Samuel F. B. Morse:
The Creator as Artist and Scientist

by Patrick Ruckert and Hunter Cobb

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Contents

Special Note to the Readers of this report: This report was presented to an audience in Los Angeles on March 29, 2014, and is available on You Tube. We recommend that the reader watch at least Part II of the video in order to follow the demonstrations. Part II begins at one hour thirty minutes into the video. The link is:
https://www.youtube.com/watch?v=MWqObyLYeyk&feature=em-share_video_user

The written version is at: http://www.amatterofmind.us/guest-contributions/scientific-contributions/

Part I

Samuel F. B. Morse: The Man, The Artist and His Life

Introduction

Creativity, as Lyndon LaRouche has defined it many times, is that quality of man which distinguishes him from all other species. But, what actually is creativity? Where is it found? And of what use is it?

In our discussion of Samuel Morse in this report, we hope to lead you to discover for yourselves the pathway to answer these questions. We begin with a few quotes from LaRouche, in order to put us on the right path, and, in addition, I'll add a few of my own remarks on the topic. Yet, it is not enough to have a definition of creativity; what each of us must do is to immerse ourselves in the actual activity of creativity. So, I hope Samuel Morse will give us some insight into how one individual can change the world-- through his or her creative contributions.

In the world of real human beings, progress, that is the continual increase of the power of man over himself and the universe, defines the only path of a sustainable future for our species. LaRouche has defined progress as the generation of new ideas, ideas that increase the power of the human species; thus ideas are the foundation of progress.

This is how he put in in "The Strategy for the New Year," of December 22, 2013:

"...ask what should be meant by 'ideas' as a weapon of progress? It is ideas! Ideas which are expressed, in effect, in discovery of the kinds of advances which increase the net progress of the human species, or, what is otherwise, the effects of increase of energy-flux density in the increase of human per-capita productivity achieved through the discovery and practice of inventions.... Progress, like what had been actually discoveries of principle, is created only by, and in the future! And that only by mankind.

"The emphasis is to be placed on discoveries which, in one sense, or degree, had not been presented to human authors of original creative performances, earlier, or, otherwise, those whose discoveries of a similar, if lesser, significance, whose work and influence work to an almost a comparable, but of less exemplary effect. That illustrates the need for the actual universal principle of creativity-per-se, on which the net progress, and also the survival of the human species depends.

"It is on such principled discoveries, and those above all others, on which the actual progress of the human species' development depends." (1)

Our report on Samuel Morse, hopefully, will also demonstrate the distinction LaRouche makes between discoveries of fundamental scientific principles and those other discoveries and inventions that derive from them. Morse's invention of the telegraph must be placed in the later category; his accomplishment was not a discovery of a fundamental principle, but as a creative personality, he took a principled discovery, and developed and applied it. Such a contribution is a creative act, but not an act of genius.

In his writings, LaRouche has emphasized that it is the creative imagination, as expressed in the creation of classical works of art, upon which the creative scientist, the discoverer of fundamental principles, and those who develop and apply those principles, depend for his or her own actual discoveries.

As LaRouche writes, later, in the above cited paper discussing the two areas of creativity-- art and science:

"These two, are Classical artistic composition and physical science. Treating these two, as being separate in their function, is the symptom of the systemic idiocy of present-day, an idiocy running throughout, in particular, Europe and the United States. The essential requirement for any competent notion of science, forbids the customary dichotomy of education in so-called "modern art" and (actually) physical science." (2)

That leads to the question of what shall determine the policy of a people, of a nation, of a culture? It must be nothing less than the development of creative personalities, who focus their lives on creating that which had never before existed, but must exist in the future. This does not mean just a description of the future, but within the minds of an increasing portion of a nation's population, for those minds to live in that future, using their imagination, their creative powers, to bring that future into existence.

I. Samuel F. B. Morse: The Artist

Our subject, Samuel Finley Breese Morse (1791-1872), was such a personality; his was a life of creative activity. His life, as an artist and an inventor, reflected his commitment to this republic, its principles and its mission to uplift the power and culture of the entire human race. As one of the patriots of our nation, of what I like to call the second generation of the American Revolution, he and his associates represented the best qualities of what it means to be a citizen. That does not mean he did not make mistakes; he did. And, as we shall see, one side of his personality led him onto a pathway that was destructive of his creativity and to the republic he loved. Yet, despite that, in the end, we must place him among those whose lives were of great benefit to future generations.

Above all, Morse's life exemplified the idea that each individual must seek to become a discovery oriented personality, who creates a future from their creative imagination, but, perhaps will not be there to see. For that is all we have, as we pass from cradle to grave, that will be immortal.

Morse, like all of us, was a product of his era, the age of the founding of this republic, the period of its continual battles to not only survive and develop, but to bring into being the promise that this new republic represented for all mankind. It was also the era of traitors and British agents like Andrew Jackson, which put us on the path to the Civil War. Morse was a participant in multiple fields of action in that historical process. Yet, unlike Friedrich Schiller (1759-1805), who said that one must live in his age, but not be of his age, Morse reflected, on one side of his life, the worst prejudices and beliefs that were current in the United States during the pre-Civil War era.

The World of the Early 1800s

Now think of the world of the early 1800s. It was, as it had been for thousands of years, a world in

which the only way to communicate a message to anyone else, or to travel anywhere, was limited to either walking, riding a horse or voyaging on a sailing ship. It took at least 30 days to get a message to or to travel to Europe from the United States. But, in a virtual moment of human history, in the course of less than 30 years (between 1815-1845), a revolution in communications and transportation was accomplished with the building of railroads and the invention of the telegraph. The telegraph, in particular, was a unique invention, one that for the first time made electricity-- which until that moment, was, for the most part, merely an interesting or amusing phenomenon-- an effective tool for the development of human culture and for economic progress.

Economically, this was a great leap upward in the energy-flux density of human productive activity. Energy-flux density is the term first applied by Lyndon LaRouche to develop the idea that mankind's history is one of the discovery and application of scientific principles, which define mankind's unique existence as not only the singular creative species that we know of, but is the responsible and singularity important element for defining physical economy. Physical economy, as practiced by the American System, puts no intrinsic value on money, but only on the increased power of mankind to change the physical universe for his benefit. For example, the history of the evolution of man's use of energy demonstrates a continuous increase in not only the quantity but the quality of the sources of that energy. Man began, first, by merely using fire with wood to cook his food and for warmth. Through discovery, man then began to use coal, which dramatically increased his power; to be able to smelt iron for example. Then the use of oil and natural gas increases the power once again of the entire economy. Nuclear processes raised the energy-flux density of man's economy by orders of magnitude. The next upward step in the increase of energy-flux density is the development of fusion power.

Such a process is social, with each discovery building upon previous discoveries. Morse's invention of an operating telegraph was the product of decades of work by the greatest minds of that and the preceding era, who were working to understand the phenomenon of electricity. In turn, the electric light bulb and other uses of electricity were the natural spin-offs of Morse's invention.

Yet, the railroad and the telegraph were only the most revolutionary developments of that period. The building of the Erie Canal, and many other canals, (3) along with other technological improvements in a wide range of production, all reflected the benefits for the nation that the re-establishment of the Bank of the United States after the War of 1812, and the American System policies of the James Monroe and John Quincy Adams presidencies conferred. (4) Central to these developments was the principle that the government would and did play a central role for both financing and regulating commerce and promoting innovation. The first federal regulations enacted by the Congress, as warranted by the interstate commerce clause of the Constitution, was in response to the 1820s series of explosions of boilers on steamboats, which killed hundreds of people. With this regulation, from then on, every steamboat boiler had to be certified by the U.S. government. (5)

It is the invention of such machines as the telegraph that increase the energy-flux density of the power of man in the universe. It is mankind's creative mind which, thus, defines the universe. Time and space are not independent, linear phenomenon, but are defined by actions and processes of the universe, especially by man's mind. As LaRouche has often said, it is through scientific and cultural progress that we increase the density of action in the universe; we increase the potential for change. The telegraph and the railroad re-defined space and time; redefined economic space and time. For what are machines?, but the artificial extension of man's powers. It is the creative power of the mind

that transforms human life and culture, as it transforms the universe itself, producing new states of the universe, new states of nature that would have never existed but for man. Thus, the human mind is the most powerful force in the physical universe, though, ironically, it has no physical existence itself.

With the railroad and the telegraph, man's creativity sharply redefined the measuring rod of both time and space. A letter that would take two weeks to be delivered from New York to Chicago, now could be delivered in a day or two by rail; or, the message would be delivered in seconds by the telegraph.

And, as we shall see, Morse did stand on the shoulders of the great artists and scientists before him. He did discover new principles and applied them, both in art and in science. Again, as LaRouche once said:

"So now you invent something different. How do you invent it? By negating what you believed before, by eliminating the error in what you thought before. That's how human creativity works." (6)

Samuel Morse-- Self-Portrait 1809

The scientific and technological revolutions of the 1820s, driven by the American System policies of especially John Quincy Adams, also provided a potential for a cultural and political uplifting of the entire nation. In 1833, Michel Chevalier, a French engineer arrived in the United States, and for two years studied the American progress in transportation and communications. He concluded that this revolution had freed the population from not only the chains of servitude that characterized the European populations, but also freed people from the chains of location. He wrote:

"To improve the means of communication, then, is to promote a real, positive, and practical liberty; it is to extend to all the members of the human family the power of traversing and turning to account the globe, which has been given to them as their patrimony; it is to increase the rights and privileges of the greatest number, as truly and as amply as could be done by electoral laws. The effect of the most

perfect system of transportation is to reduce the distance not only between different places, but between different classes." (7)

Samuel Morse's World

Samuel Finley Breese Morse was both an artist and a scientist; born in 1791 and died in 1872. He was one of the foremost American painters of his time, and he was the inventor of the telegraph. Throughout his entire life he was a patriot, never forgetting or neglecting the real American's duty to treat the British Empire with disgust. Like Alexander Hamilton, John Quincy Adams, Abraham Lincoln and Morse's close friend James Fenimore Cooper, he feared for the future of the country, alarmed especially by a leveling democracy, like that introduced by President Andrew Jackson, that would allow passions and interests to drive a Constitutional Republic to its own self-destruction. But, unlike Hamilton, Adams, Lincoln and Cooper, Morse's political response was negative. He allowed himself, ironically, to become trapped by that same mob mentality he feared, as we shall see.

Early on, in the debate on adopting the U. S. Constitution between 1787-1789, while intent on creating a republic, the founding fathers clearly understood the dangers of "democracy," the dangers of popular opinion. Here is how Alexander Hamilton put it in "The Federalist Papers," number 78:

"Though I trust the friends of the proposed Constitution will never concur with its enemies in questioning that fundamental principle of republican government, which admits the right of the people to abolish the established Constitution whenever they find it inconsistent with their happiness; yet it is not be be inferred from this principle that the representatives of the people, whenever a momentary inclination happens to lay hold of a majority of their constituents, incompatible with the provisions in the existing Constitution, would, on that account, be justified in a violation of those provisions." (8)

We have divided this report into two parts. Part I, by Patrick Ruckert, is an overview biography of Morse the artist and the political personality, with only that material on the development of his telegraph that is necessary for a picture of the man. Then, in Part II, Hunter Cobb will pick up the story as Morse transitions from the artist into the inventor of the telegraph, and will develop the background of the science of electricity and some of the technical features of the early telegraph.

At the time of Morse's birth in Massachusetts in 1791, the United States had defeated the British Empire in its war for independence and the Constitution had been adopted just two years before. George Washington was the President and Alexander Hamilton was the Secretary of Treasurer.

Samuel's Father: Jedediah Morse

Morse's father, Jedediah Morse (1761-1826) was a direct descendant of the first Pilgrims in New England, and was the pastor of a Calvinist-Congregationalist church that reflected a fundamentalist outlook that went back to Jonathan Edwards (1703-1758). Edwards represented one outlook of the Pilgrims, that of a stern no-nonsense acceptance that whatever occurred was God's will. A good example of this outlook in fiction, is the novel "The Wept of Wish-Ton-Wish," by James Fenimore Cooper, in which the central character, Mark Heathcote, while accepting the destruction of his entire settlement and the kidnapping of his granddaughter and the killing of several others on the frontiers of 17th Century America, did not seek revenge against the Indians who had carried out the attack. (9)

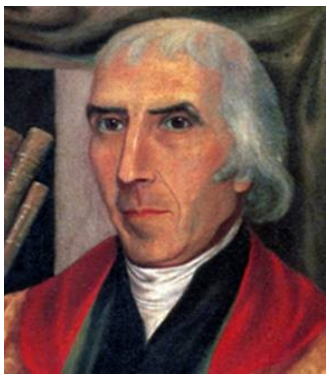
Cotton Mather (1663-1728) represented a sharply different outlook, one that saw more clearly that man is created in the image of God, the creator, and that man's role in life is to do good, as expressed in his "Essay To Do Good." Mather wrote:

"The world has according to the computation of some, above seven hundred millions of people now living in it. What an ample field among all these, to do good upon! . . . whether the things be of a spiritual importance, or of a temporal." (10)

Also, from the same essay, Mather wrote:

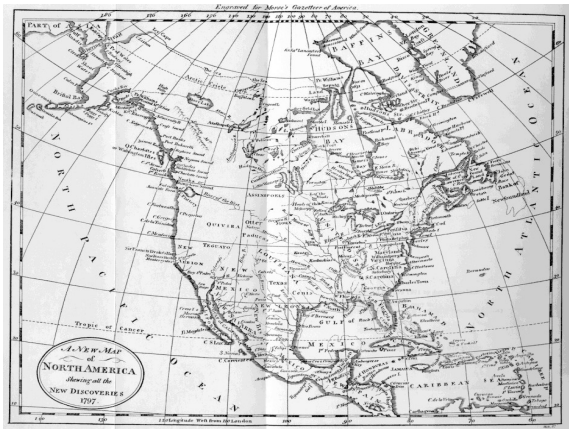
"It is an invaluable honor, to do good; it is an incomparable pleasure. A man must look upon himself as dignified and gratified by God, when an opportunity to do good is put into his hands. He must embrace it with rapture, as enabling him to answer the great End of his being."

Both father and son, in their lives and activity, reflected elements of both tendencies.



Jedediah Morse

Jedediah was more than a pastor, and in fact was a significant figure on the American stage in several areas, and one could say his impact on global history was almost as dramatic as his son's. He is considered the "Father of American Geography," and his books were widely read and known for decades through the first half of the 19th Century. In 1796, he published "The American Gazetteer," which included foldout maps and several thousand articles on towns and places in America. (11)



Jedediah Morse's Map of North America

While his books are largely forgotten today, what does live on is the affect his religious activity created for the history of China, which has just begun to come to fruition. Jedediah Morse was one of the founders of the American Board of Commissioners for Foreign Missions (ABCFM). In 1805, Morse and his allies, in response to Unitarianism's inroads in the U.S., founded Andover Theological Seminary as a rival to Harvard, which had by then become very infected by Unitarian ideas. This report is not appropriate for a detailed history of these developments, and I refer the reader to the report by the late Mark Calney, "Sun Yat-sen and the American Roots of China's Republican Movement." (12)

It was from their base at the Andover Theological Society that Morse and his collaborators, including, for example, John Quincy Adams, then created the American Board of Commissioners for Foreign Missions (ABCFM) in 1810, with its purpose to both spread the Christian religion to "the heathen," and to promote republican government. One of Morse's books, published in 1824, just two years before his death "The Annals of the American Revolution," makes that two-fold purpose clear. Morse wrote that British society is characterized by:

"...king, nobility and people. Their system, therefore, has for its basis, social distinctions, and recognizes not only the justness and propriety of these distinctions, but also the separate rights and privileges which appertain to these different and artificial classes...and attempts to maintain and preserve their separate rights and privileges... The basis of their system is the inequality, and the basis of ours is the equality, of mankind, in their social character and relations, as well as in their natural rights. Their system is designed to maintain and regulate an unnatural, unequal state of social order, and social rights; our system establishes and regulates social order, upon the natural rights of man...." (13)

I again refer the reader to Mark Calney's paper for a more thorough history of the activities of the ABCFM, but I do think that the following examples of its work are relevant to our purposes here. First, one of the most successful missions,

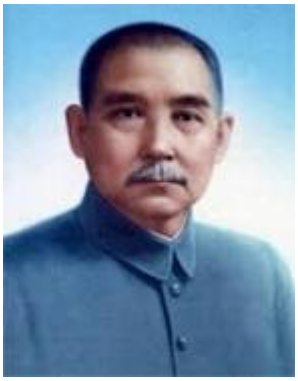
".... was in the 1820's with the Cherokee Indians of North Carolina, Georgia, Tennessee and Alabama. The Cherokees had developed their own language, with the missionaries' aid had set up their own newspaper and schools, and were quickly learning artisan trades. In 1827, they adopted a constitution modeled after that of the United States. President Andrew Jackson, however, cut off federal funding to the ABCFM and, disregarding a Supreme Court ruling by John Marshall, drove the Cherokees out of Georgia. This brutal exodus became known as the "Trail of Tears," which killed onequarter of the tribe. (14)

It was Jackson's Indian Removal law of 1830, that not only killed the Cherokees, but opened up a huge part of the southern territories to the spread of slavery, allowing slavery to not only expand, but virtually kept it alive by expanding cotton growing throughout the south, to finally to be the cause of the Civil War thirty years later.

"**The Trail of Tears**"

Andrew Jackson's Expulsion of the Cherokees

The real history making mission by the ABCFM, though, was to Hawaii, where in 1879, the future leader of the Chinese republican revolution of 1911, arrived there, and was recruited by the missionaries. Sun Yat-sen (1866-1925), through both his conversion to Christianity and his adoption of the ideas of the American Revolution, found his own mission in life. Sun Yat-sen led the Chinese revolution of 1911, that founded the Republic of China explicitly on the principles of the American republic and the economic policies of the American System.



Dr. Sun Yat-sen

Calney quotes from Dr. Sun's pamphlet, "A True Solution of the Chinese Question," written in 1904:

"To work out the salvation of China is exclusively a duty of our own, but as the problem has recently involved a world-wide interest, we, in order to make sure of our success . . . must appeal to the people of the United States in particular for your sympathy and support, either moral or material, because you are the pioneers of Western Civilization in Japan; because you are a Christian nation; because we intend to model our new government after yours; above all because you are the champion of liberty and democracy. We hope we may find many Lafayettes among you." [a reference to the great Frenchman who helped to lead colonial Americans into battle against the British Redcoats] (15)

Dr. Sun's economic program was his application of Abraham Lincoln's famous phrase from his Gettysburg Address: "A government of the people, by the people and for the people." Sun presented

this policy in his work, “The Three Principles of the People,” which still stands today as the policy of both Mainland China and Taiwan. (16)

U. S. Postage Stamp Commemorating Abraham Lincoln and Sun Yat-sen With a Map of China

Today, China, after many decades of disaster beginning with the Japanese invasion of 1931, and the so-called “Cultural Revolution” of the 1960s, is the China of Sun Yat-sen, with a breathtaking science and infrastructure driven economic development policy that is exactly what the U.S. would be doing today had we not abandoned the American System of economics, last seen with the Presidencies of Franklin D. Roosevelt and John F. Kennedy. (17)

Jedediah Morse was also a New England Federalist during those years of the early 1800s, when, in reaction to Thomas Jefferson's early support of the French Revolution of 1789, which turned into the later terror by guillotine, the Federalist Party looked to England as the model for our nation. And if it had not been for his son Samuel, Jedediah would have openly sided with the British in the War of 1812, as did many New England Federalists. (18)

Jedediah believed that the greatest danger to the nation came from France, not just because of the bloody French revolution, but more so, because it was Catholic, a faith antithetical to his Calvinist beliefs.

