

**"A LOOK INTO THE FUTURE": WOMEN
RAILROAD TELEGRAPHERS AND STATION
AGENTS IN PENNSYLVANIA, 1855-1960**

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In the April 1913 issue of *The Pilot*, the employees' magazine of the Reading Railroad, a cartoon appeared over the caption, "A Look into the Future," depicting an anxious-looking male railroad employee looking through a magical telescope into a future in which a "Miss R. U. Married" is the station agent at a railroad depot, while other women railroad employees vigorously flag trains and drive spikes.¹ His anxiety at being replaced by one of these assertive women probably reflected the feelings of many male railroaders at a time when the number of female telegraphers and station agents working for the railroads was approaching a peak.²

Though little remembered today, the presence of women in railroad depots working as station agents, ticket agents, and telegraphers was taken for granted in the late nineteenth and early twentieth centuries. Frances Willard, writing in 1897, noted that the sight of "a young woman presiding over the telegraph in offices and railway stations" was so ordinary "that one has ceased to have even a feeling of surprise at seeing them there."³ B. B. Adams, editor of the *Railroad Gazette*, observed

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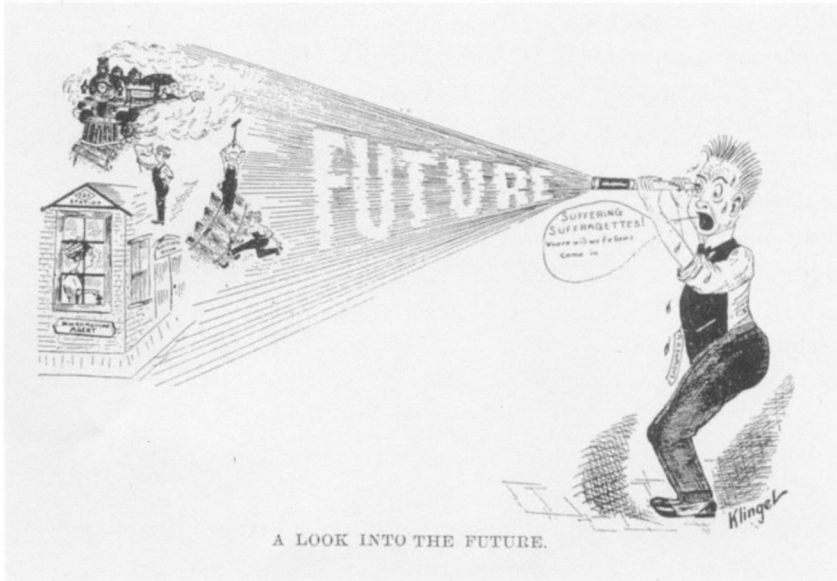


FIGURE 1: "A Look into the Future." Reading Railroad Employees Magazine, *The Pilot*, April 1913, p. 117. Reprinted by permission of The Railroad Museum of Pennsylvania.

in the same year that at railroad stations "where the business has increased enough to warrant the employment of an assistant, a young woman to do the telegraphing is frequently the first helper engaged."⁴

In fact, women had been employed by the railroads since the mid-nineteenth century—although initially in jobs that were considered to be extensions of the sort of domestic work women performed in the home. Women were employed as charwomen and restaurant employees by the Baltimore and Ohio Railroad in 1855, and as sleeping car attendants to assist female passengers perhaps as early as 1838.⁵ The development of the telegraph in the late 1830s and early 1840s by Samuel Morse and others opened a completely new technological field of employment for women, though wage inequality in the profession would quickly become a contentious issue. Sarah George Bagley, perhaps best known for her role as organizer of the Lowell Female Labor Reform Association, became the manager and operator of the telegraph office in Lowell, Massachusetts, in 1846. The following year, she left Lowell to become the operator in Springfield, Massachusetts; from there, she wrote bitterly to a friend in March 1847 that "the man who tended this office before me had four hundred dollars per year I three [hundred] and

still the business has been on the increase all the time. But I am a woman and it is not worth so much to a company for *me* to write a letter as it would be for a man.”⁶

For both geographic and economic reasons, Pennsylvania played a unique role in fostering the employment of women in the railroad and telegraph industries. The east-west orientation of the Commonwealth provided a natural pathway for communication between the big cities of the East Coast and the emerging settlements in the West along the Great Lakes and the Ohio River, not only for the canals and railroads, but for the early telegraph lines as well. Within little more than a year of Samuel Morse’s first demonstration of telegraphic communication between Baltimore and Washington in 1844, the Irish-American entrepreneur Henry O’Rielly had begun work on his Atlantic & Ohio telegraph line, which stretched from Philadelphia to Pittsburgh by 1846.

