The Voluntaryist

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"If one takes care of the means, the end will take care of itself."

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Chaos In The Air: Voluntaryism Or Statism in the Early Radio Industry?

By Carl Watner

Historical Overview

In the history of technology in the 20th Century, one of the most rapidly developed and marketed scientific advances was the radio, or the wireless, as it was originally called. Invented by Guglielmo Marconi in the late 1890s, the commercial value of wireless telegraphy was at first believed to be in the transmission of Morse code in ship-to-shore communications. Government intervention from the very beginning influenced how the wireless evolved. In the United States, the laws regulating the radio industry eventually became some of the most severe, the most drastic, and most confining of those affecting any American business. Nevertheless, the history of the radio industry is an interesting example of voluntaryism at work. Never in his wildest dreams did Marconi imagine the development of commercial voice radio broadcasting as it emerged in the United States by 1930, with hundreds of stations transmitting into millions of homes. Nor did Marconi or others understand the homesteading process by which the free market was developing property rights (freedom from interference) in the radio spectrum. Whatever progress was being made in this direction was destroyed by federal legislation in the late 1920s. "Chaos in the air," an expression some historians have used to label the early phases of the radio industry, was really the result of statism, not voluntaryism.

I. The Invention Of The Wireless And Its Early Development

Guglielmo Marconi (1874-1937) was the Italian inventorentrepreneur who came to England in 1896, and took out the world's first (British) patent for wireless telegraphy based on the use of electric waves. A year later, he and his relatives formed the Wireless Telegraph and Signal Company. From the very start of his experiments in England, Marconi recognized the commercial and military value of his invention. He provided wireless demonstrations to officials of the British Post Office, and other countries. By 1898, he had established communication between England and France across the English Channel, utilized wireless in naval maneuvers, and seen the first military application of his invention in the Boer War.

In order to commercially exploit his invention, at the turn of the century Marconi formed a subsidiary company, called Marconi International Communications, which leased trained operators and equipment, rather than charging for individual messages which those operators transmitted. Not charging for messages allowed Marconi to circumvent telegraph monopoly restrictions of the British Post Office that "prohibited a private company from sending telegraphic messages for monetary gain." In 1901, he signed an exclusive 14 year contract with Lloyd's of London. Marconi operators and Marconi equipment were used by Lloyd's to keep the home office advised about the status of insured ships. Thus Marconi established a presence in all the major seaports of the world. Meanwhile, since competitors from America and Germany had appeared, the Marconi Company established its most controversial policy, known as the nonintercommunication rule. Marconi operators on ship or shore, could only communicate with other Marconi operators. Clients using other apparatus were excluded from the Marconi network. Only in the event of a serious emergency was this rule to be suspended.

The nonintercommunication rule was the only way Marconi

could benefit from his efforts, given the British Postal regulations that prevented him from sending messages for profit. Nonetheless, when put into practice, it was to have serious international repercussions. In March 1902, Prince Henry of Germany, the Kaiser's brother, was returning to Germany after a highly publicized visit to the United States. He was sailing aboard a German liner, the "Deutschland", which was equipped with wireless equipment made by a German company, Slaby-Arco. None of the Marconi stations on either side of the Atlantic would communicate with the ship because of its rival apparatus. Prince Henry, who tried to send wireless messages to both the US and Germany, was outraged. The ship might as well not have had any wireless equipment on board.

This was just the beginning of "malignant Marconiphobia" on the part of the Germans. In July 1903, a month before the first international wireless conference in Berlin, two competing German firms, Slaby-Arco and Braun-Siemens-Halske, merged to form Telefunken in order to present a united German front against Marconi. This was done with the full support of the German government. Although the Conference was supposed to address a number of wide-ranging issues, the only real issue was the Marconi Company's refusal to communicate with other systems. All the countries at the conference, with the exception of Italy and Great Britain, favored compelling Marconi to communicate with all ships because they opposed his 'de facto' monopolization of the air waves.

'Although the 'Deutschland' incident appeared at first to be a petty confrontation between two rival companies and their respective countries, it was actually a watershed in the early history of wireless. The emerging problems surrounding the technology and its financing and regulation, and the sanctity of each country's territorial air were embodied in the Marconi-German clash. Could a private company, whether it had technical priority or not, gain dominance over a resource such as the airwaves and become arbiter of who could use them and who could not?" Most of the European countries represented at the Conference (Germany, France, Spain, and Austria) had all assumed control of wireless in their own countries-under the guise of its military significance. Whereas Marconi was involved in commercial exploitation, the governments of these countries saw huge strategic value in the airwaves. The American delegates were at a loss since their own government had done so little "to promote or gain jurisdiction over the American wireless situation."

