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## From Active Enthusiasts to Passive Listeners-Radio, the State and the Transformation of the Wireless Imagination-

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## From Active Enthusiasts to Passive Listeners —Radio, the State, and the Transformation of the Wireless Imagination—

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### 1. INTRODUCTION:

#### SEVENTY YEARS OF RADIO TRANSMISSION—IS IT TRUE?

Japanese broadcasting is said to have started in 1925. Thus, 1995, the year when I presented the paper on which the present chapter is based, marked the seventieth anniversary of broadcasting. NHK (*Nippon Hōsō Kyōkai*) celebrated the year with commemorative programming and sponsored other special events. The previous year, in 1994, the *Hōsō Bunka Kenkyūjo* (Broadcasting Culture Research Institute), an academic and research division of NHK, inaugurated a project on the “History of Broadcasting in the Twentieth Century,” and a project is currently under way to compile a new history of broadcasting in Japan.

To briefly summarize that history, it was in 1924 that the Tokyo Broadcasting Station (JOAK) was founded. On 22 March 1925, a trial broadcast was conducted at Shibaura, Tokyo, and on 12 July, regular programming began at Atagoyama. Nagoya Broadcasting Station (JOCK) was started in January and Osaka Broadcasting Station (JOBK) in February the same year. These three stations were dissolved in 1926 by the Minister of Communications (*Teishin-daijin*), Inukai Tsuyoshi, and merged into a public corporation, Nippon Hōsō Kyōkai (Japan Broadcasting Corporation). The corporation quickly developed into a national broadcasting network, and as is widely known, served as the government's propaganda organization during World War II. After the war, this public corporation was reorganized as a special public corporation (*tokushu hōjin*); it retained its former name, Nippon Hōsō Kyōkai, but is better known as NHK.

So, can it be concluded from that that Japanese broadcasting has existed for seventy years? Such a question may seem startling, but even in the United States,

where broadcasting originated, the facts about its origin are sketchy. The accepted history of broadcasting in the United States begins with a live reporting service of the results of the 1920 presidential election by the radio station KDKA in Pittsburgh, Pennsylvania, in October of that year. It would follow that the year 1995 marked the seventy-fifth anniversary of radio broadcasting in the world.

However, this view has been called into question by two considerations. First, was the KDKA broadcast really the first on record? There was a lively discourse on this "roots" issue by American historians in the late 1950s, but the answer remained inconclusive. A second, more basic question is about what would constitute a broadcast in the first stages of the technology. In reality, sending and receiving voice messages through electromagnetic waves had become frequent in the West from the early twentieth century. This new medium was called the wireless, and the concepts of radio and broadcasting would have to wait until the end of World War I to take root among the public. As pointed out by the broadcast historian Erik Barnouw, the entry on "broadcasting" in pre-World War I dictionaries defined it only as "to spread seeds or spray forth," without mentioning the meaning we have come to know. Wireless, as the word suggests, developed from cable communication technology, such as the telegraph and telephone, and was thought of as a means for personal two-way communication. Radio broadcasting, to simultaneously transmit news to the masses, gradually arose through a coincidence of multiple factors.

This paper aims to reassess the transformation of the wireless into radio as the most advanced information technology in the early twentieth century and to compare these processes in the United States and Japan. It pays special attention to the human factor surrounding this new medium; in particular, it stresses the importance of the active pioneers in this new medium, namely the amateurs and enthusiasts. It argues that their replacement by a passive mass audience offers a new insight into the situation of contemporary media.

## **2. THE WIRELESS IMAGINATION AND THE AMATEUR EXPERTS**

As stated above, the history of broadcasting conventionally acknowledges KDKA as the first radio station. However, already two months prior to this, 8MK, owned by the Detroit News newspaper, had started regular broadcasting. There is also a record of a Charles Herrold of San Jose, who provided regular broadcasts for the San Francisco Exposition of 1915. Voice message transmission using the wireless started even earlier. A Canadian, Reginald Aubrey Fessenden, conducted a successful public experiment of this on Christmas Eve 1906. Two years later, the American Lee de Forest, the inventor of the triode valve, broadcast a phonograph concert from the Eiffel Tower in Paris.

There were a number of other similar attempts made in the West, raising the issue of whether these precedents diminish the historical significance of the KDKA broadcast. I would prefer to leave this as an open question for now, but they do

confirm how the information technology called the wireless had been utilized in various ways prior to becoming a fixed form of media, called broadcasting.

