Electronic Presence

from Telegraphy to Television

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DeVRY/PHOENIX LIBRARY physics of the church to those of the computer chip. As we shall see, some even feel that the key to immortality itself is to be found in the telecommunications networks of the future.

By examining shifting accounts of electronic transmutability and media presence, *Haunted Media* provides an important sense of historical context for what many take to be a wholly "postmodern" debate. I will argue that current debates over the electronic mediation of consciousness necessarily incorporate this longer history of converting electronic simultaneity into more fantastic fictions of media presence. Although some might argue that the technology finally does exist (or will soon) to realize such discorporative fantasies, this book argues that such dreams have always been vivid and seemingly eminent but are, of course, ultimately impossible. In the end we are always left with a material machine at the heart of such supernatural speculation, a device mechanically assembled, socially deployed, and culturally received within a specific historical moment.

1 Mediums and Media

Within a five-year span in the 1840s, the American public witnessed two of the most remarkable moments in telecommunications history. On 24 May 1844 friends and observers gathered with Samuel B. Morse at the Supreme Court in Washington, D.C., to participate in the first official test of an electromagnetic telegraph line. Miss Ellsworth, the daughter of the commissioner of patents, had the honor of choosing the first words to be transmitted by this new technology. Morse sent her chosen message, "What hath God wrought?" to his associate, Alfred Vail, in Baltimore, who then sent the message back to Washington for confirmation. In the ensuing years, the telegraph rapidly expanded as a commercial operation, and in the following decade its lines quickly crossed the continent. By 1861 the telegraphic network had outraced the transcontinental railroad to California. By 1866 a reliable cable reached across the Atlantic to England and beyond.

For a world that had waited weeks to receive messages from across the ocean, and days to receive messages from across the nation, the ability to contact London from New York in only seconds must have truly tested the limits of credulity. Even more astonishingly, the electronic circuitry of the telegraph made possible the instantaneous exchange of messages in the complete absence of physical bodies. Reporting on a meeting conducted by telegraph employees over the company wire in 1857, an awestruck commentator provides a typical account of the baffling new "telepresence" created by this technology: "We publish the following novel and interesting account of a meeting of the employees of the American Telegraph Company on the 3d instand, at — what place? that is the question—at no place, or at all places where there were Telegraph offices, within the circuit of seven hundred miles. A large room, that—seven hundred miles in diameter — for a meeting to convene. . . . The members together in spirit - in communication, and yet in body seven hundred miles apart!"1

This sense of disembodied communion was an unprecedented and most provocative quality of the celebrated new medium, inspiring many commentators to declare Morse's invention the most momentous innovation in human history. In the first of a series of such glowing predictions about electronic media, many believed telegraphic technology would lead to nothing less than a utopian age. "The world, it has been said, will be made a great whispering gallery," wrote one telegraph enthusiast; "I would rather say, a great assembly, where every one will see and hear everyone else. The most remarkable effect, if I may judge from my own narrow thought, will be the approach to a practical unity of the human race; of which we have never yet had a foreshadowing, except in the gospel of Christ."²

In the midst of such utopian technophilia — only four years after Morse's public debut of his remarkable invention—the family of John and Margaret Fox went to bed for the evening in their small cottage in Hydesville, New York, a tiny village just southeast of Rochester. For a number of months previous to the night of 31 March 1848, the family had endured many sleepless evenings punctuated by a series of unexplained disturbances in their home. Previous tenants had also complained of the incessant rappings and knockings in the cottage, but despite frequent attempts to discover and eliminate the source of these sounds, the noises continued unabated. On this particular night, John, Margaret, and their two young daughters slept together in the parents' bedroom. The rapping sounds were particularly violent that night, and although Mr. and Mrs. Fox tried to get their children to ignore the noises and go to sleep, the daughters amused themselves by imitating the commotion. Finally, the youngest daughter, Kate, said aloud, "Here, Mr. Split-foot, do as I do." Kate then clapped her hands three times, which instantaneously triggered three of the mysterious raps in apparent response. Kate's sister, Margeretta, did the same and also elicited three of the mysterious knocking sounds. Suspecting an unseen intelligence behind the rappings, the children's mother engaged the invisible entity in dialogue. Eventually, by rapping its answers in response to the questions of Margaret Fox, the spirit correctly counted to ten, identified the ages of the Fox children, and numbered how many of the Fox family were still alive and how many were dead. Later the spirit responded to more complex questions by rapping once for "yes" and twice for "no."3

Recounting this apparently supernatural encounter in the numerous articles, books, and pamphlets that appeared in its wake, many believed that with this exchange of words and knocks Kate Fox had opened a "telegraph line" to another world. During the first week of this contact, more than five hundred people are said to have gathered at the house to witness

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A portrait commemorating Kate Fox's initial "telegraphic" contact with the spirit world in 1848. (*History of Spiritualism*, Cassell and Company, London, 1926)

this extraordinary series of communications, an event that became a topic of national conversation and controversy.⁴ Shortly after the mysterious rappings in Hydesville, the Fox daughters were separated and sent away to visit relatives. Removed from the "haunted house" and from each other's influence, the two girls nevertheless continued to attract the inexplicable rappings in their new homes. Quickly, those around the girls also began to manifest the strange rapping phenomena, including their older sister in Rochester, Leah Fox (who would soon become the first to charge interested parties money to witness the rappings). Communication via this first link of the "spiritual telegraph" gradually became more complex. Moving beyond simple yes-no answers, the spirits began to "speak" in sentences by rapping in response to a recited alphabet. Curiously, those who visited these homes often returned to their own towns to find that the knocking spirits had followed them home as well.

Occurring in an era of vast social and technological change for the nation as a whole, the mysterious rappings in upper New York State helped spark a religious and political movement that would become known as Modern Spiritualism. Within a decade the movement would attract thou-

manuel media

sands of avowed believers, souls searching for spiritual truth who now turned to the century's other most remarkable telecommunications device—the clairvoyant medium. Inspired by Kate Fox's ghostly "telegraphic" exchange in her parents' home at Hydesville, Spiritualism eventually included among its members Harriet Beecher Stowe (who claimed that *Uncle Tom's Cabin* had been dictated to her by "spirit" authors), Horace Greeley, James Fenimore Cooper, and even President and Mrs. Lincoln (who are said to have conducted séances in the White House).⁵ As Spiritualism expanded into a national and international phenomenon, it assumed many forms and intersected with many other practices and beliefs, so much so that providing a brief overview of the movement is almost impossible. In its most basic form, however, Spiritualism was a philosophy that proposed the dead were in communication with the living through mediums who "channeled" the spirit world. From their abode in the "seventh heaven," the spirits reassured those on earth that their loved ones lived on in the afterlife. In séances across the country, the telegraphic spirits proclaimed "the joyful tidings that they all 'still lived,' 'still loved,' and with the tenderness of human affection, and the wisdom of a higher sphere of existence, watched over and guided the beloved ones who had mourned the dead, with all the gracious ministry of guardian angels."6

Within this five-year period, the United States thus saw the advent of both the "electromagnetic" and "spiritual" telegraphs, technologies that stand as the progenitors of two radically different histories of "telecommunications." Most technological time lines credit Morse's apparatus with ushering in a series of increasingly sophisticated electronic communications devices over the next century, inventions developed in the rationalist realm of science and engineering that revolutionized society and laid the foundations for the modern information age. The "Rochester knockings" heard by the Fox family, on the other hand, inspired the modern era's occult fascination with séances, spirit circles, automatic writing, telepathy, clairvoyance, Ouija boards, and other paranormal phenomena. The historical proximity and intertwined legacies of these two founding "mediums," one material and the other spiritual, is hardly a coincidence. Certainly, the explicit connections between the two communications technologies were not lost on the Spiritualists themselves, who eagerly linked Spiritualist phenomena with the similarly fantastic discourses of electromagnetic telegraphy. As Spiritualist belief crossed the country along with the unreeling cables of the telegraph companies, Spiritualist books such as

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The Celestial Telegraph and periodicals such as The Spiritual Messenger frequently invoked popular knowledge of Morse's electromagnetic telegraph to explain their model of spiritual contact. "You send a telegraphic dispatch from New York to London through the medium of the Atlantic Cable," wrote one Spiritualist. "Break the Atlantic Cable, and all communication must stop through that medium. Break the laws that are favorable to mediumship in spiritual affairs, and all communication through that channel must likewise cease."7 One account even suggested that electromagnetic telegraphy itself was the result of spiritual intervention. Said a "spirit" from the other side when channeled through a medium in 1874, "Morse, of himself, could not have fashioned the magnetic telegraph. His mind was reaching out for thought that would help him in his work, and, as the mental action of your sphere is visible to the denizens of this, those who had been watching the workings of his mind suggested, through a familiar process of mental impression, that which enabled him to shape the invention into a form of practical utility."8

American Spiritualism presented an early and most explicit intersection of technology and spirituality, of media and "mediums." Enduring well beyond a fleeting moment of naive superstition at the dawn of the information age, the historical interrelationship of these competing visions of telegraphic "channeling" continues to inform many speculative accounts of media and consciousness even today. I would argue that many of our contemporary narratives concerning the "powers" of electronic telecommunications have, if not their origin, then their first significant cultural synthesis in the doctrines of Spiritualism. Although the idea of a spiritual telegraph may seem ludicrous today, the contemporary legacy of the Spiritualists and their magical technology can be found in sites as diverse as the "psychic friends" network, Baudrillard's landscape of the hyperreal, and Hollywood's current tales of virtual reality come alive and run amok. A century and a half after Kate Fox's initial exchange over a ghostly wire, American culture remains intrigued by the capacity of electronic media to create seemingly sovereign yet displaced, absent, and parallel worlds.