II. The U.S. Government And Other International Regulation

It was not until a year after the conference that the United States government took concerted action to address itself to the benefits of wireless. On June 26, 1904 Teddy Roosevelt appointed the Interdepartmental Board of Wireless Telegraphy, better known as the Roosevelt Board. Its purpose was to report on the consolidation and management of wireless for the government. The board was also to determine how private and government stations could operate without interference. The board submitted their report in August 1904. It suggested that the Navy take responsibility for operating the government's wireless system and begin establishing a complete country-wide radio telegraphy system. The Navy was to receive and send messages free of charge, except it was not to compete with commercial stations. It also recommended licensing of all private stations and supervision of them by the Department of Commerce and labor to prevent "exploitation" and "control by monopolies and trust." Continued on page 3

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Trust Not in Princes

by Carl Watner

"Not worth a Continental," a derogatory expression dating back to the late 1770s, was intended to convey the American populace's displeasure with its own government's inflationary practices during the Revolutionary War. The Second Continental Congress issued great amounts of paper currency to help finance the war against Great Britain. Congress passed price tariffs, and resolved that those who preferred specie to paper should be declared enemies of their country and outlawed. Legal tender laws were passed in each colony, and it was regarded as the highest crime against patriotism to refuse the "Continentals" or discount them. Among those who objected to this forced currency was Samuel Rowland Fisher (1745-1834), a well-to-do Philadelphia Quaker who wanted all members of the Society of Friends to boycott the Continental money. His feelings about these "engines of war" emerged clearly in a remark he once made to a government official. "Your government," he told the man, "if it can be so called, is of exactly a piece with the paper bills issued to carry on the war, which are the greatest lies, deceptions, and hypocrisy, and for these reasons I could not acknowledge their authority." In short, Fisher recognized the wisdom of the Psalmist who advised, "Put not your trust in princes."

The title for this article was suggested by a book, THE PROMISES MEN LIVE BY, written by Harry Scherman and published in 1938 by Random House. A large part of the text is devoted to an analysis of money and banking, which constitutes one of those areas in our economic life that depends upon deferred exchanges. What does history show of the reliability of governments, in respect to their economic promises? Their record is almost as black as it can be. Scherman uses the Biblical quotation from Psalms 146:3 to suggest that the ancients understood that the monetary promises of their rulers were not likely to be fulfilled. He then notes that in the Twentieth Century alone there has been "a well-nigh universal welching on the part of governments in the deferred exchanges they had entered into with their own citizens and foreigners-both by direct repudiation and by monetary subterfuge." The inherent dishonesty of most rulers throughout history "stands in sharp contrast to the integrity and sense of responsibility of the individual, which has been built up through long social evolution."

Although the outward signs of money have changed throughout the ages, the game of rulership has not. The neverending effort of the State to control the resources of its own citizens, and others, continues. How much can be seized, with the least amount of squawking, and from whom? This has been the immemorial problem of the ruling class in every community, large and small, in history. In addition to outright taxation, one of the major ways in which State rulers have extracted real wealth from individuals is through their monetary manipulations. The coining of money, which began as a practice of merchants to insure the quality and quantity of gold or silver in a metal ingot, has nearly always been aggrandized by governments. Their cheating has ranged from filing off the edges of gold and silver coins, to passage of legal tender laws and re-definition of the monetary unit, to establishing central banks, to the outright seizure of gold, and the repudiation of their promises to pay specie (such as the United States in 1933).

We moderns have become so habituated to using paper money and bank credits, that few of us realize that the "money" we are handling is simply a form of government debt. As our Government removed gold from circulation, it issued gold and silver certificates, which were in effect warehouse receipts, or promises that their notes could be exchanged for the gold and silver stored in the Treasury. As the Government's appetite for wealth increased, it not only increased our taxes, but removed the gold and silver backing from our currency in order to place more of its own IOU's in circulation. Thus, the \$10 bill in your pocket is nothing more than a debt of the United States Government-that is, a promise. But, a promise to pay what? The United States Government will not convert the bank notes we pass from hand-to-hand into anything real. If you present a Federal Reserve note to the United States Treasury, you will only get more paper money in exchange. (Hence, what I term a promise to fulfill a promise. The Treasury simply issues new IOUs to redeem its previously issued promises.) These IOU's are nothing more than "promises to pay nothing."

When the monetary statistics of the United States are examined, it becomes apparent how precarious our financial position really is. The total money supply of the United States is about \$800 billion. This figure included coins, currency, and money on deposit. Yet, the actual supply of bank notes and coins only totals about \$292 billion. If everyone were to demand cash for their bank deposits at the same time, there obviously would not enough cash to go around. The gold holdings of the Government (260 million ounces, or \$104 billion, valuing gold at \$400 per ounce) does not even purport to relate to the money supply. Perhaps the real question, though, is what is the net worth of the United States Government? To what extent, if any, do its assets exceed its labilities? The Government's public debt stands in the neighborhood of \$3 trillion, or well over \$10,000 for each man woman, and child in the U.S. What is the per capita net worth of the private sector? How does it compare to each person's assigned share of the public debt? How bankrupt are we? The credit of the United States Government is largely maintained by its continuing ability to "lay and collect" taxes.

The vaunted productivity of the American people stands behind their Government's credit worthiness. But this productivity belongs to the people—not the Government. When the Government denounces gold as a barbarous relic, it conveniently overlooks the fact that gold acts as a brake on its avarice and insatiable greed. C.V. Myers once said that scales, yardsticks, and counting devices are used because there is no other way to keep mankind honest. For the State to denounce gold is like the butcher claiming he gave you full weight, even though his scale shows he short-changed you. Who do you believe, the butcher or his scale? Has history proven governments more or less trustworthy than private enterprise? One of the reasons that gold became the world's money was because people could not depend on their governments to fulfill their monetary promises.

