“Mysterious Radio: Kipling and Cheever”
A. David Wunsch

“Any sufficiently advanced technology is indistinguishable from magic.”
--- Arthur C. Clarke 1961

“The very fabric of life now she thought . . . is magic. In the eighteenth century, we knew how everything was done; . . . I listen to voices in America; I see men flying—but how it’s done I can’t even begin to wonder. So my belief in magic returns.”
--- Virginia Woolf (from Orlando) 1928

A colleague—whom I will refer to as E.—asked one day that I step into his laboratory as he had something to show me. The audio tape that he placed inside a cassette deck had been used, he said, to record music and conversation, all of which he had carefully erased. He played this supposedly blank tape through his machine for me at high volume, during which in several instances he insisted that he heard a human voice—that of a dead relative. Buried somewhere in that painful white noise I did, at odd moments, hear something that might have been human, but nothing that I could discern as speech. Thanking him for his “interesting demonstration,” I left, having had my first experience with what I now know is a branch of the paranormal called “Electronic Voice Phenomena.”

Actually, I wanted to thank him for something else, but thought it prudent to keep my mouth shut. He had just treated me to a scene from the long history of the marriage between communication technologies and a belief in the supernatural. In E’s lab I felt transported back to western New York state to the company of the three Fox sisters who, in 1848—four years after Morse’s spectacular demonstration of his telegraph—asserted that they could decode the mysterious rapping heard inside their parents’ house—messages, they claimed, from the dead. These interpretations caused a sensation, and the three girls, who said that they had opened a “telegraph line” to another world, are credited with founding the modern Spiritualist Movement that spread through the United States and into the United Kingdom, and, as my friend had demonstrated, persists in various forms today. Central to this movement is the belief that the living can communicate with the dead.

The great advances in communication and transportation of the 19th century gave birth to the literature of science fiction—writing that we associate in that same century with two familiar names, Jules Verne and H.G. Wells—but which engaged the interests of
other serious authors as various as Twain, Hawthorne, and Poe. Somewhat lesser known because of fame garnered in other genres, but equally interesting, are the fantasy and science fiction contributions of Rudyard Kipling. To students of radio and its ancestor the wireless telegraph, there is one short story of his that continues to fascinate: "Wireless," which appeared in Scribner's Magazine in August of 1902. This tale—in which the wireless telegraph apparently enabled a spiritualist experience—has attracted considerable scholarly attention.[1] Kipling is not the only highly regarded writer to exploit in fiction the apparent strangeness of electromagnetic communication, and we will look not only at his piece but also at a radio related story of John Cheever's which appeared nearly 5 decades later.

About Kipling's decline in reputation as a writer, starting perhaps almost from the time of his Nobel Prize in 1907, I need say little here. Most people are astonished to learn that he died as recently as 1936—just 5 years before Woolf and Joyce—so
identified is he with Victorian England. Some three dozen of Kipling’s stories continue, however, to be held in high regard by science fiction and fantasy buffs, and anthologies with generous introductions appeared in the late twentieth century.[2]

The scene of Wireless is an unnamed coastal British city. The time is presumably the present (1902), a fact evident from the contemporary technology. We are in a druggist’s shop, heavily illuminated by electricity, on a painfully cold winter Saturday night. The shop’s owner is absent, but his nephew, young Mr. Cashell, situated in a room connected to the store, is engaged in operating a wireless telegraphy set for sending and receiving Morse code. Tending the shop is an apothecary, Mr. Shaynor, who we will soon learn is dying of consumption.

There is an unnamed visitor, the narrator, a friend of the owner, who enters the shop to see the wireless set in action. Cashell explains to the narrator that he is trying to signal to the Marconi station in the city of Poole—he is waiting for Poole to “call us up”—and anticipates communication around midnight. While they are chatting, a young woman walks in and seeks to coax Shaynor into a “walk round by St. Agnes,” presumably a local church. Shaynor agrees, and the narrator mans the counter for him. Alone with Cashell, the visitor confesses to him that he is ignorant of exactly what electricity is. He receives the reply, “If you knew that you’d know something nobody knows.” Cashell then displays a device at the heart of his wireless receiver that will show the “magic” manifestations of Hertzian (radio) waves: the coherer, a glass tube with two tiny silver plugs and a quantity of metallic dust between them.

