The transcontinental telegraph was a remarkable technological feat that had major consequences for the West and the nation as a whole. Yet relatively little has been written about it.

Recently re-discovered in the Smithsonian Institution collections, this previously unpublished diary is the only known extensive source written about the day-to-day construction of one segment of the first transcontinental telegraph line.

Brown’s lively narrative is filled with period detail about individuals, road ranches, attitudes toward Indians, public promotion of the spirit of Manifest Destiny, difficulties facing construction crews, the nature of frontier law enforcement, and even the issues of secession and Civil War.
In 1861 Charles H. Brown, a twenty-seven-year-old lawyer, became Edward Creighton’s “Man Friday.” Both men were recent migrants to the city of Omaha in the newly established territory of Nebraska. Creighton trekked from Ohio, building telegraph lines, hauling freight, and grading city streets and railroad rights of way. Brown followed the route of two older brothers who had migrated to Omaha in 1856 and obtained employment freighting for Creighton before establishing a mercantile outlet. The family connection probably secured Charles Brown a teamster’s job with Creighton in 1860; his good work and his education likely ensured his promotion to the position of right-hand man to the superintendent of construction for the transcontinental telegraph. While seeing to Creighton’s business correspondence, supervising the off-loading of supplies in Omaha and their distribution to job sites, and participating in blue-collar construction work, Brown had time to log a diary.

“My Experiences on the Plains in 1861 in assisting in the Construction of the first telegraph line across the Continent.”

Brown’s diary survives as the only known chronicle of the daily events associated with the building of the transcontinental telegraph. In its detailed descriptions, it surpasses the short, business-oriented article “Wiring A Continent: The making of the U.S. Transcontinental Telegraph Line” (originally published in The Californian magazine, 1881) by James Gamble, superintendent of construction of the western segment of the line. Brown penned a primary historical account of inestimable value. It is part travelogue, describing the various means of transportation, the local topography, flora, fauna, and climate, and the routine at the forts and road ranches along the way. It is also history from the workers’ point of view: what they ate and how they slept, amused themselves, hunted, forded streams, gathered the poles, dug the holes, and strung the wire. The reader becomes a member of the crew, experiencing the arduous but enjoyable and fulfilling work (except for...
battling hordes of ravenous mosquitoes) of building the eastern half of the transcontinental telegraph.

Moreover, Brown’s account presaged Mark Twain’s *Roughing It* (1872); both imparted colorful stories of the sparsely settled West (Twain rode a stagecoach from St. Joseph, Missouri, to Sacramento, California, while Brown traversed part of that route, Julesburg, Colorado Territory, to Salt Lake City, Utah Territory, on foot and riding mules, horses, carriages, and stagecoaches). Brown also exuberantly espoused the “continentalism” of John Quincy Adams (with divine guidance Euro-Americans would develop the landmass between the Atlantic and Pacific oceans) and the “Manifest Destiny” of journalist John L. O’Sullivan, editor of the *Democratic Review* (Providence proclaimed the right of Euro-Americans to control the continent). In that vein, the diary presented a literary equivalent of John Gast’s painting, *American Progress* (circa 1872), which depicted Euro-American civilization conquering the West (the telegraph and the railroad occupy the center-right portion of the canvas). As he jotted in his diary, Brown prayed for the preservation of the Union then being fractured by the Civil War (July 4, 1861), advocated the building of a transcontinental railroad (July 10, 1861), and presented plans for the utilization by miners, farmers, and ranchers of virtually every acre of ground he navigated.

About the Native Americans who occupied the Great Plains, Brown maintained conflicting views, while never doubting the racial superiority of Euro-Americans. He considered Indian men lazy and uncivilized, referring to them as “savages” in most instances. Yet he described Old Spot, the chief of a Cheyenne band, as “a very dignified and courteous man, about fifty years of age, fully six feet tall, powerful frame and a good looking intelligent Native American.” He compared Old Spot’s diplomatic skills to those of Daniel Webster and Henry Clay (June 29, 1861). Furthermore, while Brown decried the rampages of the “savages,” he attributed much of the violent conflict resulting from Manifest Destiny to the actions of the white pioneers, who sought to drive the Indians from their ancestral lands. “It is a great wonder that the whites are accorded such lenient treatment as they have from these wild men of the Plains,” he wrote on June 19, 1861. Brown also provided significant ethnographic data, detailing the appearance and lifestyles of the Native Americans he met.