O’Rielly’s Atlantic & Ohio Telegraph Company employed women as telegraphers almost from its inception. In an age when experienced telegraphers were in short supply, O’Rielly and his associate J. D. Reid recognized that women could be trained to staff local offices and send and receive messages, often at lower wages than their male counterparts. This strategy led to the employment of Emma Hunter as telegrapher in West Chester in 1851, and Elizabeth Cogley in Lewistown in 1855, both of whom began long and distinguished careers as telegraph operators.

Though it seems surprising today, it was several years before the railroads began to consider the use of the telegraph to regulate and control the movement of trains, even though early telegraph lines often followed along the tracks in the railroad right of way. While the telegraph was occasionally used to pass shipping and freight arrival information from one station to another, it was not until 1851 that Charles Minot of the Erie Railroad first used the telegraph to control the movement of trains. Using this system enabled much more efficient use of single track railroads; an engineer, stopping at a station, could have the telegraph operator check with the operator at the next station down the line to see if any trains were approaching from the opposite direction. If so, arrangements could be made to have one of the trains (the “inferior” train) pull off onto a siding to let the other train (the “superior” train) pass, avoiding a possible collision.⁷

One of the earliest railroads to adopt the telegraphic signaling system was the Pennsylvania Railroad, which made extensive use of the telegraph under the direction of Thomas A. Scott and Andrew Carnegie in the early

1850s. Carnegie had in fact begun his career as a messenger for the Atlantic & Ohio Telegraph Company before being hired by Scott as a clerk/telegrapher in 1853. Carnegie was an early advocate of the employment of women as telegraph operators and helped his cousin, Maria Hogan, gain employment with the railroad as a telegrapher in the Pittsburgh freight yards, where she tutored a number of other women wishing to enter the field.⁸

By the mid-1850s, the fortunes of the Atlantic & Ohio company had begun to flag, due to excessive competition and overly optimistic expansion plans, and a number of stations were closed or taken over by other companies.⁹ In the winter of 1855–56, the Lewistown office of the Atlantic & Ohio was taken over by the Pennsylvania Railroad and moved to the depot, where Elizabeth Cogley became the first woman to be officially recorded as a railroad telegrapher.¹⁰

Elizabeth Cogley's success and prominence in her field were due in part to her good education, and partly to serendipitous family connections. She was born in 1833, and came from a well-established middle-class family that had roots in Lewistown dating to the 1750s. She was educated in Dame schools as a young girl, and later at the Lewistown Academy, which offered an excellent education for young women, including instruction in the Greek and



FIGURE 2: Elizabeth Cogley, railroad telegrapher, Lewistown, PA. From *Telegraph Age*, September 16, 1897, 382. Reproduced from the Collections of the Library of Congress.

Roman classics, mathematics, and literature. ("Dame Schools" were private or subscription schools which originated in the colonial period to provide a rudimentary education to the daughters of the middle class, often run by a widow or single woman.) Her father, Joseph M. Cogley, maintained a store in Lewistown, where the precocious Elizabeth was placed in charge of the book and stationery section at the age of twelve.

Her father's store was located across the street from the Lewistown post office. During the Mexican War of 1846–48, it was the custom for a reader to be selected to stand in front of the post office building and read the latest war news from the newspaper as it was received. Elizabeth (or "Miss Lib," as she was known in Lewistown), displaying an early interest in news and current events, quickly became a member of the group that gathered around the post office to hear reports of the war. As she remarked in her later years, "I was always one of the crowd." It was probably due in part to her influence that her father began a newspaper delivery service in Lewistown in 1849.¹¹

Elizabeth learned telegraphy from her cousin, Charles C. Spottswood, who had been orphaned at an early age and was then taken in and raised by the Cogley family. He became the telegrapher for the Atlantic & Ohio in Lewistown, and got Elizabeth a position as a telegraph messenger in 1852 while she learned the Morse code. When he left to accept a position in another town in 1855, she took over his duties as operator. She demonstrated great aptitude for the work, and soon began teaching other members of her family, including her brothers, Elias and J. Friedley, and her sister Mary. Elizabeth Cogley never married, and made a lifetime career of telegraphy.