When the ancient Psalmist wrote, "Put not your trust in princes," he really gave us an expression implying that governments inevitably break their promises and self-destruct. To help prevent history from repeating itself, we must break the statist syndrome. Money originated as an instrument of trade and commerce, and if there is any chance for it to remain honest, it must return to its original functions—being a medium of exchange and a storehouse of value. Once again, money must become a free market institution—a money in which the ruling cliques of the world play no part. \mathbf{M}

"Insanity is a rare thing in individuals, but habitual to groups, parties and ages." —Freidrich Nietzsche

Chaos in the Air

Continued from page 1

The Navy's attitude was best explained by its attitude toward monopoly. The naval officers on the Roosevelt Board were not opposed to monopoly, per se, for they favored naval control of wireless. They simply opposed civilian or commercial monopoly which would take control out of their hands.

The U.S. Navy displayed a cavalier attitude towards wireless from the very first. American inventors, such as John Stone, Reginald Fessenden, and Lee De Forest, had formed their own companies to compete against Marconi, and produce their own wireless apparatus. All of them encountered a naval attitude that was "inhospitable to inventors, and unappreciative of their technical goals and financial needs." In August 1904, when the Navy scheduled its first wireless trials, it set impossible requirements, such as requiring guarantees that apparatus built by one company would communicate with another. After inspecting the equipment supplied by various companies, the Navy refused to respect their patents. In the case of Reginald Fessenden, he advised the Navy in late 1904, that they were infringing on his patent for the electrolytic detector. The Navy considered itself under no obligation to respect his patent, even after Fessenden won numerous court decisions in his favor. Ultimately he had to obtain an injunction and a contempt of court citation to prevent one of his competitors from supplying the Navy with pirated copies of his apparatus.

In October 1906, the second International Wireless Conference took place in Berlin. The second conference was again called by Germany, because nothing had been solved by the first conference. Twenty-seven countries sent delegates. Again, as at the first conference, the nonintercommunication policy of the Marconi Company was the primary issue. The American delegates introduced a resolution endorsing compulsory intercommunication, whether it be ship-to-ship, or ship-to-shore. All but the delegates of Britain, Italy, and Japan accepted these resolutions. The compromise that emerged from the conference required every public shore station to communicate with every wireless-equipped ship, and vice versa, without regard to the system of wireless telegraphy used by either. With this major issue out of the way, both the German and American delegates went on to tackle other issues which would bolster military control. "To that end they supported the revolutionary German proposal that the ether be divided into regions by wave lengths, with the military getting the largest and best tracts." The Germans recommended a range of 600 to 1600 meters for naval and governmental use, and 300 to 600 meters for commercial stations and merchant ships. In Germany, where all the stations were government-owned and -operated, this division made no real difference. But in England and America where all the stations were private, except for a few naval stations, this would impose a great hardship on Marconi by relegating all private stations, to an inferior portion of the spectrum. This proposal

Such Is Progress

"Modern individualism is the history of the authorities being unable to control a lot of loose people floating around. It was only fairly recently that everyone had to have an individualized name, whether they wished it or no. Then came Social Security and other identifying numbers. Now we are going to have individual bar codes, just like loaves of bread and all else on the market. In all secured places, or whenever representatives of authority check you out—your bar code will be scanned. When that day arrives, and it's not far away, you will be automatically suspect if caught without your piece of plastic carrying your bar code."

-Robert Sagehorn

was supported by the American delegates, "hoping it would ease the U.S. Navy into a preeminent position in American wireless: the Navy hoped to gain through regulation what it had failed to achieve technically."

Other regulations were worked out at the conference. All shipboard stations were to be licensed by the country under whose flag they sailed. Shipboard operators were also to be licensed. It was at this conference that the international distress code was decided upon. Britain preferred its own CQ (supposedly from 'seek you'), but the Germans insisted on their SOE. Since the letter 'e' was only one dot and could get easily lost, it was decided to use SOS. When Great Britain ratified the treaty in 1908, Parliament agreed to compensate the Marconi Company through a threeyear subsidy, that would make up for any loss it would suffer as a result of the abridgement of its nonintercommunication policy.

III. Developments in American Radio

When the American delegates to the second International Wireless Conference returned home, they were surprised that public sentiment was against ratification of the treaty. By late 1906, numerous developments, unique to the American radio scene had taken place. For one thing, American wireless activity had not been confined to the military or to business. The ubiquitous amateur had appeared, prompted by the discovery of the crystal detector which made possible a sensitive, durable, and inexpensive receiving apparatus. The father of science fiction and an avid promoter of wireless as a hobby, Hugo Gernsback had already opened his radio emporium, Electro-Importing Company, in New York City, for the amateur. His shop was the first in the United States to sell wireless apparatus appropriate for home use directly to the public. By 1910, the amateurs surpassed both the US Navy and United Wireless (the largest private wireless company) in both quantity of operators, and usually in the quality of apparatus. The Wireless Association of America, which Hugo Gernsback had also started, claimed ten thousand members by 1910, and the NEW YORK TIMES estimated that 122 wireless clubs existed in America by 1912.

Another development, to have more impact in the future, was that Reginald Fessenden had reported the first successful voice transmission by wireless in October 1906. At the same time, Lee De Forest announced the invention of his new receiver, the audion, an early version of the radio vacuum tube. Both of these inventors foresaw the possibilities of radiotelephony (wireless voice transmission), not only for point-to-point messages, but for broadcasting speech and music. This conception of radio was "original, revolutionary, and quite different." Instead of offering institutional customers a substitute system similar to one they already had, De Forest (in particular) was suggesting a new technical and entertainment system to be marketed to ordinary people. De Forest envisioned using wireless telephony as a means of making money for himself by delivering entertainment to people in their homes. His idea was buttressed by the occurrence of the first true radio broadcast in American history, which took place on Christmas Eve, 1906. This was done by a competitor, Reginald Fessenden, and the program included music from phonograph records, live violin music, singing and live speech. A similar program was repeated on New Year's Eve.