Thirty years after his adventure, Brown copied his diary in pen and ink using a cursive style. Between December 28, 1890, and June 25, 1891, he added a twenty-six-page introduction, which established the historical context for building the transcontinental telegraph. It also related amusing and enlightening anecdotes of the movement of laden wagon trains and of stagecoach travel along the Platte River Road between Omaha and Fort Kearny, Nebraska Territory. Inexplicably, pages eleven through fifteen are missing; the total manuscript totals 121 handwritten pages. The diary began on June 18, 1861; the first entry described Brown’s departure from Fort Kearny, and the entries for the
subsequent eight days detailed his trek to Julesburg, Colorado Territory. He amended the June 20, 1861, entry on January 30-31, 1894, adding an extensive depiction of a band of about fifty Sioux Indians he had encountered. He arrived at the six-building town of Julesburg on June 25, 1861; during the ensuing week he wrote about the local climate, the comings and goings of the stagecoaches, and the preparations for the commencement of telegraph construction.1

On July 2, 1861, Brown noted, “We commenced the construction of the telegraph line to-day.” He helped Edward Creighton dig the first hole. The declaration annuls the myth that had rapidly taken hold claiming that construction began on July 4. The symbolism of beginning construction on Independence Day of a device that would bind the nation together, when in fact it was being torn asunder by the Civil War, became standard in historical accounts. The remaining entries meticulously explained the process of construction, from gathering the correct-sized trees to use as poles, to walking off and marking the poles’ spacing, to digging the holes, erecting the poles, and stringing the wire. Brown concluded his journal on August 9, 1861, with a short four-sentence notation. The day before, he had explained that Edward Creighton had demoted his brother, Joseph Creighton, and put Brown in charge of that wagon train. Seemingly, the new assignment that had Brown working away from camp and ranging across the countryside in search of poles inhibited his nightly jottings. Much work remained before the line reached Salt Lake City. Unfortunately, that part of the story remains lost or untold. However, the narrative Brown did record is historically significant and enjoyable reading.

On May 24, 1844, Samuel Finley Breese Morse, an accomplished painter turned scientist and entrepreneur, sent a Biblical phrase (Numbers 23:23) by telegraph from the Supreme Court chamber in the United States Capitol to his partner Alfred Vail sitting forty miles away in Baltimore. Surprisingly, this milestone in long-distance communication failed to ignite the imagination; initially, government officials, military leaders, and businessmen greeted it with apathy. The indifference, however, quickly evaporated as innovative entrepreneurs comprehended the value of, and the demand for, rapid and wide-ranging communication. Within two decades transmission wires connected all major American cities, and a transcontinental telegraph line conquered the vast space between the East and West coasts.
From the dawn of civilization, delivering information between distant places was a slow, arduous, and unsophisticated process. In 490 B.C. as the mythological story goes, Pheidippedes ran twenty-six miles from Marathon to Athens to announce the Athenians’ victory over the Persians. The Greeks also used fires from hilltops to convey simple messages: one, two, or three fires each had a specific meaning (e.g., “All’s well” or “Send help”). Two thousand years later the English used the same means to warn of the approach of the Spanish Armada in 1588. Signals using flags or lighted torches originated in the seventeenth century.2 Hollywood movies made legendary the American Indians’ use of fire and smoke, as well as romanticizing the exploits of those who rode for the short-lived Pony Express. Moreover, for more than a century every American student learned of Paul Revere’s Ride from the poem by Henry Wadsworth Longfellow:

Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal light—
One, if by land and two, if by sea;
And I on the opposite shore will be,
Ready to ride and spread the alarm
Through every Middlesex village and farm,
For the country folk to be up and to arm.

Fifteen years after Revere completed his celebrated jaunt, the Frenchman Claude Chappe devised a system that eliminated the services of a rider. He invented a pivoting wooden panel that worked in conjunction with a clock; the arms moved to indicate the number on the clock face. A person on a distant tower, using a telescope, could see the indicator and relay it to another far-off tower. Chappe formulated a code for the numbers to relate to the letters of the alphabet. Thus, optically, a message moved through the air much faster than a courier on a horse could deliver it. He wanted to name his invention the tachygraphe, Greek for “fast writer,” but a friend, Miot de Melito, a government official and classical scholar, suggested telegraphe, meaning “far writer.”