As a railroad telegrapher for the Pennsylvania Railroad, Elizabeth's skill and business ability quickly brought her to the attention of railroad officials. In April 1861, with the Civil War looming, she received a telegram from the State Department in Harrisburg calling the Logan Guards into service in response to President Abraham Lincoln's call for 75,000 troops. Her transcription of this message was soon reproduced photographically and widely distributed, and resulted in her being transferred to the Pennsylvania Railroad general office in Harrisburg in 1862. During the Civil War, she handled many messages relating to the war effort; she remained in Harrisburg in the employ of the railroad until her retirement in 1900, after a continuous service of forty-three years and eleven months. She returned to Lewistown where she died at the age of eighty-eight in 1922.¹²

By the time of the Civil War, many occupations had opened up for women in the United States, due in part to industrialization and an emerging

middle-class ethic that condoned, if it did not encourage, the entry of women into the workforce to raise the economic status of the family. Virginia Penny's encyclopedic book, *The Employments of Women*, listed over 500 occupations available to women in 1863, including telegraphy. According to Penny's description, "a new source of employment has been opened by the invention of the electric telegraph." However, she also warned that women who entered the profession could expect to experience "the antagonism naturally felt by male operators, who see in it a loss of employment to themselves..."¹³

The employment of women was given added impetus by the Civil War; Philip Foner notes that over one hundred thousand women entered the workforce during the Civil War period, as men were drafted into the military.¹⁴ Many male telegraphers joined the army or the Military Telegraph Corps, creating opportunities for women to enter the profession. In Pittsburgh in the 1860s, Abbie Gail Struble, her sister Madge, and a friend, Anna Bellman, attended a telegraphy school for women run by the Baltimore & Ohio Railroad, which at that time was pursuing an aggressive expansion policy in western Pennsylvania, putting it in competition with the Pennsylvania Railroad. The three women were among the first telegraphers to learn to receive by "sound," rather than by "sight;" earlier telegraphers had used a printing register which imprinted the dots and dashes on a paper strip for later decoding. Reading by sight was clearly ineffective for train routing, as routing decisions often had to be made as quickly as possible to avoid collisions. Thus being able to decipher the clicks of the sounder as the message arrived proved a valuable skill for railroad telegraphers. Abbie Struble not only was given a position as operator at the Port Perry station, but was also employed to train other operators in the new skill.¹⁵

Abbie Struble was born around 1846, the daughter of George Lewis Struble, a steamboat pilot, and Margaret Gregory, both of Pennsylvania Dutch (German) descent. She married John Latin Vaughan, a Scottish immigrant, in 1866. He had previously worked as a telegraph lineman, and learned to operate from his wife. Together, they began careers as "boomers" in the post-Civil War era, moving from town to town with an ever-expanding family, in search of telegraphic work.¹⁶

While Abbie Struble was able to enter the profession with relative ease during the Civil War, attitudes about working women began to change in the post-war era as men returned from war and competition for jobs arose.

Employers had come to see the employment of women at lower wages than men as a means of cutting costs; male employees, in turn, feared the loss of their jobs to women, just as Virginia Penny had predicted. This turned out to be particularly true of the telegraph industry; as Melodie Andrews notes in her essay, “‘What The Girls Can Do’: The Debate Over the Employment of Women in the Early American Telegraph Industry,” wages constituted sixty percent of the operating costs of Western Union in the post-Civil War era, “and at many rural offices and isolated railroad junctions the gross receipts amounted to little more than the salary of the operator.”¹⁷

Much of the debate over the “proper place” of women in the telegraph industry in the late 1860s and 1870s took place in the pages of *The Telegrapher*, the primary trade journal of the craft. Male and female operators traded ripostes in the form of letters to the editor on a variety of subjects including the relative competence and reliability of the two sexes, wages, and working conditions. Often witty and highly literate, the letters to the editor of *The Telegrapher* from this period provide a valuable commentary on the gender issues of the era.

One such exchange in *The Telegrapher* in 1875 dealt with the suitability of the railroad station as an environment for working women. Using the pseudonym “Nihil Nameless,” a male operator posed the rhetorical question, “Will the Coming Operator Be a Woman?” and then proceeded to point out melodramatically the hazards attendant to working in such an environment:

When Miss A—has learned the business, she must get a situation . . . She cannot afford to wait until one is offered, acceptable in every way. She must take such as she can get. Suppose that happened to be at the stock yards, or at a railroad repairing shop, such as I have seen, her office will be surrounded, perhaps thronged with men of the rudest, most uncultured type, glaring on her through her window, asking her impertinent or insulting questions and giving utterance to the most shocking profanity. She must bear it; she cannot protect herself, nor punish the offenders . . . an accident occurs out on the railroad over which her line runs, she must go in the night and the storm, perhaps, and attach the instrument to the wires, and sitting there alone and unprotected, among blasphemous men, work while chilling rain drenches her, freezing as it falls . . .¹⁸