In suggesting the limitless possibilities of flowing electrical information, telegraphy's apparent ability to separate consciousness from the body placed the technology at the center of intense social conjecture, imaginative cultural elaboration, and often contentious political debate. In these at times volatile struggles, the disembodying power of telegraphy and the liberating possibilities of electronic telepresence held a special attraction

for women, many of whom would use the idea of the spiritual telegraph to imagine social and political possibilities beyond the immediate material restrictions placed on their bodies. Significantly, from the earliest moments of the movement, Spiritualists associated the powers of "mediumship" most closely with women, and especially with teenage girls. Through a unique convergence of social, scientific, and spiritual logics, women appeared to be "naturally" suited for the mysteries of mediumship. As Ann Braude writes in her history of the movement, "Americans throughout the country found messages from spirits more plausible when delivered through the agency of adolescent girls. . . . The association of mediumship with femininity was so strong that it was not dispelled by the contravening evidence of the existence of male mediums."9 When men did manifest mediumistic powers, they were said to embody the "feminine" qualities that made such otherworldly contact possible. As one Spiritualist noted, "It may be observed that ordinarily the feminine mind possesses, in a higher degree than the masculine, two important requisites of elevated mediumship: first, it is more religious; and, secondly, it is more plastic."10

As difficult as historiographic questions of agency and belief are to begin with, the questions raised by Spiritualism are even more perplexing. Did these mediums and their acolytes actually believe in the reality of spirit communications? If not, did mediums willfully deceive those in search of spiritual contact? Did followers realize the phenomenon was not supernatural yet enjoy the social interaction of the séances so much that they played along in an elaborate folie en masse? The "truth," such that it is, would no doubt consist of a variety of Spiritualist practices and experiences, ranging from the most devout belief to the most cynical deception. Although it would be impossible to reconstruct the exact motivations of those who embraced a paranormal explanation of Kate Fox's communications (and who would then cultivate spiritual communications beyond simple knocks and raps to include table tipping, spirit voices, spirit trumpets, trance speaking, and even full body materializations), it is certainly true that Spiritualism would have quickly vanished from the national scene had it not possessed some form of wider popular appeal. Clearly, those who believed in Spiritualist phenomena "wanted" to believe in some respect, and although many would dismiss such interest as mass gullibility, it might be more productive to consider the movement as a particularly esoteric form of popular culture. As a movement centered primarily on the spiritual power of women, Spiritualism became "popu-

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lar" not only as a widespread and publicly visible sensation, but also as a means of articulating the often highly radical aspirations of a subordinate political formation. As we will see in the following pages, the Spiritualists elaborated telegraphic principles into an intriguing and politically engaged theology of telepresence, weaving complex fantasies of gender and technology around the century's most celebrated electronic marvel.

Several excellent histories of Spiritualism have discussed the complicated politics of gender involved in the movement's rise and fall during the nineteenth century. There has been relatively little discussion, however, of Spiritualism as a popular discourse on gender and telecommunications, one that produced the modern era's first fantasies of discorporative electronic liberation. Long before our contemporary fascination with the beatific possibilities of cyberspace, feminine mediums led the Spiritualist movement as wholly realized cybernetic beings-electromagnetic devices bridging flesh and spirit, body and machine, material reality and electronic space. Then as now, such fantastic visions of electronic telecommunications demonstrate that the cultural conception of a technology is often as important and influential as the technology itself. As James Carev argues, the telegraph not only served as the material foundation for a new communications network but also "opened up new ways of thinking about communication within both the formal practice of theory and the practical consciousness of everyday life. In this sense the telegraph was not only a new tool of commerce but also a thing to think with, an agency for the alteration of ideas."11 In contrast to Morse's material technology of metal, magnets, and wire, the spiritual telegraph could only exist in the mortal world as a fantasy of telegraphic possibility. In an era when the technology of the telegraph physically linked states and nations, the concept of telegraphy made possible a fantastic splitting of mind and body in the cultural imagination, demonstrating that electronic presence, whether imagined at the dawn of the telegraphic age or at the threshold of virtual reality, has always been more a cultural fantasy than a technological property.

Understanding our own culture's continuing interest in fantastic forms of electronic telecommunications requires examining more closely the historical context of telegraphy's technological advent and conceptual influence. What was the cultural environment at midcentury that allowed spiritual telegraphy to thrive? How did the women mediums channeling this telegraphy use the mysteries of telepresence as a means of social empowerment? Finally, what became of both the technological and cul-

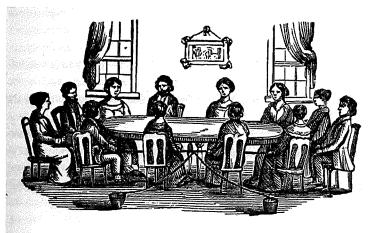
tural power of the medium by the end of the century? I believe such an analysis of this founding spiritual technology will demonstrate that our own era's fascination with the discorporative and emancipating possibilities of the looming virtual age is in many ways simply an echo of this strange electronic logic, a collective fantasy of telepresence that allowed a nation to believe more than 150 years ago that a little girl could talk to the dead over an invisible wire.

Electromagnetic Mysteries

When Samuel Morse and Kate Fox opened contact with Baltimore and the Beyond in the 1840s, they did so at a time when there were few distinctions made between what would shortly become the antithetical domains of physics and metaphysics. Lacking this modern distinction, the Spiritualists' initial conceptualization of "celestial telegraphy" was not so much a misapplication of technological discourse as a logical elaboration of the technology's already "supernatural" characteristics. Talking with the dead through raps and knocks, after all, was only slightly more miraculous than talking with the living yet absent through dots and dashes; both involved subjects reconstituted through technology as an entity at once interstitial and uncanny. Spiritualism attracted the belief of many converts because it provided a technically plausible system of explanation for these seemingly occult occurrences, transforming the supernatural into the preternatural. People had claimed to talk to ghosts before 1848, of course, but as interest in spirit phenomena spread in the wake of the Rochester knockings, the first apostles of the movement, whether attempting to legitimate and thus conceal an elaborate hoax or, more innocently, genuinely searching for a credible system of explanation, sought a logic and language appropriate to understand rationally this seemingly irrational phenomenon.

In a bid for such authority, Spiritualism attempted to align itself with the principles of "electrical science" so as to distinguish mediumship from more "superstitious" forms of mystical belief in previous centuries. It was the animating powers of electricity that gave the telegraph its distinctive property of simultaneity and its unique sense of disembodied presence, allowing the device to vanquish previous barriers of space, time, and in the Spiritualist imagination, even death. More than an arbitrary, fanciful, and wholly bizarre response to the innovation of a technological marvel, the spiritual telegraph's contact with the dead represented, at least

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THE MAGNETIC ROPE.

The séance as "spirit battery." Here a medium hopes to improve contact with the spirit world by asking her guests to hold a magnetized rope, its ends dipped in copper and zinc buckets of water. (Andrew Jackson Davis, *The Present Age and Inner Life*, 1853)

initially, a strangely "logical" application of telegraphy consistent with period knowledges of electromagnetic science, the experimental frontiers of physics/metaphysics, and the vicissitudes of a highly unstable (and highly gendered) force known as "nervous energy." The following blue-print for a "spirit battery" (as the séance was often termed in the electrodiscourse of Spiritualism), testifies to the movement's desire to bridge science and spirituality:

The males and females (the positive and negative principles) are placed alternately; as so many zinc and copper plates in the construction of magnetic batteries. The medium or media have places assigned them on either side of the junction whereat the rope is crossed, the ends terminating each in a pail or jar of cold water. . . . But these new things should be added. The copper wire should terminate in, or be clasped to, a zinc plate; the steel wire should, in the same manner, be attached to a copper plate. These plates should be dodecahedral, or cut with twelve angles or sides, because, by means of the points, the volume of terrestrial electricity is greatly augmented, and its accumulation is also, by the same means, accelerated, which

Elsewhere, this spiritual scientist observed, "We are *negative* to our guardian spirits; they are *positive* to us. The whole mystery is illustrated by the workings of the common magnetic telegraph. The principles involved are identical." ¹³

Such theories and proclamations were common within Spiritualist literature, and demonstrate why any discussion of the movement's interest in electronic presence must necessarily engage the more general cultural profile of electricity and magnetism in the early nineteenth century. Although it would be impossible to isolate the precise beginnings of the electrical science that eventually produced both the telegraph and its attending mysteries of telepresence, interest in electrical phenomena, be it lightning or lodestones, dates back to antiquity. The innovation of the "Leyden jar" in 1745, however, proved a key moment in advancing electrical science into the modern era. Developed by Pieter van Musschenbroek in Holland, the Leyden jar allowed scientists to accumulate for the first time large amounts of electricity in a storage container. Before the development of this crude battery, scientists studying electricity had to confine themselves to spontaneous electrical phenomena — brief manifestations of electricity generated by machines (or cats) engaged to produce small amounts of static electricity. As a fairly reliable source of continuous and larger flows of this ephemeral substance, the Leyden jar enabled a whole new era of electrical experimentation.