On July 2, 1793, a communication sent using the Chappe semaphore system garnered the moniker telegramme, the first known use of the word. By the end of the decade, Chappe’s towers connected many of the major cities in France and by the time Morse transmitted his Biblical exclamation, France had 533 towers covering 5,000 kilometers.3

Despite the optical system’s advantage over the runner or equestrian, adverse weather conditions often obstructed visibility, impeding its reliability. More important, a new electrical technology emerged that quickly made it obsolete. In 1600 the English physician William Gilbert (1544-1603) had coined the term “electricity,” from the Greek word for “amber,” the fossil resin used to make jewelry that produces static electricity when rubbed. It took two centuries to move from establishing the term to understanding its scientific principles and harnessing its energy. In 1800 the Italian physicist Alessandro Volta (1745-1827) invented the first battery, the voltaic pile, layers of dissimilar elements that produced a chemical reaction, resulting in a steady flow of electricity. Twenty years later the Danish physicist and chemist Hans Christian Oersted (1777-1851) observed that electrical current induced a magnetic field. In 1825 the British physicist William Sturgeon (1783-1850) constructed the first electromagnet, a piece of iron wrapped with insulated wire that became magnetic when a current of electricity passed through it.4

Numerous inventors sought to use the new technology to engineer an electric telegraph, which emerged simultaneously and independently in the United States and Great Britain. Samuel F. B. Morse had established a reputation as a well-regarded painter, but he also dabbled in several mechanical schemes to strike it rich. In 1832 as he sailed home from France following a painting excursion, he learned of the telegraphic experiments from some of his fellow passengers. He became obsessed with the concept and tinkered with the implements, while he continued to paint and teach. In 1835 Morse became a professor of art at New York University, where he received much needed assistance. He did not understand the science of electricity and experimented using only one
battery and a small electromagnet. A colleague, chemistry professor Leonard Gale, recommended a battery of twenty cells and an electromagnet with one hundred turns of wire. With the upgraded arrangement, Morse was able to send a current through ten miles of wire coiled around a spool in his classroom. In 1837 he and Gale applied for a U.S. patent. That same year in England, Sir Charles Wheatstone constructed a fourteen-mile electric telegraph between London and Bristol.

In the United States, Morse constructed a machine consisting of a wooden frame that held an electromagnet, a roll of narrow paper (e.g., a cash-register tape), and a pencil strapped to a metal rod that hung down like a pendulum. When he opened and closed the circuit, the electromagnet pulled the pencil down to the moving paper, leaving squiggly marks of various lengths depending upon how long the circuit remained open: a short time produced a “dot” and a longer time a “dash.” He rejected the idea of a separate wire for each letter of the alphabet; initially, he thought in terms of having the dots and dashes represent numbers, which would correspond to words, but that system would have required a large dictionary to translate the message.

In 1837 Alfred Vail, a wealthy student of Morse, became his much-needed business partner and helped him improve the machine and the code. Scholars credit Vail with the invention of the “key,” the lever used to open and close the circuit, with substituting a pen for the pencil, and with helping to create the code. For his efforts, he received a one-fourth share of the patent; however, his name drifted into obscurity as Morse demanded all the glory and gave no credit to his indispensable associates. Their code matched a catalog of dots and dashes to the alphabet; it copied the arrangement of letters in a box of printer’s type, with the most-used letters receiving the shortest assortment of markings (a single dot represented “E”). Quickly, experienced operators developed “sound reading,” spelling out messages by listening to the machine’s clatter without waiting to read the tape. Subsequently, the pen and paper became outmoded, and the electromagnet attracted an iron bar against a post, thudding “dits” and “dahs” for operators to decipher.