A female operator, using the pseudonym "Aliquae," responded to Nihil Nameless in a following issue, noting that the best way for women to ensure respectful treatment in the workplace was to exhibit self-respect:

One who is naturally refined will not lose her identity by coming in contact with others. And one who respects herself, will always be respected ... And is it any worse to hand orders, etc. to a few workmen, than to give orders to the butcher, the baker, etc., at home? A woman cannot stay forever penned up at home, and only go out into the world hemmed in by a father or brother on one side and a husband on the other."¹⁹

Abbie and John Vaughan's long telegraphic careers took them from Pennsylvania to Ohio and Missouri, arriving in Merkel, Texas, at the newly-opened office of the Texas & Pacific Railroad in 1882. Their five children—Madge, Edna, George, Henry, and Evadine—were literally raised in the railroad depot, and all worked as telegraphers at one time or another. In 1891, Henry—known to his family by his middle name, "Latrobe," presumably named after B&O President Benjamin H. Latrobe—went to Mexico in search of work, and obtained a position with the Mexican Central Railroad in Diez, Mexico. Eventually the entire family followed, and John and Abbie Vaughan became station agents and telegraphers for the Mexican Central and National Railroads in Moctezuma, Mexico, where they remained until 1912, when unsettled conditions brought about by the Mexican Revolution caused them to return to the United States.²⁰

The Vaughans lived in Elsinore and Long Beach, California, after their return from Mexico. During the First World War, Abbie Vaughan, by then well-known within the telegraphic community as "Mother Vaughan, the mother of code telegraphy," came out of retirement at the age of 72 to teach telegraphy; as with the Civil War, World War One created a shortage of trained telegraphers. Abbie Struble Vaughan died at her home in Long Beach in 1924.²¹

While both Elizabeth Cogley and Abbie Struble found telegraphy to be a fulfilling career choice, many Pennsylvania women entered the occupation to support themselves and their children after a change in family situation. One such case was that of Jane McDowell Foster, wife of composer Stephen Foster, and inspiration for his song, "Jeanie with the Light Brown Hair."

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FIGURE 3: Abbie Struble Vaughan and her husband J. L. Vaughan. Vaughan Family Genealogy, courtesy of Nancy Hardy, Abilene, TX.

Jane McDowell was born in Pittsburgh in 1829, the daughter of a prominent physician. In 1850, she married the struggling young composer, who was continually on the brink of financial insolvency; the following year, their daughter, Marion, was born. For the next ten years, the couple repeatedly separated and reunited as Stephen Foster's fortunes rose and fell. Finally in 1861, after Stephen Foster had begun drinking heavily, Jane Foster left Stephen for good, taking their daughter with her to live in Lewistown. Like Elizabeth Cogley, Marion was educated at the Lewistown Academy. Needing a means to support herself and her daughter, Jane studied telegraphy, and eventually secured a position with the Pennsylvania Railroad as a telegrapher. According to a letter written by her granddaughter, Jane's situation came to the attention of Andrew Carnegie, who transferred his cousin, Maria Hogan, to the Pittsburgh office in order to make the Greensburg office available to Jane Foster.

Stephen Foster died in poverty in New York City in 1864. Jane Foster continued to work at the Greensburg station and eventually remarried to



FIGURE 4: Jane McDowell Foster, telegrapher, Greensburg, PA. *Musical Courier*, Nr. 35, 1930. Photo courtesy of Werner Tomaschewski's Stephen Foster Web site at <http://www.stephen-foster-songs.de/problems.htm>.

Matthew D. Wiley, an express agent. She died in a bizarre accident in 1903, when her clothing caught on fire as she sat near the fireplace in her home.²²

During the early years of the nineteenth century, there existed a general prejudice against women "exhibiting themselves" in the public sphere by engaging in business or commercial activity. One of the advantages of telegraphy as an occupation for women cited by one of Virginia Penny's contributors in 1863 was that female operators would be kept "in an adjoining or upper room, apart from public inspection."²³ Many commercial telegraph offices, including the Western Union main office in New York City, used partitions to shield female operators from the view of the general public and the male operators until the mid-1870s.²⁴ In the environment of the railroad station, however, isolating the telegrapher from public view was impractical, and would have hindered the operator's ability to interact with the public and the train crews. Thus it was primarily in the railroad station that the general public became accustomed to seeing women telegraphers and station agents engaged in selling tickets, transmitting messages, and handing train orders to crewmen. By the mid-1870s, it was no longer a novelty to see women

performing such work. William Orton, president of Western Union, told a Senate committee in 1874 that "there was a time when it was not deemed proper to put them [women] in railway stations; but I believe that between Buffalo and Albany, the telegraph at nearly every station is worked by women."²⁵

During natural disasters, however, telegraphers, including women, became highly visible figures as they transmitted warnings of impending danger and news of survivors. One such figure was Emma Ehrenfeld, whose work as a railroad telegrapher for the Pennsylvania Railroad in the coal mining town of South Fork would likely have gone unremarked, were it not for the Johnstown Flood of 1889.