Shaynor returns without the girl. He is coughing blood, and the narrator, who has some knowledge of pharmacology, hands him a remedy he has formulated to give the poor man some comfort. While Shaynor dozes off from the medicine, Cashell gives his visitor a little lecture on wireless, explaining how a transmitted signal “induces” a received signal. We also learn from Cashell that the name of Shaynor’s female friend is Fanny Brand.

Educated British readers in 1902 knew their romantic poets. Their mental antennae would have been raised by the girl’s name, the name of the church, the weather, Shaynor’s profession, and his terminal illness. All point to the poet John Keats (1795-1821) who died in his youth of consumption. He had studied both pharmacology and medicine. His mistress was Fanny Brawne, and, in 1820, he wrote the well loved poem The Eve of St. Agnes whose opening line is “St. Agnes’ Eve—Ah, bitter chill it was.” Shaynor’s girl resembles an image in an illuminated toilet water advertisement in the shop, so there is a double pun on the name Brand—she is both Brawne and a brand.
The narrator leaves Cashell in his lab-office and returns to the main shop to find Shaynor in a daze, fixated on the glowing simulacrum of his Fanny, and, in a tentative and imperfect way, reciting lines that are unmistakably from Keats’s The Eve of St. Agnes. Shaynor begins writing, and lines from the poem now emerge on paper. At this moment Cashell tries to draw the visitor into his office: “there’s something coming through from somewhere; but it isn’t Poole.” But the narrator is irritated at the interruption and tells him harshly: “Leave me alone till I tell you.” Shaynor continues with his writing and reciting, rendering the poem nearly correctly, and then moves to a bit of the same poet’s Ode To A Nightingale. Suddenly, he begins to shake and in a moment is out of his stupor, back to his normal self, and unaware of what has transpired. When questioned, he denies any knowledge of Keats and says, “Is he a popular writer?”
Cashell now moves the pair into his office to witness a “curious performance.” Two ships out of Portsmouth are trying to make wireless contact, but neither can detect the other’s message. Cashell tells his listeners that: “Their transmitters are all right, but the receivers are out of order, so they only get a dot and a dash there.” When queried about the cause, he explains: “God knows—and Science will know tomorrow.” Finally, the signal from Poole is heard, and Cashell asks the narrator if there is anything he’d like to tell them in reply. He declines: his interest in wireless has dimmed, and he wants only to get to bed.

In most interpretations of the story, the presence of the operating wireless set is the catalyst or medium that allows Shaynor to establish an invisible channel to Keats. It has been suggested that the inability of the two ships to communicate is due to wireless communication being diverted at that moment to convey or “induce” the poet’s words. Gillian Beer points out that the story raises the question of why we assume that only the medium of print allows us to commune with a dead author and asks us to consider the possibility that Kipling is suggesting that this novel medium of the Edwardian era might be similarly employed.[3]

It is easy to lose sight of how the communications technologies developed in the nineteenth century mystified and thrilled its witnesses. The Morse telegraph made possible nearly instant communication and for the first time reliably separated communication from

Sir Oliver Lodge (1851-1940)
Physicist and Member Society for Psychical Research
transportation. Listening to an Edison cylinder one could hear the recorded voice of someone who had died, while the wireless telegraph made possible communication with no visible connection between sender and receiver. Kipling’s story takes advantage of this aura of mystery. Are we to imagine that Kipling himself believed that a scene such as the one he described was possible? I think not. His younger sister “Trix” suffered from mental illness for most of her life.[4] Modern Kipling biographers have diagnosed her as schizophrenic; she heard mysterious voices, attended séances, and indulged in “automatic writing” (like Shaynor) in a trance-like state.[5] All of this, together with her frequent hospitalizations, was disturbing to Kipling and it would be hard to imagine his assigning credibility to her delusions.

If Keats is the invisible major player in the story, there is yet another who isn’t named but who was alive when the piece was published, and who stands at the intersection of the major currents in the tale. The coherer, whose operation Cashell explains to his visitor, has a complicated history, but the term itself is attributed to Sir Oliver Lodge (1851-1940) who was to improve its sensitivity and who, circa 1894, was among the first to apply it to wireless telegraphy. Cashell’s coherer is much like the one Lodge employed. It is clear to wireless historians that, during the period of its use, no one really knew how the invention worked.[6]

