INTRODUCTION

“It has long been my belief, that the electric influence is the great principle by which the Almighty puts together and separates an it might be called, metaphorically, the right arm of God.”

Andrew Cross c. 1835

“What are electricity, galvanism and magnetism? In these lies the great secret of nature.”

Napoleon Bonaparte c. 1815

Many of the great stories of King Arthur’s court are about the Holy Grail. In England, the grail was the cup used by Jesus at the Last Supper. The continental European legends speak of the grail as a stone with spirit. The Parzifal calls it the “lapis electris.” Angels, who were neutral in their strife between God and Satan, guarded the electric stone.

The legend of the Holy Grail is a picture of the future of electricity. The divine power can be either a healer or destroyer. Movies show the Frankenstein monster seething with electric currents. The saints and saviors are pictured with a golden electric halo.

William Gilbert (1544 - 1603) became the chief physician to Queen Elizabeth. She had such a good opinion of him, that he was given a pension to continue his scientific studies. He used the money to buy many rare books and experimental equipment. He had a magnetic lodestone ground into a sphere, and used magnetic needles to show how it mirrored the earth’s field. He showed that friction on glass, sulfur and other substances would generate an attractive power, which he called “electricity.” He named it from the Greek word for amber.

In 1897 physicist Joseph Thomson completed the physical side of Gilbert’s work. He made a vacuum tube with two charged plates and a fluorescent screen. Magnetic and electric fields deflected the current and he found a charged stream of particles. He announced the discovery of the electron.
The history of medical electricity begins with the first practical static generator in 1742 and the Leyden jar in 1745 for storing electricity. Doctors electrified patients with static electricity or gave them strong shocks. This produced some promising results, but the technology was incomplete.

The first battery appeared in 1800 and opened the door to low voltage direct current. Michael Faraday opened the door to alternating current in 1831 with pulsed “faradic” current. Electricity could now be generated through motion and batteries could be charged.

In 1836 Guy’s Hospital of London set up an “electrifying room.” Patients sat on an insulated chair and received an “electric bath” from a static machine. Most patients were women and the treatment consisted of drawing sparks up and down the spine or passing shocks through the pelvis with the Leyden jars. A brass ball grounded to the earth was used to draw the sparks.

Nikola Tesla was the great genius who made alternating current the standard for transmission and use. He observed that high frequency electricity had important effects in health. In 1892 he met with Paul Oudin in Paris. They discussed ways of building therapeutic high frequency oscillators, and months later Oudin produced the first device that became known as the “violet ray.”

Paul Oudin began to experiment with skin disorders. Acne, eczema and psoriasis were easily treated with the new device. After a few treatments the skin patches would begin to break up and disappear completely in 2–3 months. When the devices were used to spark warts or skin cancer, they often were removed within weeks.

The violet ray often took away pain, and many times it was practically a miracle. I experienced this after months of enduring a shooting pain in the foot. I used the violet ray around the area for a minute each night, and the pain did not return. A friend had such pain in his shoulder that he was considering quitting work. The violet ray relieved much of the pain. His girlfriend had severe pain in her knees, which resulted from gymnastics when she was younger. The device relieved most of the pain.
The device was valuable in arthritis and was often a miracle in rheumatoid arthritis. I lent my violet ray to a friend to help with his arthritis. In a few weeks his enlarged joints shrank to normal size.

The long hours of typing books began to take their toll while I was working on this book. My left hand became painful and numb with carpal tunnel syndrome, and I was making a lot of mistakes. I gave it violet ray treatments for ten days and most of the pain and numbness was gone.

The early electrical healing devices went under several names, but were generally called “high frequency oscillators.” The Dental Brief first used the term “violet ray” in 1913. In 1916 the first inexpensive hand-held devices appeared in drug stores. The public accepted the violet ray and hundreds of thousands of units were sold. Twelve companies made the devices in the United States, Germany, France, Spain, England and Canada. Drugstores had front window displays of violet rays.

When they became popular with the public, doctors and the FDA started to despise them. At first the Journal of the American Medical Association published promising therapeutic results. Then it printed an article about a man who deliberately short-circuited his violet ray and electrocuted himself. This implied that the device was dangerous and should be outlawed. The Depression put the companies that made violet rays out of business and they became unavailable.

There is another reason why the device was forgotten. A stream of violet rays of light passes through a glass tube into the skin. Tiny sparks shoot out, and when the device is withdrawn there are sparks and the muscles jerk. Using the device is very unsettling at first and slightly uncomfortable. After the initial sensation passes, the violet ray is easy to use.