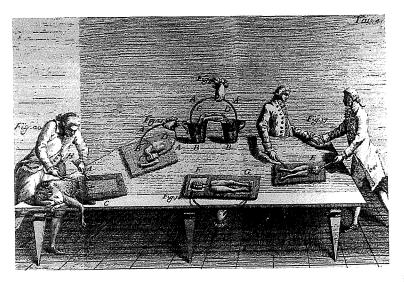
Significantly, this ability to produce electricity on command soon made this mysterious force a source of popular spectacle and amusement, especially in relation to the body. In an ingenious display of scientific and political power, Jean-Antoine Nollet debuted the Leyden jar in Paris by simultaneously "shocking" 180 members of the royal guard in the presence of the king. At the convent of Carthusians, Nollet constructed a two-and-a-half-mile chain of monks connected by wire who were then given a simultaneous shock. One clever experimenter concealed a Leyden jar for practical jokes, giving the world its first "joy buzzer." Amplifying this concept, another used a Leyden jar as a prototype "taser," electrifying a walking stick that could be used to stun an attacker. Unlucky experimenters soon discovered that substances such as ether could be ignited by the Leyden jar to make a fiery spectacle. Others used the newly harnessed

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electricity to stun and kill small animals. In the United States, Benjamin Franklin organized an entire social gathering around newly fashioned electrical appliances. "A turkey is to be killed for our dinner by the electrical shock, and roasted by the electrical jack, before a fire kindled by the electrified bottle: when the healths of all famous electricians of England. Holland, France, and Germany are to be drank in electrified bumpers, under a discharge of guns from the electrical battery." 15 Franklin also created electrical toys and curiosities, including a spider whose legs moved when in proximity to a Leyden jar and a portrait of the king of England wearing an electrified crown that "shocked those who had the temerity to touch it." 16 Yet even in these early and often amusing stages of electrical research, deeper and more profound connections endured between this evanescent substance and the enigma of life itself. Franklin's helpful attempts to install lightning rods in Philadelphia, for example, met with much opposition from the local clergy, who no doubt still believed lightning to be an expression of God's will and therefore best left to strike according to its own designs.17

A more scientific study of the relationship between electricity and the divine "spark of life" began with research by the Italian scientist Luigi Galvani. Historians are unclear as to the exact date of Galvani's discovery (sources cite 1771, 1780, and 1790). It is also ambiguous whether the momentous discovery belongs to Galvani or his wife. In any case, someone in Galvani's household at sometime in the late eighteenth century noticed that a pair of frog legs, sitting on a table near an electrical generator, twitched violently when touched by a metal knife. Inspired by this odd phenomenon, Galvani immediately began his famous experiments on muscular motion and "animal electricity." Although scientists had earlier speculated about the relationship of electricity and organic energy, Galvani's book, Commentary on the Effects of Electricity on Muscular Motion, inspired a flurry of related research in the early part of the next century. 18 Even when their theories were in disagreement, scientists and physicians were convinced that electricity was in some way related to the "vital force" of life.

Experiments concerning electricity and muscular motion became increasingly ambitious and baroque in the new century. In 1803 Galvani's nephew, Giovanni Aldini, performed galvanic experiments on beheaded criminals and amputated human limbs. His most spectacular demonstration occurred in London when, in front of a large crowd, he performed



A conceptual foundation for both spiritual telegraphy and Mary Shelley's Frankenstein: Luigi Galvani's experiments with electricity and organic media. (Luigi Galvani, Commentary on the Effects of Electricity on Muscular Motion)

many such experiments on a criminal who had just been hanged. "A powerful battery being applied, very strong contractions were excited, the limbs were violently agitated, the eyes opened and shut, the mouth and jaws worked about, and the whole face thrown into frightful convulsions."19 Aldini was eventually able to compel corpses to lift heavy weights, roll their eyes and extinguish candles with their breath, all through the animating principles of electricity. Others mounted similarly gruesome public exhibitions.20 It was within the context of such public spectacle showcasing electricity's relationship to the body that Mary Shelley wrote Frankenstein, the most famous literary account of electricity and life's "vital force." The novel's preface describes the genesis of Shelley's literary creation and the now infamous pact made among her, Lord Byron, Polidori, and her husband to write competitive horror stories. "Many and long were the conversations between Lord Byron and Shelley, to which I was a devout but nearly silent listener. During one of these, various philosophical doctrines were discussed, and among others, the nature of the principle of life, and whether there was any probability of its

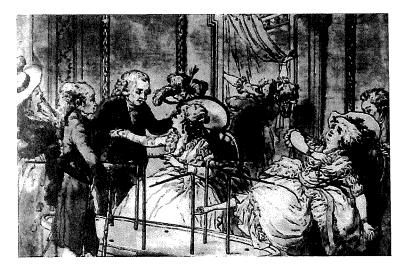
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ever being discovered and communicated."²¹ "Perhaps a corpse would be re-animated," continues Shelley; "galvanism had given token of such things: perhaps component parts of a creature might be manufactured, brought together, and imbued with vital warmth."²²

A particularly alarming manifestation of "animal electricity" and its "vital warmth" could be found in period reports of "spontaneous combustion," a phenomenon wherein a person would suddenly and inexplicably burst into flames. The emerging science of forensic medicine took great interest in this topic during the late eighteenth and early nineteenth centuries, and Charles Dickens forever emblazoned the subject in the public imagination by dispatching a character in Bleak House through such a fantastic explosion. Many theorized that an imbalance of electricity in the body was to blame for these tragic conflagrations. "Some conceive that certain persons possess the power of generating within themselves a state of electric tension, and quote relations of individuals who emitted sparks at the suggestion of the will," noted a medical encyclopedia of the period.²³ Doctors theorized that gases in the body could be ignited by such sparks to produce a spontaneous combustion of the torso, a process greatly facilitated if the victim happened to be drunk and thus saturated with alcohol.

Similar mysteries and experimental activities surrounded the phenomenon of magnetism. The figure who would prove most influential in this regard for the Spiritualists was the German physician Franz Mesmer. In the late eighteenth century, Mesmer was interested in the therapeutic possibilities of magnets. After witnessing the dynamics of priest and patient during a Roman Catholic exorcism in 1776, Mesmer became convinced of the theory of "animal magnetism." This theory maintained that magnetic fluid, much like electrical fluid, pervaded the world. By altering this invisible substance through looking, touching, and a passing of hands, the diseased body of a patient could be brought back into alignment with this force. Patients under therapy applied water taken from large "magnetized" tubs, and as "mesmerized" subjects some reported religious visions and even contact with the dead.

Such intense interest in mesmerism was not limited to France. Theories of animal magnetism, often combined with theories of animal electricity, occultism, and phrenology, were also common in England and the United States during this period, as reported in journals such as *The Magnet* and *The Phreno-Magnetic Vindicator*.²⁴ Edgar Allan Poe's gruesome story,



Working in the mysteries of "animal magnetism," Franz Mesmer applies magnetized water to swooning subjects. (Bibliotèque Nationale, Paris)

"The Strange Facts in the Case of Monsieur Valdemar," exploited this fascination with mesmerism as a power both factual and fantastic that somehow linked science and spirit. In this tale a man is mesmerized at the point of death and then kept in a state of limbo for a number of weeks. After the man begs to be allowed to die, the trance is at last broken, and the man's body instantly decomposes into a pool of "liquid putridity." The shocking conclusion of this tale depended on the reader's familiarity with the cryptic links hypothesized between "invisible" yet palpable forces such as electromagnetism and the greater mysteries of life itself.²⁵

Perhaps the most revealing document of this period's vibrant electromagnetic imagination comes from the annals of the United States Congress. When Samuel Morse appeared before this body in 1838 to seek funding for his experimental telegraph line, his request proved so "fantastic" that certain congressmen, partly in jest but mainly in confusion, introduced amendments to the allocations bill that would have provided funds for research into mesmeristic phenomena as well. The difference between the two "sciences" was not immediately clear, and many judged Morse's material technology in light of the by then largely discredited doctrines of Mesmer. "It would require a scientific analysis to determine how far the

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magnetism of mesmerism was analogous to the magnetism to be employed in telegraphs," wrote the chair of the committee. Morse's belief that electromagnetic energy could be harnessed to send long-distance communications was a topic that generated much interest and dialogue while testing the limits of belief. The very concept of telegraphy portended the unknown and the occult, especially when linked to the intangible yet quite palpable forces of electricity and magnetism. As Braude notes, "When the bill finally came to a vote, seventy congressmen left their seats, many hoping 'to avoid spending the public money for a machine they could not understand.' "26"

Thus was electrical science the quantum physics of its day, a frontier of inquiry bordering science and spirit that raised more questions than it answered. In this age of accelerated discovery, invention, and hypothesis, an increasingly sizable reading public not only learned of new technologies and scientific principles (some often quite dubious), but also participated in more sweeping speculation about the constitution of the body and its relationship to the material and spiritual worlds. This is the context in which the American public theorized Kate Fox's enigmatic rappings. Already a fertile terrain for the speculative adventures of popular culture, the mysteries of electromagnetism would become in the Spiritualist mind a foundational science in a grand theory of technology and consciousness. Conceptually energized by the example of the telegraph, Spiritual science would promote the wonders of physical discorporation and a dream of social emancipation, all to be realized through the telecommunicative wonders of electronic presence.