Lodge was a distinguished physicist and educator. However, he had another life for which he was famous both in the UK and America, a life involving belief and research in psychic phenomena.[7] In 1884, he joined the Society for Psychical research, which was founded in 1882, with the purpose of investigating scientifically such questions as whether there is life after death and whether one might communicate with the dead. The Society exists today and is proud of past members who were distinguished scientists and men of letters including William James, who like Lodge was once President, Sir William Crookes, Sir Arthur Conan Doyle, Henri Bergson, and Alfred Wallace.[8] Although the organization has a record of unmasking fortune tellers, fake mediums, and other psychics, most of its members shared a belief in life after death and in the ability of the living to communicate with the dead. Kipling’s sister, using a pseudonym, participated in activities of the group.[9]

Lodge lost a son in World War I as did Doyle. Both soon reported having communicated with their dead boys. About a year after his son’s death, Lodge published a book about how he had exchanged messages with him by means of séances conducted with a medium. The book, Raymond or Life and Death, became a best seller principally as a result of the large number of British families that had suffered a similar tragedy.[10] Kipling’s son John died in the war, but his biographers don’t mention his resorting to a medium to reconnect with the youth. Indeed, some have suggested that his poem En-dor is an admonition against such practices as “the craziest road of all.”[11]

The nature of invention in the nineteenth century and the first decade of the twentieth was virtually a guarantee that both inventors and their followers in the
general public would be drawn to a belief in the supernatural. One easily overlooks how ignorant inventors of that period were of the basic science underlying their inventions. By 1880, the cities and towns of the United States had been linked for several decades by the electric telegraph, and there was a telegraph cable under the Atlantic Ocean that joined the United States and Great Britain. Electric illumination in U.S. cities via incandescent bulbs was only a few years off. Yet, Oliver Lodge could say in a public lecture in 1882: “What is electricity? We do not know. We cannot assert that it is a form of matter, neither can we deny it.”[12]

The modern theory of electricity—now only a little over a century old, and based on the electron as the elemental particle of charge—dates from J. J. Thomson’s experiments of 1897. It took several years for scientists to accept that these particles were essential components in our evolving understanding of the atom. Cashell’s ignorance of the precise nature of electricity would have been typical of wireless operators of his era.

In December of 1901—a year before the publication of Kipling’s story—Marconi and an assistant were in Newfoundland and reported repeatedly hearing the letter S in Morse Code sent by wireless telegraphy from a transmitter in England, the first wireless transatlantic message. The sensational news made the front page of the New York Times, but the achievement was dogged by a problem: It was known for several decades that electromagnetic waves, like visible light, traveled in straight lines once the wave was launched. The signals heard by Marconi obviously had managed to follow the curvature of the Earth, yet he could offer no explanation. In fact, the physical theory explaining the bending of waves when they reached the upper atmosphere, which permitted the success of the experiment, was not established successfully until 1924 and not by Marconi.

It was the work of Edward Appleton, who later was knighted and awarded the Nobel Prize in 1947. As early as 1902, Arthur Kennelly and Oliver Heaviside separately had conjectured the existence of a conducting layer in the upper atmosphere that reflected radio waves over the horizon.

These examples are not atypical. The triode vacuum tube, developed in 1906, was the crucial invention in radio for 42 years until the introduction of the transistor. Yet, Lee de Forest, the self-styled “father of radio” who discovered the triode, did not understand its principles.[13] A vast public came to believe that modes of communication in daily use required explanations that would be far in the future. It is no surprise to learn that in 1909, William James remarked that, in denying the possibility of spiritualism we might be “ignoring a natural kind of fact of which we do not yet know the full extent.”[14] Understandably, Cashell tells the narrator of the story that he cannot explain the failure in communication between the two ships, but that: “God knows— and Science will know tomorrow.”

In the era of the story Wireless, a core belief was that the electromagnetic waves in use for communication moved from transmitter to receiver through a medium
referred to as the ether or aether. The ether was seen as a conduit for these waves just as air was required for the existence of sound waves. The medium of the ether was central to most nineteenth-century thought about electromagnetic waves but, unlike air which you could store in a balloon, the ether had never been detected. It is an example of the “natural kind of fact” that James spoke of, and it was at the center of Lodge’s spiritualistic beliefs. Where else did the dead and their voices reside but in the ether? As he put it, the ether is: “... where our existence lies, and there is our spiritual home.”[15]

