Reaching Girls

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When I was 14 I read *Madame Curie*, Eve Curie's 1937 biography of her mother. No eureka! occurred. I didn't rush to sign up for a physics course (nor could I have done so in any case given that no physics course was offered at my all-girls high school). Instead, I returned to thinking about boys and reading novels like I was supposed to do. But my experience of those long cold nights in the Paris lab, the glow of the radium, the intense need to discover, clearly made it into my bones and often sustained me later on. A woman could do science. Important science. Even as it was taking away her very life, like the heroines of my Russian novels consumed by love or honor. I'd unwittingly acquired a role model, albeit the term was not yet in anyone's vocabulary.

Recently, I went to the site for *Madame Curie* on amazon.com, and came upon a review by Kaila (aka Baby Gurl KC). "I say that for a biography it was pretty good. There was a few boring parts that made me want to put the book down. I wouldn't have read this book for pleasure. I had to read it for a physics project. I gave the book 3 stars because I did not necessary enjoy this because it was for school."

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Well, So Where Does This Leave Us?

Happily, not stranded, since for girls who may not be mesmerized by the struggles and triumphs of a resolute Polish woman in some long-ago faraway time, there is now a splendid alternative. The National Academy of Sciences has just released an outstanding 10-volume series, called *Women's Adventures in Science* (Joseph Henry Press; http://www.iwaswondering.org/index2.html), which presents the lives of 10 contemporary women scientists for middle-school readers in a format and context that Kaila might find appealing.

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The advisory board for the series, which includes ASCB members Maxine Singer (chair), Bruce Alberts, and Shirley Tilghman, got a lot of things right. They chose women from many backgrounds whose scientific pursuits—e.g., robots (Cynthia Breazeal), gorillas (Amy Vedder), and human genetic disease (Nancy Wexler)—are inherently interesting to the uninitiated. They commissioned a group of excellent science writers to craft the narratives. And they delivered a masterfully edited series such that the texts, the abundant high-quality images, and the scientific explanations are uniformly presented and accessible. The meta-message conveyed is not that one must give one's life to one's science, but rather that scientific research can generate, and accompany, a fascinating life.

Each life story is quintessentially American, albeit several of the scientists were born elsewhere, and each begins with extensive descriptions of the scientist's family, girlhood interests, important teachers, and so on, complete with engaging family-album snapshots and high-school graduation photos. It would be difficult for an American teen to find any of these girls unfamiliar. Lifted up as well are their particularities, their strengths and concerns, their discouragements and achievements, their marital successes and breakups, and their kids or no-kids status—the result being that we come to know 10 intriguing individuals and not 10 cardboard role models. Most important, and here the advisory board and the writers deserve standing ovations, is that the science is not left out in favor of personal anecdotes; instead, the science is clearly explained and developed, and the numerous venues for asking scientific questions are richly conveyed, such that these books will rightly

earn their place on science-course reading lists and not just as motivational pieces.

But motivational they most certainly are as well, to the point that even this highly satisfied cell biologist found herself wondering what it would have been like spending her life studying climate change (Inez Fung) or planetary science (Heidi Hammel and Adriana Ocampo) or biomechanics (Mimi Koehl). There are also accounts of women (Diane France [anthropology], Shirley Ann Jackson [physics], Marta Tienda [sociology]) who start out in "straight" academics and then move into more public-oriented trajectories, conveying the rich flexibility of a scientific career.

I've had a lot of trouble with the term "role model." It carries two potential inauthenticities—"role" and "model"—and hence can convey the sense that someone who is regarded as a role model, or someone who is seeking a role model, is somehow trafficking in pretense or wish projection. But then I think back to when Marie Curie was the only woman scientist on the bookshelf. Her life story had subliminal agency in my life, and I realize that we have little choice: All of us, of whatever sex, class, or ethnicity, are influenced by others and go on to influence others. And now these wonderful books bring living, laughing, excited, vibrant, and diverse scientists into the lives of young people. That they are women will have particular import for girls, but don't keep these books away from the boys—there are lots of excited, vibrant men in these accounts, and boys need women role models as well, at least until such time that "scientist" is no more gender-modified than "partner" or "parent." ■

—Ursula Goodenough