At first, Morse could not create an interest in the new technology. He demonstrated the machine to Congress in 1838, but the lawmakers exhibited little interest; he garnered a similar response from several European governments the following year. Finally, in 1843, Congress authorized an appropriation of $30,000 to construct a line from Washington, D.C., to Baltimore, Maryland, alongside the tracks of the Baltimore and Ohio Railroad (forty miles). Miss Annie Ellsworth, daughter of the U.S. Commissioner of Patents, had delivered the good news of the public funding; Morse asked her to choose the first message. Despite the success of the experiment, Congress did not perceive how it could use the contraption and it allowed private companies to develop it; they rapidly overwhelmed the apathy and by 1850, twenty firms had constructed twelve thousand miles of telegraph lines.

In 1847 during the initial boom, Edward Charles Creighton (1820-74) observed Irish-American contractors erecting a telegraph line near Springfield, Ohio. He was the son of James Creighton, an Irishman who had migrated to the United States in 1805, and who had married Bridget Hughes, an Irish-American, in Philadelphia in 1811. James brought his mother, sister, and five brothers to America and by the middle of the decade, they settled in Ohio. All the siblings became successful landowners. James and Bridget had nine children, six boys and three girls. Edward, the fifth child, attended public elementary school and at about the age of fourteen secured employment as a cart boy in central Ohio in conjunction with the construction of the National Road. When Edward was eighteen, his father gave him a wagon and team of horses, and he began hauling freight between Cumberland, Maryland, and Cincinnati, Ohio. Obviously possessed of enormous entrepreneurial drive, he promptly branched out to supplementary teamster pursuits: road construction, street grading, and railroad roadbed preparation.

Edward’s encounter with a telegraph-construction crew of a company owned by Irish immigrant Henry O’Reilly presented him with another opportunity. He began by freighting poles for a line connecting Springfield to Cincinnati and ultimately Louisville, Kentucky. Within
months, he became superintendent of construction for a link between St. Louis and Alton, Illinois. During 1848-55 Edward oversaw the erection of routes connecting the major cities of New York, Ohio, Indiana, Illinois, Kentucky, Mississipi, and Louisiana. Through these responsibilities, he became an associate with the powerbrokers that established the Western Union Telegraph Company, Hiram Sibley (1807-88) and Ezra Cornell (1807-74). They combined their eastern companies in 1856 and set about eliminating competition through acquisitions and mergers.

Meanwhile, Creighton maintained his ancillary businesses, and in 1855-56 undertook roadbed construction for a railway right-of-way near Mexico, Missouri, and street-grading contracts in Toledo, Ohio, and Keokuk, Iowa. While his crews attended to those tasks, he performed a “lemon squeezer” for Sibley, the first president of the Western Union. It consisted of a specious survey of a route for a competing line linking Cincinnati to New Orleans. Creighton’s activity convinced the owners of the existing wire to avoid the destructive competition of the phantom parallel line and to provide Western Union with favorable rates for its use. During the bogus survey, the newly elected council of Keokuk cancelled the grading contract. Edward directed his youngest brother, John Andrew Creighton (1831-1907), to sell the equipment and to proceed to the newborn town of Omaha, Nebraska Territory.

On June 10, 1856, Edward joined his brothers James and Joseph and his cousins Harry and James “Long Jim” Creighton (all four worked for him) in Omaha. After a short visit, he returned to Dayton, Ohio, to marry Lucretia Wareham on October 7, 1856. The newlyweds journeyed to Pittsburgh, Pennsylvania, to purchase a supply of lumber and returned with it to Omaha on a steamboat, traversing the Ohio, Mississippi, and Missouri rivers. Immediately, Creighton established himself as the city’s wealthiest citizen, possessing $25,000 in capital from the sale of the surplus lumber and the Keokuk grading equipment and the income from his other ventures. Edward relocated his headquarters to Omaha in expectation of constructing a telegraph line to California, which had entered the Union in 1850. However, the Panic of 1857 disrupted the economy and the sectional acrimony that produced the Civil War prevented Congress from passing an appropriation.