The "Science of the Soul"

In his seminal study of nineteenth-century American culture, *The Machine in the Garden*, Leo Marx describes in detail the period's unending fascination with technology and its faith that mechanization would produce a utopian balance between industry and nature. Writers of the period, argues Marx, frequently engaged in "the rhetoric of the technological sublime," rhapsodizing over the "unprecedented harmony between art and nature, city and country" to be found in the Edenic nation's rapid technological development.²⁷ But this utopian rhapsody soon came under attack. James Carey and John Quirk argue that by the mid-nineteenth century this utopian faith in technology began to shift from the machine to

electricity: "As the dreams of a mechanical utopia gave way to the realities of industrialization, there arose a new school of thought dedicated to the notion that there was a qualitative difference between mechanics and electronics, between machines and electricity, between mechanization and electrification. In electricity was suddenly seen the power to redeem all the dreams betrayed by the machine." Carey and Quirk term this new attitude, after Marx, "the rhetoric of the electrical sublime." ²⁸

The strange technologies of Spiritualism, both the flesh-and-blood medium in her parlor and the celestial telegraph in the invisible spirit world, were perhaps the most literal and dramatic expressions of the century's "electrical sublime." Importantly, Spiritualist faith in mediums and celestial telegraphy went beyond a mere utilitarian application of the telegraph as a metaphor. Critical to articulating a convincing technological (and thus "scientific") fantasy of mediumship, Spiritualist doctrine clearly stated that the spiritual telegraph was in fact a "real" (albeit invisible) technology. Writing in 1869, medium and Spiritualist historian Emma Hardinge described Kate Fox's initial contact with the spirit world in decidedly technological terms:

From the first working of the spiritual telegraph by which invisible beings were enabled to spell out consecutive messages, they ["the spirits"] claimed that this method of communication was organized by scientific minds in the spirit spheres; that it depended mainly upon conditions of human and atmospheric magnetisms, and pointed to the ultimation of a science whereby spirits, operating upon and through matter, could connect in the most intimate relations the worlds of material and spiritual existence.

They referred to the house at Hydesville as one peculiarly suited to their purpose from the fact of its being charged with the aura requisite to make it a battery for the working of the telegraph. (original emphasis)²⁹

Elsewhere Hardinge wrote that the spirits who made the initial contact with the Fox family at Hydesville were "philosophic and scientific minds, many of whom had made the study of electricity and other imponderables a specialty in the earth-life." ³⁰ Anyone who doubted the reality of the spiritual telegraph as a telegraph needed only to look at the example of Samuel Morse himself, who, once dead, became a frequent and proficient interlocutor from the spirit land, turning his mind back to mortal earth to continue uplifting the world that his material technology had already revolutionized. ³¹ Perhaps the most sincere testament to the technology's con-

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The Fox cottage of Hydesville, New York, "charged with the aura requisite to make it a battery for the working of the telegraph." (George Adams, Aldus Books, ca. 1930)

crete existence in the heavens came from Horace Greeley, editor of the *New York Herald*. An early supporter of Spiritualism, Greeley offered two thousand dollars a month to any medium who could furnish him with news from Europe in advance of the more terrestrial modes of communications (this being, of course, in the days before the Atlantic cable).³²

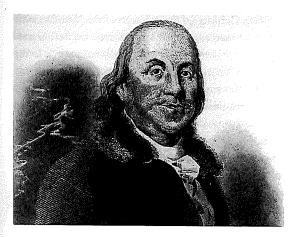
Significantly, within the century's general celebration of technology, the Spiritualists concentrated almost exclusively on electronic technologies of telecommunications. Inspired by the example of the telegraph and convinced of its parallel existence in the world of the dead, many Spiritualists described a host of ever more elaborate yet completely functional "spiritual technologies" that could be found in the afterlife, each of them centered on the wonder of telepresence and disembodied electrical contact. Some even claimed to have seen these extraordinary technological wonders firsthand. A letter written in 1852 to *The Shekinah*, one of the country's premiere Spiritualist journals, tells of a man's most unusual visitation in the night. Just as he was about to go to sleep, five apparitions appeared in his room dressed in "ancient costume" and carrying a familiar technology imbued with astounding new electrical properties.

One of them had what appeared to be a box about 18 inches square and some nine inches high; it seemed to be an electrical apparatus. They placed the box on the table, and then, electrical emanations, like currents of light of different colors, were seen issuing from the box. One of the company placed a piece of paper, pen and ink, on the lid of this box. The luminous currents now centered around the pen which was immediately taken up and dipped in the ink, and without the application of any other force or instrument, so far as I could perceive, the pen was made to move across the paper, and a communication was made which I have since learned was in the Hebrew language.³³

A psychic circle tried a few months later to contact the spirit authors responsible for these messages. They received the following reply: "My dear friends—I am happy to announce to you that the project which has engaged our attention for some years has at last been accomplished. I am, Benjamin Franklin." The purpose of this project, as with most spirit endeavors, was to inspire and edify humankind in preparation of a new social order on earth.

Other Spiritualist researchers worked diligently to create new and wondrous technologies here on earth, devices that would also invoke the mysteries of electromagnetic presence as a means of linking science and spirit, our world and the next. On 1 April 1853, for example, a Universalist minister turned Spiritualist, John Murray Spear, notified a Boston Spiritualist journal that he had received communications from the dead announcing the formation of a philanthropic organization in the spirit world. This group, "The Association of Beneficents," claimed as its members such illustrious figures as Socrates, Seneca, and Thomas Jefferson. The group proclaimed that other philanthropic committees would soon be announced. Spear later informed readers of an organization called "The Association of Electricizers," a group devoted to "teach of electric, magnetic, and ethereal laws, and of heretofore unknown mechanical forces."35 Spear had long been interested in the relationship between electrical science and spiritual practice. Hardinge notes that Spear had at one point attempted to combine minerals with "vital electricity" in order to increase his powers of mediumship. In the process, Hardinge writes, he "subjected himself to the most scathing ridicule from his contemporaries by seeking to promote the influence and control of spirits, through the aid of copper

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Often cited as a contributing inventor of the spiritual telegraph, Benjamin Franklin was also a frequent contact of mediums throughout the century. (Emma Hardinge, *Modern American Spiritualism*, 1869)

and zinc batteries, so arranged about the person as to form an armor, from which he expected the most extraordinary phenomenal results."³⁶

In July of 1853, Spear and his supporters began work on a machine based on communications given to them from the spirit world. Reported in the pages of *New Era*, this machine was to be "God's last, best, gift to man," a perpetual-motion device that embodied the principles of a "new motive force." Composed of wood, metal, and magnets, the machine was to be infused with the "life principle" by bringing it into contact with the "personal magnetism" of a number of human subjects. Once operating, the "new motor" (and others like it) would power a "circular city," a "perfect earthly home" built on principles of "symmetry and peace" and incorporating temples of art, science, and worship.³⁷ A convergence of electromagnetisms, both physical and spiritual, Spear's machine was to be a source of infinite, self-generating energy to power a new utopian age on earth.