Edgar Cayce was the sleeping prophet who gave fourteen thousand readings between 1920 and his death in 1945. Desperate people seeking help for medical problems consulted him, when doctors failed. In his self-hypnotic trances he recommended the violet ray treatments over 900 times. He kept interest in this nearly forgotten device alive.
I wanted to tell the entire story of the healers who used electricity, and emphasize the violet ray era. It was a difficult job to locate and research the books and journals. I visited the medical libraries at Stanford, University of Washington, University of Minnesota, University of Michigan, Philadelphia College of Physicians, and the National Library of Medicine. I am especially grateful to the Bakken Library and Museum in Minneapolis. This museum contains a collection of old violet rays and other electrical healing devices. The library has many rare books relating to all aspects of electrical healing.

In geopolitics there is a saying: “the winners write the history books.” The winners wrote the history books and textbooks of medicine. They made certain that everyone knew about the glories of surgery and wonder drugs. They made sure that electric medicine was placed in the category dominated by cranks and frauds.

Robert Becker was the leading scientist engaged in regeneration work with electricity. He discovered the ideal currents for regenerating broken bones. As his research became more interesting and promising, he found that the National Institutes of Health denied him monetary grants to continue. He was so discouraged that he wrote: “The pigeons of Zeus cover new ideas with their droppings and conduct rigged experiments to disprove them.”

The violet ray is a grandfathered device, meaning that it was produced before 1976 and is generally presumed to be safe and not subject to federal regulation. In spite of this the FDA threatened the companies that produce them and the people who use them with legal action. The climate of official intimidation has been so strong that only one journal (Chinese Medical Journal) has published studies in the last 70 years.

The violet ray is not a medical miracle, but it often produced remarkable healing in a short period of time. Those who use them should take the same precautions as with any electrical device. In any healing treatment, qualified medical advice should be sought. This book does not make medical recommendations, but it does tell the history and results of those who used electricity.
There is more to be told of the story of medical electricity, but this is a beginning. I am reminded of the words of Winston Churchill in 1942. “Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.” If this book results in a new beginning for forgotten technologies, then I have accomplished my purpose.

Electricity is a two-edged sword that can restore health and life or it can injure and kill. The benefits of simple electrical treatments far outweigh the risks involved. Hundreds of thousands of violet rays were sold and used with few problems. There is no endorsement of any treatment in this book, and readers are advised to consult with a medical professional. In using any electrical device all proper precautions should be employed.
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1. THE CURE FROM THE SKIES

“From a thousand experiments, it appears that there is a fluid far more subtle than air, which is everywhere diffused through all space, which surrounds the earth and pervades very part of it. Such is the extreme fineness, velocity and expansiveness of this active principle that all other matter seems to be only the body and this is the soul of the universe. This we might term electric fire, but it is hard for us to separate the ideas of fire and burning. From this pure fire, which is properly so called, the vulgar culinary fire is kindled. For in truth there is but one kind of fire in nature, which exists in all places and in all bodies. This is subtle and active enough not only to be under the Great Cause, the second cause of motion, but to produce and sustain life throughout all nature as well in animals as in vegetables . . .”

Desideratum John Wesley.

In 1973 Chinese archaeologists digging in the Hunan Province unearthed a book titled: Prescriptions Against 52 Ailments. It was buried about two hundred years before the time of Christ. Twenty-seven prescriptions were spells chanted to cure the disorders. For one of the mystery ailments the writer remarks: “Wait for lightning in heaven and then rub both hands together. Face the lightning and chant to it: Sovereign of the Eastern Quarter, Sovereign of the Western Quarter, preside over the darkness and darken this person’s stars.”

Lightning is a mystery that was once believed to be the power of the gods. The laurel protected against it, and Roman emperors wore the laurel wreath. The oak drew the stroke and Roman soldiers received their decorations of oak leaves as a remainder of the heavenly power.

Moses saw the burning bush that was not consumed. Flames appeared upon the heads of the twelve apostles on the day of Pentecost. Renaissance artists attempted to depict the mystery fire by painting
nimbus circling the heads of the divine figures.

The town of Kulu in the Indian Himalayas has a temple on a hill dedicated to the god Shiva. A sixty-foot iron rod attracts the “blessings of heaven.” Lightning flashes through the mast and shatters the statue of Shiva at the base. The shattered pieces of Shiva are reunited and used for the next blessing.

A few people seem to have a fatal attraction for lightning. Charles Brown of Kenton, Ohio was known as the human lightning rod. On May 20, 1946 he was stunned for the tenth time when a bolt struck the public library as he was checking out a book.