Emma Ehrenfeld was born around 1860 in Wilmore, Pennsylvania, the daughter of German immigrants. Her three brothers, George, William, and Fred, all worked for the Pennsylvania Railroad, and Fred eventually became District Supervisor of the Gallitzin Division. It is probable that Emma obtained her position as a telegrapher at South Fork tower as a result of her family connections.²⁶

On the morning of May 31, 1889, Emma reported to work at the South Fork telegraph tower, where she found orders to hold all trains east, due to heavy rains and the resulting possibility of flooding and mudslides. Local residents were also concerned about the rising level of water in nearby Lake Conemaugh, a lake formed by damming the south fork of the Conemaugh River, and used by members of the exclusive South Fork Fishing and Hunting Club for recreation.

"Then about noon," Emma later recalled, "I judge it was, a man came in very much excited; he says 'Notify Johnstown right away about the dam.' He says, 'It's raising very fast and there's danger of the reservoir breaking.'"²⁷

After spending a few moments pondering the veracity of the man's claims, Emma decided to err on the side of caution and send the warning to Johnstown. She soon discovered that the telegraph line was only functional as far as the next station, Mineral Point, about four miles away; after that point the wire was inoperative due to the storm. She contacted the Mineral Point operator, P. N. Pickerell, and asked him to have someone hand-carry the message to the next station that still had a connection to Johnstown.

As the afternoon progressed, Emma Ehrenfeld received more warnings about the condition of the dam, first from the South Fork railroad agent, and later from the superintendent of coal mines. As with the first message, she

sent the warnings to the Mineral Point operator, who had them carried to the next station for transmission to Johnstown. She never received confirmation from Johnstown that her messages had gotten through.

At about three o'clock in the afternoon, Emma descended from the second floor of her tower to the first floor, where the railroad men were sitting around the stove to warm themselves. One of the men told Emma to look out the window, where people were running and screaming; they suddenly realized that the dam had burst, and the water was rushing toward the tower.

Emma later described that frightening moment in her own words:

I looked out of the window on the side of the river, and saw it coming . . . It just seemed like a mountain coming, and it seemed close; of course, I don't know just how close it was, but I knew I must go if I wanted to get out, and I started and ran down the stairs without waiting to get my hat or anything; and there is a coal tipple about opposite the office, and I ran down across the track, and up those steps. It was a very short time, not more than two minutes until the office was taken.²⁸

In the meantime, the messages that operators Ehrenfeld and Pickerell had sent finally arrived in the office of Pennsylvania Railroad agent Deckert in Johnstown. Around 2:45 P.M., Deckert decided to use the telephone to notify the Western Union manager in Johnstown, a woman named Hettie Ogle, about the warnings.²⁹

Ogle was a Civil War widow with twenty-eight years of experience as a telegraph operator. After her husband was killed in 1861, she became the telegraph operator in Bedford, Pennsylvania, in order to support her son, Earl, and daughter, Minnie. In 1869, she transferred to Johnstown, where she grew the business from a single-operator station to one that employed three full-time operators, including her daughter Minnie. After the invention of the telephone in 1876, she operated the Johnstown telephone exchange as well.³⁰

The rising waters of the Conemaugh had already forced Hettie Ogle to move up to the second story of the Western Union office on Washington Street, together with her operators Minnie Ogle, aged thirty-two, Grace Garman, twenty-one, and Mary Jane Watkins, twenty-two. Upon receipt of agent Deckert's warning, she forwarded it to the Pittsburgh office and signed off, stating that due to the rising water, this would be her last message.

Her words proved to be prophetic; within a few minutes, the wall of water from the burst dam at South Fork inundated Johnstown and demolished the frame building housing the Western Union office. Hettie Ogle and her three operators were swept away and drowned.