Samuel Morse, throughout his life, reflected the religious beliefs of his father, and its anti-Catholicism, which, as we shall report, led him, like his father, to take the wrong side during an existential crisis of the nation.

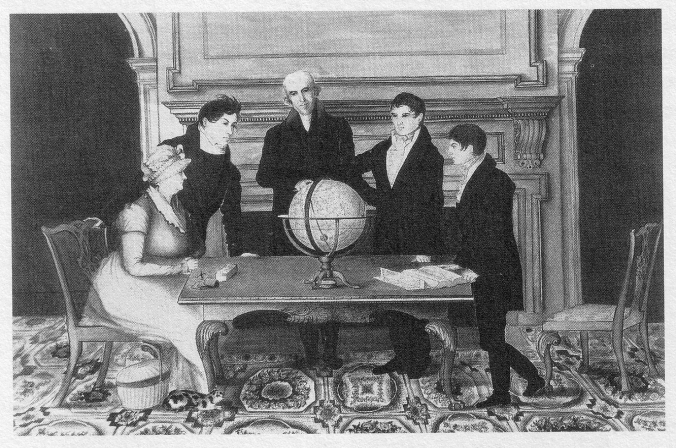
Finally, Jedediah Morse, as a reflection of his concern for not only the spiritual side of the American Indians, but also his commitment to justice, accepted an appointment from the Secretary of War in 1820, to do a major study of the American Indians. As reported by John H. Lienhard:

“For two years he traveled from one Indian nation to another, describing each tribe-- a few hundred here, a thousand there. The tone of his report is always one of consummate respect. Of course he was dealing in a swamp of treaties, agreements and vested interests. But at that early date he was still operating in good faith.” (19)

The results of his investigation were included in a “Report to the Secretary of War on Indian Affairs.” published in 1822.

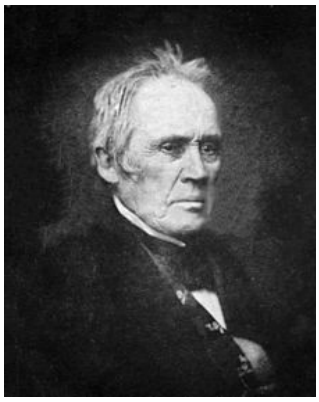
Samuel Finley Breese Morse-- The Early Years

Samuel Finley Breese Morse entered Yale University at the age of 16, and graduated in 1810. The two middle names were given him in honor of his mother's family. Morse had always expressed an artistic bent and began painting during his years at Yale, as seen in the painting of his family below..



"The Morse Family Portrait Group"
by Samuel Morse (ca. 1809)

He also was fascinated with science, especially electricity. His favorite class was chemistry taught by Benjamin Silliman (1779-1862), one of the foremost scientists and science teachers of that era. Morse and Silliman would remain life-long friends.



Benjamin Silliman, circa 1850

In his letters from that period Morse enthusiastically described the experiments the students were doing with electricity. In a February, 1809, letter he wrote:

"My studies are at present Optics in Philosophy, Dialling, Homer, beside disputing, composing, attending lectures etc etc., all which I find very interesting and especially Mr. Day's lectures who is now lecturing on Electricity. (20)

In another letter, dated Mach 8, 1809, he stated:

"Mr Day's lectures are very interesting. They are upon Electricity. He has given us some very fine experiments. The whole class taking hold of hands formed the circuit of communication and we received the shock apparently at the same moment I never took an electric shock before...." (21)

At Yale Morse met Washington Alston (1779-1843), the most accomplished painter of the generation after Benjamin West (1738-1820), Gilbert Stuart (1755-1828) and John Singleton Copley (1738-1815). Following graduation in 1810, Morse traveled with Alston and his wife to England, where, for the next five years, he would study painting. Allston and Morse would remain life-long friends. Allston was the pioneer of American landscape painters and an accomplished portraitist. In England, Benjamin West, who lived there most of his life, took Morse on as a part-time student.

Washington Allston
"Self-Portrait" 1805

Arriving in England in 1811, Morse was suddenly confronted by the growing conflict between his country and England, which a year later was to explode in the War of 1812. His letters to his parents reflect his intense patriotism and growing hatred for the British Empire.

For example, in a letter to his parents, dated May 25, 1812, he writes:

"What Lord Castlereagh said at a public meeting a few days ago ought to be known in America. Respecting the Orders of Council, when some one said unless they were repealed war with America must be the consequence, he replied that, 'if the people would but support the Ministry in those measures for a short time, Americans would be compelled to submit, for she was not able to go to war.' But I say, and so does every American here who sees how things are going with this country, that, should America but declare war, before hostilities commenced Great Britain would sue for peace on any terms. Great Britain is jealous of us and would trample on us if she could, and I feel ashamed when I see her supported through everything by some of the Federal editors. I wish they could be here a few months and they would be ashamed of themselves. They are injuring their country, for it is their violence that induces this Government to persist in their measures by holding out hope that the parties will change, and that then they can compel America to do anything. If America loses in this contest

and softens her measures towards this country, she never need expect to hold up her head again." (22)

And, in a letter to his father of August 6, 1812, Morse really unleashes his growing hatred and disgust with the British Empire, and the New England Federalists who were actively supporting the British:

"....Our political affairs, it seems, have come to a crisis, which I sincerely hope will turn to the advantage of America; it certainly will not to this country. War is an evil which no man ought to think lightly of, but, if ever it was just, it now is. The English acknowledged it, and what can be more convincing proof that than the confession of an enemy? I was sorry to hear of the riotous proceedings in Boston. If they knew what an injury they were doing their country in the opinion of foreign nations, they certainly would refrain from them. I assert (because I have proof) that the Federalists in the Northern States have done more injury to their country by their violent opposition measures than even a French alliance could. Their proceedings are copied into the English papers, read before Parliament, and circulated through the country, and what do they say of them? Do they say the Federalists are patriots and are firm in asserting the rights of their country? No; they call them cowards, a base set; say they are traitors to their country and ought to be hanged like traitors. These things I have heard and read, and therefore must believe them.

"I wish I could have a talk with you, papa; I am sure I could convince you that neither Federalist nor Democrats are Americans; that war with this country is just, and that the present Administration of our country has acted with perfect justice in all their proceedings against this country.

"To observe the contempt with which America is spoken of, and the epithets of a 'nation of cheats,' 'sprung from convicts,' 'pusillanimous,' 'cowardly,' and such like,-- these I think are sufficient to make any true American's blood boil. These are not used by individuals only, but on the floor of the House of Commons.

"...this war will reestablish that character for honor and spirit which our country has lost through the proceedings of Federalists." (23)

Continuing this theme, Morse, in another letter to his father, dated November 1, 1812, writes:

"....'Tis the character of Englishmen to be haughty, proud, and overbearing. If this conduct meets with no resistance, their treatment becomes more imperious, and the more submissive and conciliating is the object of their imperiousness, the more tyrannical are they towards it. This has been their uniform treatment towards us, and this character pervades all ranks of society, whether in public or private life.

"The only way to please John Bull is to give a good beating, and such is the singularity of his character, that the more you beat him the greater is his respect for you and the more he will esteem you." (24)

In this letter, he once again complained to his father of the New England Federalist's sabotage of the war and their support for England, hoping that his father would realize that the British were playing them for fools.

Almost a year later, Morse's view of the British and the war were even more intense, as seen in this excerpt from his letter to this father of July 10, 1813:

"Imagine yourself, if possible, in my situation in an enemy's country and hearing songs of triumph and exultation on the misfortunes of my countrymen, and this, too, on the 4th of July. A less ardent spirit than mine might perhaps tolerate it, but I cannot. I do long to be at home, to be in the navy, and teach these insolent Englishmen how to respect us...." (25)

For Morse there was no separation of art and politics. He believed not only in America and its independence, but also that its artists must develop a distinctive American culture, and not kowtow to British opinion. Morse clearly saw the same dynamic that the BRICS nations (Brazil, Russia, India, China and South Africa) saw as they created a new global financial-economic system at their summit meeting in Brazil on July 15, 2014. Here is how Russian President Vladimir Putin put it: "These are all young states, and the future belongs to the young...."

It was in this period that Morse began to define his future. He early on expressed his hopes of becoming the foremost history painter of his era. In England, where Benjamin West had lived for years, and Morse was able to become one of his students, he thought that he was beginning to realize that hope. In a letter of May 2, 1814 he wrote:

"The Americans at present stand unrivaled, and it is my great ambition (and it is certainly a commendable one) to stand among the first. My country has the most prominent place in my thoughts. How shall I raise her name, how can I be of service in refuting the calumny, so industriously spread against her, that she has produced no men of genius? It is this more than anything (aside from painting) that inspires me with a desire to excel in my art. It arouses my indignation and gives me tenfold energy in the pursuit of my studies. I should like to be the greatest painter purely out of revenge." (26)

And in a letter to his parents on May 3, 1815, he wrote, expressing his ambition to be something more than a portrait painter; to revive the Renaissance of the 15th Century in the United States:

"....I do not speak of portrait-painters; had I no higher thoughts than being a first-rate portrait-painter, I would have chosen a far different profession. My ambition is to be among those who shall revive the splendor of the fifteenth century; to rival the genius of a Raphael, a Michael Angelo, or a Titian; my ambition is to be enlisted in the constellation of genius now rising in this country; I wish to shine, not by a light borrowed from them, to to strive to shine the brightest...." (27)

Morse's ambition was to be finally fulfilled many years later, though perhaps not quite in the way he imagined in his youth. (See page 52 of this report)

Morse's first painting that was exhibited to the public was "The Dying Hercules," which was not only well received in England, but also brought him recognition in the U.S.

“The Dying Hercules”
by Samuel Morse (1812-1813)

While in England he also painted “The Judgment of Jupiter,” an allegorical picture of Jupiter (God), which for Morse, at this time, meant that God was punishing England for its crimes against the United States.

"The Judgment of Jupiter"
By Samuel Morse

Morse thought deeply about art and its affects. And thought a painter, Morse in a letter to his brother Edwards on November 17, 1813, raises poetry to the higher plane of creativity.

"I must defer giving my reasons for thinking Poetry superior to Painting; I will mention only a few of the principles upon which I found my judgment. Genius in both these arts is the power of making impressions. The question then is: which is capable of making the strongest impression; which can impress upon the mind most strongly a sublime or a beautiful idea? Does the sublimest passage in Milton excite a stronger sensation in the mind of a man of taste than the sublimest painting of Michael Angelo? Or, to make the parallel more complete, does Michael Angelo convey to you a stronger impression of the Last Judgment, by his painting, than Milton could by his poetry? Could Michael Angelo convey a more sublime idea of Death by his painting than Milton has in his 'Paradise Lost'? There are the principles upon which your 'divine art' is to be degraded below Poetry?" (28)

In December, 1813, Morse, at the urging of the offices of the U.S. Secretary of State, attempted to free an American prisoner of war held by the British, one Benjamin Burritt. Being rebuffed by the British

government, Morse did all he could for the man despite his own meager resources. (29)

Because his finances were always precarious, Morse undertook to sell some of his paintings, and in the course of that, what he thought an unpleasant task, he developed his lifelong view of those whose primary identity is business. They are brutes, he concluded, "grovelling, avaricious devotees of mammon, whose souls are narrowed to the studious contemplation of a hard-earned shilling." (30)

Back in the United States

He returned to the U.S. in late 1815, writing just before he left: "On returning to America, let my endeavor be to rouse the feeling for works of art." (31)

Morse married Lucretia Pickering in 1818.

"Lucretia Pickering Morse"
by Samuel Morse

A month later he was in Washington D.C., painting the portrait of President James Monroe. For the next several years, he supported himself by painting portraits, and for awhile did fairly well.

“President James Monroe” by Samuel Morse

At about this time he began, with his brother Edwards, developing inventions, including a flexible leather piston-pump, which they patented. In Morse's Journals and Letters, his son Edward Lind Morse, comments:

“It was to be used in connection with fire-engines, and seems really to have been an excellent invention, for President Jeremiah Day, of Yale College, gave the young inventors his written endorsement, and Eli Whitney, the inventor of the cotton-gin, thus recommends it....” (32)

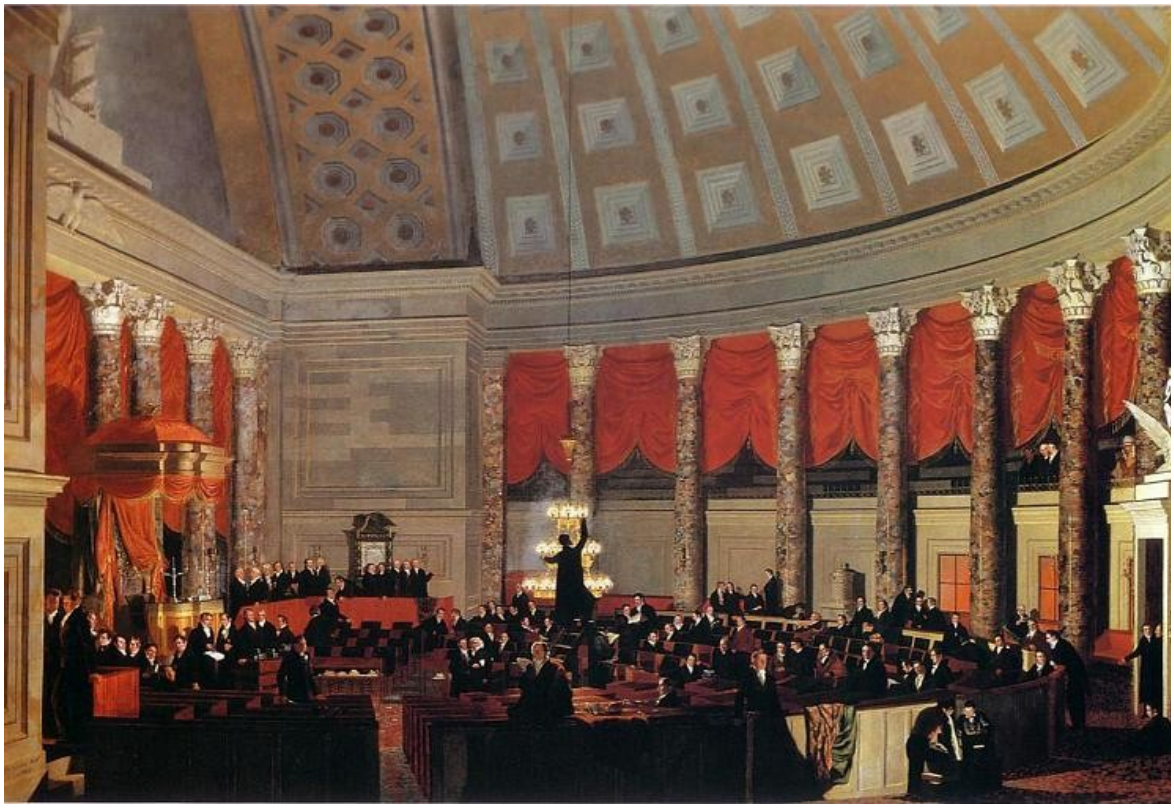
Whether it was inventions or electricity, Morse's interest in the handmaiden of art, science, was frequently expressed, as seen in this letter to his wife on March 11, 1821:

“Tell Mr. Silliman I have stronger magnets at New Haven than any academy can have, and, while that is the case, I cannot be decoyed from home.” (33)

While Morse was referring to his ties to his wife and children, his use of the word 'magnets' in a letter that mentions Professor Benjamin Silliman, with whom Morse had studied electricity at Yale, was not an accident.

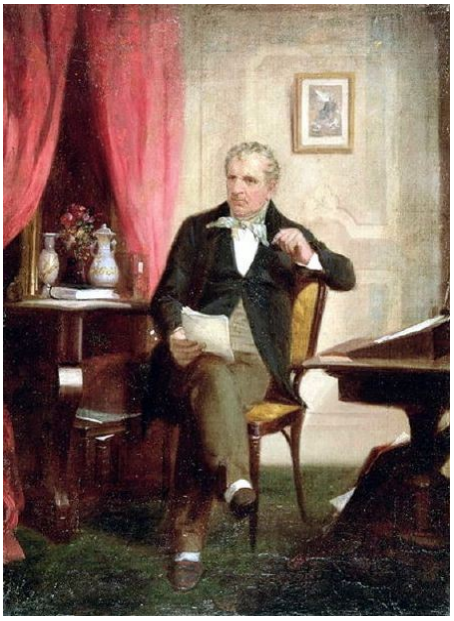
Also in 1821, he painted “The House of Representatives.” Its intent, as reported by Kenneth Silverman:

“For him it underlined his fierce anti-British outlook. The somberly lit cavernous chamber and its twenty-two monumental columns, dwarfing the legislators who prepare to work into the night, dramatize the young republic's seriousness, stability, and unostentatious grandeur.” (34)



"The House of Representatives"
by Samuel Morse

His friend James Fenimore Cooper (1779-1851) unsuccessfully attempted to get the U.S. government to purchase this painting for display in the gallery of the House.



James Fenimore Cooper

Cooper had more success in helping him to win the commission, in 1824, to paint the official U.S. portrait of the Marquis de LaFayette, (1757-1834) who was on a year long tour of the United States, almost 50 years after the Declaration of Independence and the Revolutionary War, in which he had played such an important role. (35)

LaFayette's U.S visit coincided with the 1824 Presidential election, which brought John Quincy Adams (1767-1848) into the White House. Adams, as President from 1825-1829, restored the American System of Alexander Hamilton, unleashing the greatest industrial expansion of the country that had taken place up to that time. (36)

Marquis de LaFayette
by Samuel Morse

Morse was awed by LaFayette. In a letter to his wife from Washington, D.C., after meeting LaFayette for the first time, Morse wrote:

"....He has a noble face. In this I am disappointed, for I had heard that his features were not good. On the contrary, if there is any truth in expression of character, there never was a more perfect example of accordance between the face and the character. He has all that noble firmness and consistency, for which he has been so distinguished, strongly indicated in his whole face.

"While he was reading my letters I could not but call to mind the leading events of his truly eventful life. 'This is the man now before me, the very man,' thought I, 'who suffered in the dungeon of Olmuetz; the very man who took the oaths of the new constitution for so many millions, while the eyes of thousands were fixed upon him (and which is so admirably described in the Life which I read to you just before I left home); the very man who spent his youth, and his fortune, and his time, to bring about (under Providence) our happy Revolution; the friend and companion of Washington, the terror of tyrants, the firm and consistent supporter of liberty, the man whose beloved name has rung from one end of the this continent to the other, whom all flock to see, whom all delight to honor; this is the man, the identical man!' ; My feelings were almost too powerful for me as I shook him by the hand and

received the greeting of-- 'Sir, I am exceedingly happy in your acquaintance, and especially on such an occasion.'" (37)

Having just begun his work on the portrait, Morse received a letter from his father informing him that his young wife had suddenly died, leaving Morse with three children. As a widower with three young children, but so full of ambition that he could not care for them, Morse farmed his children out to relatives, with whom they grew to adulthood. This created obvious strains in his relationship to his children that took years to repair, years later, after he had achieved success with his telegraph. Morse left his work on the portrait of LaFayette to return home, picking it up again later in the year when LaFayette was in New York City, being hosted by Morse's good friend James Fenimore Cooper.