While the nation continued to suffer the consequences of the financial panic, the local economy quickly turned sharply upward with the discovery of gold in the Colorado Territory. The Pike’s Peak gold rush of 1858 presented extraordinary opportunities for outfitting, freightling, and finance. With his available capital Edward launched new endeavors in all those areas, including a partnership with Augustus and Herman Kountze that expanded their banking operation to Denver and Central City, Colorado. Moreover, the regional prosperity included the stringing of additional telegraph lines. The records are vague, but Edward may have contributed to erection of the lines from Jefferson City, Missouri, to Fort Smith, Arkansas, and from St. Joseph, Missouri, to Omaha.9

At long last, on June 16, 1860, Congress acceded to the appropriation of $40,000 per annum for ten years to construct a transcontinental telegraph: “An Act to Facilitate Communication Between the Atlantic and Pacific States by Electric Telegraph,” commonly called the Pacific Telegraph Act.10 During the summer Edward and his associates shuttled between Omaha and Denver, appraising the route and negotiating contracts for poles, while building a line from Omaha to Fort Kearny. Subsequently, he undertook a dangerous unaccompanied investigation of the route to the West Coast, following the trail of the Pony Express. On November 18, 1860, he left Omaha by stagecoach, stopping at Fort Kearny and Fort Laramie and arriving at Salt Lake City in mid-December. He secured the cooperation of Brigham Young, the leader of the Mormon settlement, then rode a mule six hundred miles to Carson City, Nevada, stopping at Pony Express stations along the way, thence to San Francisco by stagecoach. There he met Western Union partner Jeptha Wade, who had succeeded in merging four feuding companies that would build the line east through the Sierra Nevada Mountains.11 Wade and Edward returned to New York City by sea, which included a horseback ride across the Isthmus of Panama. Edward proceeded to

First Telegraph Line across the Continent:
Charles Brown’s 1861 Diary

“What hath God Wrought!”: The Evolution of Telegraphy
Dayton to collect his wife, who had returned home to give birth to a son, Charles David, on April 4, 1859 (tragically, the boy died from an undiagnosed ailment on April 12, 1863). Creighton completed his arduous seven-month journey on May 25, 1861, arriving with his family in Omaha aboard the steamboat West Wind.12

During his absence, on January 11, 1861, the Nebraska Territorial Legislature authorized the incorporation of the Pacific Telegraph Company; most of the incorporators, including Edward Creighton, were Western Union executives. Creighton arranged to have W. B. Hibbard construct the line from Fort Kearny to Julesburg, while he would superintend the operation from Julesburg to Salt Lake City.13 The work entailed finding the correct-sized trees to trim into poles, no easy task on the treeless plains (teams ranged as far as two hundred miles from camp following stream beds). Workers using long-handled spades dug a hole to the depth of five feet and then raised the pole in the hole, approximately twenty-five per mile. Wire stringers attached un-insulated galvanized iron wire (copper was too expensive) through glass insulators on the poles. A fifty-volt wet cell battery provided the power and could push the current up to five hundred miles because of the minimal leakage due to the low humidity of the Great Plains.14

While the Civil War erupted in the East, the first poles went in the ground on July 2, 1861. Making rapid progress, Edward reached the Mormon capital three months later on October 17. The Congressional subsidy included a bonus for speed; the Pacific Telegraph Company earned extra money by arriving at the midpoint first. Edward sent his wife a telegram reading: “This being the first message over the new line since its completion to Salt Lake, allow me to greet you. In a few days two oceans will be united.” A week later, the Overland Telegraph Company of California completed the circuit from Carson City; on October 23 Stephen J. Field, the chief justice of California, wired Abraham Lincoln to assure him of Californians’ “loyalty to the Union and their determination to stand by its Government on this day of trial.”15

Creighton became general superintendent of the Pacific Telegraph Company, which included responding to disruptions in service caused by Indian vandalism, roaming buffalo (who knocked over the poles while using them as back scratchers), and prairie fires. It also entailed building branch lines; from Julesburg to Denver and Central City in 1864; Denver to Salt Lake City in 1866; Salt Lake City to Virginia City, Montana, in 1867; Helena, to Fort Benton, Montana, and Laramie, Wyoming, to Promontory Summit, Utah, in 1869. In the latter year, he also constructed a railroad-specific link for the Union Pacific from North Platte, Nebraska, to Promontory Summit. He concluded the last two assignments after he had stepped down as superintendent in 1867, although he remained on the Pacific Telegraph Company board of directors.

