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## Glowing in the Dark: Examining 'The Radium Girls' and Other Forgotten 'Herstory' Tales

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## Glowing in the Dark:

### Examining "The Radium Girls" and Other Forgotten "Herstory" Tales

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#### **Abstract**

It is no doubt that women have struggled for inclusion and representation throughout history – either for the right to work/vote, accurate and fair representation in the government, media, or elsewhere. The “Radium Girls” of the 1920s contribute to this struggle – women who were well known during their time because of their exposure to radium in their workplace and how they sued their employers for that exposure but were later forgotten about. Additionally, another group of similarly disregarded women working during this time exists – nurses for the Red Cross who saved countless lives, contributed to the war effort tremendously, and were subjected to horrible conditions while taking care of American troops; but they, too, were left out of today’s history books. And to add more to this narrative of excluded women in history, a woman named Henrietta Lacks has a similar story to these two – the story of a woman whose cells were taken without her consent. However, around 100 years after the Radium Girls’ stories first began, most of the American population has no idea who they are. Similarly, few know the story of Henrietta Lacks or the Red Cross nurses during World War One saving American lives. So, what happened? How did the radium girls go from being internationally known, published in countless newspapers and periodicals, to forgotten about by so many

people? Why wasn't Lacks aware of the use of her cells, or the scientific and medical knowledge that was discovered as a result of it? The answer to these questions lies in the idea that they were women whose stories are part of the scientific and medical fields of history – a history that tends to disregard women who are part of a valuable narrative that needs to be remembered and taught to future generations.

*Keywords:* Radium Girls, 1920s, 1930s, World War 1, Great Depression, Occupational Hazards, Herstory, Women's History, Henrietta Lacks, HeLa Cells, Red Cross, Nurses

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### **Who are the “Radium Girls”?**

The Industrial Revolution, WW1, and the Great Depression are all 1900s-1930s events that are remembered decades later, and any person who has studied U.S. history would likely know about them. But the Radium Girls aren't – the group of women whose exposure to radium at work centered them in a women's worker's rights scandal plaguing the 1920s. Radium was discovered in 1898 by scientists Marie and Pierre Curie, and its' health impacts have made significant contributions ever since. However, most of the general public weren't aware of the dangers of radium and its' ability to harm people – they falsely believed radium was healthy and extended life expectancy because it destroyed cancerous tissue in the body, according to Kate Moore's 2016 book *The Radium Girls: The Dark Story of America's Shining Women*. What people didn't know was that radium similarly destroyed *healthy* tissue, making its' supposed health benefits detrimental to humans. When the U.S. entered WW1 in 1917, the demand for radium products increased. Known as a magical cure-all for several diseases,

radium products were everywhere – advertisers promoted radium cosmetics, clothing, water, hygiene products, and much more.<sup>1</sup>

One of these products were radium dial watches, or watches whose dials were painted with a luminous paint that made them glow in the dark. Women painted these watch dials in factories such as Radium Dial and USRC and were termed the “Radium Girls.” At night, it was said people could tell the women apart from their looks alone – because they worked with so much radium, it was all over their clothes, making them glow in the dark at nighttime. But since the element was rare and expensive to obtain, they were cautioned to use it sparingly. They had a job to do, and they were paid well for it, earning some of the highest wages for women at the time. Some earned apx. \$20 a week, equal to \$370 today, and some of the best earned about \$2000 (\$40,000) annually.<sup>2</sup> Once they were hired, they would be taught the infamous “lip, dip, paint” technique – in which the women would put the paintbrush in their mouths to soften the bristles to ease the painting process. Due to the commonness of this technique, radium girls ingested much more radium than the average person; however, this was no concern for the women, who were told the radium was healthy.