Emma Ehrenfeld survived the flood in South Fork by climbing the hillside; according to a local story, she was “rescued” from the hillside by a physician, Dr. Joseph Glass. She married Dr. Glass the following year; they would have seven children, five of whom survived into adulthood. After Dr. Glass’s death in 1913, she relocated to Pittsburgh. In 1940, she moved to Daytona Beach, Florida, where she died in 1943 at the age of eighty, her connection with the Johnstown Flood largely forgotten.³¹

As already mentioned, women telegraphers and station agents had become commonplace by around 1900. The *Official List of Officers, Agents, and Stations* of the Philadelphia and Reading Railway Company for 1901 showed 19 of 458, or approximately 4 percent, of station agents to be women. A similar listing for the Pennsylvania Railroad in 1906 showed 83 out of 3,922, or 2 percent, of agents to be women.³²

Development of block signaling in the 1890s added new tasks to the responsibilities of station agents and telegraphers. Block signaling was a technique for ensuring train safety and preventing collisions by permitting only one train to occupy a given stretch of track at a time. The railroad track between two stations was designated a “block;” when a train entered the block, the operator at the entry point would set a signal indicating that the block was occupied, and that it was dangerous for another train to enter the block (a “danger” signal). When the train exited the block at the other station, the operator at that station would telegraph back to the operator at the entry point, who would then clear the signal, and permit another train to enter the block.³³

The signals consisted of blades and lamps mounted on signal towers adjacent to the tracks. A horizontal blade combined with a red light indicated danger ahead, normally a sign that a train was already in the block; a blade set at a sixty-degree angle from the horizontal together with a clear light indicated that it was safe to enter the block.³⁴

Signals were set by means of switch levers located in the station, or in a separate signaling tower. The early manual, or “Armstrong” levers, were quite difficult to set and required a great deal of physical strength; the later “interlocking” levers were easier to work and included a safety feature that prevented incorrect signals from being set. In large stations,

setting the signals was performed by block operators whose sole duty was to tend to the switch levers. In a small station, however, setting the signals was just one more of the station agent's duties—as Thomas Curtis Clarke noted,

The agent at a small station has a great multiplicity of duties to perform. He must sell tickets, be a good book-keeper, and a faithful switch-tender. He generally must be a telegraph-operator and must be vigorous physically. He must be ready, like the conductor, to submit to some abuse from ill-bred customers, and should be the peer of the businessmen of his town.³⁵

While Clarke uses the generic “he” to refer to the gender of the station agent, the same responsibilities applied to women station agents. While most women station agents seemed to be able to set switches without undue difficulty, their physical abilities came under more scrutiny from their supervisors, both male and female, than their male counterparts. Janet Davidson, in her study of women who worked for the Pennsylvania Railroad during World War One, quotes Edith Hall, an inspector for the Women's Service Section, who noted in her report on working conditions for women block operators in 1919 that “none of the women admit that the work is too hard, but I am convinced that the work in most of the towers visited—in practically all of them—is too heavy to be assigned to women indiscriminately.”³⁶

Like Emma Ehrenfeld, many women gained railroad employment through family connections. Julius Robert Rothe, a construction foreman for the Reading Railroad, had two daughters, Lillian and Irene, who had long careers as station agents and telegraphers on the Philadelphia-New Hope branch of the Reading.

Julius Rothe was born in Dresden, Germany, in 1852, and emigrated to the U.S. as a young man. Prior to arriving in Buckingham, Pennsylvania, in 1891, he had worked in railroad construction in Tennessee and North Carolina. His daughter Lillian, who had been born in 1889, became station agent at the Traymore station in 1906, at the age of seventeen. Only six months into her apprenticeship, the Traymore station was burglarized and vandalized; stamps and envelopes worth three dollars were taken, and railroad tickets were torn up. Two years later, she married Watson W. Carver, the station agent at nearby Ivyland, and assumed the duties of telegrapher at that station.³⁷



FIGURE 5: Left: Lillian Rothe Carver; Middle: Irene Rothe Kappauf, 1920s. Photo courtesy of Harvey Crouthamel, Gettysburg, PA.

Her sister Irene became station agent at Bycot, (sometimes referred to as “Holicong” station) sometime before 1912, when a photograph was taken of her with the empty milk cans to be used for the daily milk run. She was not the first female station agent at Bycot; a Mrs. F. R. Kreuson was listed as the station agent in 1901. Irene married Harry B. Kappauf, a painting contractor, in 1915; while the wedding announcement indicated that the couple intended to begin farming in the Holicong area, it was two years before Irene Kappauf resigned her position at the Bycot station.³⁸

According to her nephew, Irene Kappauf often told the story of a mischievous young girl who lived near the Bycot station, who, perhaps having heard of the burglary at the Traymore station while Lillian was agent, left a note saying “Give me all your money or I will get you!” The girl, Margaret Meade, never lost her audacious temperament, and grew up to become a renowned anthropologist.³⁹

The entry of the U.S. into the First World War in 1917 created additional opportunities for women to become station agents and



