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A brief discussion of ‘Sarah Frances Whiting and the “photography of the invisible”’

Sarah Frances Whiting was an empowering figure and inspiration for women in academia and science, which was heavily male-dominated at the time. In her early life, her father, a professor himself, had encouraged her studies in physics and astronomy. She graduated with a BA and became a math teacher at a girls’ school in Brooklyn. She had no formal graduate education, but attended lectures to grow her knowledge, which made an impression on the community. Soon, she was noticed by Pauline and Henry Durant, the philanthropist founders of Wellesly College, a place for women to have more equal opportunities to learn and teach. They wanted her to come to teach at Wellesly, and arranged for her to first spend some years traveling and visiting other universities in the region. During these trips, she was notably the first woman to attend Edward Pickering’s physics classes, where she was impressed by the hands-on approach that involved students designing and conducting their own lab experiments, something that she would soon be making a large focus of her own curriculum. She was responsible for the creation of these labs and acquisition of state of the art instruments in her physics and astronomy departments, and for the spread of these labs to other departments as well, putting Wellesley at the leading edge, and becoming the second undergraduate physics lab in the country, only after MIT.

She soon became famous among women’s activists and the scientific community alike. Just weeks after receiving news of Wilhelm Röntgen’s recent groundbreaking discovery of X-rays, she was among the first in the US to successfully recreate “Röntgen rays”, and the first to do so in an undergraduate laboratory, something that was only possible because of the importance she had placed on having this state-of-the-art equipment available. She made this discovery with the help of another instructor and some students, working together to fine-tune equipment, variables, and exposure time, and testing a wide variety of materials. Although the original glass plates have not survived, some photo’s were recently uncovered on the campus, showing some of the unique items they tested, such as jewelry and coins in a purse.

Sarah Frances Whiting faced many social challenges throughout her life. Being a woman in science and academia at the time, she had very limited opportunities and faced much resistance. The higher scientific community showed some mixed responses, with some treating

her fairly like any other colleague, and others criticizing the idea of women venturing out into these fields, making comments such as “What would become of the buttons and the breakfasts if all the ladies should know so much about spectroscopes?”, which is rather ironic, considering how much Whiting used spectroscopes in her teachings. Whiting overcame these barriers through a combination of perseverance and collaboration with the other women at Wellesley. It’s obvious these barriers have only ever prevented scientific progress, so the work of Whiting and everyone at Wellesley deserves credit for the introduction and broader acceptance of women in science and academia, and for the progress of science as a whole. Although many of these barriers have been broken down, it is clear that they haven’t been totally eradicated, and that more work needs to be done into the future to remove them for the sake of both equality and progress.