Major R. Sumerford of Vancouver, British Columbia was on army patrol during WWI. A bolt of lightning killed his horse and left him paralyzed from the waist down. He eventually recovered enough to walk with the help of two canes. In 1924 he went fishing in the mountains. His friends left for supplies and he sat under a tree. Lightning struck it and paralyzed his right side. In 1930 he was walking in a Vancouver park. A storm blew up and he hurried towards the shelter area. He was struck and confined to a wheelchair. He died two years later. On a July night in 1934 a violent electrical storm struck Vancouver. A bolt of lightning struck a single tombstone in a cemetery and shattered it. It was the grave of Major Sumerford.

The famous meteorologist Heinz von Ficker was caught in a thunderstorm on the Matterhorn Mountain. He was struck three times in the back by bolts of lightning and his clothes were ripped to shreds. He remained fully conscious, but the fourth lightning bolt knocked him out for a short time.

Literature contains a number of cases in which lightning provided a healing impetus. In 1776 Mrs. Wynne went to Dublin to consult with several surgeons. She had a large tumor in the left breast. They didn’t want to operate, so she returned home. She was looking out of the window of her home when lightning struck it and set fire to the roof. The stroke passed through her left shoulder and down her back. She tumbled to the floor and was found later that evening. Doctor Georgius Hicks visited her two days later and found that her breast tumor was smaller and softer. In a few weeks it was completely gone. He decided to try electric shock to treat breast cancer. He was able to
reduce the cancerous tumors and pain in two women with shocks.

In the summer of 1806 Samuel Leffers suffered from a stroke. The left side of his face was numb and he had great difficulty in speaking. He was unable to close one eye and could hardly walk. Several months later while he was in his house lightning struck and he lay senseless for about twenty minutes. When he recovered he began to feel much better. The next day he sat down to write a letter to a friend, and he found that he didn’t need glasses. Although he lost part of his hearing, he looked thirty years younger and his face acquired a remarkable smoothness and beauty.

Susana Watts was traveling home when a severe storm struck. The carriage broke down and she had to walk the rest of the way. The cold weather was too much and her health failed. She was unable to use her arms and was confined to bed. Three years later a bolt of lightning struck the house and left a large circle on the ceiling with a black ring. She was unconscious and the servants loosened her clothes and began to massage her. As she awoke she was angry with them, for touching her. Then she got up and began to walk. She stumbled and reached out for the handrail. The lightning restored the use of her arm and cured her arthritis.

In 1822 Martin Rockwell was standing looking out of a window when lightning struck the building about ten feet away. He was briefly paralyzed and it took an hour for normal movement to return to his left leg and right arm. There was a burning sensation in his chest that continued for days. Rockwell suffered from asthma since he was a boy and was often unable to sleep. Since the lightning strike he was entirely free of asthma. He would feel it slightly when he had a cold or was fatigued.

In 1828 a ship was crossing the Atlantic with a passenger who had been paralyzed for three years. Lightning struck his quarters, and suddenly he jumped out of bed. He remained perfectly normal ever since.

Another strange stroke of lightning aroused medical curiosity in 1846. Lightning struck a group of black women. One woman had been childless for years and in a few months, she was expecting. Another woman was seventy years old and she had gone through meno-
pause twenty years before. She began to menstruate and continued for
the next three years.

Around 1850 an English farmer developed cancer of the lower lip
and chin. He agreed to have surgery, but before the date he was out
plowing his fields. He was struck by lightning, both of his horses were
killed, and his plow was shattered. A few weeks later the cancer was
distinctly less and in months it disappeared. He enjoyed good health
for the next ten years. The cancer reappeared and the man died.

Thomas Young was a farmer near Dukedom, Tennessee. Cancer
began on his face and the surgeon removed part of his lower jaw. The
cancer continued to spread and by June of 1932 he was nearly dead.
He chose to spend his last days lying in bed or on a hammock under
the trees. One day a sudden storm came and struck one of the trees
his hammock was tied to. The bolt stunned him and ripped the soles
from his shoes. In a few days he began to feel better. The cancerous
sores started to heal, and soon he was back to normal.

In 1971 Edwin Robinson jackknifed his truck in order to avoid
hitting a car. As a result of the accident he became blind and quite
deaf. In June of 1980 he walked out into the backyard as a storm was
brewing to call his pet chicken indoors. The next moment he felt as
“somebody cracked a whip over his head.” He lay unconscious for
about twenty minutes before he was able to go inside. After a good
nap he went into the kitchen for a sandwich. Suddenly he realized he
could see a little. His wife asked: “What time is it?” He was able to
tell her that it was 5 P.M. Two days later he was able to walk about
without his cane. His hearing returned and he didn’t need the hear-
ing aid. He kept remarking about the strange feeling on the top of his
head. A new crop of hair was growing over the bald area.

