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Wendy the Scientist

Change does not come from nowhere. It needs a stimulus. A simple change to the story of Peter Pan and Wendy could play a major role in the development of dreams for young minds and could lead them into careers previously seen as unimaginable, just as simple actions that were taken in my own childhood shaped the dreams that have become reality today.

I was born and raised in the small town of Mableton, Georgia, right outside of Atlanta. My mother was an accountant and my father was a construction worker. They are two of the hardest-working people I have ever known. Both worked long hours to provide for me and my siblings. However, I never felt second to their jobs, as they continually sacrificed their time, money and energy to create a better life for us. My parents raised me to be curious, to love learning, and never to give up. From the age of six, I developed a love for mathematics and design. Upon noticing those desires, my parents took the time to expose me to basic mathematical concepts. Each week they went out of their way to take me to various science, technology, engineering, arts and mathematics programs in addition to my schooling, providing me with key elements for success. Never was I placed in a box by my parents to only pursue “what girls do.”

At eleven years old, I decided to become an engineer, a dream that I did not realize was considered uncommon to those of my gender. I was only a little girl exploring what I loved, without thinking of the obstacles that would accompany my decision. I collected magnets and stickers of military aircraft, hoping that one day I would design my own. Every day I stared at those fighter jets, my determination propelling me forward. Thankfully, my school curriculum introduced me to amazing women like Mae Jemison, the first African American woman to travel in space, and Bessie Coleman, the first African American woman to become a pilot. Their biographies became the stories I needed to make my dream seem more achievable.

My dream of becoming an aerospace engineer drew closer with each course, program, and camp that I attended. My knowledge of the material increased, but so did my awareness of the lack of representation. Each year, I noticed the lack of female peers as I delved deeper into the sciences. In many instances, other young women were encouraged to pursue other fields or looked down upon as nerds because of their interest in the sciences. Being a “science geek” was not considered cool or fun.

Upon entering high school, I decided to begin taking courses in engineering. At first, there were other girls in my class. However, as I continued to advanced levels, I ended up being the only female. The same situation continues in my daily work life today.

There needs to be a shift in the cultural narrative that suggests science isn't for girls. This narrative has resulted in fewer women pursuing careers in science and few female scientists to act as an inspiration for the next generation. There are countless talented young girls who have the potential to change the world with the power of their minds.

We can start to change the narrative by offering new ones as Lauren Gunderson has done in this adaptation.

The story of *Peter Pan* is a classic that has been told and retold for many decades. There have been various adaptations and spin-offs, particularly based on the characters of Peter Pan and Tinkerbell. However, not much has changed for the character Wendy Darling. In Lauren Gunderson's new adaptation of J.M. Barrie's play, we begin to perceive Wendy in a different light as she showcases her astronomical knowledge. When seen together with Peter's "Neverland," the traditional space of childhood imagination, the play becomes an adventure of learning that confronts social stereotypes and gendered expectations.

In Gunderson's play, Wendy is presented as a young scientist who looks up to Marie Curie and is eager to share her discoveries of fairies and Neverland with the Royal Academy of Sciences. As a young scientist myself, I feel Wendy's characterization presents a chance to expose young girls to a different type of narrative. Young girls will be able to attend a theatre and see a story that involves a young female scientist as a main character. The importance of telling a story such as this cannot be minimized. It is not merely a children's story or a fairy tale. This new version of the story gives young girls an additional vision of who they could become, providing them with a role model and the general audience with another perspective.

Wendy's new story mirrors the childhoods of many female scientists who have graced us throughout time. Like Wendy, they are also women who have broken through the expectations set on them due to their gender, unapologetically following their passions in the sciences. However, many of these female scientists have been overlooked with their stories remaining untold.

For centuries, women have been placed in the background and underrepresented in other male-dominated fields. Their knowledge and contributions to the world deserved to be acknowledged. To our misfortune, the list of women who have made substantial contributions who have been forgotten in history goes on and on.

Katherine Johnson, Mary Jackson, and Dorothy Vaughan are three prime examples of history-altering women who were placed in the background and not given the proper recognition for their work until decades later and for two of them, only after their death. Katherine Johnson is the mathematician who calculated the trajectories for America's first human spaceflight and various other missions into space. Mary Jackson became NASA's first African American female engineer, among very few female engineers, specializing in the aerodynamics of airplanes. Dorothy Vaughan became the first African American manager and supervisor at NASA, specializing in FORTRAN computer programming and calculations for flight paths.

And there are so many others. Kitty Joyner served as NASA's first female engineer, where she specialized in supersonic wind tunnels. Rachel Carson changed the way the United States views the environment by highlighting the dangers of synthetic pesticides. Her work drove initiatives such as the establishment of the Environmental Protection Agency (EPA).

In the Byzantine era, Hypatia of Alexandria excelled in the disciplines of mathematics and philosophy as a scholar-professor. Hedy Lamarr, in addition to being known as an actress, was also an inventor. She developed an invention that would safeguard military radios from outside sources. Her idea led to many technologies that we still use today.

Esther Lederberg discovered a virus that infects bacteria and went on to create a successful technique for vaccinations alongside her husband. However, her husband was the only one out of the pair to be receive a Nobel Prize for their research. Her contributions have yet to be properly recognized.

Each of these women played a major role in history, despite having to overcome so many obstacles and challenges to do their work only because they were women. It is important for these women to be recognized for their efforts as is not only their right, but for young girls to see positive role models of women scientists throughout history. Such positive exposure is one vital element for children to succeed in the future. If a young girl does not see women in the field of science, the dream of becoming a scientist becomes further away from reality.

The number of women in STEM fields is slowly increasing, but we still have a very long way to go. For true equality to exist, women must be afforded the same opportunities and recognition as men.

For one thing, it makes for better science. As history has shown, time and again, equality, diversity, and inclusion are the keys to sustained success, innovation, and the generation of new ideas. If you take a group of people from the same background, they will often arrive at the exact same ideas, and the results will remain the same. However, if you take a group of people with differing backgrounds, the ideas and subsequently the results will constantly change. Differing ideas stem from a diversity of backgrounds which stems from a diversity of people. For this reason, but not just this reason, it is important for both men and women to be presented with equal opportunities in each and every field.

One of the best avenues of exposure for young minds is stories. With the imagination of a child, I was able to place myself into the shoes of the main characters, and the story became even more relatable when the main character was a woman. Cinderella gave me the desire to wear glass slippers and meet a prince someday. Mulan gave me the dream of learning how to fight and possibly become a warrior. Snow White made me afraid to eat red apples. Pocahontas gave me a greater love of nature. Ariel encouraged me to learn how to swim. Belle taught me to not judge someone from their outside appearance. Tinkerbell actually encouraged me to "tinker" by being creative and designing like an engineer. These animated Disney stars all played a vital role in my childhood.

The women that I encountered in these stories became automatic role models in different areas of my life. They embodied women that I aspired to be someday, whether they were a princess, fairy, or warrior.

Imagine the power of a young female scientist serving as the new center of a story such as *Peter Pan*. Narratives like that have the ability to affect young minds, turning stories and dreams into goals. Young girls deserve to understand that science can be interesting and rewarding. Young girls deserve to understand that they are more than capable of succeeding in these fields. Young girls deserve to understand that science is not only for boys.

Throughout my life, I have sat in classrooms and workspaces dominated by men. In these spaces I continue to focus on my dream, as Wendy focuses on Tinkerbell among the stars through her telescope.