FIGURE 6: Irene Rothe preparing for the milk run, Bycot Station, 1912. Collection of Kurt Bell, State Railroad Museum of Pennsylvania, Strasburg, PA. Reprinted by permission of The Railroad Museum of Pennsylvania.

telegraphers, as railroad men were called to military service, leaving vacancies in many offices. The *Pilot* reported the appointment of over forty-five women as station agents, telegraphers, and ticket agents for the Reading Railroad in the period from the U.S. entry in the war in April 1917 to the end of 1919. Among these were Lillian Carver, who was appointed station agent at Grenoble in November 1917; her sister Irene came out of retirement a year later to become station agent at Lahaska, a post she retained until well into the 1930s. Irene Kappauf died in 1977. In 1930, Lillian's husband, Watson W. Carver, suffered a stroke, and she spent the remainder of his life caring for him until his death in 1955. She also became an antiques and glassware dealer; one of her prominent customers was the Snellenbergs Department Store in Philadelphia. Lillian Carver died in 1969.⁴⁰

World War Two created another large increase in the number of women employed by the railroads; over 100,000 women went to work for the railroads in the U.S. during the war.⁴¹ Demand was especially great for telegraphers, and many railroads relaxed their earlier requirements for knowledge of Morse code and railroad operating practice in order to fill vacant positions quickly.

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Beginning female railroad telegraphers were referred to as “victory operators” on many rail lines, a term that soon became a term of disparagement for a novice or “ham” operator. Sue Morehead, who became a telegrapher for the Southern Pacific in 1944, wrote of her experiences in gaining a position as a telegrapher in the pages of *Railroad Magazine*:

I called the Superintendent's office for information about getting one of these new jobs. They told me to go out to any little station along the line, listen in, study the Book of Rules, and let them know when I felt qualified to take the examination. Being a telegrapher wasn't necessary for one of these spots.⁴²

The introduction of centralized traffic control (CTC) in the 1920s shifted much of the work of train routing and scheduling away from the station agent/telegrapher to the centrally located dispatcher. It was no longer necessary for the local agent/telegrapher to set signals or report on the location of trains, thus leading to a deskilling of the occupation. Train orders began to be transmitted by telephone rather than by telegraph, eliminating the need for the station agent to know Morse code. While telegraphers continued to transmit shipping information on freight and agricultural products, this was done using the recently developed



FIGURE 7: Agnes Jozaitis, teletype operator, Pennsylvania Railroad, sending shipping information to Philadelphia, 1960. *Pennsy Magazine*, May/June 1960, 10. Reprinted by permission of The Railroad Museum of Pennsylvania.

teletype, rather than by traditional Morse telegraphy. By the 1960s, Morse equipment was no longer in use in most railroad stations. However, the telegraph keys and sounders were often kept in service as a backup system.

Conclusion

Due to its many archives and local historical societies, Pennsylvania has proven to be a rich source of material on women who worked for the railroads as telegraphers and station agents. Thanks to these resources, it was possible to go beyond the norms of social history—where a brief mention of a name attached to a statistic is often all that can be recovered from the historical record—and assemble fairly detailed biographies on a considerable number of Pennsylvania women station agents and telegraphers. This allowed the reconstruction, at least in part, of the multi-dimensional aspects of their lives—how their work intersected with their domestic lives, how and why they entered the profession, and what sort of impact they had on their communities. In spite of this success, there is still a considerable amount of material lying undiscovered in archives, museums, and family histories—an invitation to further research on this topic.

Working as a station agent or telegrapher was an area of business activity by women in the nineteenth and early twentieth centuries that has been largely overlooked by business and labor historians alike. In addition to the technical skills required to send and receive messages, maintain the equipment, and manage train movement, telegraphers and agents had to acquire the business skills needed for bookkeeping, message filing, equipment inventory, and communication with corporate headquarters. Railroad telegraphers in particular had to become knowledgeable about train orders, waybills, and tariffs, and had to communicate with railroaders in their own language. Such skills were difficult for women to acquire in the mid-nineteenth century, when business proprietorship was still regarded as a largely male occupation. Women had to learn these skills either at a telegraphy school, or by serving an apprenticeship to an experienced agent/operator.

The Census of 1870 listed more women telegraph operators in Pennsylvania than in any other state.⁴³ There are a number of factors that help explain why Pennsylvania led the nation in the number of women entering this technical field in the late nineteenth century, including education, industrialization, and immigration.