### **Mysterious Medical Illnesses**

Once the girls began suffering from various illnesses and medical issues, they didn’t know what the problem was. The most prominent issues were dental – women suffered from tooth decay, broken jawbones, in addition to other issues. One of these women was Amelia Maggia, nicknamed Mollie – one of USRC’s best employees and one of three radium girls

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<sup>1</sup> From Kate Moore, *The Radium Girls: The Dark Story of America’s Shining Women* (United Kingdom: Simon & Schuster, 2016), 5

<sup>2</sup> From Teresa Odle, *Wristwatch Martyrs: The Radium Girls* (ASRT Scanner 41, no. 2: December 2008) 38f.

among her sisters.<sup>3</sup> A few years after beginning work at USRC, Mollie began experiencing painful dental issues. She began to see a local dentist but he couldn't figure out the problem. And though he tried helping Mollie, her condition only got worse. Her injuries became more and more severe, until Mollie was in constant, unimaginable pain. A piece of her jaw broke off in the dentist's hand once – and no matter what he tried, nothing worked.<sup>4</sup> Though she loved working for USRC and the wages she made at the time, she couldn't bear working at the factory anymore. She quit her job and stayed home, but over time, the pain became too much to endure. She died on September 12<sup>th</sup>, 1922, suffering to her very last breath.<sup>5</sup>

### **Behind the Front Lines**

However, while women worked day by day painting watch-dials for the regular American people as well as soldiers fighting in the trenches in World War One, there was another group of women similarly discarded from history textbooks who worked tirelessly saving American lives. These were women who worked as nurses for the Red Cross, using limited medical supplies within their reach to save the limbs and lives that they could. In “Stories Hidden and Lost: Fort Wayne Red Cross Nurses in the Great War,” author Peggy Seigel writes about these women, but more specifically two of the best – nurses Elizabeth Melville and Margaret Phillips Church.<sup>6</sup> She explains in her article how many nurses such as these two wished to write letters about their traumatic experiences attempting to treat festering wounds

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<sup>3</sup> From Kate Moore, *The Radium Girls: The Dark Story of America's Shining Women* (United Kingdom: Simon & Schuster, 2016), 13.

<sup>4</sup> From Teresa Odle, *Wristwatch Martyrs: The Radium Girls* (ASRT Scanner 41, no. 2, December 2008), 38f.

<sup>5</sup> From Dan Cooper and Brian Grinder, *The Playboy and the Radium Girls (Part 2: The Radium Girls)* (Financial History no. 91, Summer 2008) 13ff.

<sup>6</sup> From Peggy Siegel, *Stories Hidden and Lost: Fort Wayne Red Cross Nurses in the Great War* (Indiana Magazine of History, vol. 115, no. 2, June 2019), 116ff.

and hundreds of near-dead soldiers. However, many of their letters could not be read because of censorship – anything deemed “critical of the war effort or helpful to the enemy” was off-limits for the women to write to their families at home or elsewhere.<sup>7</sup>

Elizabeth Melville was assigned to a hospital in France in late 1917, having graduated from Fort Wayne Hope Hospital’s nursing program several years before, and had years of nursing experience behind her when the U.S. entered the war. She endured treating hundreds of injured people, and in 1918 wrote how she was responsible for the bedding and Red Cross supplies for Base Hospital 32, the base she had been a part of. When she went back to Fort Wayne in spring 1919, she was happily welcomed and published in the *Fort Wayne Sentinel* for her service tending to thousands of soldiers. However, Melville did not have a chance to tell of her experiences, because not long after 1919 she ceased to be remembered in public memory, and not many records survived of what Melville did in the years to follow. Seigel writes in her article, “[Melville’s] experiences would instead be more fully told in Base Hospital 32 histories, in letters of fellow nurses published in newspapers across Indiana, and eventually in a diary of a ‘32’ nurse that surfaced in 1986” (Seigel 6).<sup>8</sup>

### **Henrietta Lacks: A Case of Stolen Cells**

Henrietta Lacks is another woman who can be added to this narrative of excluded women in history whose story involves science and the health field as well. Lacks was treated for cervical cancer in her early 30s and died a few months later, but she and her family at the

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<sup>7</sup> From Peggy Siegel, *Stories Hidden and Lost: Fort Wayne Red Cross Nurses in the Great War* (Indiana Magazine of History, vol. 115, no. 2, June 2019), 116ff.