A discussion of Morse's portrait of LaFayette is, to my knowledge, best presented by Pierre Beaudry in his report, "Samuel F. B. Morse: The Leonardo of America." I will include here just one paragraph from Beaudry, at this time, but I do recommend people read his entire article, since it also includes much more, including LaFayette's role, with Morse and Cooper, in the revolutionary developments in France in 1830.

"First of all, the portrait was not painted in France, but in America, when Lafayette traveled to the United States in 1825 (sic). *Morse emphasized this towering quality of the subject, by putting the observation level of the spectator slightly below Lafayette's knees, giving the subject additional elevation and dignity above the horizon, thus, increasing his stature with respect to the heavens in the background. From the vantage point of that special effect, Morse had given recognition to Lafayette as the 'Hero of the Two Worlds,' in accordance with the consecrated American expression of the time."* (38)

Between 1824 and 1827, Morse was a regular participant in the Bread and Cheese Club, established by James Fenimore Cooper, which met weekly in New York City. The club was the gathering place for about 25 of the leading artists, writers, publishers, architects, scholars and many others to discuss developments in their areas of work and how to use their talents to develop the country. Other members, just to name two, included William Dunlap (1766-1839), the founder of the American theatre, and the author Washington Irving (1783-1859). LaFayette, on his 1824 tour, participated in one of its meetings.

Later, from 1829 through 1832, Morse and Cooper would become even closer friends and political collaborators in France, working intensely with LaFayette once again.

In 1825, Morse, as one of the leading painters in New York City, along with other artists, like Thomas Cole, initiated the creation of an academy of artists, the National Academy of Design, since the existing American Academy of Arts, run by the famous artist John Trumbull (1756-1843), mostly served as an entertainment center for wealthy contributors. Here, the battle for principle between the American idea of the development of all the people, versus the British idea that money shall control all, was, for the first time, fought in the arena of the arts. (39)

The artists wanted an institution that would represent the ideas of the American Revolution, would be run by and for artists, and serve them, and be a center of learning and support. The National Academy of Design was founded in January, 1826, with Morse elected its first President. He was annually reelected President every year until 1845, when, because he was so involved with his telegraph he

could devote no time to the Academy. In 1861, he was once again elected President, but only on his condition that he would serve just one year.

He, as President of the National Academy, in 1827, took on the task of giving a series of lectures on art, which put the Academy on a solid intellectual foundation.

In one of the lectures, he again expressed his intent to create an audience for art.

"...what use is it for the Artist to cultivate his own taste, if those around him are incapable of feeling and appreciating the beauties which are spread before them." (40)

Also during this period he attended lectures and held discussions with experimenters in the field of electricity, keeping up with the new knowledge developing in this field. As his son comments in the Letters and Journals:

"In the year 1827, Professor James Freeman Dana (1793-1827), of Columbia College, delivered a series of lectures on the subject of electricity at the New York Athenaeum. Professor Dana was an enthusiast in the study of that science, which, at that time, was but in its infancy, and he foresaw great and beneficial results to mankind from this mysterious force when it should become more fully understood.

"Morse, already familiar with the subject from his experiments with Professor Silliman in New Haven, took a deep interest in these lectures, and he and Professor Dana became warm friends.... In this way Morse became perfectly familiar with the latest discoveries in electrical science, so that when, a few years later, his grand conception of a simple and practicable means of harnessing this mystic agent to the uses of mankind took form in his brain, it found a field already prepared to receive it...." (41)

Morse in Europe

In 1829, Morse headed to Europe, and his first extended stay was in Italy, where he worked on improving his painting skills by copying old Masters. "The School of Athens" by Raphael occupied him for five or six weeks, working on it full time in the Apostolic Palace in Vatican City. He considered Raphael the greatest painter of them all. "The School of Athens" places great thinkers and scientists in one painting, irrespective of the fact that they lived in different historical eras. As you consider this painting by Raphael, keep it in mind, as, shortly, we shall discuss Morse's own painting, "The Gallery of the Louvre," which places paintings from different centuries together on one canvas.

The School of Athens by Raphael

His father's and his own anti-Catholicism really came to the surface in Italy. Morse saw the Catholic religion as a belief system and a structure that was enforced on people, not one that they adopted based on reason or choice. It did not seem to occur to him that his own Puritan-derived fundamentalist beliefs, effectively inherited from his father, were neither adopted voluntarily or from reason. At least he never publicly acknowledged such.

But still, Morse studied the Catholic culture and churches from the standpoint of an artist, and found the art and music of the Catholic churches and services very beautiful. Kenneth Silverman comments as follows:

"Such uncomfortable reminders of the seductive power of the Church led Morse to question the power of his own art. His painting aimed, after all, at promoting moral refinement and respect for republican ideals. But might the sensuous appeal of color and form promote instead, as Catholicism did, a 'religion of the Imagination'? He remained persuaded that when properly employed by the painter the medium would communicate truths to the Understanding. But there was clearly a danger. Without an 'enlightened piety,' a love for art could sink into 'heartlessness and frivolity.'" (42)

Just to note here that Morse's inherited Puritanism was one that practiced extreme austerity; that considered anything that did not relate more or less directly to the praise of God as being near blasphemy. So, the conflict in his mind that Silverman notes, went very deep. Ironically, this outlook served Morse well during the time he was working on his telegraph as he went for weeks virtually penniless, relying upon friends just to eat.

Perhaps Morse's prejudice toward Catholics is better understood from an 1863 French novel, “Paris in America” by Edourd Rene de Laboulaye (1811-1883). (43) LaBoulaye's view was that American's deeply felt religious beliefs, rather than mere membership in an established church, was a key foundation of American's freedom. On the other hand, the discipline of an established church, he opines, might make individuals more governable; creating a more submissive personality in the population. That, of course, is a quality an oligarchy requires to maintain its power. (44)

While in Italy, Morse met two of James Fenimore Cooper's artist friends-- Thomas Cole (1801-1845), the artist, and Horatio Greenough (1805-1852), the sculptor. Cole's masterpiece, “The Course of Empire,” reflected the outlook and forecast of both Morse and Cooper, that this would be the fate of the United States, if it ever allowed itself to degenerate into becoming an empire like Britain.

“The Course of Empire” by Thomas Cole

The Savage State-- Oil on canvas, 1834, 39 ½ × 63 ½ in.

The Arcadian or Pastoral State-- Oil on canvas, 1834, 39 ½ × 63 ½

The Consummation of Empire-- Oil on canvas, 1836, 51 × 76 in

Destruction-- Oil on canvas, 1836, 39 ½ × 63 ½ in.

Desolation-- Oil on canvas, 1836, 39 ½ × 63 ½ in

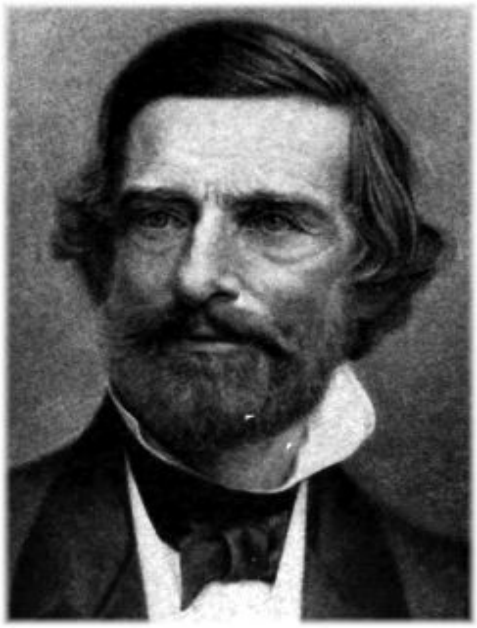
Morse also spent two months in Venice, hating everything about the city, expressing what Cooper

emphasized that the so-called “Serene Republic” was nothing but the most vicious tyrannical form of government on Earth, which is the subject of Cooper's novel “The Bravo.” (45) Silverman discusses Morse's time in Venice in a similar way.

“The all-day lounging in San Marco was not merely an 'empty heartless enjoyment,' either, but something darker, repressive. People socialized under surveillance, 'surrounded by police agents and soldiers, to prevent excess.' In a bloody-walled dungeon of the ducal palace he saw and sketched a machine for strangling prisoners.” (46)

He arrived in Paris in September, 1830, and stayed just a few doors from LaFayette's apartment, which was also near the home of James Fenimore Cooper. Cooper had arrived in Europe in 1826, and would return to the U. S. in 1833. During his time in Paris, Morse spent nearly every evening with Cooper and his family; and quite frequently visited with LaFayette. In addition to politics and art, these two men spent their evenings immersed in classical music. “Both loved music-- Cooper played the flute, Morse the piano....” (47)

Morse enthusiastically joined with Cooper and LaFayette in their political work. All of Europe was in a revolutionary upheaval and the revolutionaries from numerous countries would end up in Paris, hosted by Cooper and LaFayette, who were essentially the coordinators of uprisings and republican activity throughout the continent. The revolutions that convulsed Europe in 1830, were soon crushed by a desperate oligarchy, fearful that, especially in France, an American-style republic might be created. Another American who worked with them was Samuel Gridley Howe (1801-1876), who during the Civil War thirty years later, would found and direct the North's “Sanitary Commission,” which ran hospitals for the Union Army, and to which Morse would provide financial aid. Howe's wife, Julia Ward Howe (1819-1910), was the author of the Civil War fighting song, “The Battle Hymn of the Republic.” (48)



Samuel Gridley Howe

Julia Ward Howe

Just before Morse returned to America late in 1832, he received a letter from LaFayette, reflecting on their joint political work and warning of the threat of disunion of the United States. From LaFayette's letter:

"Upon you, my dear sir, I much depend to give our friends in the United States a proper explanation of the state of things in Europe. You have been very attentive to what has passed since the Revolution of 1830. Much has been obtained here and in other parts of Europe in this whirlwind of a week.... I think it useful, on both sides of the water, to dispel the cloud which ignorance or design may throw over the real state of European and French politics.

In the mean while I believe it to be the duty of every American returned home to let his fellow citizens know what wretched handle is made of the violent collisions, threats of a separation, and reciprocal abuse, to injure the character and question the stability of republican institutions. I too much depend upon the patriotism and good sense of the several parties in the United States to be afraid that those dissensions may terminate in a final dissolution of the Union;...." (49)

LaFayette's warning was echoed by John Quincy Adams in his diary of July 30, 1834, as he battled to save the Second National Bank from destruction by President Andrew Jackson:

"The system of administration for the government of the Union is radically and, I believe, irretrievably vitiated at the fountain. The succession to the Presidency absorbs all the national interests, and the electioneering contests are becoming merely venal. My hopes of the long continuance of this Union are extinct. My own system of administration, which was to make the national domain the inexhaustible fund for progressive and unceasing internal improvement, has failed. Systematically renounced and denounced by the present Administration, it has been undisguisedly abandoned by H. Clay, ingloriously deserted by J. C. Calhoun, and silently given up by D. Webster. These are the opposition aspirants to the Presidential succession, not one of them having a system of administration which he would now dare to avow, and at this time scarcely linked together by the brittle chain of common opposition to the unprincipled absurdities of the present incumbent." (50)

For Morse, almost a year of his stay in Paris was spent at The Louvre, working on his masterpiece, "The Gallery of the Louvre." Cooper would join him at his easel almost daily, enthusiastically urging him on. Others would also join Morse there. One of those was the Baron Alexander von Humbolt, (1769-1859) who became a close friend, and with whom he met again years later while working on his telegraph and attempting to secure his rights to it in France. (51)

"Gallery of the Louvre"
***by Samuel F. B. Morse (*1831–1833)**

The "Gallery of the Louve," he and Cooper planned, would be exhibited throughout the U.S., to be used as a tool for uplifting the educational and cultural level of the American people. (52)

This amazing painting incorporates 37 individual masterpieces of the greatest of European artists. Morse's favorite is placed front and center in his painting, those by Titian. Here, gathered in one painting are the best of Rembrandt, Leonardo, Raphael, Caravaggio, Veronese, Rubens, and Reni, among others. As Beaudry puts it,

"For Morse the selection of more than thirty eight(sic) *different portraits and sceneries reflected the mental gallery of classical artistic compositions that had informed his own mind during his trip to Europe, and represented the most important choices for Americans to adopt as models for the development of the National Academy of Design. Morse's ability to patiently copy the likeness of those great European masterpieces, on location at the Louvre during an entire year, reflects the uniqueness of the American genius of classical artistic composition. No other artist, in the history of mankind had ever attempted to replicate such a diversity of European geniuses, into a single manifold portrait and*

succeeded, at the same time, in stamping on all, ironically, his own unique republican characteristic." (53)

Beaudry, in the second of his articles on Morse, "Samuel F. B. Morse's Gallery of the Louvre," provides an invaluable and detailed discussion of Morse, his artistic purpose, and an examination of the painting itself. Again, I shall just include here but one short sample from Beaudry's excellent report:

"Morse sought to establish this cultural principle in America upon his return from his European tour in 1832. His mission was to created the necessary conditions for a completely new ***American cultural fabric*** (emphasis in the original) *which would be different from the European culture, and would be capable of integrating the best compositions from every nation in the world. In congruence with this objective, the constant principle that Morse identified and developed throughout his Lectures on art was the principle of change in the human creative imagination: 'A Fine Art may be defined then as Art whose principle intention is to please the Imagination.' (footnote- 'Samuel F. M. Morse, Lectures on the Affinity of Painting with the Other Fine Arts,' Ed. Nicolai Cikovsky, Jr., Columbia University of Missouri Press, Columbia and London, 1983, p. 46). In other words, the purpose of artistic composition is not art for art's sake, or an entertaining amusement; it is a means to indirectly instruct and reform the human mind by way of exciting and moving the imagination as if through the magnetic field of the universal mind of the Creator. Classical artistic composition is not created in order to amuse your sense-perception; its intention is to effect a change in the human soul, to enrich the creative imagination of humanity by educating and elevating the minds of the spectators to a higher level of culture and secure a higher level of creative existence for mankind...."* (54)

Morse also placed his friend Cooper and his wife and daughter Susan in the painting. Susan Cooper (1813-1894) went on to become a successful writer herself. The Cooper family is located in the upper left corner. Morse's students are also depicted in the painting, one of whom is shown in the foreground of the painting with Morse himself looking over her shoulder. As reported by James Crawford, the student bares a striking resemblance to Morse's own daughter Susan Morse. Finally, the woman depicted alone in the lower right is Morse's wife Lucretia, who had died in 1824. (55)

It was during one of the frequent evenings at Cooper's apartment, Cooper remembered many years later, that Morse first mentioned to him his idea for a telegraph. In Cooper's novel "The Sea Lions," published in 1848, on page 158-161, Cooper relates a discussion in which Morse had put forward his idea of the telegraph. Cooper writes:

"We pretend to no knowledge on the subject of the dates of discoveries in the arts and sciences, but well do we remember the earnestness, and single-minded devotion to a laudable purpose, with which our worthy friend first communicated to us his ideas of the subject of using the electric spark by way of a telegraph. It was in Paris and during the winter of 1831-32, and the succeeding spring, a time when we were daily together; and we have a satisfaction in recording this date that others may prove better claims in if they can...." (56)

Morse, in later years, did not remember having mentioned his idea for a telegraph during the period cited by Cooper. In 1849, Morse asked Cooper to explain this, to which Cooper responded on May 18, 1849, and writing:

"For the time I still stick to Paris, so does my wife, so does my eldest daughter. You did no more than to throw out the general idea, but I feel quite confident this occurred in Paris,. I confess I thought the notion evidently chimerical, and as such spoke of it in my family. I always set you down as a sober-minded, common-sense sort of a fellow, and thought it a high flight for a painter to make to go off on the wings of the lightning. We may be mistaken, but you will remember that the priority of the invention was a question early started, and my impressions were the same much nearer to the time than it is to-day." (57)

In Paris on July 4, 1832, Morse presided over a banquet to celebrate America's independence from the British Empire. Cooper was second in command; LaFayette was the guest of honor; William C. Rives (1793-1868), the American minister to France, and others attended.

Morse gave the toast to LaFayette, saying:

"I cannot propose the next toast, gentlemen, so intimately connected with the last, without adverting to the distinguished honor and pleasure we this day enjoy above the thousands, and I may say hundreds of thousands, of our countrymen who are at this moment celebrating the this great national festival--the honor and pleasure of having at our board our venerable guest on my right hand, the hero who two worlds claim as their own. Yes, gentlemen, he belongs to America as well as to Europe. He is our fellow citizen, and the universal voice of our country would cry out against us did we not manifest our nations' interest in his person and character." (58)

As mentioned often in this report Morse and Cooper were very close friends. So I want to include here extended excerpts from Morse's letter to his brother on July 18, 1832, because it demonstrates not only his admiration for Cooper, but also expresses Morse's own patriotism and his disgust for European royalty:

"Cooper is very little understood, I believe, by our good people. He has a bold, original, independent mind, thoroughly American. He loves his country and her principles most ardently; he knows the hollowness of all the despotic systems of Europe, and especially is he thoroughly conversant with the heartless, false, selfish system of Great Britain; the perfect antipodes our own. He fearlessly supports American principles in the face of all Europe, and braves the obloquy and intrigues against him of all the European powers....

"I know of no man, short of a true Christian, who is so truly guided by high principles as Cooper. He is not a religious man (I wish from my heart he was), yet he is theoretically orthodox, a great respecter of religion and religious men, a man of unblemished moral character. He is courted by the greatest and the most aristocratic, yet he never compromises the dignity of an American citizen, which he contends is the highest distinction a man can have in Europe, and there is not a doubt but he commands the respect of the exclusives here in a tenfold degree more than those who truckle and cringe to European opinions and customs. They love an independent man and know enough of their own heartless system to respect a real freeman. I admire exceedingly his proud assertion of the rank of an American (I speak from a political point of view), for I know no reason why an American should not take rank, and assert it, too, above any of the artificial distinctions that Europe has made. We have no aristocratic grades, no title of nobility, no ribbons, and garters, and crosses, and gewgaws that please the great babies of Europe; are we, therefore, to take rank below or above them? I say above them, and I hope that every American who comes abroad will feet that he is bound, for his country's sake, to

take that stand. I don't mean ostentatiously, or offensively, or obtrusively, but he ought to have an American self-respect.

"There can be no condescension to an American. An American gentleman is equal to any title of rank in Europe, kings and emperors not excepted. Why is he not? By what law are we bound to consider ourselves inferior because we have stamped folly upon the artificial and unjust grades of European systems, upon these antiquated remnants of feudal barbarism?

"Cooper sees and feels the absurdity of these distinctions, and he asserts his American rank and maintains it, too, I believe, from a pure patriotism. Such a man deserves the support and respect of his countrymen, and I have no doubt he has them.... It is high time we should assume a more American tone while Europe is leaving no stone unturned to vilify and traduce us, because the rotten despotisms of Europe fear our example and hate us....

"America is the stronghold of the popular principle, Europe of the despotic. These cannot unite; there can be, at present, no sympathy.... We need not quarrel with Europe, but we must keep ourselves aloof and suspect all her manoeuvres. She has no good will towards us and we must not be duped by her soft speeches and fair words, on the one side, not by her contemptible detraction on the other." (59)

As Morse returned to the United States in 1832, his mind, more than ever reflected his patriotism. Silverman puts it this way:

His thinking about politics had been kept 'at boiling heat,' he said, making more apparent than ever before the contrast between America and Europe. Europe was, above all else, sinister. Everywhere he had felt the oppression of Church and State, with their attendant ignorance and squalor...."