The collision of two ships, the REPUBLIC and the FLORIDA, in January 1909, precipitated the first government regulation of wireless in America. The two ships, carrying over 1200 passengers, rammed one another 26 miles south of Nantucket. Two people were killed, and hundreds injured, but the remainder were saved as a result of the efforts of Jack Binns, wireless operator on the REPUBLIC, who transmitted SOS messages until a rescue ship arrived. Realizing that the wireless provided a safety net to ships at sea, Congress passed the Wireless Ship Act on June 24, 1910. "It provided that any ocean-going steamer sailing in or out of United States ports, carrying fifty or more persons, and plying between ports two hundred miles or more apart, be equipped with 'efficient apparatus for radio-communication, in good working order, in charge of a person skilled in the use of such apparatus'."

By 1910, wireless had existed in America for a decade. The US Congress had not ratified either of the international treaties of 1903 or 1906, and the commercial companies had lobbied against any type of regulation whatsoever. The increased use of the air waves led to a three-way struggle between the amateur radio enthusiasts, the U.S. Navy (representing the American military establishment) and the commercial business interests. As radio was uncharted ground (and at this point in time not yet regulated domestically by the federal government) there were no guidelines for doing away with interference or establishing priority to portions of the airwaves. The commercial companies were loath to take this dispute into the public arena for fear of suggesting that wireless was still unreliable and needed public regulation. If the commercial companies could not overpower their competitors, they resorted to gentlemen's agreements among themselves. "For example, the one hundred members of a wireless club in Chicago worked out an air-sharing agreement with the local commercial operators which was designed to reduce interference for both groups."

Military officials began lobbying in Washington, as early as 1909, for stricter regulations or elimination of the amateur on the grounds of safety at sea and national security. Amateur interference with Navy ships at sea, as well as base naval stations rankled the Navy to no end. The amateurs issued charges of their own against the Navy: that many naval operators were incompetent and that the Navy used antiquated equipment. The amateurs were not willing to accept the national security argument when the Navy itself had done little to "ensure that wireless would help preserve that security." According to the amateurs the Navy should have to clean up its own act before it called for restricting the amateurs. In short, the amateurs took "proprietary attitude toward the airwayes they had been working in for the past five years." The Wireless Ship Act of 1910, which had gone into effect in July 1911, ultimately worsened radio interference, especially at port, because more and more ships were equipped with radio apparatus. By 1912, numerous bills had been introduced in Congress to diminish pollution of the ether, as radio interference was called, though none were passed.

IV. The Radio Act of 1912

The sinking of the TITANIC occurred on April 15, 1912, and acted as a catalyst for renewed federal action. As the disaster unfolded in the press, the status of wireless and wireless regulation "were permanently altered." One ship, within twenty miles of the TITANIC, was equipped with wireless, but its sole operator had retired for the night, and the captain had shut down the ship's engines (which generated the electricity for the apparatus) while travelling through the iceberg field. Another ship, thirty miles away had no radio apparatus aboard. The CARPATHIA, which was fifty-eight miles away, and which rescued the survivors in lifeboats, only received the TITANIC'S SOS by luck. The ship's operator had returned to the wireless room to verify the ship's time and overheard the disaster signal when he put on his headphones. Soon after the CARPATHIA reached New York, the Senate Committee on Commerce began holding its preliminary hearings into the TITANIC disaster.

Within four months of the Senate hearings, the whole American radio scene shifted dramatically in the statist direction. Not only would the government supervise and regulate the air waves, but transmitting in the ether would no longer be an inherent right, but rather a privilege assigned by the State. Safety at sea was not the only legislative concern. Other political influences were at work. The Senate, on April 3, 1912, finally endorsed the treaty prepared at the second International Wireless Conference of 1906. "A third convention was scheduled for June 1912, and the United States was informed that its delegates would not be welcome unless it ratified the treaty." Such inaction would place the United States outside the pale of the other "civilized" nations, all of which embraced statist control of the air waves. To remedy this, Congress passed appropriate legislation.

The Radio Act of 1912, which was to regulate radio until 1927, was approved on August 13, and took effect four months later, on December 13, 1912. The most significant passage in the Act



was the provision that the Secretary of Commerce be empowered to issue licenses and make other regulations to sort out the wireless "chaos." The Act required that all operators be licensed by the government, that stations use certain assigned frequencies, and that distress calls were to receive the highest priority. Amateurs were assigned a portion of the spectrum then considered useless-short waves of 200 meters or less. Congress finally adopted the international distress signal and mandated that every shore station listen in on the 300 meter band (the wavelength assigned for emergencies) every fifteen minutes. "Intercommunications between systems was compulsory," and fines were provided for "irresponsible transmission" and "malicious interference" (at the time of the TITANIC disaster, amateurs had interrupted rescue efforts and provided false reports about the progress of the rescue mission). The new legislation allocated wavelengths according to the 1906 International Conference, so the military received the most useful wave bands. Naval stations were required to transmit and receive commercial messages if there was no commercial station within a 100 mile radius. The 1912 Act limited the issuance of licenses to citizens of the United States, and empowered the president "to close private wireless stations, or to authorize the government to take them over" in the event of war or disaster. The American Marconi Company supported the new regulations, which reinforced its own commercial monopoly in the U.S., since it had bought out or driven out of business its main competitors. "With the amateurs assigned to the short waves and the Navy to the 600 to 1600 meter range, the regulation ensured that in America, the Marconi Company would have portions of the spectrum entirely to itself.

