

Beth Urr was always discriminated against in science. She had three children yet gained assistant and associate positions in world renowned universities. How did she do it?

Choices
By Beth Urr

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CHOICES

In this memoir I offer a
vivid account
of my own path against, around
and through the barriers of
science and life.

BETH URR

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CHAPTER 2:

Dream and Demise

I met Rory at a high school party when we were very young. There he sat, shy and Beatle-looking with his pull-on shoes, a brown corduroy jacket, and tight black pants. He had a beautifully slim swimmer's body. The minute I heard his Scottish rolling r's, I knew I was in trouble. We were a couple much of our senior year. I loved his parents and younger brothers. They, too, had melodic accents and I soon mimicked them to feel like I was one of them.

Rory and I finished classes in our separate high schools. Then, during the summer after graduation, we were inseparable. He was enchanting with a deep voice, a thundering laugh, and a calm personality. But, there was much parental concern about our young age. Despite this, we married because we were so deeply entwined. We had love and nothing else mattered. Our parents worried that we both had rather headstrong personalities, which is the opposite of what is needed in delicate marriage negotiations. But, I was so infatuated

with Rory's Beatle-like image that I could not see deeply enough to understand his real character. In marriage, we had a very friendly time and we had a reasonable working relationship for parenting. We helped each other with chores, listened to music, and laughed at TV programs. Our life was very simple. Rory's night job as a computer programmer made our life challenging because he was always on night shift, and then sleeping during the day, leaving me alone.

What I certainly did not know was the extent of Rory's expectations. We desperately wanted to be together but, on the other hand, I had just graduated with honors from my high school. Moreover, I had been accepted with a scholarship into the honors undergraduate program at Imperial University. Rory did not appreciate this opportunity at all. His hierarchical thinking was like that of many other men. Did he feel emasculated by my scholastic successes? I began to think I was an ambitious woman, and not liked. Rory certainly did not like my classes. Maybe he felt that, if I was successful at my university studies, he would not be the strong, dominant male in our partnership? All I

know is that I had little understanding of his negative behavior toward my career aspirations because my family had always encouraged me in the many interests I had.

I was not the compliant wife he wanted and, quite often, he let me know it.

“Lass, are you daft?” he would say. “I don’t give a DAMN about your university courses. I’m a working-class bloke. I write computer programs for the bank.”

Back in the 1970s, this was a high-level, new occupation. But, because he was newly out of high school, he had the lowest salary. “It’s not proper that my wife would go to university. You know they just smoke pot there!”

I loved his gentle heart completely. He was so considerate of other people, and doted on his siblings but his roadblock was such a conundrum that I became paralyzed with frustration. How could I change his mind? I pleaded that I would get a better paying job by having university schooling. But, it was hopeless. The bickering shattered my nerves. To please him, I ended up taking a low level, part-time, filing position in a

bank. It was not much above making coffee but it was about the best job available for a woman having only a high school diploma. I did not tell my employers that I had a child. Back then, having a child was a reason not to hire a woman. I knew the current job was not good for me so I further tested Rory's protestations by entering Imperial University in a part-time extension program. I began that summer with classes in mathematics and organic chemistry. These were the courses that Rory endlessly complained about.

Then, a joyous event! Baines was born. And, he was a doll! Baby chubby, flaxen hair, sky blue eyes, and the rosiest, pudgy cheeks. He was an excellent distraction from our marital differences. He gurgled and smiled but he had very bad colic. He howled from six till ten o'clock every night, until he finally took his evening bottle. I was exhausted. I could barely make Rory's breakfast in the morning. I became cranky from lack of sleep. Thankfully, Baines was very playful and athletic in the day. In fact, sometimes he eagerly ran, then charged into walls, bruising his forehead to stop. His playfulness mitigated my fatigue but there was tension

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about who would look after him, and when. I gave in except when I was taking courses. I had overwhelming fatigue day after day like all women with babies.

When Baines was small, Rory and I lived in an old, grey, stucco building that looked onto a busy, boring street. It was a semi-industrial area, which was the only place we could afford to live. There were no pleasant parks to walk in while I was pushing Baines in his pram. There were no pretty homes, no trees, and certainly not gardens like my grandfather's. So, I dreamed of science.