"Morse had also some to understand why European governments so often criticized the United States. They dreaded change. They feared that America's example of people ruling themselves would threaten class privilege and possibly foment revolution. 'Our simple existence keeps hope alive in the breast of patriots.'" (60)

And, Morse's anti-Catholic beliefs emerged from his European stay stronger than ever:

"Morse also appreciated more keenly than ever how America's precious political liberty depended on its foundation in Protestantism-- a religion of persuasion not of force." (61)

In a letter to James Fenimore Cooper, written as he was about to sail from England, on October 2, 1832, he again made clear his disgust with the British system:

"My journey to England, change of scene and air, have restored me wonderfully. I knew they would. I like John's country [referring to the American term for the British-- 'John Bull' (PR)]*; it is a garden beautifully in contrast with France, and John's people have excellent qualities, and he has many good people; but I hate his aristocratic system, and am more confirmed in my views that ever of its oppressive and unjust character...."* (62)

Below, we shall report on how Morse's anti-Catholic views would shortly emerge publicly as he began the active political side of his life. Silverman's comment is apropos:

"Morse's experience of Europe had intensified his already fierce nationalism. With his artistic career stalled, he gave much of his time to writing about the threat to America of foreign despotisms. While abroad he had kept extensive journals, full of political observation and comentary." (63)

Silverman noted in the quote above that Morse's artistic career had stalled. When he returned to America in early 1833, Andrew Jackson was the President and he was literally taking the country apart, as noted in the diary entry by John Quincy Adams cited above. Jackson's presidency had also unleashed the mob, both in terms of a degenerated state of culture and the intense, often violent, partisanship in the political sphere. It was not an environment where the classical cultural ideas and work of Morse, or for James Fenimore Cooper and others, could thrive.

II. Samuel F. B. Morse: The Inventor of the Telegraph

The Idea Becomes a Mission

Now, we shall introduce Morse, the inventor of the telegraph, for it was on his voyage home from Europe that Morse first put down on paper his ideas for developing that invention. Morse recalled, years later, that at a dinner one evening aboard ship, he said to his fellow diners: "If the presence of electricity can be made visible in any part of the circuit, I see no reason why intelligence may not be transmitted instantaneously by electricity." (64) That night, Morse, in his sketch book, wrote down his ideas and drew the first crude schematics of what would emerge within a few years as a workable telegraph. Those drawings have been preserved and a copy is in the National Museum in Washington, D.C. (65)

The first sketch showed the embryo of the dot-and-dash alphabet, which applied numbers to represent letters. Later the dots and dashes were arranged in a system to directly represent letters, which became the Morse Code, the language of the telegraph.

The second drawing was of his first idea of a method by which these signs could be recorded, by some chemical decomposition on a strip of paper, passed over two rollers.

He included in this first design notes on insulating the wires in tubes or pipes.

The next drawing was of a magnet, indicating his view that electro-magnetism would be a necessary element. This was later developed to be a universal element of the working telegraph-- the receiving magnet, which attracts the lever and produces the dots and dashes. His son writes in the Letters and Journals,

"...and this, simple as it seems to us 'once found,' was original with Morse, was absolutely different from any other form of telegraph devised by others, and, improved and elaborated by him through years of struggle, is now recognized throughout the world as the Telegraph." (66)

As mentioned earlier, the process of Morse's development of the telegraph, was in itself, not a fundamental discovery of a scientific principle, though Morse did make specific scientific discoveries while working on his telegraph. The discovery of a scientific principle of nature is the product of a human mind, which imagines then proves the existence of some phenomenon or process, that up until

that moment, was unknown. Morse's telegraph was an invention-- the application of scientific discoveries to some useful end.

Linking Morse's artistic and inventive capabilities, Beaudry writes:

"...that Morse was both the discoverer of the principle of applying intelligence to electromagnetism and the inventor of the physical telegraphic instrument that demonstrated its physical feasibility of telegraphic electricity. In other words, Morse was not only the inventor of a communication system that could be expressed practically by dots and dashes in an electrical wire, but also, more profoundly, he discovered the principle of communication capability among human minds by means of which universal discoveries of principle can travel like lightning across centuries through the dual-time function of historical specificity and simultaneity of eternity." (67)

Morse's son, Edward Lind Morse, put it this way:

"There was required a rare combination of qualities and conditions. There must be ingenuity in the adaptation of available means to desired ends; there must be the genius to see through non-essentials to the fundamental principle on which success depends; there must be a kind of skill in manipulation; great patience and pertinacity; a certain measure of culture, and the inventor of a recording telegraph must be capable of being inspired by the grandeur of the thought of writing, figuratively speaking, with a pen a thousand miles long-- with the thought of a postal system without the element of time. Moreover the person who is to be the inventor must be free from the exactions of well-compensated, everyday, absorbing duties-- perhaps he must have had the final baptism of poverty.

"....Morse's electro-magnetic telegraph was mainly an invention employing powers and agencies through mechanical devices to produce a given end. It involved the combination of the results of the labors of others with a succession of special contrivances and some discoveries of the inventor himself. There was an ideal whole almost at the outset, but involving great thought, and labor, and patience, and invention to produce an art harmonious in its organization and action." (68)

Again, Part II of this report will focus on the technical side of the discovery and the development of electricity as a scientific principle in the context of Morse's invention of the telegraph, giving more details of Morse's process of invention. In the remainder of Part I, here, we will provide just a few more comments on Morse's first years of work on the telegraph, mostly focused on the non-technical matters. Then Part I will conclude with our report on Morse's political activity and the final years of his life.

Back in New York City, two years after his return to the U.S., Morse took a position as Professor of Literature of the Arts of Design at the University of the City of New York. It was there that he built the first experimental models of his telegraph.

Whether it was in art, science and invention, religion, or politics, Morse always acted from a sense of purpose, a sense of having a mission. In a letter to Cooper on February 21, 1833, Morse expressed this idea:

"I have been told several times since my return that I was born one hundred years too soon for the arts in our country. I have replied that, if that be the case, I will try and make it but fifty. I am more and

more persuaded that I have quite as much to do with the pen for the arts as the pencil, and if I can in my day so enlighten the public mind as to make the way easier for those that come after me, I don't know that I shall not have served the cause of the fine arts as effectively as by painting pictures which might be appreciated one hundred years after I am gone, If I am to be the Pioneer and am fitted for it, why should I not glory as much in felling trees and clearing away the rubbish as in showing the decorations suited to a more advanced state of cultivation?..." (69)

Acknowledging the difficultly of his mission and the challenge especially created in the nation during the years of the the destructive and degenerate Andrew Jackson administration, Morse wrote in his journal in October, 1833, accurately describing the character of the Andrew Jackson administration, though he does not specifically attribute the affect to Jackson:

"Are not the refining influences of the fine arts needed, doubly needed, in our country? Is there not a tendency in the democracy of our country to low and vulgar pleasures and pursuits? Does not the contact of those more cultivated in mind and elevated in purpose with those who are less so, and to whom the former look for political favor and power, necessarily debase that cultivated in mind and that elevation of purpose? When those are exalted to office who best can flatter the low appetites of the vulgar; when boorishness and ill manners are preferred to polish and refinement, and when, indeed, the latter, if not avowedly, are in reality made an objection, is there not danger that those who would otherwise encourage refinement will fear to show their favorable inclination lest those to whom they look for favor shall be displeased; and will not habit fix it, and another generation bear it as its own inherent, native character?" (70)

Morse was not a pessimist, as seen by the following footnote he added to this thought:

"These were once my fears. There is doubtless danger, but I believe in the possibility, by the diffusion of the highest moral and intellectual cultivation through every class, of raising the lower classes in refinement." (71)

But, disappointed that the American people were not receptive to great art and that the political class excluded him from commissions to paint historical subjects in the then being completed Capitol Building in Washington, D.C., Morse turned full-time to the arena of invention, his third area of interest; his religious beliefs being the first and painting the second.

For Morse, again, as he had expressed it during his early years in England, there was no separation between art and science. Here is a quote from Daniel Huntington' letter to Mr. Prime (72), which demonstrates how Morse approached his art-- as a scientist. Huntington (1816-1906), was a former student of Morse's in 1835, who then became one of America's foremost artists.

"....Professor Morse's love of scientific experiments was shown in his artiest life. He formed theories of color, tried experiments with various vehicles, oils, varnishes, and pigments. His studio was a kind of laboratory. A beautiful picture of his wife and two children was painted, he told, me, with colors ground in milk, and the effect was juicy, creamy, and pearly to a degree. Another picture was commenced with colors mixed with beer; afterwards solidly impasted and glazed with rich, transparent tints in varnish. His theory of color is fully explained in the account of his life in Dunlap's 'Arts of Design....'" (73)

Daniel Huntington

He was now over 40 years of age and would live 40 years more. As he turned to his idea for the telegraph, he turned his back on painting, though he kept on as President of the National Academy of Design. Morse expressed his disappointment at not receiving the recognition as an artist that he thought he deserved in a letter to Cooper many years later, in 1849:

"Alas! My dear sir, the very name of pictures produces a sadness in my heart I cannot describe. Painting has been a smiling mistress to some, but she has been a cruel jilt to me. I did not abandon her; she abandoned me. I have taken scarcely any interest in paintings for many years. Except for some family portraits, valuable to me from the likenesses only I wish that every picture I had painted was destroyed." (74)

Samuel Finley Breese Morse, 1840

Morse's son reports that “A favorite Biblical quotation of his was 'Woe unto you when all men shall speak well of you.' His further comments about his father, I think, summarize the next decades of Morse's life:

“He deeply deplored the necessity of making enemies, but early in his career became convinced that no man could accomplish anything of value in this world without running counter either to the opinions of honest men, who were as sincere as he, or to the self-seeking of the dishonest and the unscrupulous. Up to this time he had had mainly to deal with the former class, as in his successful efforts to establish the National Academy of Design on a firm footing; but in the future he was destined to make many and bitter enemies of both classes.” (75)

Edward Lind Morse further comments:

“The history of every great invention is a record of struggle, sometime Heart-breaking, on the part of the inventor to secure and maintain his rights. No sooner has the new step in progress proved itself to be an upward one than claimants arise on every side; some honestly believing themselves to have solved the problem first; others striving by dishonest means to appropriate to themselves the honor and the rewards, and these sometimes succeeding; and still others, indifferent to fame, thinking only of their own pecuniary gain and dishonorable in their methods. The electric telegraph was no exception to this rule; on the contrary, its history perhaps leads all the rest as a chronicle of 'envy, hatred, malice, and all uncharitableness.' On the other hand, it brings out in strong relief the opposing virtues of steadfastness, perseverance, integrity, and loyalty.”

“Like other men who have achieved greatness, he was made the target for all manner of abuse, accused of misappropriating the ideas of others, of lying, deceit, and treachery, and of unbounded conceit and vaingloriousness.” (76)

Creating a Telegraph

The word telegraph comes from the Greek “tele” (far) and “grapho” (write).

Morse built his first model of the telegraph in 1835, and, here is how he it described much later:

“There I immediately commenced, with very limited means, to experiment upon my invention. My first instrument was made up of an old picture or canvas frame fastened to a table; the wheels of an old wooden clock moved by a weight to carry the paper forward; three wooden drums, upon one which the pate was wound and passed over the other two; a wooden pendulum, suspended to the top piece of the picture or stretching-frame, and vibrating across the paper as it passes over the centre wooden drum; a pencil at the lower end of the pendulum in contact with the paper; an electro-magnet fastened to a shelf across the picture or stretching frame, opposite to an armature made fast to the pendulum; a type rule and type, for breaking the circuit, resting on an endless band composed of carpet-binding; which passed over two wooden rollers, moved by a wooden crank, and carried forward by points projecting from the bottom of the rule downward into the carpet-binding; a lever, with a small weight on the upper side, and a tooth projecting downward at one end, operated on by the type, and a metallic fork, also projecting downward, over two mercury cups; and a short circuit of wire embracing the helices of the

electro-magnet connected with the positive and negative poles of the battery and terminating in the mercury cups." (77) [See illustration on page 68]

After Morse's first successful demonstration of the telegraph in his offices at the University of the City of New York, Robert G. Rankin, who witnessed the demonstration, wrote later about how Morse thought of his work, which is probably the best description of how Morse thought of God, man and creativity; how nature's laws were not only knowable to man, but were designed to be so.

"He had been long impressed with the belief that God had created the great forces of nature, not only as manifestations of his own infinite power, but as expressions of good-will to man, to do him good, and that every one of God's great forces could yet be utilized for man's welfare; that modern science was constantly evolving from the hitherto hidden secrets of nature some new development promotive of human welfare; and that, at no distant day, magnetism would do more for the advancement of human sociology that any of the material forces yet known; that he would scarcely dare to compare spiritual with material forces, yet that, analogically, magnetism would do in the advancement of human welfare what the Spirit of God would do in the moral renovation of man's nature; that it would educate and enlarge the forces of the world.... He said he had felt as if he was doing a great work for God's glory as well as for man's welfare; that such had been his long cherished thought. His whole soul and heart appeared filled with a glow of love and good-will, and his sensitive and impassioned nature seemed almost to transform him my eyes into a prophet." (78)

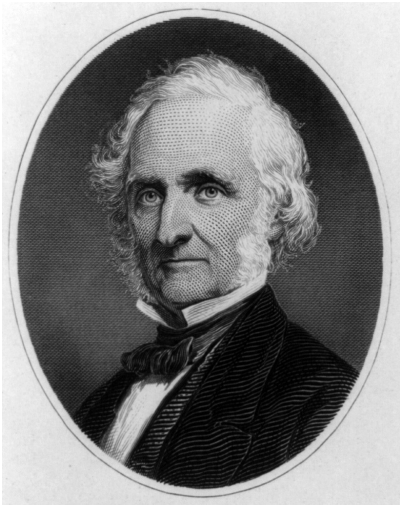
It was at this time that a young man named Alfred Vail (1807-1859) joined with Morse to help him perfect his first crude machine. Vail had grown up in Morristown, N.J., the son of the owner of Speedwell Ironworks, one of the most advanced facilities of its time. Vail had the technical and machining background that Morse lacked, but that was not all. Vail convinced his father to finance their work, and for the next few years Morse and Vail together steadily improved the telegraph. Vail himself developed several technical improvements, specifically the sending key and the recording registers and relay magnets. Vail also helped Morse develop the code that would be the language of the telegraph, known today as Morse Code. While Vail's name is little known today, there is an elementary school near the site of Speedwell Works in Morristown named "Alfred Vail."

Alfred Vail

Many others, including the leading American scientist of the era, Joseph Henry, made contributions to Morse's work, but our purpose here is not to present a detailed history of the telegraph, it will suffice for our purposes to let Morse himself list the individuals he was indebted to for his success, as he partially does near the end of Part I of this report.

Joseph Henry

And though he was betrayed and cheated by many over the next decades, one man, ironically, who worked with Morse, ran his finances, never cheated him and became a close friend, was none other than Amos Kendall (1789-1869), who had been Andrew Jackson's right-hand man as he destroyed the National Bank of the United States in the 1830s. (79) Yet, perhaps even then, Kendall did have his better side, which was evident in his honest report that even in the 1828 election, in which Jackson defeated John Quincy Adams, he "...could not help observing that what the Old Hero's supporters really wanted was 'the privilege of availing themselves of the very abuses with which we charge our adversaries." (80) Their partnership lasted the rest of Kendall's life, as Morse found in Kendall a man who also held religious views similar to his own.



Amos Kendall

Morse himself commented often about the attempts to steal his invention and cheat him of both the credit for it and rewards he deserved. Though, as we can see in the following quotation from his journal of January 22, 1838, he was not a man to take revenge or to harbor a grudge:

"My argument goes to prove that, unless there is a benevolent consideration in our discoveries, one which enables us to rejoice that others are benefited even though we should suffer loss, our happiness from any honor awarded to a successful invention is exposed to constant danger from the design of the unprincipled." (81)

That same year Morse took his telegraph to Washington, D.C. and was given a room in the Capitol Building to demonstrate its operation to members of the government. On February 21, 1838, President Martin Van Buren and the entire cabinet watched a successful demonstration. Unfortunately, the President was Martin Van Buren, who had succeeded Andrew Jackson, and continued the Jackson policy, which Van Buren had actually designed, of opposition to all Federal government participation in building infrastructure. (82) One member of Congress, Francis Ormand .Jonathan Smith (1806-1876), the chairman of the Committee on Commerce, responded positively and became a partner of Morse, though, later, he turned against Morse in an attempt to cheat him.

Francis O. J. Smith

While Morse would wait for several more years before the Congress would allocate funds to build the first functioning telegraph line, he gave thought to how a telegraph system should be organized, expressing his commitment and understanding of the Constitutional role of government as stated in the Preamble to our Constitution, and, as he wrote in his Letters and Journals:

"It is obvious, at the slightest glance, that this mode of instantaneous communication must inevitably become an instrument of immense power, to be wielded for good or for evil, as it shall be properly or improperly directed. In the hands of a company of speculators, who should monopolize it for themselves, it might be the means of enriching the corporation at the expense of the bankruptcy of

thousands; and even in the hands of Government alone it might become the means of working vast mischief to the Republic.

"In considering these prospective evils, I would respectfully suggest a remedy which offers itself to my mind. Let the sole right of using the Telegraph belong, in the first place, to the Government, who should grant, for a specified sum or bonus, to any individual or company of individuals who may apply for it, and under such restrictions and regulations as the Government may think proper, the right to lay down a communication between any two points for the purpose of of transmitting intelligence, and thus would be promoted a general competition. The Government would have a Telegraph of its own, and have its modes of communicating with its own officers and agents, independent of private permission or interference with and interruption to the ordinary transmissions on the private telegraphs....

"If the Government is disposed to test this mode of telegraphic communication by enabling me to give it a fair trial for one hundred miles, I will engage to enter into no arrangement to dispose of my rights, as the inventor and patentee for the United States, to any individual or company of individuals, previous to offering it to the Government for such a just and reasonable compensation as shall be mutually agreed upon." (83)

Later in 1838, Morse went to Europe in what turned out to be a futile attempt to patent his telegraph in various countries, though he had been awarded a patent by the United States in 1837.

Morse: A Pioneer of Photography

While in Paris, Louis Jacques Mande Daguerre's (1789-1851) invention of the process of photography attracted Morse's attention, and he held discussions with Daguerre, who showed him the entire process. Morse wrote to his brothers about this on March 9, 1839:

"You have, perhaps, heard of the Daguerreotype, so called from the discoverer, M. Daguerre. It is one of the most beautiful discoveries of the age. I don't know if you recollect some experiments of mine in New Haven, many years ago, when I had my painting-room next to Professor Silliman's,-- experiments to ascertain if it were possible to fix the image of the camera obscura. I was able to produce different degrees of shade on paper, dipped into a solution of nitrate of silver, by means of different degrees of light, but finding that light produced dark, and dark light, I presumed the production of a true image to be impracticable, and gave up the attempt. Mr. Daguerre has realized in the most exquisite manner this idea." (84)

After returning to the United States, Morse became the first American to establish a photographic studio. Working with John William Draper (1811-1882), they advanced the art of photography by various improvements, including one that shortened the time the plates had to be exposed to the light from an hour to just a few minutes. This allowed for portrait subjects to much more easily pose for having their picture taken. Among Morse's photography students was Mathew Brady (1822-1896), the famous Civil War photographer.