The Radio Act of 1912 clearly represents a watershed in the history of wireless. The "one critical precedent this law established in broadcast history was the assumption" that the ether was a collective national resource of the people of the United States, rather than private property of the first person or persons that used it regularly. "Another precedent established was that the State would assume an important role in assigning property rights in the spectrum." There would be no free market or private property rights in the ether. Instead the federal government would implement and protect "the people's interest" in spectrum use by some standard of "public convenience and necessity." Particular wavelengths could not be bought and sold. "Rather, the State would determine priority on the basis of claimed needs, previous investment, and importance of the messages. Those claims would be acknowledged by wavelength allocations. What established merit in 1912 was capital investment or military defense, coupled with language that justified custodial claims based on an invaluable service to humanity. This, too, was a significant precedent. For, under the guise of social responsibility, of protecting the lives of innocents, and of managing a resource more efficiently, the military and a communications monopoly secured dominant positions in America's airwaves.'

V. World War I Nationalization and the Formation of RCA During the second decade of the 20th Century, the single most important influence on American radio was "the Navy's increasingly proprietary attitude toward America's wireless system." Josephus Daniels who was Secretary of the Navy from 1913 to 1921, was "an outspoken advocate of complete naval control of American wireless." "World War I provided a most favorable political and ideological climate for the promotion of military wireless ambition" in the United States. The war was used as an excuse for the Navy to gain full control over American wireless. Under the Radio Act of 1912, when the US formally declared war on April 6, 1917, President Wilson closed down or assumed control over all private radio stations in the United States. Amateurs were ordered off the air, and told to dismantle their stations (local police in New York searched for and seized over 800 amateur stations). Fifty-three stations (mostly American Marconi's) were taken over and added to the Navy's communication network. Another twenty-eight stations were closed down. By the end of the war, the Navy owned 111 of the 127 commercial stations then in existence.

During 1918, the Navy's obsession to obtain total control of American radio was nearly achieved. Under its war powers, the Navy bought out one of Marconi's major competitors, Federal Telegraph, in May 1918, to prevent its being purchased by Marconi. Thus by the end of 1918, the Navy controlled all of the major elements of the budding broadcast industry, except-the amateurs (who were at that time outlawed), Marconi's long distance stations, the patent on the vacuum tube, and General Electric's alternator. Since the military, especially the Navy, was the only buyer of radio equipment during the war, it was able to dictate equipment specifications, production schedules, suppliers, and prices. The Navy even threatened the Crocker-Wheeler Company with government take-over, when it refused to turn over the blueprints of its motor-generators to its chief competitor, General Electric. The Navy was also responsible for imposing a patent moratorium in the radio industry. This made it possible for suppliers to use the best components, regardless of who owned the patent.

By the summer of 1919, it was clear that the press, Congress, and the public would not support Secretary of the Navy Daniels' attempts to assert control over the post-war wireless industry. Since the Navy was afraid that the Marconi Company would regain its prominence and have control of, or access to, American technology, naval officials began orchestrating the formation of an all-American company that would buy out American Marconi. Such a company would forever end all foreign interests in America's wireless communication network. This new company was to be the Radio Corporation of America, and it was incorporated with the Navy's blessings in October 1919. E.J. Nally, president of American Marconi, became the first president of RCA. American Marconi was forced to turn over all of its stations and employees to the new corporation, which was formed as a government-sanctioned monopoly.

Even after the formation of RCA, the Navy remained a potent influence in the post World War I environment. Stanford Hooper of the Navy engineered industrial cross-licensing agreements of radio patents between members of the Radio Group or Radio Trust. This group included RCA, GE, Westinghouse, and United Fruit (whose wireless operations combed Central America). The

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Supplies subject to availability. Indicate your second choice or if you wish us to make selections for you. Send your payment, order, name and address to THE VOLUNTARYIST, Box 1275, Gramling, SC 29348. most important legacy, however, left by naval control of radio during World War I was the belief that radio was a natural monopoly and that only as a monopoly could radio function in the U.S.

VI. The Post-War Amateur Boom and Commercial Broadcasting

Although amateur radio had a strong foothold before the war, the government ban on amateur receiving stations was not lifted until April 12, 1919. Amateurs were not permitted to transmit until September 26, 1919. Groups like the American Radio Relay League, which had held its first cross-country message relay in 1916, and which had been formed two years earlier to unite radio amateurs in a grass-roots, coast-to-coast communications network, which "made it possible for the private citizen to communicate across great distances without the aid of either the government or a corporation," sprang back into action. By 1920, the Department of Commerce counted over 10,000 licensed amateur radio operators.

Frank Conrad was one of the most famous amateurs. He was a gifted engineer who worked for Westinghouse in Pittsburgh, Pennsylvania. By May 1920, the local newspaper was reporting on his radio concerts, which included live performances on piano, and phonograph music. Seeing an opportunity to increase sales of radio sets, the Joseph Horne Department Store in Sept. 1920 ran an ad in the PITTSBURGH SUN describing the Conrad radio concerts and informing the public that sets capable of receiving these concerts were on sale for \$10. Finally, a Westinghouse vicepresident realized that the real wireless market was in commercial broadcasting. Westinghouse had Conrad set up a commercial broadcasting station at its plant, and began building radio receivers for home use. The Westinghouse station, KDKA began operating Nov. 2, 1920, in time to report on the presidential election.

