or dissecting while the girls watched and took notes. The boys acted like they knew what they were doing, despite the fact that the girls often scored higher on written tests than their male lab partners. Clearly, gender was an issue in the science classroom. The girls were being robbed of their equal place in the class, and the boys were being cheated—often by their own behavior and my own unknowing complicity—of hearing from students who could contribute a great deal to the class dynamic.

In her essay "Feminist Pedagogy," Susan Jarratt claims "feminist pedagogy does not entail an overt discussion of feminism as a politics or movement" and that "this pedagogy must be shaped to fit the circumstances and possibilities under which you work" (115, 126). Without promoting a specific agenda but by encouraging "the presence of the whole person into the educational scene," I—testosterone not withstanding—became a practitioner of feminist pedagogy (123). I encouraged all my students to answer questions with authority, and I waited longer for hands to go up before I called on a student. I required both partners in every lab exercise to participate actively and take notes, and I continued to investigate gender differences in the classroom. Whenever possible, I fought against the myth that science was the domain of boys. In the years that followed, the high school physics teacher complained that his class was being overrun by girls. I was thrilled.

Today, we have evidence that gender differences are far more extensive than my observations indicated years ago. Studies of cross-sex conversations have shown that men are responsible for the overwhelming majority of interruptions (West and Zimmerman 107; Tannen, You Don't Understand 210). The study by Candace West and Don Zimmerman also refutes the claim that men interrupt to get in a word and conclude that, if anything, women frequently must interrupt to "get a word in edgewise" (109). Studies have also shown that in two- way conversations, women

ask more than twice as many questions as men do (Fishman 95). These questions frequently function as a means of getting permission to talk or as a way of giving authority to the one questioned. Deborah Tannen goes on to suggest in *The Argument Culture* that even classroom debate and the Socratic method of teaching may be based on a male culture that values winning (256-290).

The challenge, then, is how to apply this knowledge and the volumes of additional gender research to the benefit of all students in the composition class. One possibility is the decentralized classroom suggested by process pedagogues. Joyce Armstrong Carrol offers "statistical proof that training teachers in process actually helps teachers interact more effectively with their students, thus producing better student writing" (Rubin 96-97). Jarrat also states that feminist pedagogy and process pedagogy share many characteristics: emphasis on process over product, the use of collaboration, journal writing, and narrative, to name a few (115). In addition to employing these process techniques in my own composition class, I also try to make students aware of the gender roles we frequently fall into when we communicate. By becoming aware of these roles, students and teacher can, if they wish, begin to step outside them. Those who habitually interrupt have the opportunity to become good listeners. Those who are hesitant to answer questions experience a classroom more open to their participation.

But does this mean that males must sacrifice their masculinity in a feminist classroom? During a dinner I attended two years ago, the poet Robert Bly, author of *Iron John*—a book many feel ignited the men's movement—sat next to a female professor he had never met. Surprisingly, Bly played the role of the perfect listener. He didn't interrupt and he gave the professor his undivided attention when she talked. He also did a remarkable job of passing along visual and auditory signals that he understood what she was saying. It was a remarkable lesson for me and those men who feel threatened by the feminist movement. Freed of the stereotypical male role, Bly demonstrated an ability to communicate that could be a model for all of us. We might even say he demonstrated self-actual-

ization, an integral part of expressive pedagogy (Burnham 33).

But how do listening skills or the frequency with which one student interrupts another affect writing? I suspect the answer can be found on a number of different levels. On the most basic level, teachers want to create a classroom environment that promotes learning and respect. When members of the class, male or female, are deprived of their voices, the entire class is shortchanged. And teachers who simply "put the desks in a circle" to decentralize authority may only be shifting the authority from themselves to the more outspoken students, especially if the class is not made aware that many of us often fall into ruts of interrupting or not actively listening to someone else.

On another level, it seems that a heightened awareness of gender roles in communication can improve students' critical thinking. Students begin to ask questions about who wrote the text and why. Was the purpose of an essay to explore different points of view of a controversial topic or was it written as an argument in which one side is right and the other wrong? Students might also begin examining their own writing the same way and, in the process, take a closer look at audience. By structuring a classroom in which all students take on more authority—I don't think you can give authority—the feminist teacher can foster individual strengths and better understand individual differences.

I do not go as far as bell hooks, who writes that the "liberatory feminist movement aims to transform society by eradicating patriarchy, by ending sexism and sexist oppression, by challenging the politics of domination on all fronts" (Jarratt 117). I'm not sure hooks would even accept the possibility of a male feminist. Despite my differences with hooks, I think the essentialists are good for the feminist movement. They give it energy and they challenge us to examine our own classroom practices. I agree with Jarratt's observation that the feminist movement ranges over a wide spectrum of beliefs and practices involving an awareness of gender roles and how they can influence dynamics within the classroom (117). As such, feminist pedagogy shares theory and techniques with process,

collaborative, and expressivist pedagogies by valuing process over product, helping students find their voices, and decentralizing the classroom. Both male and female teachers with a wide range of theoretical approaches to teaching composition have the opportunity to incorporate feminist pedagogy in their composition classes. I think all students will benefit when it happens.

Works Cited and Consulted

Burnham, Christopher. "Expressive Pedagogy: Practice/Theory, Theory/Practice." Tate 19-35.

Fishman, Pamela M. "Interaction: The Work Women Do." Thorne 89-102.

Jarratt, Susan C. "Feminist Pedagogy." Tate 113-131.

Rubin, Donnalee. *Gender Influences: Reading Student Texts*. Carbondale: Southern Illinois UP, 1993.

Tannen, Deborah. *The Argument Culture*. New York: Random House,1998.

---. Y*ou Just Don't Understand: Women and Men in Conversation*. New York: Morrow, 1990.

Tate, Gary, Amy Rupiper, Kurt Schick. *A Guide to Composition Pedagogies*. Oxford: Oxford UP, 2001.

Thorne, Barrie, Cheris Kramarae, Nancy Henley. *Language, Gender and Society*. Rowley, Massachusetts: Newberry House, 1983.

West, Candace and Don H. Zimmerman. "Small Insults: A Study of Interruptions in Cross-sex Conversations Between Unacquainted Persons." Thorne 103-118.