Two brothers in London were struck by lightning. The next day
the deaf brother recovered his hearing. A coal miner in Northern
England lost his sight after an explosion of gunpowder. After he was
struck by lightning the sight of his left eye returned. A woman with
multiple sclerosis was struck by lightning. She had been slowly degen-
erating, but within months she recovered most of her normal func-
tion.
Professor Stefan Jellinek was the pioneer of electropathology. He founded the Electropathological Museum at the University of Vienna. The museum contains more than a hundred watercolor paintings and objects showing the mysterious traces left by lightning or man-made currents. One exhibit is a tattoo made by the links of a golden chain on the neck of a woman who was struck by lightning. He wrote several books on the effects of electrical currents and lightning.

Jellinek wrote *Dying, Apparent Death and Resuscitation*. He showed that in most cases of electrical injury, it was possible to restore consciousness with artificial respiration. Before this, most doctors believed that nothing could be done.

Few of us are willing to stand on a hill in a thunderstorm hoping that a bolt of lightning might cure our problems. Lightning is more likely to be the final solution to all of our ills! But controlled man-made lightning might be just the ticket to good health.
2. BIOLOGICAL ELECTRICITY

“The whole torpedo, I mean the sea torpedo is said by some to cure headache and prolapsus ani when applied. I tried both of these things, and found neither to be true. I thought that the torpedo could be applied alive to the person who has the headaches. It could be that this remedy is anodyne and could free the patient from pain as do other remedies, which numb the senses, and this I found to be so.”

Claudius Galen c. +180.

“The live black torpedo when applied to the painful area relieves and permanently cures some chronic and intolerably protracted headaches, providing that the pain is localized and lacks feeling. However, there are many varieties of torpedo and it may be necessary to try two or three varieties before numbness is felt as numbness is the sign of the cure.”

Compositiones Medicamentorum Scribonius Largus c. +46.

Humans and other vertebrates have weak electric fields surrounding them. It may be that everything living has an electrical field. Certain fish have developed powerful fields and use electricity to locate food and stun it before they eat it.

The Torpedo, Astroscopus, Malapterurus and Electrophorus fish have highly developed electric organs. The organ consists of large numbers of disk-like cells called electroplaxes or electroplates. They are arranged in orderly columns with the innervated sides all facing the same direction. The Torpedo has horizontal electrical plates forming thick cells. The cells discharge in parallel and generate currents of several amperes at about 50 volts. The electric fishes live in both salt and fresh water.

There are five species of the Torpedo in the Mediterranean. The most common is the “electric ray” Torpedo torpedo, which has an electric organ consisting of 800 to 1,000 cells connected with bundles of nerves. The top surface of the fish is positive and the bottom is negative.

The electric eel of South America has 70 columns of electroplates,
each containing 6,000 cells in series. A large eel can produce 3 millisecond pulses of up to 600 volts. The nervous system is specially configured so that all cells discharge in short bursts. The slowness of nerve conduction would be normally expected to produce a smaller, more spread-out pulse.

The *Gymnarchus* fish responds to the presence of metals in water. When a copper wire rectangle was placed in a shallow tank, the fish appeared to be trapped within it. Every time it approached the wire, it halted and moved away. If a piece of wire is left in the tank for long enough, it will show no response. These fish do not bump into the walls of the aquarium when kept captive.

The first electric fish may have used electric pulses to locate food and navigate in muddy rives. *Gymnarchus* discharges 300 pulses per second. If another electric fish is nearby, they shift the frequency of the pulses, so they can distinguish their own pulses. The fish hunt at night and when a microphone is put into the water, you can hear ticking, rattling, and whistling sounds. If they sense something around them, they raise the frequency of the impulses.

The ancient Egyptians were the first to picture the Nile catfish *Malopterus electricus*. They probably ignored the shock and used it for food. There was a belief that the fish used its power to shock the fisherman and allowed the other fish to escape.

Hippocrates recommended this fish for food, because it was soft and easily digested. He doesn't mention its shocking effects, but this might have been why he recommended it. The fish was prescribed for tuberculosis patients and women suffering from menorrhagia.

Plato was familiar with the works of Hippocrates and talked about him in his famous dialogues. Socrates would really “electrify” his audiences and Plato compares him to the torpedo fish. “The flat torpedo fish who torpifies those who come near him with the touch, as you now torpified me, I think. For my soul and my tongue are really torpid and I do not know how to answer you.”