"Over the next year and a half, the 'broadcasting boom' swept the United States, beginning in the northeast, and moving south and west, reaching unprecedented levels of intensity by the spring of 1922." Many of the features we now take for granted, such as time signal service, broadcasting of baseball games and other sporting events, theatrical programs, and political interviews were all inaugurated during 1921 and 1922. In 1922, the AT&T flagship station WEAF introduced the first advertisements over the air. By 1927, it was estimated that the retail value of receiving sets, parts, and accessories amounted to about \$500 million, compared to about \$2 million in 1920. Over 7.5 million radio sets had been produced in 7 years, and in the same period the number of organized broadcasting stations had grown from one to over 700.

When the first commercial station made application in 1921, for a federal radio license under the Radio Act of 1912, the Secretary of Commerce, who was charged with the issuance and administration of the radio licensing system, found himself in a quandary because it represented a new class of station. Although the Act itself provided for a system which primarily served as a station registry, the Secretary assigned each station a wave length under which it was to operate. Eventually, it was decided to license the station on a wave length of 360 meters, because that would place it far enough from frequencies used by other classes of users, such as ships, the military and amateurs. As other broadcasting stations applied for licenses, they, too, were placed on the same wave length (and eventually on the 400 meter band, too), so that by 1923, there were several hundred commercial transmitters potentially interfering with one another. In many cases, this interference was real because the stations were in close enough geographical proximity to cause interference.

At the same time, the case of Hoover vs. Intercity was decided in the appeal courts. Herbert Hoover, Secretary of Commerce in 1921, had refused to renew the broadcasting license of Intercity Radio Company, Inc. on the grounds that he was unable to find a wave length to assign whose use would not interfere with others. Intercity sued and, in the final decision rendered in February 1923, it was held that "the Secretary of Commerce had no discretion to refuse the license. ..." In effect, the court declared that any one had the right to apply for and receive a license from the Secretary of Commerce, though the Secretary had some discretion in the assigning of wave lengths to them. Partly as a result of the outcome of this case, Hoover called a general conference of all radio interests in an attempt to bring some "order" to the air waves. At the conference, the frequency spectrum was divided up so that each type of radio service (ships, shore stations, transoceanic stations, amateurs, and commercial broadcasters, etc.) had its own special frequency zone, and within the zone, each broadcaster was assigned a particular channel.

This and subsequent annual conferences, helped clear up some of the congestion in the air. So long as there were not too many stations, and none of them were using high power (at the time, a 500 watt station was the standard size) there were few complaints of interference. However, since the Intercity decision did not permit the Secretary of Commerce to deny applications for radio licenses, there was a proliferation of requests. Soon there were over 500 commercial stations in the country, and there was no longer any room in the commercial portion of the broadcasting frequency zone in which to assign them wave lengths. Consequently, by the end of 1925, the Department of Commerce ceased issuing any new commercial radio licenses.

While this was occurring, the government brought criminal charges against the Zenith Radio Corporation for violating the terms of its license which had been granted in early 1925. The Zenith license stipulated that the station must use the wave length of 332.4 meters, and its hours of operations were limited from 10 to 12 pm on Thursday, and then only when the use of this time was not desired by the General Electric Station in Denver. Zenith, by its own admission, broadcast at times and on wave lengths not specified in its license. The decision rendered in April 1926, held that the Secretary of Commerce "had no power to make regulations and was to issue licenses" according to the Radio Act of 1912, whose only requirement was that the wave lengths be less than 600 meters and more than 1600 meters.

As one attorney at the time put it, "As a result of this ruling, the entire regulatory system broke down." The Department could not legally prohibit the issuance of licenses. Within 10 months an additional 200 commercial stations were licensed. In July 1926, the stations then in existence were using 378,000 watts of power. By March 1927, that wattage had nearly doubled. The broadcasting industry was in a state of confusion. Stations would change frequencies as well as the output. Many stations could not air their programs, and the listening public was entirely discouraged and dissatisfied by the fact that nearly every transmission was accompanied by the whistles and squeals from interfering stations.

In an article on the "Law of the Air" published in 1928, it was pointed out that there were two ways in which this predicament might have been handled. First, the broadcasting industry itself must have eventually come to the realization that it was on a self-destructive course, and taken measures to "regulate itself, relying upon the courts to handle the situation in accordance with the fundamental rules of law which had been found applicable in other similar conditions." This in fact was happening. Even before the Zenith decision, some stations had made agreements among themselves as to the hours during which they might broadcast and as to the frequencies they might use. "Many stations made the best of the situation and, by contract, worked out a satisfactory and amicable schedule of hours." Such contracts and agreements had been upheld in federal court (see Carmichael v. Anderson, 14 Fed 2nd 166, July 19, 1926) even apart from the invalidity of any Department of Commerce licensing restrictions.