But Spear's device was more than a magical motor. Conceived by minds in another world with blueprints communicated through spiritual telegraphy, Spear's earthly device was an attempt to develop nothing less than a "living" machine. "Immediately after the announcement of the birth of

Spiritualist fantasies of disembodied communication and living technologies such as Spear's proto-robot greatly resembled the fantastic devices of the then emerging genre of science fiction, another arena of popular culture that demonstrated an interest in the discorporative powers of telegraphic technology. Indeed, in many cases it would be difficult to differentiate between these two discourses of scientific possibility. Within later Spiritualist literature, for example, mediumistic accounts of adventures on Mars and Venus were not uncommon, while science fiction throughout the century frequently imagined the astonishing possibilities to be realized through the telegraphic liberation of mind and body. A particularly interesting author in this regard was Robert Milne, a Scottish writer born in 1844 who settled in San Francisco, where he penned a number of extraordinary tales detailing seemingly "paranormal" telegraphic phenomena. Some of Milne's stories merely exploited the culture's general conflation of Spiritualism and electrical science, as in "A Mysterious Twilight; Being a Dip into the Doings of the Four-Dimensional World," where Milne's narrator finds himself electrocuted by vengeful spirits who engineer a

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short circuit in a home's electrical wiring during a séance.⁴³ In "An Experience in Telepathy; in which Clairvoyance and Spiritual Telegraphy Play a Part," two men have out-of-body experiences as they telepathically "visit" with a friend in Mexico.⁴⁴ In what is perhaps Milne's most prescient story, written in 1879, his narrator happens on a wire that extends from a rooftop and up into the clouds. The narrator discovers that a scientist has learned to send messages anywhere in the world by tapping into the "electric diaphragm," an atmospheric layer that conducts electromagnetic messages across the planet.⁴⁵

One tale in particular is of interest as a vivid fantasy of telegraphic disembodiment. In "Professor Vehr's Electrical Experiment" a young man visits the famous Professor Vehr, who has been experimenting with electronic telepathy. Vehr tells the young man that he has invented an apparatus that allows one to "see" anywhere in the world. Worried because he has not heard from his fiancée in many months while she travels in Europe, the young man asks if he can use the device to find her. Vehr agrees and places the mental traveler inside a complicated electronic apparatus, bearing a "marked resemblance to the known characteristics of a Leyden jar" with what looked like "ordinary telegraphic wires." Once in the device, the young man holds a telegraph wire in each hand. Vehr then taps the wires into a telegraph line outside his window. The professor explains the process to the young man's friend in a passage that explicitly links the century's technological and spiritual fixations:

"That is the first effect of [a] moderately strong charge of static electricity in the human frame," explained the professor. "It induces a highly wrought condition of the nerves, which in their turn act upon the ganglion of the brain; that, in its turn, reacting again, through the duplex series of nerves, upon the wire held in the left hand, which brings the holder into communication with whatever object enthralls his attention at the time of the trance. The experiment is, in effect, clairvoyance reduced to an art, the mesmeric trance accomplished by scientific means and conditioned by the recognized and accepted laws of electrical science."

Through the machine he sees another man courting his fiancée in New Orleans. His telegraphic consciousness returned to the room of Professor Vehr, the young man is despondent about his imminent romantic loss and his sense of helplessness. Vehr then agrees to debut his latest innovation. This time by attaching his apparatus to the telegraph line, Vehr is able

While authors such as Milne depicted the era's telegraphic fantasies in science fiction, a number of respected scientists sympathetic to the Spiritualist cause developed theories and performed experiments in an attempt to provide empirical proof of Spiritualist principles. Dr. Robert Hare, an American physician and electrical engineer who devoted much energy to investigating Spiritualist claims, argued that a form of "spiritual electricity" powered the raps, knocks, and materializations of the séance. Just as the mysterious substance of electricity pervades our mortal world, Hare reasoned, "so the spirits ascribe their electricity and their light to the undulation and polarization of an analogous ethereal fluid."48 Hare also designed several devices to test scientifically the power and veracity of the spiritualist medium.

Hare's work, which garnered much respect due to his established reputation in more "legitimate" science, intersected with a host of other scientific theories of the spirit world to articulate nothing less than a "science of the soul." This was an attempt to understand the soul through scientific inquiry while also mapping its location in relation to the material world. "The most external portion of the spirit being electricity, is the agent of life and motion," noted one spiritual cartographer; "the next interior portion being magnetism, is the agent of sensational power; and the inmost germ, which is properly the soul itself, being the divine principle of intelligence, is the expansive receptacle of celestial wisdom."49 Some theorists imagined the spirits inhabiting a series of celestial spheres emanating around the earth; others believed that the spirits, unfettered by time and space, had unlimited access to the universe as a whole. One writer even posited a simultaneous existence of the material and spiritual worlds within the human body, arguing that the soul itself was an electromagnetic phenomenon trapped by material flesh:

It is easy to conceive, then, that the magnetic essence of all the particles and compounds of the body, associated together, must necessarily form an interior, magnetic and invisible body, in the same manner as the association of the particles themselves forms the outer and visible body. Moreover, as the

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pervading and surrounding essence of each of these particles must correspond in nature to the particle itself, and may be called the spirit of the particle; so this interior, magnetic body, if it could be tested by spiritual chemistry, would be found to consist of what may be termed spiritual carbon, spiritual nitrogen, spiritual calcium, and so on to the end of the category composing the physical body. At death the particles of the visible body collapse, and this interior, vitalizing and magnetic body, exhales forth in its united form, its various parts maintaining their mutual affinities as before; and could we then see it as it is, we would find it to possess spiritual bones, muscles, heart, lungs, nerves, brain, &c., and that it still preserved all the general features of its original mould, though in a vastly improved state.50

The author proposed that this "spirit body," or what we commonly think of as the "soul," would then recognize itself in a new spirit world, "abounding with scenery, organizations and other objects corresponding to its own essence and affections; and then would commence a life sevenfold more intense than that enjoyed while in the flesh!"51 Just as Mary Shelley had thirty years earlier conceived of a material body stitched together from limbs stolen from the grave and then animated with jolts of electricity, this Spiritualist constructed his own Frankenstein's Monster, one powered by Spiritual electricity that eerily resided within each person as an invisible doppelgänger waiting to emerge at the moment of death. Thus did heaven, the afterlife, and the soul become theorized, spatialized, and concretized phenomena subject to scientific inquiry and validation.

History prepares us, then, for the opening comments in physicist Frank J. Tipler's 1994 book, The Physics of Immortality. Tipler introduces his book by arguing that "theology is a branch of physics," and even more provocatively, "physicists can infer by calculation the existence of God and the likelihood of the resurrection of the dead to eternal life in exactly the same way as physicists calculate the properties of the electron."52 Replacing telegraphic metaphors with those from the computer age, Tipler continues, "it is necessary to regard all forms of life - including human beings - as subject to the same laws of physics as electrons and atoms. I therefore regard a human being as nothing but a particular type of machine, the human brain as nothing but an information processing device, the human soul as nothing but a program being run on a computer called the brain."53 Tipler's theories, of course, are conceptual cousins to

the long-standing fantasy in science fiction and contemporary cyberculture that human consciousness (and presumably the soul as a by-product of that consciousness) might one day be downloaded into a powerful computer. For many, then as now, metaphysics are apparently most convincing when supported with some form of mathematics.

I note these parallels, not so much to ridicule such theories, as to demonstrate how enduring this dream of electronically evacuating the body remains even today. As in much science fiction, utopian, and religious literature, Tipler and the cyber-enthusiasts invoke an invisible future as a compensatory vision for the problems of the present, imagining a "spiritual" technology as a means of bodily escape and deliverance from the troubles of a material and depressingly finite universe. The Spiritualists were the first to imagine such electronic technologies as a link to an unseen world of phantom subjects, spirits who "transmitted" word of a future utopia much brighter and more promising than the often dismal realities presented by nineteenth-century industrialism and Victorian society. Operating within a larger general fascination for the possibilities of electronic telecommunication, the Spiritualists found the telegraph a most logical and appropriate instrument of social and even material deliverance. The miraculous "disembodying" presence evoked by Morse's technology suggested the tantalizing possibility of a realm where intelligence and consciousness existed independent of the physical body and its material limitations, be they social, sexual, political, mortal, or otherwise.

The Negative Female

As one might imagine, such "emancipating" possibilities were of particular interest to women, who from Kate Fox onward served as the ideological and technological core of the movement. Communication with the spirit world required more than a mere telegraph, be it electromagnetic, celestial, or otherwise. Spiritual contact also depended on the equally enigmatic technology of the "medium," a complex receiver who channeled the mysteries of spiritual electricity through the circuitry of another unfathomable entity in nineteenth-century science—the female body. Like the telegraph, women presented many Victorians with "a machine they could not understand," making "feminine" physiology and psychology an equally imaginative field of scientific speculation, especially when such conjecture intersected, as did seemingly all aspects of nineteenth-

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century life, with theories of electromagnetism. Exploiting the scientific ambiguities surrounding both electromagnetism and their own bodies, female mediums would make strategic use of "telepresence" as an avenue for empowerment and emancipation.