In 1863 with the Kountze brothers, Edward founded the First National Bank of Omaha and became its first president; they also incorporated the Colorado National Bank in Denver and the Rocky Mountain National Bank in Central City. Moreover, Edward remained prominent in freighting, especially long-distance, thirty-plus wagon trains to Denver, Salt Lake City and Virginia City, Montana. He graded a roadbed for the Union Pacific in Wyoming and cut through a bituminous coal vein near Rock Creek; he established a mining company and sold the coal to the Union Pacific. In 1869 he organized the first longhorn cattle drive from Texas to the new UPRR railhead at Ogallala, Nebraska, and became the largest cattleman on the northern Great Plains. He also grazed oxen, horses, and sheep. That same year he helped organize the Omaha and Northwestern Railroad and became its president. Finally, Creighton invested heavily in real estate: three office buildings and thirteen lots (valued at $139,000) in Omaha; thirty-seven pieces of property totaling 900 acres in Douglas County; and 3,757 acres in seven contiguous eastern counties.

Edward Creighton collapsed in his office on November 3, 1874, and died at home two days later at age fifty-four. As he was laid to rest at Holy Sepulchre Cemetery, virtually all business activity in Omaha paused out of respect for its leading citizen. Before his death, a colony in Knox County decided to name their settlement in his honor. In 1958
he was elected a charter member of the Cowboy Hall of Fame in Oklahoma City, Oklahoma. In 1965 Ak-Sar-Ben (an Omaha civic organization) and in 1982, the state of Nebraska, selected him for membership in their respective halls of fame. His wife bestowed his most significant memorial, providing a bequest for the creation of Creighton University in 1878.16

By the time of Edward Creighton’s death, the man who had served as his personal assistant during the construction of the transcontinental telegraph had also become one of Omaha’s most prominent citizens. Charles H. Brown was born on April 12, 1834, at Stephentown, New York. His father, Randall Adam Brown, a descendant of a Mayflower pilgrim, and his wife, Margaret Sweet, had seven children. Their older sons, James Jay Brown and Randall Adam Brown, Jr., migrated to Omaha in 1856 and became teamsters for Edward Creighton; working with John A. Creighton, Edward’s youngest brother, they made several long hauls to Denver. Subsequently they began wholesaling to traders dealing with Native Americans and outfitting pioneers moving west. They established a mercantile store at Fourteenth and Douglas streets that became a prominent Omaha enterprise for the remainder of the nineteenth century.17

Charles H. Brown followed his brothers to Omaha in 1860. He had graduated from Williams College (1858), studied law at the firm of Seymour and Van Santvoord of Troy, New York, and been admitted to the New York Bar shortly before his departure. He secured employment with Edward Creighton driving ox wagons to Denver, then became his personal assistant in conjunction with the building of the transcontinental telegraph. Following that historic venture, he returned to Omaha and clerked in his brothers’ store until October 1862, when he gained election as the prosecuting attorney for Douglas County, the beginning of a prominent political career. In succession the voters made him a member of the Nebraska constitutional convention (1864), a member of the lower house of the territorial legislature for the tenth and eleventh sessions (1865,1866), a member of the Omaha City Council (1865), mayor of the city (1867), member of the state constitutional convention (1875), and member of the state senate (1876, 1878, 1882).18

Subsequently, while remaining active in Democratic Party politics, Brown retired from office and practiced law. On June 10, 1886, at the age of fifty-two, in Chicago he married the widow of his younger broth-
er, Mrs. Louis (Eunice Dora) Brown, who had a twelve-year-old daughter, Margaret. A decade later Eunice became a widow again when Charles died on April 26, 1897, fourteen days after his sixty-third birthday, as a result of heart disease. He left instructions for no “ostentation” at his funeral, which took place the day after his death from his home at Twenty-second and Capitol streets with interment at Forest Lawn Cemetery.

Charles Brown had the benefits of a good education and his writing style is sprightly and coherent. He sometimes omitted punctuation, such as apostrophes or periods, which the editors have silently inserted as necessary. Brown’s occasional variant spelling of proper names (e.g., Julesburgh for Julesburg and Holliday for stagecoach magnate Ben Holladay) and his inconsistent capitalization have been retained throughout. “Strikethroughs” in the original manuscript have also been retained. A few words added or corrected by the editors and minor explanatory material not found in the notes appear in brackets. Brown mentioned several individuals or localities that could not be further identified.