Samuel B. Morse. A daguerreotype made between 1844 and 1860 from the studio of Mathew B. Brady. From the Library of Congress Daguerreotype Collection.

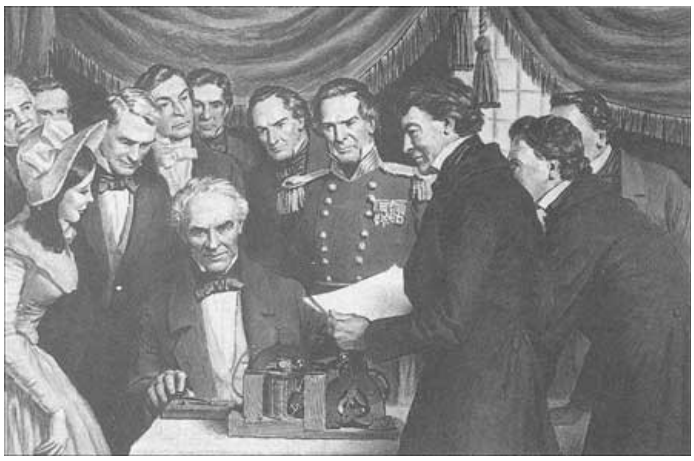
Reproduction of an Original Daguerreotype of Samuel Morse by Mathew Brady

Morse thought of photography as an art, one that would benefit painters immensely, as the painter could take pictures of his subjects, then at his leisure in his studio compose his painting.

Finally, a Telegraph is Built

While photography did divert him from his telegraph for some time, finally on March 3, 1843, the Congress and the President approved $30,000 for an experimental telegraph line to be built between Washington, D.C. and Baltimore. After serious setbacks, with crooked contractors and other problems, the 44-mile line was completed in 1844.

The first successful transmission of a message by the telegraph between Washington, D.C. and Baltimore was on May 24, 1844. The demonstration was held in the chambers of the U.S. Supreme Court, and the first message, sent by Morse, were the words from the book of "Numbers," Numbers 23;23: "What hath God wrought" (85)



Artist's portrayal of Morse sending the first telegraph message

Like the later announcement by President John Kennedy that the United States would land a man on the Moon within the decade of the 1960s, the first successful telegraphic transmission unleashed a wave of optimism and scientific curiosity in the American people. The little known science of electricity became a matter of study for many Americans. Now, with the building of telegraph lines, many of them running side by side with the railroad tracks, time and space was contracted as communications and travel were revolutionized.

Dispatching trains by telegraph started in 1851. The first transcontinental telegraph was in operation 1861, mainly along the rights-of-way off railroads.

As Morse reflected on the years of relative obscurity and real poverty he experienced as he worked on his telegraph, he, again, expressed his unified view of God, man and creativity:

"His work on the telegraph had all along been sustained by his belief that technology and theology were two sides of the same thing, that the inspiration and end of his invention was the greater glory of God, and secondly of God's country." (86)

Within a decade, the country was covered with telegraph wires; Europe, too; as well as Japan and China. The first permanent trans-Atlantic cable was completed in 1866. Morse had forecast in 1844, that not in too many years America would be connected to Europe by telegraph, a forecast that was generally deemed absurd at the time. Absurd to others, perhaps, but not to Morse, since his unlimited optimism that the lawfulness of human progress could only be delayed or diverted, but never stopped, made it clear to his mind that such a project would be accomplished.

Route of the first Trans-Atlantic telegraph cable

What did the telegraph produce? For one, it created thousands of positions as telegraph operators; hundreds of new businesses to manufacture the equipment and the infrastructure it required; new publications which focused on the technology; thousands of jobs for engineers and construction firms. It revolutionized the U.S. press, as stories in one part of the world or the country could be transmitted to every newspaper the same day it was written. Most importantly, the telegraph unified the nation in a manner that had been unthinkable just a few years earlier. Not only were Americans now able to know "the news" from the rest of the country and the world, but this was the beginning of a qualitative shift in the thinking of our citizens. Until the railroad and the telegraph created the dramatic changes in transportation and communications, the primary self-identity of most Americans was that he or she was a citizen of a specific state. The railroad and telegraph began the process of American's coming to see themselves as Americans first and a citizen of a state secondly, a process that was dramatically accelerated by the Civil War.

It was only after years of fighting off those who attempted to steal Morse's invention, that the U.S. Supreme Court in 1854, unanimously ruled that Morse, indeed, was the first and original inventor of the telegraph.

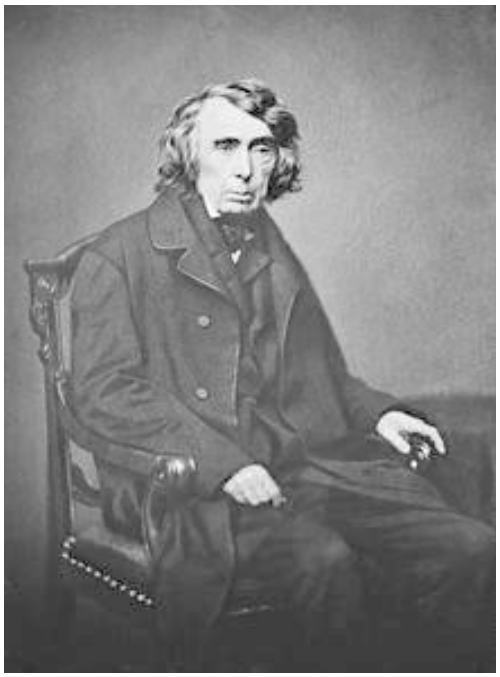
The following is an excerpt from the opinion of Justice Grier, concurred in by Justices Nelson and Wayne, in the Supreme Court's decision:

"I entirely concur with the majority of the court that the appellee and complainant below, Samuel F. B. Morse, is the true and first inventor of the recording telegraph, and the first who has successfully applied the agent or element of Nature, called electro-magnetism, to printing and recording intelligible characters at a distance; and that his patent of 1840, finally reissued in 1848, and his patent for his

improvements, as reissued in the same year, are good and valid; and that the appellants have infringed the rights secured to the patentee by both his patents. But, as I do not concur in the views of the majority of the court, in regard to two great points of the case, I shall proceed to express my own." (87)

Although this ruling of the Supreme Court settled the case, there would be more and more battles with those who still attempted to deny that Morse had created the first working telegraph, and more battles with those who attempted to cheat him, many times successfully so.

This Supreme Court decision provides us with another irony in the life of Samuel Morse. The Chief Justice of the Supreme Court was Roger Taney, who had been appointed by Andrew Jackson as a reward for earlier helping Jackson destroy the Second National Bank of the United States. (88) While upholding Morse's claim as the inventor of the telegraph, thus doing him justice, it was the same Taney who wrote the Dred Scott decision of 1857, which declared that Blacks, not just those enslaved, but also free Blacks, could never be citizens of the United States, thus denying justice to an entire people. The irony takes on another quality, as we shall see a little later, as it is Morse, who during the Civil War, promoted the view that Blacks were of an inferior race and should always remain in slavery. Thus, the man who fought for justice for himself in his personal life, and for others, was, like Taney, willing to deny it to an entire people. Why? Below, in the section on the U.S. Civil War, I will show how Morse's religious beliefs, once again, led him away from his generally humanists impulses.



Roger Taney

III. Samuel F. B. Morse: The Politician

His Father's Legacy

That Morse publicly expressed this belief is not a surprise, as we shall now trace his political activity,

beginning in the 1830s. It was then that he began to go public with his long-held, and essentially inherited belief--from his father--, that Catholicism was a threat to the sovereignty of the United States, coming especially from Catholic immigrants. As a series of crop failures in Ireland, combined with the genocidal policies of the British toward Ireland during the failures of the potato crop, forced hundreds of thousands of Irish to migrate to the United States, anti-Catholic sentiment among Americans began to grow. In addition, large numbers from another predominately Catholic nation, Italy, at that time, were also coming to this country.

Irish emigrants on shipboard in the River Mersey, about to embark for America, c. 1846

Morse wrote articles for his brother Sidney's newspaper, "The Observer" denouncing and warning against the increased Catholic migration to this country. He also authored a nearly two-hundred page book, "Foreign Conspiracy against the Liberties of the United States." Morse, in that book, presented an argument that claimed that it was European governments that were out to destroy republican government, by a Catholic invasion.

"Behind the plot, Morse wrote, was Prince Klemens von Metternich, the author of the Congress of Vienna and creator of the Holy Alliance. Morse charged '...that Jesuit cells were even now infiltrating the American press, insinuating themselves into American political councils, inveigling American children into Catholic schools.'" (89)

Morse's writings were widely republished and helped create anti-Catholic organizations and the first anti-immigrant political parties. In 1835, he became a chief spokesman of the Native American Democratic Association, the first of these anti-immigrant political parties of the era, which led later to the anti-immigrant Know Nothing Party of the 1850s. He ran for the Mayor's office in New York City in 1836, as the anti-immigrant candidate, coming in last with just 1,496 votes. His friend James Fenimore Cooper joked about his low vote total, writing,

"The fellow actually got 1500 votes, and would have been elected could he have got 15,000 more." (90)

In Morse's mind he was acting on his patriotic identity, and like too many, was blind to his own misguided ideas of what being a patriot required of the citizen-- that one is to not be misled by appearances or even deliberately created conflicts that separate humanity by secondary attributes of race, religion, or anything else.

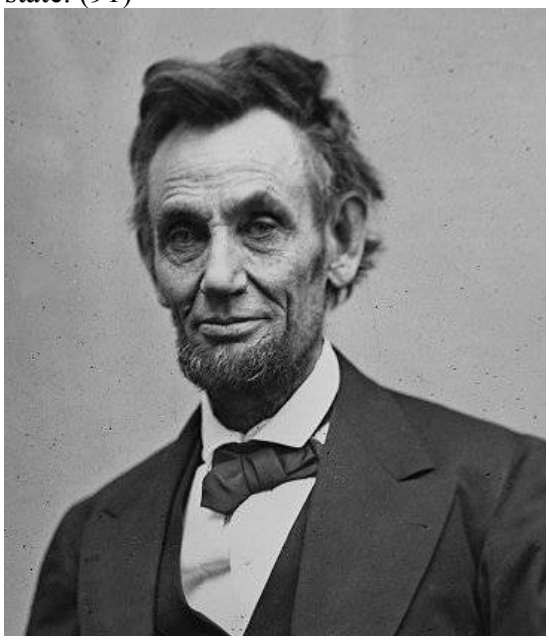
His views, as he often expressed them, were, that the United States had freed itself from the European feudal system, but that the new immigrants coming to these shores retained the mentality of subjects, and brought to the United States those beliefs and habits of an anti-republican culture.

He ran again for Mayor in 1841, again as the anti- immigrant candidate, but faced with a very polarized contest between the Whigs and the Democrats, he got only 78 votes this time.

Slavery and Abolition: Morse, and the Nation, Shift

In the 1850s, the slavery question was becoming a volatile and even violent dividing point for the nation, especially with the Kansas-Nebraska Act of 1854, which permitted those territories to decide for themselves whether to allow slavery when they were admitted as states.

Morse, who now turned his rhetoric and political organizing against the abolitionists, saw the passage of the Kansas-Nebraska Act as possibly a calming event for the nation, and welcomed it. His thinking, here, was the exact opposite of that of Abraham Lincoln at that time, whom, as he put it, was aroused by the Kansas-Nebraska Act, seeing it as a threat to spread slavery across the whole country, and dedicated himself to stopping the spread of slavery. Lincoln was right, as the U.S. Supreme Court decision of 1857, in the Dred Scott case demonstrated beyond doubt that the intent of the "slave power" was to spread slavery to every state. (91)



Abraham Lincoln

Morse, now not only an anti-immigrant agitator, but increasingly an anti-abolitionist leader, again put himself forward as a candidate in 1854, this time for the U.S. Congress, this time as a Democrat, but

really as a stealth candidate of the anti-immigrant, short-lived Know Nothing Party. He received more votes this time--5,000-- but again he was defeated.

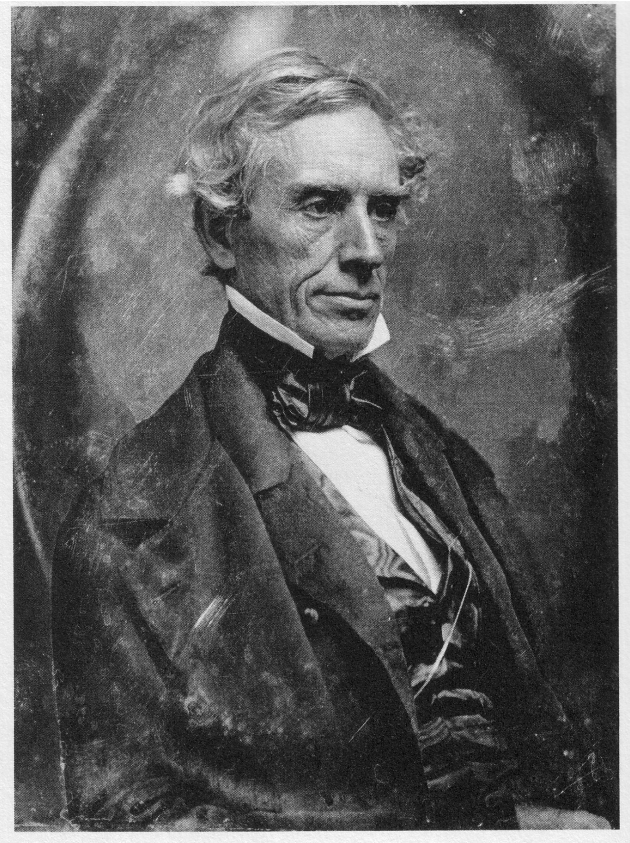
The Death of James Fenimore Cooper

His friend James Fenimore Cooper died in late 1851, but Morse was unable to attend the memorial held for Cooper in New York City on February 24, 1852, but the following letter by Morse was read to the assembled guests:

"My Dear Sir:-- I truly regret that circumstances over which I have no control, prevent my participation in the services commemorative of the character, literary and moral, of my lamented friend, the late James Fenimore Cooper. I can scarely yet realize the melancholy fact, that he is no longer with us, for the announcement of his death came upon me most unexpectedly. I can truly say that the pleasure of years of close intimacy was never for a moment clouded by the slightest coolness. We were in daily, almost hourly, intercourse while in Paris during the eventful years of 1831, 1832. I never met with a more sincere, warm-hearted, constant friend. No man came nearer to the ideal I had formed of a truly high-minded man. If he was at times severe or caustic in his remarks on others, it was when excited by the exhibition of the little arts of little minds. His own frank and open nature instinctively recoiled from the contact with them, though found in the saloon of ambassadors or the halls of royalty. He was an ardent, uncompromising friend of his country's institutions, and defended them when attacked at the risk of the threatened loss of fame and fortune.

"His liberality, obedient to his generous sympathies, was scarcely bounded by prudence; he was always ready to lend his purse and his pen to struggling merit, and many who are now reaping the fruits of his early kindness, will have learned of his decease with the most poignant sorrow.

"Although unable to be with you, I trust the Committee will not overlook me when they collect the funds for the contemplated monument. With sincere respect, your most obedient servant,
Sam'l F. B. Morse (92)



Samuel Morse, at about sixty
(Princeton University Library)

The Trans-Atlantic Telegraph

All through the 1850s, Morse, while assisting as a consultant in the first attempt to lay a telegraph cable across the Atlantic, continued his efforts to get the European nations, all of whom had adopted his telegraph, as opposed to any built by anyone else, to pay him compensation. Finally, in 1857, some of the European nations paid Morse for his invention and for their having used it for years, while ignoring his patents. He was granted $80,000 by in an agreement reached by a half-dozen countries; France and Britain refusing to join in the compensation pact. In addition, numerous nations honored him with awards and titles.

In 1858, the first Trans-Atlantic cable was finally successfully laid. The first message was sent on August 5. "A mighty though silent transformation in the conditions of human existence has just been effected," wrote the New York Tribune. (93) Though Morse did not directly participate in this successful event, homage to him was paid by politicians and the press on both continents. A month later the cable failed, and the second, successful and permanent telegraphic connection between Europe and North America, would not be completed until after the U.S. Civil War, in 1866.

Earlier, during the Civil War, the Russians proposed to build a transcontinental telegraph from St. Petersburg to the Pacific, across the Bering Straight, and connect Russia to the United States. Morse himself loved the idea and invested $30,000 in the project. (94) Western Union actually began to built

the line, but abandoned the project when the successful Trans-Atlantic cable was laid in 1866.

The U.S. Civil War

Just as John Quincy Adams had warned in the 1830s, that President Andrew Jackson's spread of slavery by expelling the Cherokees from their lands, would bring the nation to a Civil War, and that Civil War would destroy slavery itself. That war came in 1861. Here is Adam's warning:

"If slavery be the destined sword of the hand of the destroying angel which is to sever the ties of this Union, the same sword will cut in sunder the bonds of slavery itself. A dissolution of the Union for the cause of slavery would be followed by a servile war in the slave-holding States, combined with a war between the two severed portions of the Union. It seems to me that its result might be the extirpation of slavery from the whole continent; and, calamitous and desolating as this course of events in its progress must be, so glorious would be its final issue, that, as God shall judge me, I dare not say that it is not to be desired." (95)

Morse was horrified by the election of Abraham Lincoln in 1860, and saw the Civil War as a living nightmare. Morse had never been a sectionalist, always standing for the unity of the republic, even as he campaigned against the abolitionists. The outbreak of the Civil War pushed him over the edge, so to speak, though, as we shall see, he was still able to maintain some approximation of rational thinking. He blamed the abolitionists for the war and he placed his sympathies with what he called the "Christian slaveholders," who, he thought had played into the hands of the abolitionists. He condemned secession as being just as evil an heresy as abolitionism. The Civil War threw Morse into, probably, the most pessimistic state of mind he ever experienced in his life, as seen in the following excerpts of a letter he wrote to Amos Kendall on July 23, 1862. In this letter, he once again, takes aim at the British:

"I am much depressed. There is no light in the political skies. Rabid abolitionism, with its intense, infernal hate, intensified by the same hate from secession quarters, is fast gaining the ascendancy. Our country is dead. God only can resuscitate it from its tomb. I see no hope of union. We are two countries, and, what is most deplorable, two hostile countries. Oh! How the nations, with England at their head, crow over us. It is the hour of her triumph; she has conquered by her arts that which she failed to do by her arms. If there was a corner of the world where I could hide myself, and I could consult the welfare of my family, I would sacrifice all my interest here and go at once. May god save us with his salvation. I have no heart to write or to do anything. Without a country! Without a country!" (96)

That view led Morse to publish a forty-page pamphlet, called, "The Present Attempt to Dissolve the American Union, A British Aristocratic Plot," in which he charged that a scheme by the British had manipulated Americans to fight each other. Among the proofs of his thesis he presented the speeches by British officials rejoicing at the coming destruction of the republic. One quote in the book, for example, was from the Earl of Shaftesbury, as reported by Silverman:

"I, in common with almost every English statesman, sincerely desire the rupture of the American Union.... With a population of thirty millions, they will soon, if not checked, overshadow Great Britain...."