The crumbling of a general belief in the existence of the ether dates from 1905 and the publication of Einstein’s theory of special relativity, which held that the laws of physics turn out to be exactly the same in all frames of reference moving at constant velocity with respect to one another. If the ether existed, an observer at rest in the ether would enjoy a privileged position in physics and directly contradict the new theory. Einstein’s work explained the negative outcomes of all experiments designed to detect the ether.[16] Gradually, belief in relativity took hold in the physics community, but not in the mind of Lodge who, at his death in 1940, clung firmly to a concept which by then had virtually no other proponents in the physics community.[17]

Interestingly, Kipling, who in a sense intersects with Lodge in Wireless, had his own problems with Einstein’s work—in this case the general theory of relativity published in 1916. Although Kipling embraced the technologies of modernity—he was greatly enthused by the automobile and electrification—there were limits to what he would accept from modern physics. Writing to a friend ostensibly about the Germans the year after WW I ended, he asked:

"Do you notice how their insane psychology attempts to infect the Universe? There is one Einstein, nominally a Swiss, certainly a Hebrew, who (the thing is so inevitable that it makes one laugh) comes forward scientifically to show that under certain conditions Space itself is warped and the instruments that measure it are warped also. . . . When you come to reflect on a race that made the world Hell, you see how just and right they should decide that space is warped, and should make their own souls the measure of Infinity . . . Einstein’s pronouncement is only another little contribution towards assisting the world toward flux and disintegration.”[18]

Although the wireless transmission of voice and music became possible in 1906, radio broadcasting in the United States began on a sustained basis only in 1920.
Despite some resemblance of the hardware to that used in wireless Morse code transmission, we must regard radio broadcasting as a new medium, different from wireless telegraphy. Unlike the wireless telegraph whose termini were in offices, radio entered the home, and unlike its predecessors the phonograph and telephone, which also created disembodied voices, radio was a mass medium affording instant communication but which could be received in isolation. Jeffrey Sconce has documented how the new mass audience for radio created, at the same time, consumers of bizarre science fiction stories in which for example, a maniac broadcasts “a cursed piece of music that will draw its nation of listeners to mass suicide.” He remarks, with some hyperbole, that: “the institution of broadcasting came with a price: the invasion and dissolution of the private sphere of the home.”[19]

In 1947, forty five years after the appearance of Wireless, John Cheever, who later won the Pulitzer Prize, published in the New Yorker one of his best known stories, The Enormous Radio.[20] In post-war America, a radio set was sufficiently commonplace so that one might imagine it to be as devoid of magic as the toaster. Nonetheless, the device still had sufficient aura of mystery so that a radio might plausibly become a catalyst for the supernatural in one fictional New York apartment. Some indication of the destructive magic — and in this story it is destructive — seemingly inherent in radio, can be seen in a letter written by Ezra Pound to a friend, just 7 years before the Cheever piece appeared, in which his new radio is referred to as a “Goddamn destructive devil of an invention,” “... a devil box,” and a “devouring serpent.”[21] We can look at the stories of Kipling and Cheever as a pair of markers embedded in the eras of wireless telegraphy and radio in which the authors exploit the strangeness attached to these inventions.

Cheever’s plot illustrates an invasion, to use the language of Sconce. The tale takes place in the apartment of Jim and Irene Westcott, who live in the comfortable Upper East Side of Manhattan. In their middle thirties, they have a seemingly agreeable life typical of their social class: they have two young children, a maid who also serves as a cook and nurse, and they frequently attend concerts and the theater. Their radio breaks down, and because of their interest in classical music, they buy an expensive replacement. The new set is ugly and gives off “a malevolent green light.” At first it works to their satisfaction, but Irene, who is home most of the day, soon discovers that the device picks up and rebroadcasts into their apartment music and voices generated within their own apartment building.

They both initially enjoy the novelty of spying on their neighbors, learning their intimate secrets, and they spend an enjoyable evening so well entertained that they go to bed “weak with laughter.” But in the next two days, Irene continues what has become an addiction, and what she learns is distressing. A neighbor is having an affair with the building’s handyman, another woman is a “common whore,” a man beats his wife, a neighbor sells a diamond that a guest has accidentally lost at a recent party. A sick woman cannot afford more visits to the
doctor. Irene is tormented by her new knowledge. Her appearance changes from one of cheerful innocence to “radiant melancholy.”