Pennsylvania's legislature was an early proponent of education for women; the notion of tax-supported public education for all was an important constituent of Jacksonian democracy.⁴⁴ The "Act to Establish a General System of Education by Common Schools," passed by the legislature in 1834, and additional measures passed in 1835 and 1838, provided tax-supported public school education and specifically included women. According to James P. Wickersham, author of *A History of Education in Pennsylvania*, "The credit of the discovery that girls should have an equal place with boys in a system of public instruction, higher as well as lower, belongs to the legislature of 1838."⁴⁵

In addition to the literacy and general education provided by a public school education, telegraphers had to acquire the specialized skills required to operate—in particular, Morse code and equipment maintenance. Again, Pennsylvania provided opportunities for women to learn telegraphy well in advance of other parts of the country. These opportunities ranged from the sort of informal on-the-job training provided by operators like Maria Hogan and Elizabeth Cogley, to vocational schools set up for the specific purpose of training women to be operators. The Pittsburgh Female College began offering such training in 1861, according to an article in the *Pittsburgh Evening Chronicle*:

Through the munificence of Florence Kramer, esq., a complete Electromagnetic Telegraph Apparatus has been ordered from Boston, and will be put up and in readiness for the next term. It is the opinion of those well versed in the matter, that ladies will, in a great many cases, soon take the places of gentlemen in our telegraph offices, and the design is to furnish them with the facilities for becoming thoroughly conversant with the details of the business, and thus open up to those who may desire it, an easy, pleasant, and honorable means of obtaining a livelihood. The object of the faculty is to combine the useful with the ornamental—the practical with the theoretical. Hereafter, those young ladies attending the college may, without interfering with their other duties, learn to become practical operators, under circumstances and upon terms much more pleasant and favorable than can elsewhere be obtained.⁴⁶

It is worth noting that the telegraphy course at the Pittsburgh Female College predated similar training provided by Western Union in New York

by eight years. In 1869, Western Union began a telegraphy course for women at Cooper Union that graduated approximately eighty women per year.⁴⁷

Industrialization also contributed to the early entry of women into the telegraph industry in Pennsylvania. The rapid growth of the railroads, mining, and steel production all created demand for rapid communications between markets and suppliers, and in turn created a demand for skilled telegraph operators. While the majority of operators were men, the requirement for technical skills and literacy gave qualified women the opportunity to overcome bias against their employment.

Immigration and industrialization together helped to create a strong middle-class work ethic in which it was considered acceptable for women to enter the work force in order to give their families a foothold in the American economy. The earliest women to enter the telegraphy profession tended to be of English or Scottish ancestry, and to belong to families that had already been in the U.S. for a considerable time, as their fluency in English gave them an advantage in seeking work that required a high degree of literacy. Elizabeth Cogley's family, for example, came from England in the 1750s and settled in the Harrisburg area, while the more recently arrived Carnegies and Hogans came from Scotland. Later on, recent immigrants from many parts of the world entered the profession, and in Pennsylvania, they tended to be German, though sometimes referred to as "Pennsylvania Dutch." Abbie Struble and Emma Ehrenfeld both were born in the U.S. of German parents, as were the Rothe sisters.

For recent immigrants, telegraphy was a means of entering the new middle class of technology workers fairly rapidly. While many female operators were the children of laborers or railroad workers, their technical skills gained them access to a lifestyle that included discretionary income, mobility, and a freedom to live a life of their choosing—options that their parents could scarcely have imagined.

Women operators and station agents played an important role in the operation of the railroads in the late nineteenth and early twentieth centuries. They were recognized as communicators who brought the news to their communities, and enabled the trains to run safely and on time. Although their story has been largely forgotten, these "wizards of the wire" made a significant contribution to the development of the transportation and communication networks in the United States. Male job anxieties notwithstanding, the work of the women telegraph operators and station agents of nineteenth- and twentieth-century Pennsylvania provides a "look

into the future” where technical skill and business ability would be more important than gender, and equal employment opportunity based on ability would be a reality.

NOTES

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9. The remnants of the Atlantic & Ohio Telegraph Company were absorbed by Western Union in 1864; see Thompson, *Wiring a Continent*, 397.
10. Index card for Elizabeth Cogley. Voluntary Relief Records, Pennsylvania Railroad. Pennsylvania State Archives, Harrisburg, PA.
11. Cogley Family Papers. Archives, Mifflin County Historical Society, Lewistown, PA. For a near-perfect visualization of the scene described by Elizabeth Cogley, see Richard Caton Woodville’s 1848 painting, “War News from Mexico.”
12. Cogley Family Papers, “Aged Lady’s Fall Causes Death,” *Lewistown Sentinel*, Lewistown, PA, March 24, 1922.
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 35. *Ibid*, 411.

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