<sup>8</sup> From Peggy Siegel, *Stories Hidden and Lost: Fort Wayne Red Cross Nurses in the Great War* (Indiana Magazine of History, vol. 115, no. 2, June 2019), 116ff.

time weren't told how her cells were taken for studies, nor were they compensated for the medical breakthroughs that resulted from studying those cells. It wasn't until years later when further generations of Lacks' family were told this information. According to "The Digital Life of Henrietta Lacks: Reforming the Regulation of Genetic Material" by Kelsey Russo, it wasn't until over 60 years later until Lacks' story became known.<sup>9</sup>

### **Radium Girls vs. USRC: Suing for Their Lives**

But over in Orange, New Jersey, some women knew exactly what was happening with their bodies – women like Grace Fryer, Katherine Schaub, Quinta McDonald, Albina Larice, and Edna Hussman, all former employees of USRC and all women who filed suit against them in 1927. They each asked for \$250,000, equal to apx. \$3.4 million today.<sup>10</sup> Moore's book goes into extensive detail about this event, including many details about the women's personal lives and the legal hurdles they had to jump through to receive justice. It also includes important facts about how the women were internationally known because of the court battle that ensued from trying to receive adequate compensation from their employers for the pain they caused the women and their families.

While these women did eventually receive this compensation years and many frustrating court battles later, they still had hurdles to jump through – this time being the retelling of their story to future generations. Previously published in newspapers such as the *New York Times*, these women all but completely disappeared from the pages of history. They

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<sup>9</sup> From Kelsey Russo, *The Digital Life of Henrietta Lacks: Reforming the Regulation of Genetic Material* (Journal of Legal Medicine, vol. 38, no. 3/4 July 2018), 449ff.

<sup>10</sup> From Kate Moore, *The Radium Girls: The Dark Story of America's Shining Women* (United Kingdom: Simon & Schuster, 2016), 175ff

were scarcely mentioned in news going forward after many of the women had passed away. It wasn't until the late 1980s, when filmmaker Carole Langer came to Ottawa, IL (the city in which Radium Dial, one of the companies employing radium girls was previously located) to direct a film about the women – a documentary titled *Radium City*, which was released in 1987. In her book, Moore quotes Marie Rossiter, one of the longest-living radium girls, as having stated, “God has left me here. I always knew someone would walk through that door, and I would finally have a chance to tell my story” (391). The reason for Rossiter’s shock, similar to other women’s who were still alive years later, was because their story had been untold and forgotten about. To further honor her and other dial-painter’s memories, Langer dedicated the film to her, “commending her for the way she had never lost her sense of humor or her faith, even as she’d battled against the toughest odds throughout her life” (Moore 391).

Slowly, these women became known in society – or at the very least, among those who had studied radium, science, or women’s history extensively. In 1998, *Times* journalist Denise Grady wrote an article titled “A Glow in the Dark, and a Lesson in Scientific Peril,” which speaks briefly of the women in commendation of Marie and Pierre Curie’s discovery of radium 100 years previously.<sup>11</sup> Additionally, author Claudia Clark wrote *Radium Girls: Women and Industrial Health Reform* in 1997,<sup>12</sup> and the following year, author Ross Mullner wrote *Deadly Glow: The Radium Dial Worker Tragedy*. These books became part of the select bibliography for Kate Moore’s book. At the time of writing it, Moore was also a director for the 2015 play *These*

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<sup>11</sup> From Denise Grady, *A Glow in the Dark, and a Lesson in Scientific Peril* (The New York Times, October 6 1998).

<sup>12</sup> From Clark, Claudia. *Radium Girls, Women and Industrial Health Reform : 1910-1935*. University of North Carolina Press, 1997. EBSCOhost, search.ebscohost.com.reedleycollege.idm.oclc.org/login.aspx?direct=true&db=kdh&AN=BK0002901601&site=ehost-live.

*Shining Lives*, a play about the radium girls that was said to be the inspiration for her book. After Moore's book became a *New York Times* bestseller and part of the reason the radium girls' story was known again, a fictional book named *Glow* by Megan E. Bryant was published in 2017 about the women, and if that wasn't enough, the film *Radium Girls*, directed by Ginny Mohler and Lydia Dean Pilcher, was released in 2018. Finally, the radium girls received the acclaim for their endurance through the lengthy court battles almost 100 years previously.