Girlfriends

When Baines was about four months old, and I was a year out of high school, I planned to have my girlfriends come for a visit. We had very close relationships in high school when performing together doing public speaking or drama. When I attended math and science classes in high school, I often missed their carefree chatter because the nerdy boys kept to themselves. I was considered odd.

During that year my friends had become full-time students at Imperial University and I was excited to hear

about their stories. In preparation, I got Baines up a little early in the morning, then put him down for his nap later than usual so he would wake later in the afternoon to greet my friends.

My five giggling friends arrived. The girls sat on my beige couch, lounged on the stippled carpet, or snuggled into the kitchen chairs. How glorious they looked, with faces scrubbed clean, shining hair, bright eyes, and colorful knit outfits that I once wore, but could no longer afford. Remember, there was little childcare then, and home sitting for babies was very expensive. I was a home bound mother without a job, and only a high school education. Rory's low-ranking night shift job was not sufficient to buy all the baby supplies we needed. We were poor, and in debt.

Pauline began, "My courses are challenging. Creative art is the most difficult." She mentioned that she had a challenging painting due in three days but she had yet to get started. I could not imagine the gall. I always tried to be prepared; a trait learned from my childhood responsibilities. I did not do well rushing at

the last minute. My approach was to visualize things first, organize the tasks, and then execute.

“What is the picture about?” I asked. Pauline answered that it was supposed to be a Rembrandt. Then, I was worried.

“How can you achieve those exacting details in such a short time?” I asked.

But, she laughed it off, saying, “I will be doing a simple, modern version of the portrait. I will finish it up this evening.”

I didn’t know what her grade would be but that cavalier attitude was one I could never relate to. Later, I told the girls, “I too am taking two courses at Imperial University.”

“Congratulations!” they cheered.

One of my friends had taken a biology course that she thought I would really like because it had lots of math and physics. I eagerly made a mental note of the course name, Membrane Physiology, the study of cell membranes, i.e. the lipid and protein layer at the perimeter of a cell.

Then Baines gave a gentle whimper. He was the attraction my friends had come to see. I rushed into the bedroom to quiet him. Taking off his wet diaper, I doused him with a cotton candy-smelling baby powder, then pulled a new diaper over his bottom. I took him to the living room amid a crescendo of anticipation. The girls “coo cooed and goo gooed.” They were both amazed and impressed that I had a real live baby, a son. Who would not be taken by him? They continued gurgling and chortling at him. I showed them how he could walk. Then, he tottered along, turned around, and gave a tiny smile. He ran back to me, offering a firm baby hug. I held him, planting a wet kiss on his cheek.

That loving kiss he gave me was how I experienced overwhelming joy in being a mother to Baines. My girlfriends saw this, and said motherhood was treating me well. But, deep in my brain, there was something else I needed: to go to university, and use my mind. I just knew there had to be room for both in my life even though I was not exactly sure how to orchestrate them. I had faith that I could do it because I thought of myself

as both a competent student and an attentive mother. I wanted to go to university and be a mom.

Abandoned

It was the twenty fourth of December when I returned home to be with Rory for Christmas. I had taken some time to visit my sister and mother, who lived in the west. Rory was supposed to meet us at the airport but he did not appear. I had only just enough money for the lengthy taxi ride home. During that long trip, I was fraught with fear that something terrible had happened. Eventually, we arrived at the apartment door. The minute we entered, Baines started to whimper. He was hot and flushed. I called for Rory. I was so distracted by my search that I did not unfasten Baines' snow clothes until he started to give his dribbly cry.

No note and no call on the recording machine. Just a smelly, nearly empty milk container in the refrigerator. I was fraught with fear he would never come back. I had not been able to choose between university and Rory. I wanted both. But, every time I brought it up, he failed to understand, or acknowledge

my intellectual needs. I think his own personal manhood issues were a complication because he grew up in an old-fashioned neighborhood in Aberdeen Scotland where the women with children, like his mom, stayed home. And now, it seemed, he had given up on me, without so much as an explanation.