Theophrastus took over the school of Aristotle and wrote books on animals, fish and plants. He remarks that the torpedo could send shocks through clubs and spearing irons to numb the hands of fisherman.
Plutarch compared the lives of the famous Romans and Greeks in his well-known books. In *Moralia* Plutarch remarks: “Swimming circularly about his prey, he shoots forth the effluviums of his nature like so many darts and then infects the water. The fish around are neither able to defend themselves, or escape, being held in chains and frozen.”

At the time of Christ, Tiberius Caesar ruled Rome. Slavery was common among the wealthy Romans and Tiberius freed one of his slaves. Later Anthero walked along the shore and stepped onto a flat fish, which gave him a numbing shock. The shock relieved his “gutta,” which might have been arthritis.

Pliny wrote his *Natural History* around +70. He mentions several torpedo remedies, but they were eating the fish or applying parts of the dead fish. He mentions the “exhaltations” of the torpedo, but getting live fish was not easy for those who needed an electric cure.

The electric fish began to attract the attention of scientists around +1700. Francesco Rida and Stephano Loranzini dissected the torpedo and found that the electric organ was essentially a modified muscle. The invention of the Leyden jar in 1745 played a decisive role in establishing the electric nature of the fish. A weak static current could now be turned into a real shock. The scientists were puzzled over the nature of the fish. It didn’t attract light bodies or electrify a Leyden jar and there was no spark or crackling noise.

The eccentric scientist Henry Cavendish worked on the electric fish. He never invited visitors to his laboratory, but on this occasion he invited a group of friends to witness his research. He constructed a model of the torpedo with electrical equipment and put it under wet sand. The visitors walked over it with bare feet and got the same sensation as the real torpedo. Cavendish estimated that one torpedo equaled 49 charged Leyden jars.

John Walsh continued the investigation of electric fish. He showed that an electrical eel would produce a visible spark in a dark room. He put two wires into the water of an aquarium in which his eel was swimming. When his friends would put their hands over the wires, the eel would sense this and give them a shock. His experiments stimulated interest in electric healing. A newspaper soon had an ad for getting healing shocks for two shillings and sixpence!
When the Europeans began to explore Brazil, they found the powerful electrical eel swimming in the rivers and ponds. Alexander von Humboldt found that they were difficult to catch, because they buried themselves in the mud. The Indians drove horses into the muddy pools and the horses discharged the eels. Then they speared the eels with harpoons fastened to dry wood handles.

A Jesuit missionary wrote: “In these rivers and lakes the electric eel is found, which if any man holds in his hand, and it stir not, it doth produce no effect. If it move itself ever so little, it so tormenteth him which holds it, so his arteries, joints, sinews and all his members feel exceeding pain with a certain numbness. As soon as it is let go from the hand all the pain and numbness are gone. The superstitious Abassines believed that it is good to expel devils out of the human body, as it did torment spirits no less than men.”

The governor of Surinam, Storm Van s’Gravesander, wrote in 1754: “It has been observed that various people who had gouty pain and touched the torpedo were completely cured two or three minutes after contact. The experiment has been repeated at various times, but always with the same result.”

The Dutch surgeon Frans Van der Lotte wrote in 1761: “An Indian had paralysis of the abdomen. After having used several external and internal medicines in vain, I tried an electric eel, in the presence of my friends, which had just been caught in the river and hence was in full strength against the knees of the patient. The shock was so tremendous that two persons who were holding the patient under the arms on each side were knocked to the floor. After I had repeated this three times, the patient, who had to be carried from his plantation, walked back to the plantation without cane or crutches, completely recovered and was without need of assistance.”

Abraham Van Doorn had a slave boy with crooked arms and legs. He had the boy thrown into a tub containing large black electric eels. After being shocked the boy crawled out, but if he was unable to crawl he was helped out. The boy completely recovered from his nerve disease, but his bones remained deformed.
Van Doorn also threw another slave with malaria into a tub with an electric eel. The fever disappeared in a few minutes and didn’t return. He also tried this on an Indian boy with malaria. Once again, the electric eel cure worked.

Charles Darwin speculated about the evolution of the electric fish, because he didn’t know of any transitional forms. All muscles are weakly electrical and some people appear to be strongly electrically charged. The electric fish have developed this ability and used it to locate food and stun prey.
BIBLIOGRAPHY

The journals in this bibliography are listed in alphabetical order. Most large medical libraries shelve them in this manner. All foreign titles of articles have been translated for the benefit of my English readers. The authors of books are listed after the journals.

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