"…. And whatever Shaftesbury may or may not have said, the Earl of Shrewsbury did remark that 'men now before me will live to see an aristocracy established in America.' News and rumors abounded of foreign designs to exploit the divisions with the United States—of France outfitting warships in response to a possible Union blockade of Southern ports, of Spain sending troops to the Gulf of Mexico, looking to reassert its position in the Americas. A Boston newspaper alerted its readers to the gathering of the European vultures: 'The terror of the American name is gone, and the Powers of the Old World are flocking to the feast from which the scream of our eagle has hitherto scared them.'" (97)

So, Morse, at least, still maintained his life-long understanding of the evil of the British Empire.

Later in the war, Morse became the President of the New York Society for the Diffusion of Political Knowledge, a group of Wall Street millionaires and traitors attempting to sabotage the Union War effort. The reaction among supporters of the Union was led by Morse's very old friend, the poet and writer William Cullen Bryant (1794-1878). He wrote in the "Evening Post:"

"The rich men of New York are to supply the money...for an active and unscrupulous campaign against the government of the nation, and in the behalf of a body of rebels now in arms." (98)

"William Cullen Bryant"
by Samuel Morse

On behalf of this group, Morse wrote articles and letters attempting to prove that slavery was justified by the Bible, anchoring his arguments in his religious beliefs, and promoting the idea that Blacks were inferior to Whites, and God made the Black race to be forever the slaves of the White. In one of those articles, "An Argument on the Ethical Position of Slavery," he wrote:

"My creed on the subject of slavery is short. Slavery per se is not sin. It is a social condition ordained from the beginning of the world for the wisest purposes, benevolent and disciplinary, by Divine Wisdom. The mere holding of slaves, therefore, is a condition haveing per se nothing of moral character in it, any more than the being a parent, or employer, or ruler." (99)

The following excerpt is from a letter Morse wrote to a professor Christy on September 12, 1863:

"You have exposed in a masterly manner the fallacies of Abolitionism. There is a complete coincidence of views between us. My "Argument,' which is nearly ready for the press, supports the same view of the necessity of slavery to the christianization and civilization of a barbarous race. My argument for the benevolence of the relation of master and slave, drawn from the four relations ordained of God for the organization of the social system (the four being the servile relation, or the relation of master and slave) leads conclusively to the recognition of some great benevolent design in its establishment.

"But you have demonstrated in an unanswerable manner by your statistics this benevolent design, bringing out clearly, from the workings of his Providence, the absolute necessity of this relation in accomplishing his gracious designs towards even the lowest type of humanity." (100)

To understand better Morse's thinking I include the following from Kenneth Silverman's book:

"....Divinely ordained physical differences, he said, dictated the domination of blacks by whites: 'Nothing is clearer in my mind than that the status of the African in the compound of the Caucasian & the African, is that of subjection to the superior race, and this is the best for both races.'

"Morse emphasized this 'best' in all his arguings, stressing the benefits of slavery to the slave. The institution had produced examples of domestic contentment rarely known in this fallen world: 'Protection and judicious guidance and careful provision on the one part; cheerful obedience, affection, and confidence on the other.' The apostle Paul himself had advised a slave to prefer slavery to freedom, even given a chance to become free. And missionary experience confirmed the wisdom of Paul's advice, Morse commented. After fifty year's labor the American missionary churches overseas could count only about 44,500 conversions among free blacks. By contrast, churches in the South could boast more than 500,000 converts among enslaved blacks. The salutary message was dramatically clear: 'CHRISTIANITY HAS BEEN MOST SUCCESSFULLY PROPAGATED AMONG A BARBAROUS RACE, WHEN THEY HAVE BEEN ENSLAVED TO A CHRISTIAN RACE. Slavery to them has been Salvation, and Freedom, ruin.'" [Emphasis in original]. (101)

Morse did not go so far as to directly champion the Confederacy, but in 1864, he worked for the defeat of Abraham Lincoln's re-election. He became a spokesman for the discredited General George McClellan's (1826-1885) Democratic Party Presidential campaign against Lincoln, and even introduced McClellan to a huge New York rally. Morse honestly believed that the nation must remain one unified nation, but that the North would have to make whatever compromises were required to ensure that, including a guarantee of continuing the institution of slavery. In reality, that was a policy that would destroy the nation, as Lincoln said again and again. After McCellan lost to Lincoln, Morse gave up his anti-war agitation and resigned himself to submit to whatever would follow.

Even though he effectively played the role of a traitor during the Civil War, still his better side led him to play a prominent role in the National Sanitary Commission, which ran hospitals for the wounded. As reported earlier, the head of the Sanitary Commission was Samuel Gridley Howe, who had worked with Morse and Cooper in France supporting the European revolutions of 1830.

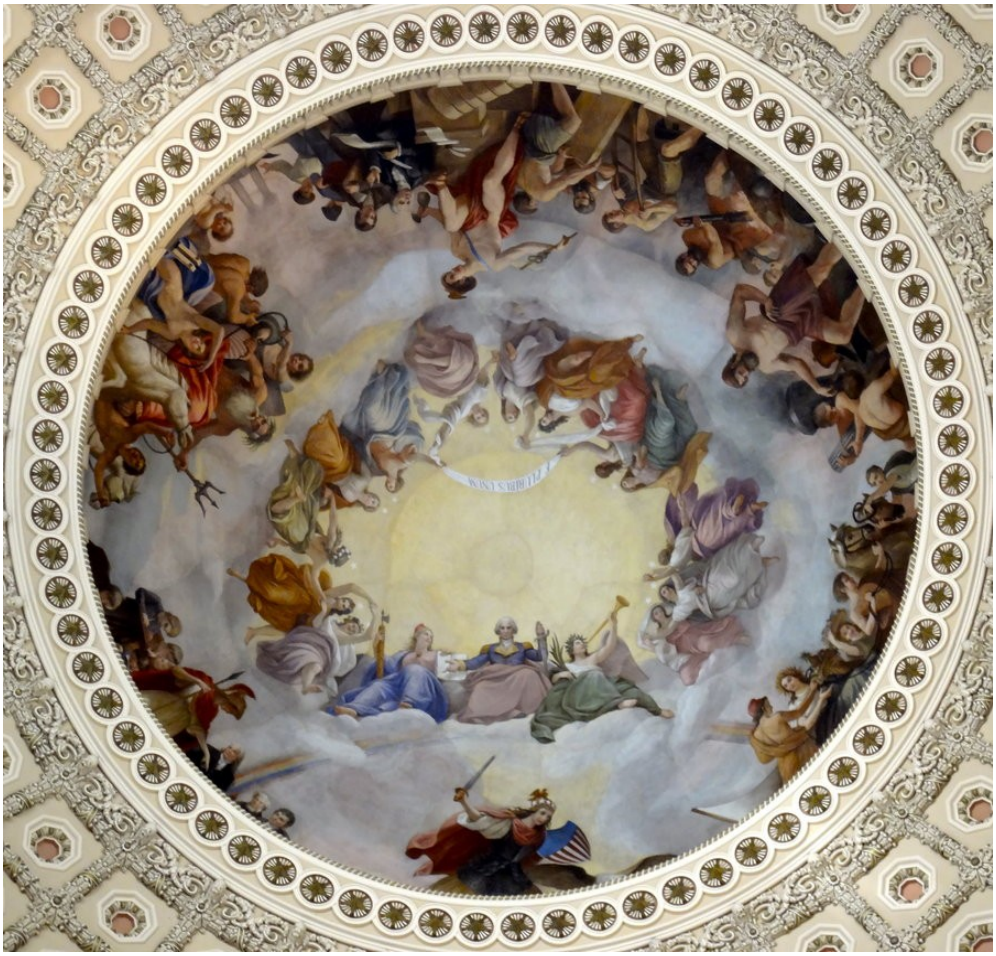
The Civil War provides us with one more irony in the life of Morse, one, I am sure, that in the end he

would have acknowledged with a smile. Due to the North's greater industrial capability, Lincoln's Union forces were able to much more effectively use Morse's telegraph in pursuing the war than was the Confederacy. Further, the Abraham Lincoln, whom Morse detested, would spend long hours in the telegraph office reading war dispatches that came to him on the machine that Morse had perfected. And the first coast-to-coast telegraphic message was from the Chief Justice of California to Abraham Lincoln, to assure him of the loyalty of California to the Union.

Union Army Telegraph Corps building telegraph lines.
Thousands of miles of telegraph lines were built by the Telegraph Corps.

IV. Samuel F. B. Morse: The Final Years

Following the Civil War, in 1865, and the completion of the first permanent trans-Atlantic telegraph in 1866, Morse was finally publicly hailed as the great inventor, and though disappointed many years ago of gaining the commission to do a painting for the Capitol Rotunda, now on the ceiling of that same rotunda is the painting by Constantino Bruimidi's, “Apotheosis of Washington,” with Morse sitting in the company of Benjamin Franklin, Robert Fulton and Minerva, the goddess of the arts.



“Apotheosis of Washington,” by Constantino Bruimidi

The Apotheosis of Washington **is the fresco painted by Italian artist Constantino Bruimidi in 1865 and visible through the oculus of the dome in the rotunda of the United States Capitol Building. The fresco is suspended 180 feet above the rotunda floor and covers an area of 4,664 square feet. The figures painted are up to 15 feet tall and are visible from the floor below. The dome was completed in 1863, and Brumidi painted it over the course of 11 months at the end of the Civil War. Six scenes line the perimeter, each representing a national concept allegorically: from directly below Washington in the center and moving clockwise, "War," "Science," "Marine," "Commerce," "Mechanics," and "Agriculture." The perimeter scenes are not fully visible from the floor of the Capitol.** ***The Apotheosis of Washington*** **depicts George Washington sitting amongst the heavens in an exalted manner, or in literal terms, ascending and becoming a God (apotheosis).**

The painting is visible through the oculus* of the dome in the rotunda of the United States Capitol Building. The fresco is suspended 180 feet above the rotunda floor. The figures painted are up to 15 feet tall and are visible from the floor below. Six scenes line the perimeter, each representing a national concept allegorically: from directly below Washington in the center and moving clockwise, "War," "Science," "Marine," "Commerce," "Mechanics," and "Agriculture".

**Oculus: A circular opening in the center of a dome.*

"Apotheosis of Washington," (detail- Men of Science)

Minerva, the Roman goddess of crafts and wisdom, is portrayed with helmet and spear pointing to an electrical generator creating power stored in batteries next to a printing press representing great American inventions. American scientists and inventors Benjamin Franklin, Samuel F. B. Morse, and Robert Fulton watch. In the left part of the scene a teacher demonstrates the use of dividers.

In addition, many American homes had prints of Christian Schussele's "Men of Progress" painting decorating their living rooms. In this painting we see Morse in the middle of nineteen American inventors, all sitting in one room.

Men of Progress by Christian Schussele (1862)

From left to right: William Thomas Green Morton, James Bogardus, Samuel Colt, Cyrus Hall McCormick, Joseph Saxton, Charles Goodyear, Petere Cooper, Jordan Lawrence Mott, Josheph Henry, Elephalet Nott, John Ericsson, Fredrick Stickels, Samuel F.B. Morse, Henry Burden, Richard March Hoe, Erastus Bigelow, Isaiah Jennings, Thomas Balanchard, Elias Howe. On the wall in the background left, Schussele painted a painting of Benjamin Franklin.

In December, 1868, Morse was honored by a banquet given in his honor, held in New York City. This was to honor the now undisputed inventor of the telegraph. The banquet was presided over by U.S. Supreme Court Chief Justice Salmon Chase (1808-1873). Letters from President Andrew Johnson (1808-1875) and President-Elect General Ulysses S. Grant (1822-1885) were read. Governor Alexander Bullock (1816-1882) of Massachusetts, wrote:

"Massachusetts honors her two sons-- Franklin and Morse. The one conducted the lightning safely from the sky; the other conducts it beneath the ocean from continent to continent. The one tamed the lightning; the other makes it minister to human wants and human progress." (102)

Samuel Morse-- 1865

Chief Justice Chase introduced Morse to the large crowd, which included scientists, artists, political leaders and others, with the following remarks, which notes, importantly, some of the history of the development of electricity, leading to Morse's invention:

"Many shining names will at once occur to any one at all familiar with the history of the Telegraph. Among them I can pause to mention only those of Vota, the Italian, to whose discoveries the battery is due; Oersted, the Dane, who first discovered the magnetic properties of the electric current; Ampere and Arago, the Frenchmen, who prosecuted still further and most successfully similar researches; then Sturgeon, the Englishman, who may be said to have made the first electro-magnet; next and not least illustrious among there illustrious men, our countryman Henry, who first showed the practicability of producing electro-magnetic effects by means of the galvanic current at distances infinitely great; and finally Steinheil, the German, who, after the invention of the Telegraph in all its material parts was complete, taught, in 1837, the use of the ground as part of the circuit. These are some of those researchers for truth whose names will be long held in grateful memory, and not among the least of their titles to gratitude and remembrance will be the discoveries which contributed to the possibility of the modern Telegraph.

"But these discoveries only made the Telegraph possible. They offered the brilliant opportunity. There was needed a man to bring into being the new art and the new interest to which they pointed, and it is the providential distinction and spendid honor of the eminent American, who is our guest to-night, that, happily prepared by previous acquirements and pursuits, he was quick to seize the opportunity and give to the world the first recording Telegraph.

"Fortunate man! thus to link his name forever with the S. F. B. Morse, the man of science who explored the laws of nature, wrested electricity from her embrace, and made it a missionary in the cause of human progress.'" (103)

David Huntington, a former art student of Morse's, who was quoted earlier in this report on the same topic, said the following:

"....In fact, however, every studio is more or less a laboratory. The painter is a chemist delving into the secrets of pigments, varnishes, mixtures of tints and mysterious preparations of grounds and overlaying of colors; occult arts by which the inward light is made to gleam from the canvas, and the warm flesh to glow and palpitate.

"The studio of my beloved master, in whose honor we have met to-night, was indeed a laboratory. Vigorous, life-like portraits, poetic and historic groups, occasionally grew upon his easel; but there were many hours--yes, days-- when absorbed in study among galvanic batteries and mysterious lines of wires, he seemed to us like an alchemist of the middle ages in search of the philosopher's stone....

"Finally, my dear master and father in art, allow me in this moment of your triumph in the field of discovery, to greet you in the name of your brother artists with 'All hail.' As an artist you might have spent life worthily in turning God's blessed daylight into sweet hues of rainbow colors, and into breathing forms for the delight and consolation of men, but it has been His will that you should train the lightnings, the sharp arrows of his anger, into the swift yet gentle messengers of Peace and Love." (104)

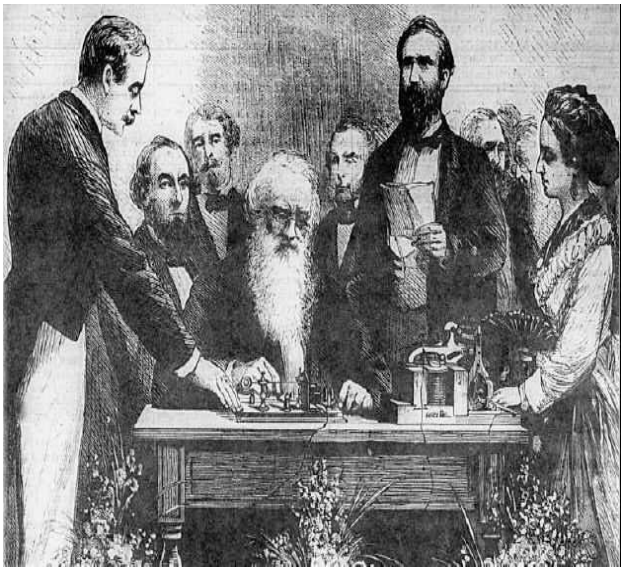
In 1869, his long-time partner and friend Amos Kendall died. Morse paid tribute to him by saying that in all the years they worked together he was the only one who never manipulated him or betrayed his trust. (105)

Morse Bids Farewell to the Children of the Telegraph

On June 10, 1871, a statute of Morse was dedicated in New York's Central Park, near what is called the "Inventor's Gate." The statute was paid for by one dollar donations from telegraph operators throughout the United States and Canada.

Statue of Samuel Morse
Central Park, New York City

That evening there was another ceremony at the old Academy of Music in New York City. Hundreds attended to honor Morse as he was to "bid farewell to his children of the Telegraph." (106)



Samuel Morse at the Academy of Music
Morse to "bid farewell to his children of the Telegraph."
June 10, 1871

On the stage a table was placed and on it was the original instrument used to send the first message in 1844, from the U.S. Capitol Building to Baltimore. This instrument was connected to all the lines that spread out throughout the entire world.

As thousands of greetings poured in from all over the world, Morse sent out the following message in return: "Greetings and thanks to the Telegraph fraternity throughout the world. Glory to God in the highest, on earth peace, good will to men."

As he tapped out his name, as reported in his Journal and Letters,

"the click of the instrument being clearly heard in every part of the house, and as clearly understood by the hundreds of telegraphers present, so that without waiting for the final dot, which typified the letter e, the whole vast assembly rose amid deafening cheers and the waving of handkerchiefs....