There was another way in which the broadcast industry was beginning to control its excesses. Many older stations refused to share time with the newer stations and were coming to claim "the exclusive right to use a wave length free from interference, by reason of priority of appropriation." The foremost case upholding the idea of homesteading rights was a state decision in the Circuit Court of Cook County, Illinois on November 17, 1926. In Tribune Co. v. Oak Leaves Broadcasting Station, the chancellor was influenced by four types of common law cases. The two most important were those dealing with prior appropria

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tion of water in the western states and trade-name cases. The western doctrine was that the first appropriator of the water of a stream was rightfully entitled to its use as against all other comers. This doctrine applied to both irrigation and mining and was the outgrowth of the customary usage of the western pioneers. By analogous reasoning, it was held that the Chicago Daily Tribune's station, WGN (World's Greatest Newspaper) had "created and carried out for itself a particular right or easement in and to the use of" its customary wave length, and that outsiders should not be able to deprive them of that right. Furthermore, the use of call letters and dial readings enabled listeners to identify each particular station on their receiving apparatus. These identifiers were similar in nature to trade-marks or tradenames, and were used by the stations to build patronage. popularity, and goodwill. The court concluded that "priority of time creates a superiority in right" in the property of a commercial broadcaster.

The Tribune decision intensified the fear of legislators and regulators that licensees under the Radio Act of 1912 would ultimately be able to assert proprietary rights in the courts. This prompted the passage of a Joint Resolution of Congress on December 8, 1926 that mandated that all existing commercial broadcasting licenses expire in 90 days, and required all "licensees to file their waiver of any assertion of proprietary interest in a license or frequency as against the regulatory power of the United States." This echoed an earlier Senate resolution, passed in 1925, in which the airwaves and the use thereof had been declared to be "the inalienable possession of the people of the United States......" Instead of allowing property rights in the spectrum to develop, Congress passed a new federal radio law on February 23, 1927.

The Federal Radio Act of 1927 strengthened the principle of statism underlying the earlier law of 1912. The new law exerted stringent controls over the broadcasting industry. First, it stated that 60 days after the passage of the act, all licenses would be terminated. Second, it clearly stated that broadcasting was not a right, but rather a privilege granted by the United States. Third, it created the Federal Radio Commission, whose powers were eventually transferred to the Federal Communications Commission in 1934. Finally, it embraced language of the earlier Joint Resolution of Congress by providing elaborate provisions against the assertion of any property rights in a frequency.

In his 1959 article, "The Federal Communications Commission," Ronald Coase analyzed the rationale behind the broadcasting regulatory system and the events which preceded government regulation. He cited Charles A. Siepmann's book, RADIO, TELEVISION, AND SOCIETY (1950) which provides the standard justification for the Radio Act of 1927: "Private enterprise, over seven long years, failed to set its own house in order. Cutthroat competition at once retarded radio's orderly development and subjected listeners to intolerable strain and inconvenience." Coase puts these reasons to rest by explaining that the views of Siepmann and others are faulty because they "are based on a misunderstanding of the problem."

(T)he real cause of the trouble was that no property rights were created in these scarce frequencies. We know from our ordinary experience that land can be allocated to land

users without the need for government regulation by using the price mechanism. But if no property rights were created in land, so that everyone could use a tract of land, it is clear that there would be considerable confusion and that the price mechanism could not work because there would not be any property rights that could be acquired. If one person could use a piece of land for growing a crop, and then another person could come along and build a house on the land used for the crop ... it would no doubt be accurate to describe the resulting situation as chaos. But it would be wrong to blame this on private enterprise and the competitive system. A private-enterprise system cannot function properly unless property rights are created in resources, and, when this is done, someone wishing to use a resource has to pay the owner to obtain it. Chaos disappears; and so does the government except that a legal system to define property rights and to arbitrate disputes is, of course, necessary.

While this is not the place to challenge Coase's assumption that we need a governmental legal system, the main thrust of his argument is true. The fact of the matter is that the participants in the commercial broadcasting industry were acting in such a manner as to bring about the recognition of property rights and of the right to be free of interference in their broadcasting activities. Of course, it is difficult to say what would have happened had the Radio Act of 1927 not been passed. But reviewing the history of wireless and the radio it was nearly a foregone conclusion that the State would somehow assert its dominance in this media. From the very first, the State recognized the wireless' potential as a strategic military weapon. Later it realized its propaganda value. Although it was voluntaryism which made possible the invention of wireless and its commercial developments, it was the aggressive nature of the State and its military that was mostly responsible for the way radio became a handmaiden of the State. \mathbf{M}

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Personal Anarchy

Continued from page 8

and to take as little as possible. When I do take something I try very hard to be *aware* that it has the stench of statism. Here are a few things that I haven't done or supported because they empowered the government.

1) I don't vote.

2) I don't sign petitions asking the government for anything. (I do sign petitions demanding that they *stop* some things.)

3) I oppose government "solutions," even in areas where I agree with the goal because I don't think government solves anything — although it often gives the illusion that something is being done. For example, I oppose the E.R.A., civil rights legislation, bottle bills, food stamps, socialized medicine and so forth. I oppose these things because they make the government look good while not really doing *anything*. For example, it gives the illusion that something is being done about racism and sexism while nothing is really is. It makes people think that there is a quick fix to everything — simply pass a law and pollution, sexual harassment, job discrimination, etc. will end.

4) In those places where I have power (whether I want it or not), I try to practice the spirit of anarchy by minimizing my role and giving others options. Two places where this frequently comes up is in my role as a parent and my role as a teacher. I try to always *ask* my sons or people in my classes to do things and give them the maximum amount of latitude for alternatives.

5) Where I see problems, I try to support non-statist solutions to them. For example, I totally oppose the statist campaigns of Mothers Against Drunk Drivers — not because I favor drunk driving, but because it empowers the government. I oppose drunk driving by wholeheartedly supporting and endorsing safe ride programs. They are totally voluntary, non-statist, and they work.