### **Forgotten Herstory: Why They Faded Into Obscurity**

The Radium girls weren't the only one out of these women to be written about years later; Henrietta Lacks, too, went into the spotlight of women's history when Rebecca Skloot published her book, *The Immortal Life of Henrietta Lacks*, in 2010. But that was almost 60 years after Lacks' cells were taken – and Moore's book about the radium girls wasn't published until almost 100 years after the women had started working for USRC and similar companies. So one question remains to be asked of these stories: why did it take so long for these women to become known? And further beyond that, when will the Red Cross nurses have their moment in the spotlight as well? An obvious answer for this question could lie in the fact that they were women; the radium girls lived during a time in which women had hardly received the right to vote, and women had significantly less rights than they do today. But women had the right to vote in 1920, which was 31 years before Lacks' cells were taken, so this theory doesn't completely add up. Something that may be considered is that studies reveal women are overall less likely to work in the private sector<sup>13</sup>, in which there are typically higher salaries – so women

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<sup>13</sup> From Carole Truman, *Paid work in women's lives: continuity and change – Women, power and resistance: an introduction to women's studies* (Pennsylvania: Open University Press, 1996), 35-47.

like the Radium Girls were already at a disadvantage and less likely to obtain higher positions for the companies they worked for. This could have potentially resulted in these women being seen as less important, and therefore not as necessary to remember several years later as compared to other historical events. Additionally, questions have arisen regarding issues with digitizing media in recent years and feminist history. Although some may argue that the digitization of media makes history more accessible, in this case, the opposite could be true. Examples of these issues were stated in “Twenty Years On: Feminist Histories and Digital Media” by Paula Hamilton and Mary Spongberg. The article brings to light issues such as critiques that have arisen against algorithms on the internet for race and gender blindness, or whether the digitization of media has widened access to the public or if it has merely further divided different races and classes. This argument is stated because digitizing media can present issues for certain people to access the material, such as people who don’t speak English or can’t access computers or the Internet.<sup>14</sup>

Despite how these women have mostly been forgotten about for decades, it is vitally important to remember their story and retell it so future generations won’t forget them. Moore’s book details the impacts that these women had on the future of science, technology, and health decades after their deaths; some even went so far as to donate their bodies to science so future generations could fully understand the impacts of radium on their bodies.<sup>15</sup>

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<sup>14</sup> From Paula Hamilton and Mary Spongberg, *Twenty Years On: Feminist Histories and Digital Media* (Australia: Women’s History Review, 2017), 671-677.

<sup>15</sup> From Kate Moore, *Radium Girls: The Dark Story of America’s Shining Women* (United Kingdom: Simon & Schuster, 2016), 391.

These women were very influential to many projects and organizations in the years that followed their deaths; for example, studying their bodies and the impacts of radium to their health aided in the Manhattan Project. In addition to this, the Atomic Energy Commission stated that they could potentially have saved hundreds of lives because of the knowledge of radium that was discovered on their behalf. Moore's book also stated that these women played a direct hand in the creation of the Occupational Safety and Health Administration (OSHA).<sup>16</sup> Additionally, when the U.S. Environmental Protection Agency (EPA) visited the site of the USRC plant located in New Jersey in 1979, decades after the radium girls worked there, the levels of radioactivity in the location were noted as twenty times higher than a safe amount. Not just the plant itself, but the surrounding community, was impacted by the contamination from the radium, costing the government a reported \$144 million (\$209 million) to clean up the area.<sup>17</sup> The Radium Dial location was also immensely harmed – and despite the emergence of World War 2, it “went bust in 1943” (Moore 385). These women contributed so much to science and health in today's world, and it is therefore incredibly important to remember who they were and what they sacrificed. Édouard Glissant, a French writer and philosopher, once said, “To forget is to offend, and memory, when it is shared, abolishes this offence. If we want to share the beauty of the world, if we want to be in solidarity with its suffering, we need to learn how to remember together.”<sup>18</sup> It has been stated many times that if we don't learn and remember our history, we are doomed to repeat it. In order to prevent a situation like this occurring again,

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<sup>16</sup> From Kate Moore, *Radium Girls: The Dark Story of America's Shining Women* (United Kingdom: Simon & Schuster, 2016), 390.

<sup>17</sup> From Kate Moore, *Radium Girls: The Dark Story of America's Shining Women* (United Kingdom: Simon & Schuster, 2016), 384.

<sup>18</sup> From Max Farrar and Ian Thackray, *How History Is Warped by Acts of Forgetting* (The Guardian, 2019).

we need to remember these women and what was done to them, or we risk repeating the same mistake years later.

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