"When the excitement had somewhat subsided, the chairman Mr. Orton said: 'Thus the Father of the Telegraph bids farewell to his children.'" (107)

In Morse's address to this audience, he spoke about human progress being a social process:

"In the carrying-out of any plan of improvement, however grand or feasible, no single individual could possibly accomplish it without the aid of others. We are none of us so powerful that we can dispense with the assistance, in various departments of the work, of those whose experience and knowledge must supply the needed aid of their expertness. It is not sufficient that a brilliant project be proposed, that its modes of accomplishment are foreseen and properly devised; there are, in every part of the enterprise, other minds and other agencies to be consulted for information and counsel to perfect the whole plan...." (108)

He also gave due credit to at least some of those who came before him in the study of electricity and those who worked with him, even thanking those who had betrayed and robbed him. He stated:

"The inventor must seek and employ the skilled mechanician in his workshop to put the invention into practical form, and for this purpose some pecuniary means are required as well as mechanical skill. Both these were at hand. Alfred Vail, of Morristown, New Jersey, with his father and brother, came to the help of the unclothed infant, and with their funds and mechanical skill put it into a condition to appear before the Congress of the nation. These New Jersey friends is due the first important aid in the progress of the invention. Aided also by the talent and scientific skill of Professor Gale, my esteemed colleague in the University, the Telegraph appeared in Washington in 1838, a suppliant for the means to demonstrate its power. The Honorable F. O. J. Smith, then the chairman of the House Committee of Commerce, belongs the credit of a just appreciation of the new invention, and of a zealous advocacy of an experimental essay, and the inditing of an admirably written report in its favor, signed by every member of the committee... To Ezra Cornell, whose noble benefactions to his state and the country have placed his name by the side of Cooper and Peabody high on the roll of public benefactors, is due the credit of early and effective aid in the superintedence and erection of the first public line of telegraph ever established." (109)

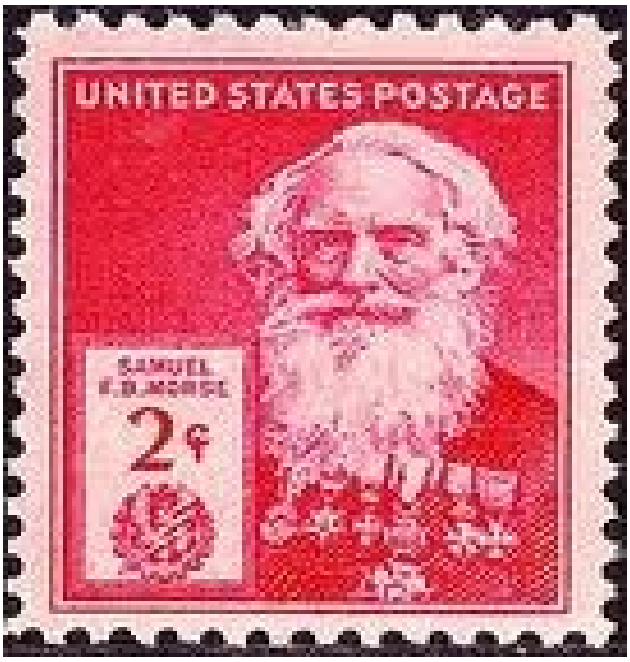
Less than a year later Morse died, on April 2, 1872. He was mourned as the inventor of the age, all of

his political views having been forgotten. The New York Herald concluded its notice of his death with the following:

"....we come to sum up his life, we gladly see that the world is better, society more generous and enlarged, and mankind nearer the ultimate fulfillment of its earthly mission because he lived; and did the work that was in him." (110)

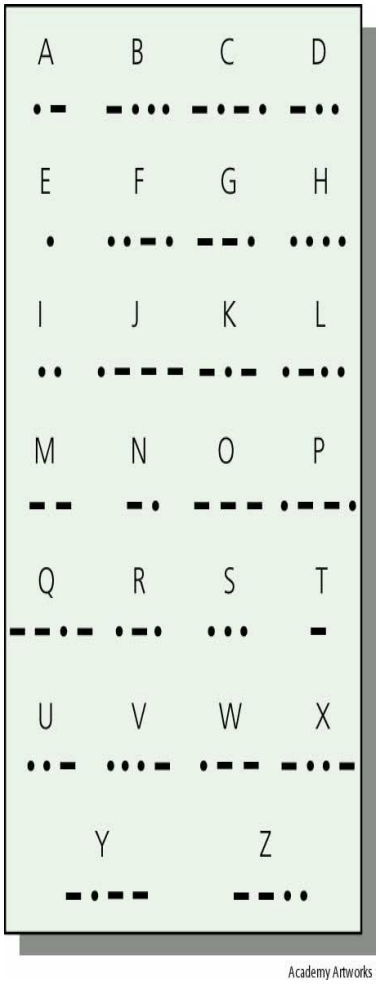
Morse's Legacy

On the 100th anniversary of the first telegraph message sent on May 15, 1844, from the U. S. Capitol Building, the U.S. Congress re-enacted the event with a message sent from the chambers of the House around the world. The U.S. Post Office issued a commemorative stamp, and a new Liberty ship was launched, christened the "Samuel F. B. Morse."



Samuel Morse
U.S. Famous Americans Series postal issue of 1940

As with all technologies, the telegraph had its day, which began to come to an end with the invention of a new, more powerful tool-- the telephone; then satellite signals, and more recently digital fiber-optic cables. Western Union sent its last Morse telegram in 1960, the last of the Trans-Atlantic telegraph cables were abandoned in 1966, a century after the first was successfully laid. In the 1990s, the U.S. military and coast guard phased out Morse code in their operations. The Morse Code today is probably still learned by Boy Scouts and is used by radio amateurs.



Morse Code- the Language of the Telegraph

Though these new tools may be more powerful and efficient than Morse's old telegraph, in principle they do nothing more than what Morse had given the world 170 years ago.

Morse's son Edward summarized, at the end of the "Letters and Journals," the actual contributions Morse made that may be considered discoveries or inventions:

"In 1832, he conceived the idea of a true electrical telegraph-- a writing at a distance by means of the electromagnet. The use of the electro-magnet for this purpose was original with him; it was entirely different from any form of telegraph devised by others, and he was not aware, at the time, that any other person had even combined the words 'electric' and 'telegraph.'

"The mechanism to produce the desired result, roughly drawn in the 1832 sketch-book, was elaborated and made by Morse alone, and produced actual results in 1835, 1836 and 1837. Still further perfected by him, with the legitimate assistance of others, it became the universal telegraph of to-day, holding its own and successfully contending with all other plans of telegraphs devised by others.

"He devised and perfected the dot-and-dash alphabet.

"In 1836, he discovered the principle of the relay.

"In 1838, he received a French patent for a system of railway telegraph, which also embodies the principle of the police and fire-alarm telegraph. At the same time he suggested a practical form of military telegraph.

"In 1842, he laid the first subaqueous cable.

"In 1842, he discovered, with Dr. Fisher, the principle of duplex telegraphy, and he was also the first to experiment with wireless telegraphy.

"In addition to his electrical inventions and discoveries he was the first to experiment with the Dagauerreotype in America, and, with Professor Draper, was the first in the world to take portraits by this means, Daguerre himself not thinking it possible." (111)

The Author's final comment

Now, back to where we began. The life of Samuel F. B. Morse, I think, demonstrates, not only that the creative personality can jump from area of activity to another, where that creativity is expressed in all of them, but, that sometimes, it can be a pretty messy affair.

Morse's life exemplifies just how messy it can be. Especially since, in his case, his creative powers were crippled by a locked-in belief system (a fundamentalist religious belief) that imprisons his mind in the straightjacket of prejudices and assumptions that happen to be a major force during the period in which he lived.

That others, like Abraham Lincoln, were able to rise above such influences demonstrates just how crippling such ideologies can be.

End of Part I

Part II

A Brief History of Electricity and the Role of Samuel F. B. Morse

[Note to readers: Part II, while self-contained in this written format, is inadequate to adequately present the re-created experiments that marked the process of the mastery of electricity. We urge the reader to also watch the video of this presentation. Part II begins at one hour and thirty minutes of the video of the presentation of this material to an audience in Los Angeles on March 29, 2014. The video is available on You Tube, under the title, "Samuel Morse and the dawn of the electric age." The You Tube link is: https://www.youtube.com/watch?v=MWqObyLYeyk]

Introduction

When most people think of electricity today, they think about wires, lights, motors, computers, etc.--what we do with electrical currents in wires. But electric currents are a fairly new phenomenon—and an entirely a man-made creation. Lets go back to the origin of this creation and to the time before electric currents in wires existed.

Electrical phenomena were observed in ancient times, by the ancient Greeks, and probably before them. It was observed by the Greeks that pieces of amber, a fossilized resin, when rubbed with fur or silk, would attract small pieces of dust or hair. (A few precocious Greeks later discovered that Styrofoam cups would stick together or attract grains of coffee or tea.)

Demonstration #1: Static electric attraction

Actually, the word electricity or electron derives from the Greek word for amber.

Not a lot was done to investigate this phenomenon in a rigorous way until the 17th and 18th centuries. Then it was discovered that two different kinds of electricity were produced--one by rubbing amber, the other by rubbing glass. The first was called resinous electricity, the latter vitreous electricity. Both were generally thought to be some sort of a fluid. When they were brought close together a spark would neutralize the electricity between them.

In 1745 an invention, called a Leyden jar, enabled the electric charge to be stored and later released or discharged.

Demonstration #2: The Leyden jar

During this period, Benjamin Franklin (1706-1790) conducted many experiments with electricity, including his famous one proving that lightning is an electrical discharge, though contrary to popular opinion, his kite was not struck by lightning, which might have proved fatal--rather, his kite passed through the clouds during an electrical storm and picked up a charge which traveled down the string to

the key tied to it, from which he got a significant spark.

"Benjamin Franklin Drawing Electricity from the Sky"
by Benjamin West (1738-1820)

Franklin also made an important hypothesis about the two kinds of electricity--that they were not two

different kinds of fluid, but rather one kind of fluid, with either a lack of it in one form of electricity, or an overabundance of it in another. From this conception he invented the terms "positive" and "negative" electricity.

In 1771, Italian physician Luigi Galvani (1737-1798), investigating the cause of muscle contraction in living organisms, discovered that frog legs jumped when an electric spark was applied. More surprising, was the discovery that the frog legs jumped even when no apparent outside spark was applied, but when a metal scalpel touched the leg in a metal pan.

Luigi Aloisio Galvani

Physicist Alessandro Volta (1745-1827), who observed this, concluded that what was occurring was not "animal electricity," but something activated between the two metals in the briney fluid of the frogs' legs.

Alessandro Giuseppe Antonio Anastasio Volta

Volta tested his hypothesis by constructing a sandwich of two different metals with a cloth soaked in salt water between them--i.e. no animal tissue. Lo and behold--he got an electric spark! By creating a "pile" of such sandwiches, he was able to get quite a large spark. This was the first battery.

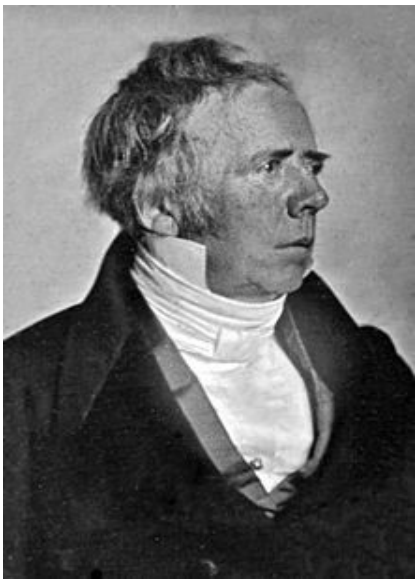
Demonstration #3: The Voltaic battery with pennies and nickels

With Volta's invention of the battery, around 1800, a new capability now existed. Electricity could flow in wires over a period of time, not just be released in a spark. This led to further discoveries. An electric current from batteries was run through water, and as a result, water was dissociated into

hydrogen and oxygen. In 1802, chemist Humphrey Davy (1778-1851) isolated a number of new metal elements using electrolysis, including potassium, sodium, barium, and magnesium.

Humphrey Davy

Then one of the most important discoveries was made in 1820 by Danish scientist Hans Christian Oersted (1777-1851). Oersted discovered that an electrical current in a wire produced a magnetic effect in the surrounding space.



Hans Christian Ørsted

Demonstration #4: The deflection of a compass needle by a current in wire

The discovery of the connection between electricity and magnetism, which had long been suspected,

but never directly observed, now unleashed a burst of excitement and experimentation all over the world.

Andre Marie Ampere (1775-1836) of France made the most thorough study of this new field, which he called electrodynamics. Through a series of ingenious experiments he demonstrated and measured the force between elements of electrical currents in different geometric relationships to each other. Two current elements parallel and in the same direction will attract. Two elements parallel in opposite directions will repel. And so forth.

Andre Marie Ampere

One discovery of Ampere's, which remains controversial to this day, and a thorn in the side of academic physics dogma, is the so-called "longitudinal force" or "angular force." This effect occurs when two current elements are moving in the same direction in line with each other, one in front and one behind. Ampere showed that there is a weak force of repulsion between these current elements.

This discovery, as elaborated further by Wilhelm Weber (1804-1891) and Carl Friedrich Gauss (1777-1855), led to all kinds of interesting results, like the reversal of the force of repulsion of charged particles at distances on the scale of the atomic nucleus.

Wilhelm Weber

There is much more that could be said on this subject, which is very relevant to the issue of developing fusion energy, among other things, but I can only whet your appetite for that in this report.

One of the inventions made in the 1820's, was the electromagnet. Early on there were many different designs for electromagnets, but the basic idea was the same. In a single wire the magnetic force in the neighborhood of the wire is fairly weak, but what occurs when the wire is wound into a coil? It is dramatically more powerful. And by winding it tens or hundreds of times its strength increases. A very powerful magnet is created in this way. Electromagnets are especially strong if the coil of wire is wound around a piece of iron. The American scientist Joseph Henry (1797-1878), one of the pioneers in this field, made electromagnets that could lift over one thousand pounds.

Joseph Henry

Demonstration #5: A simple electromagnet

It was in this milieu of discovery and invention that Samuel Morse was captivated by the idea of using electricity to communicate over long distances almost instantaneously. It was not obvious how to do it. Several others in Europe and the U.S. were pursuing a number of approaches to this purpose. Ampere had proposed a system back in the early 1820s, a system that would use 26 separate circuits and magnetic needles (like the compass), one for each letter of the alphabet, but he did not pursue this.

Carl Friedrich Gauss and Wilhelm Weber developed a system of telegraphic communication between buildings at Gottingen University in Germany. Joseph Henry developed a system in his classroom at Princeton, and made a number of crucial discoveries of principle which he shared with Morse.

Carl Friedrich Gauss
(1777-1853)

But it was Morse who developed a device that worked. Morse's success, as reported in Part I, rapidly

transformed the world. Morse is also probably the only man of his era who had the stamina to fight the grueling political battle, hold public demonstrations of his invention, and importantly, to get the U.S. Congress to fund the first functioning line.

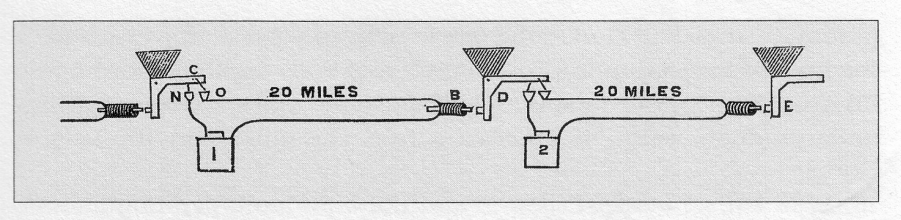
This was no small task. In September of 1837, he gave the first public demonstration of his telegraph system. This test at New York University was successful over a wire one-third of a mile in length. In February, 1838, Morse gave a demonstration of his system to members of Congress and requested $30,000 to build a test model over 50 miles. I won't go through all the ins and outs of this battle, but it wasn't until 1843, that Congress finally approved the money for the test system to be built between Washington and Baltimore.

The original plan was to bury the line in conduits underground. This plan was abandoned and the final line was strung on poles 30 feet above the ground. The demonstration of this line was made on May 24, 1844, with Morse sending the now famous message from the book of Numbers, "What hath God wrought!," sent from the Supreme Court building in Washington, D.C., to a location in Baltimore. While this was the famous first message sent, what received more attention at the time, occurred three days later. The national Democratic Party convention to choose a Presidential candidate was being held in Baltimore. Morse's partner, Alfred Vail, from Baltimore, sent messages to Morse, who was surrounded by anxious politicians in Washington, D.C. The telegrams from the raucous proceedings of the convention, informed all of Washington, D.C. of the nomination of dark horse candidate James Polk.

Now we shall look at simplified model of how the Morse telegraph system works.

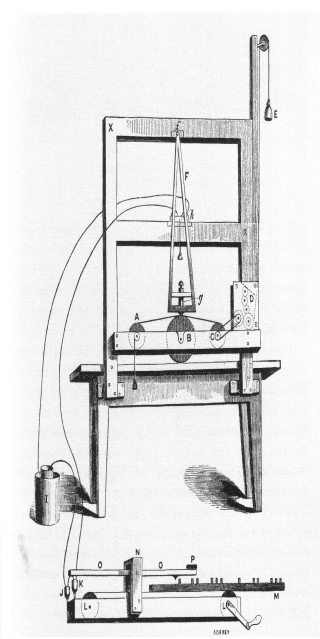
Demonstration #6: A simple telegraph

One major technical problem Morse had to solve was extending the length of the wire to thousands of feet and then to hundreds of miles. To solve this, some of Joseph Henry's discoveries were crucial. Henry had experimented with different ways of winding the electromagnets, and both he and Morse developed a relay system, where one circuit when closed would close another circuit miles down the wire with a second battery. This process could be repeated as many times as necessary to go the distance required.



Morse's 1837 Relay Plan
(Samuel I. Prime, "The Life of Samuel F.B. Morse," LLD. [1875])

Morse's early telegraph was much more complex than what I demonstrated. Here is his early design, built in 1936.



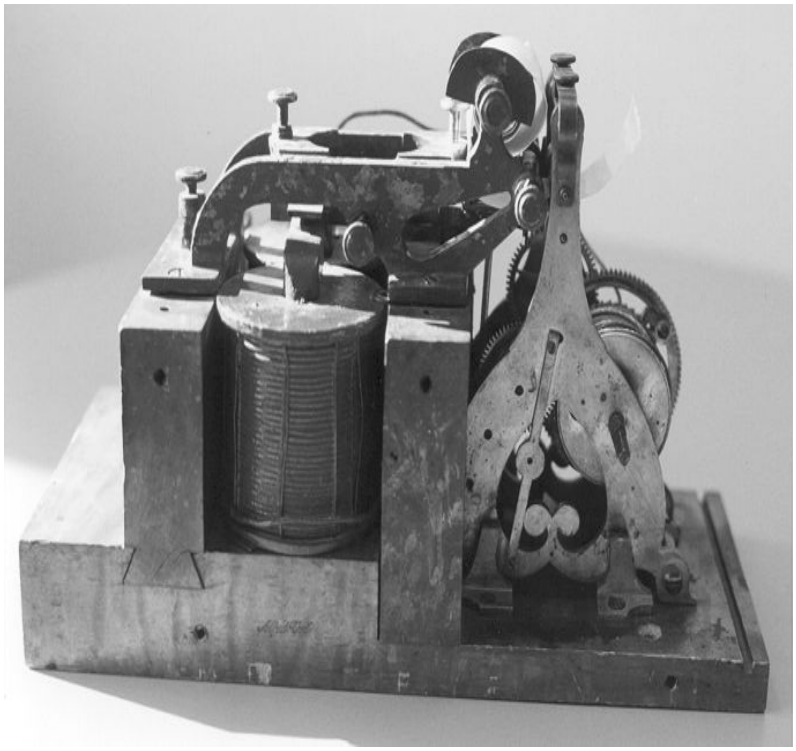
Morse's Original Telegraph apparatus (ca. 1836)
(Samuel I. Prime, The Life of Samuel F. B. Morse, LLD. [1875])

This model created a paper tape with the printed code which could then be read. It was later discovered that the telegraph operators became so efficient at simply hearing the dah-dah-dit-dit sound of the key, that they could simply transcribe the message, thus obviating the need of a paper tape. Experienced

operators could send and receive 30 words per minute. Here is a telegraph sending key similar to that Morse used to send his first message in 1844.

The Telegraph Key

Below is the receiving register for telegraph messages. It is called the Vail Register since Alfred Vail built it. This is the actual receiving register used by Morse in his first telegraph message in 1844 and his last in 1871.



The Vail Register, used for Morse first and last telegraph message

How the telegraph works

The telegraph key is simply a switch in an electric circuit that turns on an electric current. As the sender taps out a word the switch completes a circuit which allows an electric current to flow around it. As with all electric circuits, at least two wires are needed between the sender and the receiver -although for the very simplest of telegraph circuits, just one real wire and a return path through the earth is normally sufficient.

At the receiving end of the circuit the electric current can be used to provide power to an indicator dial or pointer machine (so the operator can watch the message coming in), to an electric 'sounder' or a buzzer (so the operator can hear the message) or to a device printing on paper tape (so the message can be stored and read later).

Following the success of his Washington, D.C. to Baltimore line, Morse still had many battles to fight, including how to fund more telegraph lines to be built, and legal battles over patent rights that went all the way to the Supreme Court. Two years after the Washington to Baltimore test line was built, the first commercial line from Washington, D.C. to New York was completed, and, shortly after that, a line was built from New York to Boston. By 1851, there were 50 separate telegraph companies operating in the country, many using competing technologies. The first successful trans-Atlantic telegraph cable was laid in 1858, but failed a month later. It was not until 1866, after the U.S. Civil War, that another cable was laid that did not break.