Electrical theories of femininity were almost as old as electrical theory itself. As with most other totalizing accounts of cosmos and consciousness, electromagnetic principles of the early nineteenth century gradually informed the study of ever more complicated phenomena, moving beyond galvanism and biology to pervade emerging disciplines such as psychology and anthropology. More important for the tenets of Spiritualist belief, electromagnetic theory also entered increasingly into debates over sex and gender. In Animal Electricity; or the Electrical Science, for example, published the same year that Morse debuted the telegraph in Washington, James Olcott proposed that "electrified" women were the agents responsible for the evolution and diversity of the world's races. Evolutionary progress, he argued, resulted at certain key historical moments when "a series of violent electro-magnetic disturbances in the womb" pushed evolution to new heights. In this decidedly racist branch of electromagnetic speculation, "the Negro [was] far back, and the Mongolian the more near, and the Circassian the last formation of the last great change."54 Describing these periods of evolutionary transition, Olcott wrote, "Millions of females would at that moment be enceinte. They would, the more delicate and amiable, swoon away, and in this semi-living state, soon become emersed in electric menstruums, soft and energetic enough to crush, and at the same time warm enough slowly to evolve the embryo."55

While Olcott engaged in abstract theorization, others tested the mysteries of gendered sensitivity and electromagnetism in a more "empirical" manner. An important figure in the Spiritualists' eventual electromagnetic model of mediumship was Baron Charles von Reichenbach, whose work seemed to provide experimental proof of enhanced feminine sensitivity. His earliest experiments involved placing "cataleptic" and "feeblebrained" teenage girls in dark rooms and then exposing them to a magnet. After performing this experiment on some twenty-two young women, Reichenbach concluded that "those sensitive persons, who are so in a high degree, perceive in the dark, at the poles of powerful magnets, a luminous appearance of a waving, flame-like nature, less or more according to the degree of their diseased sensibility, or more or less perfect degree of darkness." In other words, Reichenbach believed that girls with a "dis-

eased sensibility" could perceive a flickering aura around magnets, a force that was neither wholly electrical nor magnetic (interestingly, "disease" in this scenario led to an increase rather than a diminution of this allegedly feminine trait, suggesting that femininity in itself was regarded as a diseased state). Reichenbach continued his experiments with other luminous objects and suggestible subjects, eventually developing a theory of a new universal force that pervaded all matter. Reichenbach called this newfound substance, Odyle, and referred to its presence in the universe as the "Odic force." Dismissed as a lunatic in later histories of electromagnetism, Reichenbach's experiments in the early part of the century nevertheless had a formative impact on Spiritualists seeking a credible scientific explanation for their incredible telecommunications with the dead.

Olcott and Reichenbach incorporated electrical theory into the related and more widespread patriarchal belief in Victorian society that women, although physically and mentally "inferior," were in some sense more "sensitive" than their male counterparts. Surveying the Darwinian tradition in gender psychology that dominated the century, Cynthia Russett observes that women were routinely distinguished from men by their "powers of intuition, of rapid perception, and perhaps of imagination."57 Women also displayed their strength of emotion, as well as a "'refinement of the senses, or higher evolution of sense-organs,' and rapidity of perception and thought, expressed in 'intuitive insight' and 'nimbleness of mother-wit'" (42). It should be noted, however, that these seemingly "positive" traits related to perception were, at the time, "held to stand in inverse ratio to high intellectual development, since the latter induced reflection and this in turn retarded perception" (42). Stunted in their physical and mental growth, women retained only a childlike wonder, a fragile constitution, and volatile emotionality. With his vivid image of "delicate" women "swooning away" under the influence of "electrical mentsruums," Olcott presented a familiar portrait of Victorian women as defined by an intrinsic and at times debilitating "sensitivity," an ultimately "passive" quality attending their primary purpose in life as the sex "'sacrificed to reproductive necessities' "(43). Ironically, these "negative" qualities attributed to women were to become the foundation of their spiritual authority. As Judith Walkowitz notes, "Spiritualists deemed women particularly apt for mediumship because they were weak in the masculine attributes of will and intelligence, yet strong in the feminine qualities of passivity, chastity, and impressionability."58

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Spiritualism and its eventual antagonists in medical science shared a brief but crucial moment of common intellectual heritage in these early accounts of feminine physiology. Although their theoretical concerns would eventually diverge, both the Spiritualists and the pioneers of scientific neurology, inspired by the electrifying examples of galvanism, attributed much importance to the "nervous principle" that governed a telegraphic model of the nervous system. Both paradigms thought mediumistic women particularly vulnerable to the vicissitudes of the mysterious forces of "nervous energy," a form of organic electricity one commentator described as "an intermediate agent by which mind acts on matter, and which is itself neither mind nor matter."59 The nervous principle, he continued, operated much like other forces of nature. "In many modes of its operation, it is similar to the magnetic and electrical principles; having probably its negative and its positive, an attracting and a repelling power, which may either balance each other, or over-balance and control one the other." This substance was thought to be "abundant in persons of strongly nervous temperament, and . . . developed so as to overcharge the system of the person who is under great excitement of body or mind." As the more "sensitive" of the sexes, women were believed to have an unstable abundance of such energy, especially as adolescents. As this same author writes in diagnosing the "generally young, ... inexperienced, and female" mediums of Spiritualism, "They are just that class whom we ordinarily speak of as persons of high nervous temperament, of an acute mental organism. It is the very class of persons in whom the nervous principle is active, from whom we seem to see the nervous energy thus flowing off" (24-25, 39).

As the two entities most closely associated with the mysteries of the life force, women and electricity were deeply imprecated in Victorian questions of spirituality. Building on a larger Victorian ideology of the ineffable moral purity and higher spirituality of women, the Spiritualists would go on to produce a theory linking electromagnetism and femininity in a divine alliance. If communication with the dead were possible, reasoned most, then women, having brought life into the world through their "receptive reproductive economy," would be the most likely candidates for bringing the living spirits back onto the mortal plain through their "exquisite sensitivity." Yet, even though the "nervous energy" of women may have been more abundant and unstable, it was still ultimately subordinate to a more powerful masculine force. Pondering the ineffable myste-

ries of sexual, spiritual, and electrical attraction, one theorist proposed, "Since one class of persons (healthy males) are known to be positively electric, and another class (delicate females) are known to be negatively electric, and since in their nervous energies there may be the same difference, when by the naturally exciting manipulations each is charged like a Leyden jar, why should there not be between the two a mutual attraction, in which the stronger will control the movements of the weaker?" ⁶⁰ Despite the efforts of such dominating powers, however, these peculiar convergences of sexual and electrical discourse at midcentury suggest that the fundamental "nature" of both these unruly forces remained at the center of scientific controversy and cultural speculation.

Catalyzing much of this electrical, spiritual, and sexual speculation. telegraphy provided a conceptual model for grounding such abstract theories in the seemingly more concrete examples of applied technology. As the preferred operators of celestial telegraphy, the successful feminine medium integrated domestic, spiritual, and even electrical expertise into an unprecedented form of social authority.⁶¹ Spiritualism's electronic rearticulation of femininity's intrinsic "passivity" and nervous instability presented an important opportunity for empowering women, whose physical disenfranchisement from nearly all aspects of public life and knowledge severely limited their sphere of social activity. Not surprisingly, Spiritualism's development was closely aligned with the emerging cause of women's rights, a social movement that, like Spiritualism, had its roots in upper New York State in the 1840s. Braude argues that the Spiritualists distinguished themselves from other progressive movements of the period "by lifting women's rights out of the reform platform as preeminent. . . . As investigation of the manifestations swept the nation, Spiritualism became a major — if not the major — vehicle for the spread of woman's rights ideas in mid-century America."62 Most certainly, many Spiritualists, male and female, were in some sense disenchanted with the prevailing social and political climate at the middle of the century, and viewed women's rights issues as key to social reform.

Appropriately, then, while Morse's telegraph carried news of banking, commerce, and other concerns of the masculine sphere, the spiritual telegraph addressed issues of vital concern to women. Mediums frequently strayed into such political territory during "trance" sessions, public events where the medium would enter a trance state and channel the words of a departed soul eager to comment on the mortal world's political landscape.

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Channeling such a spirit for an audience in New York, for example, Emma Hardinge challenged the audience to improve the fate of the city's six thousand prostitutes. "The six thousand women are 'outcasts.' Where are the six thousand men? In your saloons, and halls of legislature, your offices of trust, and places of honor, chanting the hymn of model America's 'FRATERNITY,' whilst gibing demons cry 'Amen.' "63 Communicating at séances through the circuit of telegraph and medium, the spirits of a higher and more refined plane of existence repeatedly argued that women needed to be liberated from the "limited education that restricted the development of their intellects, from unjust laws that denied them access to their property and custody of their children, from unequal marriages that subjugated them to men, and from economic restrictions that forced them into dependence."

Such advocacy, however, did not necessarily brand these women (and men) as extremists. Within the context of Spiritualism's model of electronic presence, women "mediums" and "trance speakers" were able to raise feminist issues and debate them freely without necessarily challenging directly the overall social order. 65 In a complex and somewhat ironic process of ideological negotiation, Spiritualism empowered women to speak out in public, often about very controversial issues facing the nation, but only because all understood that the women were not the ones actually speaking, at least not women who were still alive. "Mediums presented not their own views but those of the spirits who spoke through them," notes Braude. Both in drawing rooms and large auditoriums, "The essential passivity of women was asserted in a public arena, displayed before thousands of witnesses."66 Women could thus only assume such an "active" role in Spiritualist thought and practice through their fundamentally "passive" natures, a constitution electrically inscribed in their enhanced sensitivity.