Jim arranges for a repairman to fix the set, but their lives are not mended. He begins to fret about their financial situation, and he reproaches Irene for her extravagance. Irene is terrified lest his voice be broadcast to the neighbors through their own radio. Jim explodes at her apprehension and reminds her of some ugly truths with which they have, until now, apparently lived without rancor: Irene has had an abortion or as Jim puts it, “went off to have that child murdered.” Irene has cheated her sister on their inheritance. She moves to the radio, hopeful that she might hear the neighbor’s nurse saying something soothing to the children she cares for, but the repaired set flatly reports news from the outside world, including a railroad disaster that has killed 29 people and some information on temperature and humidity. The Westcotts will not be the same.[22]

If Keats’s St. Agnes resides openly in the Kipling story, the Book of Genesis slithers beneath this one. The ugly radio set with its green glow evokes the snake in the tale of Adam and Eve. There is even a passing reference to an apple core. Pound’s comparison of radio to a “devouring serpent” is apt here. It would be simplistic to read this story as a critique of technology. It is, more broadly, a statement of the torment that awaits us when we become aware of the meanness, dishonesty, and cruelty in the world. We might then see these very aspects of our own lives. The tale condemns the cliché that one’s pain becomes more bearable, if one places it in the context of the sufferings of humanity.

The mechanism whereby an ordinary home radio becomes an eavesdropping device is technically preposterous, and there is nothing in Cheever’s biography to suggest he imagined it plausible.[23] It is plausible, though, that Jim and Irene, ignorant like much of the public of the physics of radio, would be prepared to accept the tale’s premise. We also should keep in mind that, during the 1940s, AM radio receivers often did pick up strange and inexplicable sounds (especially in city apartments). This observation is doubly true for the period of wireless telegraphy appearing in Kipling. The FM radio that most of us listen to provides little in the way of mysterious noises that were once commonplace.

In the very year that The Enormous Radio appeared, the transistor was introduced to the world by three U.S. physicists at Bell Telephone Laboratories. These men, all with PhDs in physics, understood the quantum mechanics that explained their invention which was to revolutionize the construction of radios—and all electronics—over the next decades. Unlike the coherer, the vacuum triode, and radio propagation over the horizon, there was no whiff of mystery to this device that replaced the radio tube. The absence of this aura is characteristic of most of twentieth-century inventions with which we are familiar, and it perhaps explains why mainline (i.e. non-science fiction) writers are no longer producing stories such as *Wireless* and *The Enormous Radio*. 
To be sure, there are still small societies of believers using radios or recording machines to communicate with the dead. A collection of essays, *Radiotext(e)*, contains *Radio From Beyond the Grave* by Carola Morales, who describes her group: *The American Association for Broadcast Voice Phenomena.*[24] They are "one hundred strong" and report hearing George Washington and Adolf Hitler. The reader can find the organization's site on the Web in addition to one for the *American Association of Electronic Voice Phenomena*, to which my friend E with the "erased" tape belongs.

To an electrical engineer, there is something miraculous about radio—but not the miracles reported by such groups. The wonder is in the engineering itself. The electrons on the rabbit ears antenna that I'm using at this moment to hear a college FM radio station are moving about in a highly complex pattern, altering their behavior millions of times per second. Yet my radio, tuned to 95.3 MHz, has made itself sensitive only to that motion—vibrations of the current taking place in a small spectrum centered at 95.3 million times per second. The current itself is tiny—it's measured in millionths of amperes. The radio senses that minute current and turns it into Beethoven. Now that is a miracle.

If the plot of John Cheever's *The Enormous Radio* rings a bell, you may be recalling its adaptation for television. The story originally ran in the May 17, 1947, issue of *The New Yorker.* Forty years later, on May 17, 1987, the episode "The Enormous Radio" aired during the third season of the Twilight-Zone-esque series called *Tales from the Darkside.* The teleplay was by Guy Gallo; the director was Bill Travis. A trivia note: The enormous radio is a Majestic Multisonic manufactured in West Germany by Grundig. The first televised version of Cheever's short story, however, was on the first season of *The Revlon Movie Theater* and aired on July 21, 1953. The teleplay was by Reginald Rose; the director was Daniel Petrie. That production featured Darren McGavin, who performed in many of the classic anthology dramas of the 1950s and starred as Mike Hammer (1958- 1959). Source: Internet Movie Database www.imdb.com

**David Wunsch**

Department of Electrical and Computer Engineering
University of Massachusetts Lowell
Lowell, MA 01854
David_Wunsch@uml.edu

Bio note: A. David Wunsch is Professor Emeritus of Electrical Engineering at the University of Massachusetts Lowell where he teaches a course on the principles and history of radio.