The transatlantic telegraph cable was the first intercontinental communications link of the electric age. This illustration shows the Great Eastern, the largest ship afloat, which laid a permanent cable in 1866.

In 1861, Western Union, a company composed of many merged smaller telegraph companies, including Morse as a major owner, completed the first transcontinental telegraph line, built by a Federal contract. In summary, from the first demonstrations in the late 1830's, within a little more than two decades, the

the vast American continent was covered with telegraph lines, and the U.S. was temporarily connected to Europe. Something had occurred that was not even conceived of when Morse built his first crude devise.

In parallel with, and sparked by the development of the telegraph, other rapid-fire advances were made possible by the further developments in finding uses for electric currents. Dynamos, or generators, were developed as an alternative to batteries in creating electric currents. These were based on the principle of electromagnetic induction, discovered by Joseph Henry and Michael Farady (1791-1867) in 1831. They discovered that a moving or changing magnetic field will induce an electric current in a nearby wire. A steady magnetic field will not produce that effect, but the effect is produced only by a changing magnetic field.

Demonstration #7: An electric current produced by a magnet moving through a wire coil

It is this effect that allows transformers to work, with an alternating current and two adjacent coils of wire. If a direct current was used, then the magnetic field would be constant and there would be no induced current. It is one of these transformers that is in the black box of your computer power cord.

Similarly, large power generators work in this way. With a source of energy, like Niagara Falls, a one builds a system of pipes to direct the fall of the water to a bank of turbines which spin coils of wires in a magnetic field, generating electricity.

Motors to transform electrical energy into mechanical energy also began to be developed in the 1830's, although commercially efficient ones were not developed for a couple more decades. This was followed by the invention of electric light bulbs, the telephone, etc.

Today, fifty years after the assassination of President John Kennedy, the last American System president, we've become accustomed to stagnation.. By looking back to the period of the 1830's through the 1880's, and its rapid development, driven by the railroads and the telegraph, we see what America was once capable of doing. This same period was also a time of deep crisis for the British empire following the defeat of the Confederacy in the U.S. Civil War. Nations throughout the world were orienting toward the American System. At the Centennial Exhibition in Philadelphia in 1876, the great works of American technology were on display, and scientists and industrialists from around the world, like Mendeleyev and Emil Rathenau, came to marvel and learn from America. (footnote on Centennial)

Now is the time to revive that productive, creative American System. “The Four New Laws to Save the U.S.A. Now! Not an Option: An Immediate Necessity” by Lyndon LaRouche, provide a compact policy statement to do just that. (1)

End of Part II

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http://chinese.larouchepub.com/sites/default/files/text/RW_NF_LAR_SUN_scdan.pdg

"Sun Yat-sen's Legacy and the American Revolution," by Robert Wesser and Mark Calney, Executive Intelligence Review, October 28, 2011. http://www.larouchepub.com/eiw/public/2011/eirv38n42-20111028/42-50_3842.pdf

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"Engines of Our Ingenuity," by John H. Lienhard. **http://www.uh.edu/engines/epil1462.htm)**

Notes

Part I

1. "A Strategy for the New Year," by Lyndon H. LaRouche, Jr., LaRouchepac.com; http://larouchepac.com/node/29313.

2. Ibid.

(3) The Erie Canal was one of the greatest achievements of engineering up until that time. The canal was 363 miles long, forty-feet wide and four feet deep, Eighty-three locks were required to lift and lower the boats 675 feet.

(4) For example see, "John Quincy Adams Battles For the American System" by Denise M. Henderson, Executive Intelligence Review, November 16, 2007. http://www.larouchepub.com/eiw/public/2007/eirv34n45-20071116/56-71_745.pdf)

(5) "What Hath God Wrought-- The Transformation of America, 1815-1848," by Daniel Walker Howe, (Oxford University Press, New York, 2007), pp. 214-215.

(6) From a discussion with associates. Date unknown.

(7) Howe, Op. Cit., as quoted in. pp. 208-210.

(8) "The Federalist Papers," by Alexander Hamilton, James Madison and John Jay, (The New American Library, New York,1961) Number 78, pp. 464-472.

(9) "The Wept of Wish-Ton-Wish," by James Fenimore Cooper (D. Appleton & Company, New York).

(10) As quoted in, "Sun Yat-sen and the American Roots of China's Republican Movement," by Mark Calney, 2010. Page 6. http://larouchejapan.com/japanese/drupal-6.14/sites/default/files/text/Sun-Yat-sen-American-Roots-article.pdf;

A version of this report was published under the title, "SunYat-sen's Legacy and the American Revolution," by Robert Wesser and Mark Calney; Executive Intelligence Review, October 28, 2011, pages 42-50; http://www.larouchepub.com/eiw/public/2011/eirv38n42-20111028/eirv38n42-20111028.pdf)

(11) "Engines of Our Ingenuity," by John H. Lienhard. http://www.uh.edu/engines/epil1462.htm)

(12) Calney, Op. Cit., "Sun Yat-sen and the American Roots of China's Republican Movement."

(13) Jedidiah Morse D.D., "Annals of the American Revolution," (Hartford, 1824), p. 386. As quoted by Mark Calney in, "Sun Yat-sen and the American Roots of China's Republican Movement.," 2010; page 5. http://larouchejapan.com/japanese/drupal-6.14/sites/default/files/text/Sun-Yat-sen-American-Roots-article.pdf

(14) Calney, Op. Cit., "Sun Yat-sen and the American Roots of China's Republican Movement," p. 6.

(15) Ibid., pp. 1-2.

(16) Ibid., p. 23.

(17) The following reports by this author provide some of the content and history of the American System:

"The American System: Henry W. Corbett and Howard V. Morgan of Portland, Oregon," by Patrick Ruckert, February 19, 2013. Unpublished but available here:
http://amatterofmind.org/Pierres_PDFs/GUEST%20CONTRIBUTIONS/POLITICAL_/1._CORBETT_AND_MORGAN_DEFENDERS_OF_THE_AMERICAN_SYSTEM.pdf

"The California Water Crisis, the California Water Management System, and the Solution—NAWAPA , Part I," By Patrick Ruckert, July 23, 2013. Unpublished, but available here:
http://amatterofmind.org/Pierres_PDFs/GUEST%20CONTRIBUTIONS/POLITICAL_/California%20Water%20Crisis%20by%20Patrick%20Ruckert.pdf

A published, but shorter version of the above report is in *Executive Intelligence Review*; September 27, 2013. The links are:
http://larouchepub.com/eiw/private/2013/2013_30-39/2013-38/pdf/20-26_4038.pdf
http://larouchepub.com/eiw/private/2013/2013_30-39/2013-38/pdf/27-28_4038.pdf

A video of a lecture on the subject of this report is on You Tube, at:
Part I: https://www.youtube.com/watch?v=3IqiB-kp4g0
Part II: https://www.youtube.com/watch?v=nfgrt6aRXts
Part III: https://www.youtube.com/watch?v=5eK1xUZhRIc

"The Fight to Build the Grand Coulee Dam and the Economic Revolution that Transformed the Nation," by Patrick Ruckert, February 23, 2013. Unpublished, but available from the author at patruckert@hotmail.com. A video of a lecture on the subject of this report is on You Tube, at:
Grand Coulee Dam - History of the Battle to build it - By Patrick Ruckert
or, here: https://www.youtube.com/watch?v=znWVTrD_FcU

(18) "The Olive Branch: Or, Faults On Both Sides, Federal And Democratic. A Serious Appeal On The Necessity Of Mutual Forgiveness And Harmony," by Mathew Carey (1760-1839), published in 1814, and republished over subsequent years, is one of the best and most polemical accounts of the treason of the New England Federalists that occurred during the War of 1812. The book is available at Amazon.com and on line, at: https://archive.org/details/olivebranch00care

Carey was a dedicated follower of Alexander Hamilton and his American System of Political Economy. His son, Henry Charles Carey (1793-1879), like his father, a publisher, who published the works of James Fenimore Cooper, wrote many books and articles promoting the American System. Henry Carey was also an economic adviser to Abraham Lincoln as he reestablished the American System of Alexander Hamilton with his "Greenbacks" policy.

(19) "Engines of Our Ingenuity," by John H. Lienhard. http://www.uh.edu/engines/epil1462.htm

(20) "Samuel F. B. Morse, His Letters and Journals-- in Two Volumes," by Edward Lind Morse, Volumes I and II, (1914). (Republished by Filiqarian Publishing, LLC./ Qontro, Santa Barbara, CA, 2013. Volume 1, p. 20.

(21) Ibid., Volume 1, p. 20.

(22) Ibid., Volume 1, p. 49.

(23) Ibid., Volume 1, p. 51-51.

(24) Ibid., Volume 1, pp. 54-55.

(25) Ibid., Volume 1, pp. 66-67.

(26) I have unable to relocate this quote, but I am sure it is from Morse's Letters and Journals,s Volume 1.

(27) Ibid., Volume 1, p. 100.

(28) Ibid., Volume 1, p. 70.

(29) Ibid., Volume 1, pp. 74-75.

(30) "Lightning Man-- The Accursed Life of Samuel F. B. Morse," by Kenneth Silverman, (Alfred A. Knopf, New York, 2003), p. 33.

(31) Ibid., p. 38.

(32) Ibid., p. 118.

(33) Ibid., p. 113.

(34) Ibid., p. 64.

(35) "James Fenimore Cooper and his Family in Samuel Finley Morse's Painting: The Gallery of the Louvre," by James Crawford; presented at the 14th Cooper Seminar, "James Fenimore Cooper: His Country and His Art," at the State University of New York College at Oneonta, July, 2003.

(36) Henderson, Op. Cit.

(37) Morse, Op. Cit., Volume 1, p. 145.

(38) "Samuel F. B. Morse: The Leonardo of America," by Pierre Beaudry, October 1, 2008., page 13. Available on: Pierre Beaudry's Galactic Parking Lot: http://amatterofmind.org/Pierres_PDFs/AMERICAN_ART_I/BOOK_I/4._SAMUEL_F_B_MORSE%27S_GALLERY_OF_THE_LOUVRE.pdf

(39) The Academy of Fine Arts was built on the British system model, that ensured that only the wealthy and privileged would be allowed to participate in the most creative activity of any civilization. Another of the founders of the National Academy of Design, and its first Vice-President, William Dunlap, in his book, "A History of Rise and Progress of the Arts of design in the United States," wrote:

"The Academy of fine arts was a 'joint stock company,' composed of persons of every trade and profession, who thought the privilege of visiting the exhibition an equivalent for twenty five dollars-- such persons were the electors of the directors, and entitled to be themselves elected directors. Artists could only share those privileges by purchasing stocks, and might be controlled in everything respecting their profession by those who were ignorant of the arts. Artists had sprung up who might challenge competition with any in the world, and maintain the challenge."
As quoted in "Samuel F. B. Morse: The Leonardo of America," by Pierre Beaudry, October 1, 2008. Available at: Pierre Beaudry's Galactic Parking Lot: http://amatterofmind.org/Pierres_PDFs/AMERICAN_ART_I/BOOK_I/4._SAMUEL_F_B_MORSE%27S_GALLERY_OF_THE_LOUVRE.pdf

This article by Pierre Beaudry, and another of his articles, "Samuel F. B. Morse's Gallery of the Louve," are invaluable works for providing an excellent summary history of this development, a detailed examination of the mind of the creative artist, and a picture of the ideas behind Morse's artistic identity. I shall refer to both of these papers again, later in this report. Here is the link to "Samuel F. B. Morse's Gallery of the Louve: http://amatterofmind.org/Pierres_PDFs/AMERICAN_ART_I/BOOK_I/4._SAMUEL_F_B_MORSE%27S_GALLERY_OF_THE_LOUVRE.pdf

(40) Silverman, Op. Cit., p. 82.

(41) Morse, Op. Cit., Volume1, p. 160.

(42) Silverman, Op. Cit., p. 104.

(43) Edourd Rene Lefebbvre de Laboulaye was a scholar, poet, author and anti-slavery activist, who organized support for the Union during the U. S. Civil War. He was a zealous supporter of the United States Constitution and looked to the U.S. as the model that France should follow. He is also the man who proposed creating a monument to be given as a gift to the United States. His friend, the sculptor Frederic Auguste Bartholdi, executed that monument-- The Statue of Liberty-- which was paid for by donations from French citizens and presented to the U. S.

(44) "Dr. Lefebvre's American Dream," by Carol E. Harris, The New York Times, April 1, 2014; The Opinion Page- Disunion. http://opinionator.blogs.nytimes.com/2014/04/01/dr-lefebvres-american-dream/?_php=true&_type=blogs&_r=0)

(45) "The Bravo- A Tale," by James Fenimore Cooper; Horace Billings & Co., New York, 1835). Silverman discusses Morse's time in Venice in a similar way. Op cit., Silverman, page 110.

(46) Silverman, Op. Cit., p. 110.

(47) "The Greater Journey-- Americans in Paris," by David McCullough, Simon and Schuster, 2011, p. 75.

(48) A more detailed report on this activity is found in " The Fight for the Republic: James Fenimore Cooper and The Society of the Cincinnati," by Patrick Ruckert, Executive Intelligence Review, October 26, 2007, pages 62-71. **http://www.larouchepub.com/eiw/public/2007/eirv34n42-20071026/eirv34n42-20071026.pdf .**

(49) Morse, Op Cit., Volume 1, p. 229.

(50) As quoted in "The Myth of Andrew Jackson Destroyed," by Michael Kirsch; Larouche PAC, 2012; p. 37. Out of print, but available at http://larouchepac.com/andrewjackson.

(51) Alexander von Humbolt, a collaborator of Friedrich Schiller, must be considered a universal genius. He created the field of biogeography with his explorations of South America and his 21 books on the geography and botany of this huge area. His unifying of various fields of scientific study makes him a forerunner of the great Russian-Ukrainian biogeophysicist Valadimir Vernadsky.

(52) "James Fenimore Cooper and his Family in Samuel Ginlay *Morse's Painting: The Gallery of the Louvre*," by James Crawford; presented at the 14th Cooper Seminar, "James Fenimore Cooper: His Country and His Art" at the State University of New York College at Oneonta, July, 2003.

(53) Beaudry, Op. Cit., pp.s 8-9.

(54) Beaudry, Op. Cit., "Samuel F. B. Morse's Gallery of the Louvre," p. 5.

(55) Crawford, Op. Cit.

(56) Morse, Op. Cit., Volume 1, p. 223.

"The Sea Lions Or, The Lost Sealers," by James Fenimore Cooper, 1848. The copy I used was published by D. Appleton & Company, New York, probably in the 1940s or 1950s.

(57) Morse, Op. Cit., Volume 1, p. 224.

(58) Ibid., Volume 1, p. 226.

(59) Ibid, Volume 1, pp. 227-229.

(60) Silverman, Op. Cit., p. 119.

(61) Ibid., p. 119.

(62) Morse, Op. Cit., Volume 2, p. 10.

(63) Silverman, Op. Cit., p. 132.

(64) Morse, Op. Cit., Volume 2, p. 11.

(65) Ibid., Volume 2, p. 11.

(66) Ibid., Volume 2, p. 12.

(67) Beaudry, Op. Cit., "Samuel F. B. Morse's Gallery of the Louvre," p. 27.

(68) Morse, Op. Cit., Volume 2, pp. 15-16.

(69) Ibid., Volume 2, p. 19.

(70) Ibid., Volume 2, p. 21.

(71) Ibid., Volume 2, p. 21.

(72) Mr. Prime is Samuel I. Prime, a writer, editor, art critic and collector. He was a substitute editor of the New York "Observer," owned by Morse's brother Sydney. Prime wrote, perhaps, the first biography of Morse, in 1875, "The Life of Samuel F.B. Morse,"

(73) Morse, Op Cit., Volume 1, page 233.

(74) "The Letters and Journals of James Fenimore Cooper," edited by James Franklin Beard, (Belknap Press Harvard, Volume 4, 1960), page 80.

(75) Morse, Op. Cit., Volume 1, pp. 233-234.

(76) Ibid., Volume 2, p. 9.

(77) Ibid., Volume 2, p. 27.

(78) Ibid., Volume 2, p. 31.

(79) Kirsch, Op. Cit.

(80) Howe, Op. Cit., p. 331.

(81) Morse, Op. Cit., Volume 2, p. 46.

(82) Kirsch, Op. Cit.

(83) Morse, Op. Cit., Volume 2, p. 49.

(84) Ibid., Volume 2, p. 71.

(85) Ibid., Volume 2, p. 117.

(86) Silverman, Op. Cit., p. 245.

(87) "The Life of Samuel F. B. Morse," by Samuel Irenaeus Prime, *(*Appleton & Company, New York, 1875).

(88) Kirsch, Op. Cit.

(89) Silverman, Op. Cit., p. 135.

(90) Ibid., page 142.

(91) While the details of these developments are not an appropriate topic for this report, a few words about the Kansas-Nebraska Act are in order here, so that the reader may have a just appreciation for the affects of the 1850s developments on Morse, and the entire country. The Missouri Compromise of 1820, regulated slavery in the Western Territories-- our Mid-West today. It prohibited slavery in the unorganized territory of the Great Plains north of the 36th parallel and permitted it in Missouri and the Arkansas Territory. That is what we know as the Mason-Dixon line. The Kansas-Nebraska Act implicitly repealed the Missouri Compromise, opening up the Kansas and Nebraska territories to slavery if the settlers there voted for it. This was called by its sponsor Steven Douglas-- Lincoln's opponent in the 1858 Lincoln-Douglas debates-- "popular sovereignty." The result was what is referred to as "Bloody Kansas," as pro and anti-slavery forces squared off in both states. Then the Dred Scott decision of 1857, in addition to declaring that Blacks could never be citizens, also declared that the Missouri Compromise was unconstitutional.

(92) Morse, Op. Cit., Volume 2, p. 163.

(93) Silverman, Op. Cit., p. 375.

(94) Ibid., p. 403-404.

(95) Howe, Op. Cit., p. 160.

(96) Morse, Op. Cit., Volume 2, p. 214.

(97) Silverman, Op. Cit., p. 394.

(98) Ibid., p. 397.

(99) From "An Argument on the Ethical Position of Slavery in the social system, and its relation to the politics of the day," New York, Papers from the Society for the Diffusion of Political Knowledge, no. 12, 1863 in Slavery Pamphlets #60, Beinecke Rare Book and Manuscript library, Yale University.

(100) Morse, Op. Cit., Volume 2, p. 217.

(101) Silverman, Op. Cit., pp. 401-402.

(102) Morse, Op. Cit., Volume 2, p. 238

(103) Ibid., Volume 2, p. 239.

(104) Ibid., Volume 2, pp. 240-241

(105) Silverman, Op. Cit., p. 429.

(106) Morse, Op. Cit., Volume 2, p. 246.

(107) Ibid., Volume 2, p. 248.

(108) Ibid., Volume 2, p. 248.

(109) Ibid., Volume 2, p. 258.

(110) Ibid., Volume 2, pp. 263-264.

Part II

(1) "THE FOUR NEW LAWS TO SAVE THE U.S.A. NOW! NOT AN OPTION: AN IMMEDIATE NECESSITY" by Lyndon H. LaRouche, Jr., June 8, 2014; larouchepac.com.
http://larouchepac.com/files/20140608-larouche_four-new-laws-to-save-usa_final_final_1.pdf)