Existing at the fringes of Victorian science's understanding of electricity, femininity, and spirituality, the medium occupied a strategic political and intellectual space that allowed her to intervene in the public sphere through a combination of supernatural and technological discourses, a model legitimated by the equally incredible yet incontrovertible evidence of the telegraph. While the technology of the telegraph transformed America into a wired nation, the *concept* of telegraphy enabled endless displacements of agency, projecting utopian possibilities onto a disembodied, invisible community and recasting an often radical political agenda as an act

of supernatural possession. The telegraph, spiritual or otherwise, not only made one interlocutor physically absent; it also placed the ultimate source of transmission in irresolvable ambiguity. Spiritualism as a movement exploited this intrinsic mystery of electronic telecommunications to make possible both new means and new forms of political discourse. Mediums exploited the indeterminacy of telegraphy's electronic presence to "throw their voice" both physically and politically in a most complex form of ventriloquism. Arguably, such a masquerade would have been impossible without the provocative example of Morse's telegraph and its powers of disembodiment. For a brief moment at least, Spiritualism presented a unique and even subversive articulation of femininity, electricity, and technology, recasting women's physical and mental "inferiority" into a form of technological authority — an expertise frequently invoked in support of women's rights, abolitionism, and other "radical" causes.

Hysterical Telegraphy

Considering the highly gendered social formation in which it flourished and the often explicitly political ends to which it was employed, "spiritual telegraphy" clearly involved more than a simple-minded belief in the occult. The Spiritualists would appear to have had a more instrumental investment in the reality of this phantom apparatus. In fact, even many commentators of the period considered the entire movement to be based on a politically motivated hoax. "The connection of spirit-rapping, or the spirit manifestations, with modern philanthropy, visionary reforms, socialism, and revolutionism, is not an imagination of my own," grumbled one critic. "It is historical and asserted by the Spiritists, or Spiritualists themselves."67 Another skeptic proposed that Spiritualist women took advantage of their protected social position, as propriety dictated that they were less likely to be questioned as frauds. "Whether the 'spirits' think of it or not, we mortals know that their sex and costume is a fine security against detection. And may this not be the reason why most of the raps are through lady mediums?"68 Such suspicions and resentment grew as the movement matured, and in the second half of the nineteenth century, the delicate instrument of the medium came under increasing attack. Although they had been at odds from the earliest days of the movement, Spiritualism and medical science became increasingly antagonistic rivals after the Civil War as each sought to legitimate its own models of "nervous" physic-

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logical and psychological phenomena. Walkowitz writes that physicians, "alarmed by the growing popularity of spiritualism among the educated classes," mounted an all-out attack on the movement. "They caricatured spiritualists as crazy women and feminized men engaged in superstitious, popular, and fraudulent practices. Spiritualists responded by elaborating an iconography of male medical evil, portraying the doctor as a fraud and as a sexually dangerous man, a divided personality whose science made him cruel, blood-thirsty, and hypermasculine because it suppressed his feminine, spiritual part." In this debate, no less an authority than J. M. Charcot, France's foremost theoretician of hysteria, warned of Spiritualism's effects on the mind. "Of all causes productive of these traumatisms of the cerebral functions," mused Charcot, "there is perhaps none more efficacious, and whose influence has been oftener acknowledged, than inordinate belief in the marvelous, in the supernatural."

The importance of telegraphy as a conceptual construct is especially apparent when one considers that telegraphic metaphors not only gave structure to Spiritualist belief, but also presided over the movement's eventual delegitimation and extinction. Ironically, the empowering model of telegraphic technology would eventually be turned against the Spiritualists, leading to a new articulation of femininity and electronic disassociation that would serve to restrict drastically the autonomy of women (often quite literally). In opposition to the liberating fantasy of corporeal transcendence harbored by the Spiritualists, emerging (and often competing) sciences such as neurology and psychiatry employed "telegraphic" knowledge to articulate their own theories of feminine physiology and psychology. As the century unfolded, critics of Spiritualism increasingly aimed these "rationalist" sciences at mediumistic women in an attempt to place their bodies back under medical and thus political control. As Walkowitz observes, "Special female powers also rendered female mediums vulnerable to special forms of female punishment: to medical labeling as hysterics and to lunacy confinement."71

Sharing the premise that women possessed a unique sensitivity, the emerging science of neurology sought its own explanations as to the electrical relationship of consciousness and the body. Spiritualism and its medical antagonists developed rival theories to address what both paradigms saw as a very specialized and highly telegraphic relationship between gender, consciousness, and electricity. The Spiritualists believed a woman's surplus (or imbalance) of "nervous energy" made her a more

receptive candidate for receiving the higher electromagnetic transmissions of the spirits. Medical science believed this surplus led instead to dysfunctions of the body, where the nervous system, as a great telegraphic network, was overtaxed by the variable intensity of this flow. Whereas mediums viewed themselves as channeling invisible streams of "spiritual electricity," a capacity enabled by the more "plastic" and "religious" feminine mind, many physicians of the period saw women as extraordinarily prone to electrical "dysfunctions" of the nervous system. This was no idle debate. For its advocates, celestial telegraphy led to revelation, enlightenment, and the elevation of feminine voices in a resoundingly patriarchal society. The collapses of "nervous telegraphy," on the other hand, led to the seemingly ubiquitous nineteenth-century maladies

Physicians increasingly favored electrical etiologies in the late nineteenth century, and were often just as quick as the Spiritualists to adapt electromagnetic and telegraphic metaphors in their discussions of neurasthenia, hysteria, and nervous energy. As John and Robin Haller write in their history of Victorian medicine:

of hysteria and neurasthenia. What the Spiritualists saw as "mediumistic phenomena," medical science labeled "mania" and "insanity." This tele-

graphic breakdown of the nervous system brought with it stigmatization,

institutionalization, and even death.

It was not without reason then, with all the talk about neurenergen and nervous expenditure, that physicians discussed the nervous activity of the human body in terms of "current," "electricity," "nerve molecules," "conductibility of the neuron," "transmission of impulses," and "fluid theory." In describing the brain and nervous system, physicians frequently compared them to a galvanic battery "whose duty is to provide a certain and continuous supply of its special fluid for consumption within a given time."

Nineteenth-century physicians pointed out that, like electricity, the nervous energy in the human body was a compound fluid, one negative and the other positive. The natural balance in quantity of these fluids in a particular substance was known as "natural electricity," while the liberation of fluids produced a phenomenon of "active electricity."

Just as the female medium's powers to "speak" were based on a paradox, so too were a woman's proclivities for neurasthenic and hysterical dysfunctions. "In one sense," write Haller and Haller, "the medical profession interpreted woman's symptoms of nervous exhaustion as a product of

the role she played in society." The routine existence of domestic confinement provided little opportunity to discharge nervous energy, a condition thought to be exacerbated by the rapid social, cultural, and technological changes taking place outside the home. The solution, however, was not to better integrate women in the public sphere, for this too held dangers. Once outside the home, women "saw their nerve centers lose control and go astray, traveling along 'forbidden channels.' "Physicians, in turn, used this logic to explain woman's "natural inferiority... and her susceptibility to nervous disease when she took on too many duties, moved out of the home, or just presumed too much in a man's world." Mediums, of course, were particularly vulnerable to such attacks in that they had dared to emerge from domestic life to take a place on the public stage.

When confronted with an overtaxed nervous system, mediumistic or otherwise, the physician's task was to restore this economy through the precise application of electrical flow.⁷⁵ As one theorist wrote, "If there is an induced current so acting as to diminish the normal current, then effects, such as paralysis, or anesthesia are produced; if it acts so as to increase the nerve force, then such phenomenon [sic] as excessive motor activity or hyperaesthesia is the result."76 Haller and Haller describe the logic behind such "electro-therapeutics." "The use of electricity on the neuron, it was believed, restored 'conductibility' which, due to prostration, had become resistant to the nerve current. By exciting the nerve tissue, a condition of 'electrotonos,' or a change in nerve excitability, occurred, in which the neuron found newer paths of transmission for its nervous impulses."78 As physicians adopted electricity as a popular treatment for a variety of physical complaints in the second half of the century, it became especially important in treating mental and nervous disorders. "'We like it," wrote one asylum director, "find it beneficial in most cases, valuable in a majority, and indispensable in certain forms of hysterical insanity, in primary dementia, and neurasthenia." "79 For many physicians, belief in mediumistic abilities was both cause and symptom of a disordered nervous economy, a condition that would eventually lead to full hysteria. Charcot compared Spiritualists to children, writing that the movement "indicates clearly the danger there is, especially to persons nervously predisposed, in superstitious practices, which unfortunately have for them so great an attraction, and in that constant tension of mind and imagination to which those are brought who apply themselves to spiritistic performances and the search of the marvelous, an occupation in which children take so much delight."80

eration even while extending old and more familiar relations of gendered power. Within an already dynamic field of social struggle, the electrical animation of telegraphic presence significantly informed increasingly antagonistic regimes of knowledge, producing theoretical spaces (and technological models) that could generate either calls for social change and political reform or criteria of insanity and institutionalization. Mediums became complex and contested "devices," linking for some the living and the dead, science and religion, masculine technology and feminine spirituality, but signifying for others the fundamental fragility of women and their inability to adjust to the modern world and its many wonders. Operating at the provocative fringes of religion and rationalism, spirit and science, mediums presented themselves as a "technology" constructed from and yet in conflict with the more colonizing embodiments of traditional religion and rationalist science. In doing so, they walked a fine line between empowerment and institutionalization. One might say, whereas the

Spiritualists imagined telegraphic technology as a means of transcending

material existence in an "out-of-body" experience, medical science employed telegraphic metaphors to reground consciousness within the bodies

of women who were thought to be "out-of-their-minds."