Even in the moment, I felt conflicted: Shouldn't I go to university to be fair to my intellect? I was torn between the marriage, and all that meant to me (love, loyalty, intimacy), and what I desired to accomplish in life. Did I have an elevated opinion of myself? I did not think so. Was I ambitious? Yes. I blamed myself for not being the wife he wanted but I was living in a newly forged social structure where women were beginning to be offered opportunities in education. My brain was filled with these new possibilities. And, I couldn't bring myself to sacrifice those chances for yesterday's standards.

according to the new Latin genus/species system developed by Linnaeus that is still used now. Prominent (male) botanists regarded her as an esteemed scientist. But, it is easy for a woman's excellent work to be overlooked. Jane Colden's manuscript was, shockingly, not published until 1988.⁷

Matthew and Matilda

In the past, and even now, the participation of women in the sciences is either “forgotten” or “taken over” by the nearest male. This is not surprising given the male network of prestige. The usurping of a woman's status is called the “Matilda Effect,” a term coined by Margaret Rossiter (1993) to give tribute to the suffragist Matilda Joslyn Gage in her 1870 essay “Woman as an Inventor.” It was issued under the auspices of New York, New York State Woman Suffrage Association 1870.

⁷ Beatrice Scheer Smith, “Jane Colden (1724–1766) and Her Botanic Manuscript,” *American Journal of Botany* 75, no. 7 (July 1988): 1090–96, doi.org/10.1002/j.1537-2197.1988.tb08817.x.

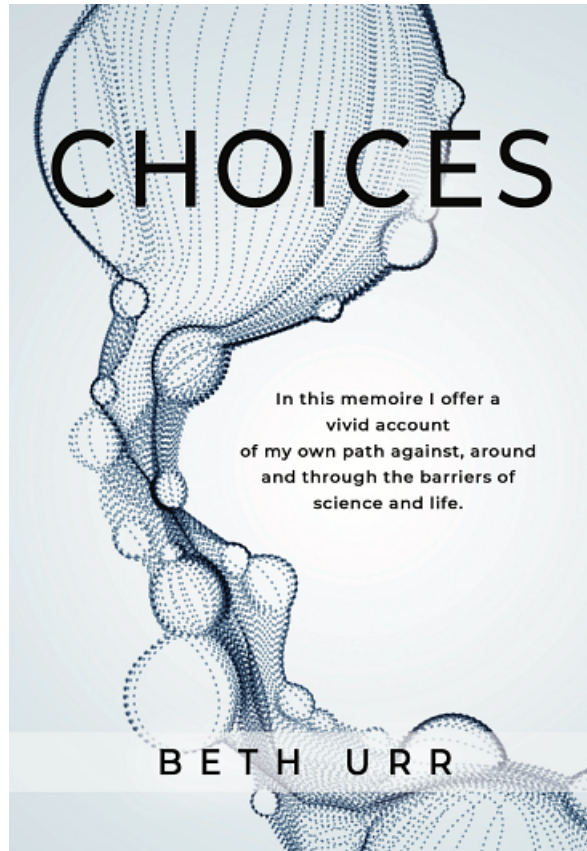
The “Matthew Effect” was coined by sociologist Robert K. Merton.⁸ It described how eminent scientists will often get credit for a work rather than a comparatively unknown researcher. The name “Matthew Effect” was taken from the Gospel of Matthew in the Bible: “For whosoever hath, to him shall be given and he shall have more abundance, but whosoever hath not, from him shall be taken away even that he hath.” Worrisome words.

The “Mathew Matilda Effect,” describes the systematic exclusion of women from scientific literature, prizes, and societies. Progress has been made but this “effect” is still occurring today. Part of this exclusion occurs at the level of paper publishing and grant funding. See below.

The New Woman

In the sixties, and before, when a woman’s place was commonly understood by society to be in the home,

⁸ Robert Merton, “The Matthew Effect in Science,” *Science* 159, no. 3810 (January 5, 1968): 56–63, doi.org/10.1126/science.159.3810.56.



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