6) I try to support in every way I can, victims of statism and other forms of power and coercion. This includes support of prisoners, mental patients, the poor and homeless and other outsiders. I try to show this support in personal ways (e.g., moral support, friendship, letters) and through working at and helping financially activities that are non-statist (e.g., church soup kitchens).

In these and other ways, I try to practice anarchy. (After all, everything needs practice.) I do these things not because I think any of them are going to change the world, but because I think they are right. I try to be conscious of whether my actions are limiting, confining, and anti-freedom, or open, option-creating, and freedom-producing. Among other things, this allows me to be involved with non-anarchists and not live a life endlessly judging of others. What I try to keep before my mind is whether what I am doing is dedicated to the spirit of anarchy. That makes anarchy personal, subjective and living, instead of a dead set of facts that I go around trying to apply to other people or situations. It helps terrifically in minimizing the frustration that all anarchists feel as the result of living in a statist world.

Don't misunderstand me. I think we should combat the State in every way we, as individuals, can -- short of martyring ourselves. I think we should witness for anarchy. The best way to do that is to live as freely as we can. To be an example of freedom.One of the very best times to witness for anarchy is when someone asks a question: Why don't you vote? You mean you're saying I can decide what to do? Why don't you support the ERA - I thought you hated sexism? This is the way I witness my vegetarianism too - not by pointing fingers and calling meateaters murderers. I eat vegetarian food wherever I go and sooner or later most people will ask me why. In nearly twenty years of being a vegetarian, many people I know have become vegetarians or near vegetarians - not because of me, but because of themselves. I also know a fair number of people who have become anarchists, or have radically changed their views about government. I think that trying to be a decent human being, emphasizing toleration and love, works far better than being a judgmental witch hunter and proclaimer of heresies. In addition to that, I think it fits into the spirit of anarchy much better. After all, there does seem to be something inconsistent about coercing people into being anarchists. \mathbf{M}

Thanks...

Due to an oversight, I failed to credit Rex May, creator of the "Baloo" cartoons for his contributions to THE VOLUNTARYIST. I am pleased to take this opportunity to acknowledge his work. His humor never fails to bring a smile.

Personal Anarchy

By Michael Ziesing

Tell people you're an anarchist and you'll probably get a reaction. Maybe they'll back away and/or run in sheer terror. (You may have a bomb and know how to use it, after all!) Or maybe they'll spit in your eye and/or try to lock you up. What I get most is a whole lot of questions. And the ones most often asked, by far, are these: In a statist world - one controlled by government - isn't being an anarchist sort of Utopian, even phoney? Do anarchists really believe that we could have a world without government? Many anarchists have tried to answer these questions. They've spent much time and thought considering how anarchy would solve this problem or deal with that issue. In other words, If anarchy were the "rule" in the world, how would it work? Personally, I've never been particularly interested in that line of thought. What I am interested in is anarchy and the world in which I live and act and speak. When people ask me the topof-the-list question, I want to talk about anarchy now. I want to talk about anarchy in the first person. I want to say there or here is my view. I have no intention or desire to speak for the anarchist community, if there even is such a thing. By definition, all anarchists speak for themselves. And what this anarchist wants to talk about is personal anarchy.

All governments – from Iraq to Israel, from China to the U.S.A. – all governments, are based on coercion and force. If you don't want to do what the government says, they will either make you do it, lock you up, take your property, torture you, or kill you. Coercion is exercising force to bring about compliance. All governments do it. Whether the coercion is an effort to bring about things we agree with (e.g., reducing littering, stopping sexism or racism in hiring or housing) or things that we don't agree with (e.g., being taxed, drafted, driving 55 miles an hour). The point is that force – naked power – is used to bring about compliance. That's a given, and it seems to me an indisputable fact. Don't do what the government says. Pay the price. Period.

Because no government is willing to admit that it governs solely on the basis of naked power, all governments claim to have authority. That is, they claim to be legitimate. They claim to have the RIGHT to rule. Over the relatively small period of human history where there have been governments (a tiny, tiny fraction of human history indeed) all sorts of reasons have been put forward for why a particular government was the legitimate government. Among those "justifications" have been that it was a mandate from heaven, that it was the will of the majority, the will of "superior" people, and so forth. In actual fact, there is no such thing as a legitimate government in any ordinary language sense of the word. People have a right to be and do as they please, so long as they don't initiate force against others. My goal is to be as free as I can in this world - in the here and now. I'd also like to help others be as free as they can be. That I'm not absolutely free and that others are not is certainly true. That isn't the point of anarchy. Because freedom is an openended concept, no person or group can ever be totally free. The point is to try to live our lives as a movement toward freedom, away from coercion, and as a process involving openness - i.e., choice. If we operate by that principle, we are living in the spirit of anarchy. Whenever we try through coercion, threat, or violence to force people to do things our way we are opposing the spirit of anarchy. Everything in opposition to the spirit of anarchy is anti-freedom. Everything!

One of the most obvious ways that people abdicate their freedom — and consequently the freedom of others — is by empowering government. The more empowered a government is the more legitimate it *seems*. Any time the government is asked for anything, it is an infusion of power and legitimacy. From shelters for the homeless to medicare, from national defense to police and fire "protection" — the more we ask for and/or the more we take, the more we are empowering government. Empowering government is diametrically opposed to the spirit of anarchy. I try my very best to ask the government for nothing *Continued on page 7*

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