In the end, however, what made Spiritualism both particularly effective and yet potentially dangerous for women was the absolute indeterminacy bound to this earliest form of electronic presence. Given the state of nineteenth-century knowledge, who really could prove, ultimately, whether spiritual telegraphy was fact or fiction? Moreover, how could one be sure if a "medium" was or was not actually hysterical or insane? Such an enigma presented a significant legal question of the age, with one physician admitting, "The difficulty would be to determine what individuals actually believed and what ones only assumed and claimed to believe, for the purpose of deception, gain, or self-glorification."81 This writer concluded that those who believed spirits in general could communicate with the living were not insane, but those who believed that they were in actual communications with the spirits were insane. The problem proved even more vexing for directors of asylums, who were put in the difficult medical/ideological position of determining whether a Spiritualist medium was insane, merely deluded, or just affecting the phenomena. The

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case history of an institutionalized young medium in 1859 indicates the ambiguities involved in such diagnosis:

During the next several successive days, she would appear constantly possessed and controlled by spirits. Sometimes they spoke through her, commanding her in the third person, at one moment to go to a distant part of the town with a message to a certain one, and in the next breath directing her to go to another room of the house, where it would be told her what she should do. . . . In the effort to obey these commands, many of which were trivial, contradictory, and impossible, she would be greatly perplexed, and at times in utter despair. Generally, however, her state was one of exaltation. Her voice was loud, her manner imperious, and she resisted with much strength, though not passionately, when interrupted in carrying into effect the directions of the spirits, and would appear to her friends perfectly natural in manner and speech. 82

Although today such symptoms might seem to indicate the onset of a schizophrenic episode, the doctor in the case observed that "her fellow Spiritualists assured her that nothing was wrong with her, and that she was only passing through a special and extraordinary experience, in her development as a medium" (324). After much consideration as to the ultimate status of what might be seen either as this woman's hysterical "symptoms" or paranormal "communications," the doctor finally asked his colleagues,

For, granting the theory that the belief in the agency of spirits was the primary underlying delusion of the patient, what part of the entirety of the mental disease . . . does this statement of fact express? How much of the insanity does this delusion represent? If a dozen years ago, and previously to the first development of the Spiritual phenomena, an hypothesis of the relations of disembodied spirits to men, like that which has come to distinguish a numerous sect, had belonged to a single individual, that man would have been, without doubt, mad. There can be just as little doubt that at present thousands of persons, of nearly, at least, an average soundness of intellect, hold precisely the same belief, in terms, as did our patient. The simple belief, then, in spiritual phenomena, as actual or possible facts in her experience, was not previously to her attack of mania, and is not since her convalescence, an insane delusion.⁸³

Or, as another exasperated doctor noted, "The physician who examines hysterical patients has always to bear in mind that they intend to deceive

him, to hide the truth, and feign things that do not exist, as well as to disguise things that do exist."84 The same might have been said of "mediums," women who by strategically adapting the scientific language of technology and exploiting the electronic mysteries of telegraphic presence, crafted a fantastic language in which to affirm gendered authority and extol progressive social intervention.

The Telegraphic Imagination

In the months after the Rochester knockings, the Fox sisters and their mother traveled extensively to provide public demonstrations of the spirit phenomena. Skeptics examined the girls and their communications repeatedly but could not account definitively for the source of the rappings. Such disbelief did little to dampen enthusiasm for the growing movement. In a letter published in the New York Herald in April of 1851, however, a relative of the girls claimed to know the "true" source of the manifestations. Kate Fox, the youngest of the Fox daughters, allegedly explained to this relative that she produced the raps by cracking the joints in her knees and toes, a skill both she and Margeretta had mastered as children by pressing their toes against the footboard in bed. Despite this admission and numerous counterattacks, the movement continued to flourish. In 1888, fully grown and somewhat down on her luck, Margeretta made a public confession of the less than paranormal source of the manifestations (according to some, because she had received money to do so). Interestingly, Margeretta recanted the confession no sooner than she had issued it, placing the matter once again in some degree of ambiguity.85

Started as a girlish prank, perhaps, the spirit manifestations rapidly assumed a public life of their own. As the two girls secretly instructed others in how to produce the phenomena (or as others devised their own techniques), this diverting charade expanded its influence in parlors and auditoriums across the country as mediums conveyed messages from departed loved ones, fallen national heroes, and colorful figures across all of human history. The advent of the "planchette" and "Ouija board" allowed families to experiment with spiritual communications in their own home. At some point, this "game" of raps and knocks evolved into a doctrine of religious belief that inspired many devout followers and led to ever more elaborate manifestations of the spirits. By the 1870s, Spiritualism was a vital social, philosophical, and commercial enterprise, generating jour-

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nals, books, and speaking tours that examined the wonders of the spirit manifestations and sought to either validate or repudiate the veracity of Spiritualist claims. At its height of influence, belief in Spiritualism could be found in freed southern slaves and blue bloods of Boston, in mediumistic teenage girls and members of Congress. During these years, Spiritualism no doubt incorporated a wide variety of participants exhibiting a range of motivations — adolescent girls who enjoyed the attention and power of their "mediumship" while knowing full well it was a hoax; mediums who actually convinced themselves of the reality of their own manifestations; reformers who recognized that the manifestations where fraudulent yet saw in them the opportunity to increase their political influence; religious zealots who exploited Spiritualism as a convenient opportunity to receive messages directly from God; and "average Americans" who, although not obsessed by Spiritualist doctrine, found the manifestations an interesting source of discussion and speculation.

In a period distinguished by the mysteries of electricity, an emerging turbulence in the politics of gender, and an overall utopian enthusiasm for technologies of deliverance, this unlikely juxtaposition of toe joint and telegraph helped articulate what would eventually become a fully developed fantasy of electronic transmutability. Through images of discorporation, anthropomorphization, and even cybernetics, Spiritualism produced the media age's first "electronic elsewhere," an invisible utopian realm generated and accessed through the wonders of electronic media. The conceptual appropriation of telegraphy by Spiritualism (and medical science) suggests that as telegraph lines stretched across the nation to connect city and town, town and country, they also stretched across the nation's imagination to interconnect a variety of social and cultural spheres. For the Spiritualists, the bodiless communication of telegraphy heralded the existence of a land without material substance, an always unseen origin point of transmission for disembodied souls in an electromagnetic utopia. Each time a medium manifested occult telepresence, be it through rappings or spirit voices, planchette readings or automatic writing, she provided indexical evidence of a social stage continually displaced and deferred that held the promise of a final paradise. Such unbridled enthusiasm for the wonders of an "electronic elsewhere" would have no real equal until the recent emergence of transcendental cyberspace mythologies in our own cultural moment.

By the end of the nineteenth century, Spiritualism as a "science" was

for the most part discredited, but Spiritualist belief survived to inform cultural fantasies surrounding the next century's new telecommunications marvels. The "electronic elsewheres" imagined in connection with wireless, radio, and television, however, would be much more sinister and disturbing than the Spiritualist fantasies of electronic utopia. As telegraphy gave way to wireless, and as the nineteenth century gave way to modernity, new articulations of telepresence were to be more anxious than beatific, suggesting a realignment in the social imagination as to the powers and possibilities of electronic telecommunications.

2 The Voice from the Void

By the end of the nineteenth century, the spiritual telegraph survived only as a metaphor. Besieged by the attacks of scientific rationalism, few Spiritualists were willing to defend the idea that Benjamin Franklin still toiled in the phantom laboratories of a spiritualist technocracy, fashioning imaginative electronic technologies to uplift the mortal world. Mediumistic women across the country still performed séances for the benefit of skeptical critics and grieving relatives, and a few even achieved some degree of fame, but they were no longer conceived as a negatively charged "terminal" in the cosmic schematic of some interdimensional telecommunications device. Speculative interest in Morse's terrestrial telegraphy, meanwhile, yielded to the wonders of telephony and the promises of wireless. But waning excitement over the novelty of telegraphy did not mean psychic researchers had abandoned their search for a link between electronic presence and the paranormal. For many, interest in occult media intensified in the late nineteenth and early twentieth centuries as research into psychic phenomena became more empirical and systematic. At first discredited but then increasingly informed by the doctrines of scientific rationalism, Spiritualism's fanciful portraits of a benevolent spirit world gave way in the age of modernity to a program of pragmatic experimentation focused squarely on verifying the act of communication itself. During this period of transition, organizations such as the Society for Psychical Research emerged in England and the United States to assess the validity of paranormal communications through the protocols of the "scientific method." Intriguingly, many of the researchers who would have an important role in developing electronic telecommunications in the new century were also acutely interested in paranormal phenomena and the scientific possibilities of spiritual contact. Perhaps no longer willing to believe that spirits assembled technologies in the afterlife, many citizens of the modern age did believe that a mortal genius in this world might one day develop a working system to verify contact with the realm of the dead. At the very least, many of the most celebrated scientific minds of the period believed that as yet undiscovered forces governed mediumistic phenom-