Wireless telegraphy had been made practical by the Italian Guglielmo Marconi in 1895, who recognized immediately that the telegraph would be a viable industry. Cable communication networks had been growing worldwide with the international spread of stock markets and the commercial development of the newspaper. However, cable construction and management required huge capital investments. Wireless telegraphy, literally requiring no cable, developed as an alternative means to cable communication in the international arena. The advent of World War I established it as an industry with maritime and naval communication as its main markets. At the center was the Marconi joint-stock corporation founded by Marconi in Great Britain.

Wireless communication also intrigued ordinary citizens interested in new technology, and eventually the general public, as well as commercial business. Wireless was a scientific activity based on the theory of electromagnetic waves, but many in the general public believed that it used the "ether" as its medium of transmission. From ancient times in the West, the voice of God was believed to be delivered through the ether. The word, "ether" thus combined connotations of hopeful modern technology, magic and religious mystery. Just like today's "cyberspace," it conjured up an image of a magical media space.

The wireless especially attracted young males, who idolized it. At night, toward midnight when the air cleared in various parts of the West, they would crank up their sets and communicate with each other across vast distances. It was the advanced aficionados' bold dream to cover the entire world with wireless communication to form an interactive and real-time network and to develop a truly democratic society. It is significant that this vision essentially shared the same dream as the one held by the Internet-believers in present times!

The wireless radio transmitter of the time was a strange-looking and barren assembly of slats, steel nails, coils, crystals, and vacuum tubes that could explode at any moment, a hulking "naked machine," as it were. These mechanized hulks attracted young men in their teens just as personal computers did in the 1970s. Radio became a medium of the initiation ritual by which a boy could become a man in the life-style culture of the day. For example, David Sarnoff became an instant hero in 1912 as a wireless operator who continued to broadcast for seventy-two hours the list of victims in the sinking of the S. S. Titanic. Sarnoff, who eventually rose to the presidency of RCA and NBC, became a main participant in establishing wireless technology. What was most significant about the wireless phenomenon was that for the youth fascinated with the scientific world of electro-magnetism, wireless meant long distance communication. The media function it was to later assume, making possible passive listening to talks and music, was deemed an activity of little significance.

This was true in the U.S. as well as in Japan. "Listener" was a word that tended to carry a derogatory connotation. Wireless activity provided dreams and

adventure, as we see in the following description of the radio youths by the social historian, Catherine Covert:

Thus when the amateur experimenter of the early twenties sat down in his garage, shack, or attic bedroom to assemble his mystifying array of wires, coils and batteries, he could inhabit a world of excitement, drama, and power. He could choose to exert his will over time and distance. He could send his voice across the miles. In those precious hours of the imagination, there was symbolic expansion, aggression, responsibility, and action. "Manly" was indeed the word [COVERT and STEVENS 1984: 204].

Where would the radio be found in the houses of the time? In U.S. homes, it was found in the garage. Garages then and now are places for machines and tools, such as farming and horse equipment, carts, and cars as well as an area demarcated from the main living quarter, including the living room; garages were typically a space for men and boys. The radio, the hulking naked machine, was not something for women, children, and the uninitiated to touch. Only youths with special skills could control it. There was nowhere to place it other than the garage.

For Japanese youths, the special radio space was usually the attic. Whatever the difference in location, though, the enthusiasts shared the same feelings. For example, the following is a letter published in a magazine in the Taishō period dedicated to wireless aficionados from a youth who had succeeded in receiving an experimental broadcast:

That day, I came home from school to operate the machine as usual. Suddenly, with the inductance coil at the first setting and the variable condenser at 120 degrees, I heard a voice, "Today is a fine day, today is a fine day." Ten minutes passed, and there were statements on the damage situation from the earthquake, recovery of telecommunication from the Ministry of Communications, etc. I could not help shouting in my mind, "Wireless telephone, wireless telephone!" Ah, truly, scientific power is great. (How I Became a Radio Enthusiast, *Wireless and Experiments*, July 1924, pp. 111-112)

Ihara Hiroo estimated that in 1925, when radio broadcasting as we know it started, there were already some 50,000 radio aficionados in Japan. Of them, about 15,000 were Tokyo residents, and like the personal computer aficionados today, they were mostly young men. They, too, waited for the late night hours when the air became clear, putting on the earphones of the crystal radio to their ears and eagerly listening to even the signal sounds of the wireless in the attic. Pioneers like Hamaji Tsuneyasu and Tomabechi Mitsugu had already started sending and receiving voice messages. Newspaper companies and department stores held exhibits and open demonstrations for sending experimental broadcasts to delight the aficionados on the receiving end.

### 3. RADIO'S TRANSFORMATION INTO A MASS MEDIUM

After World War I, wireless seemed to have become established as a relatively special industry of primarily maritime and naval applications, distinguished from cable transmission and the telephone. However, throughout the 1920s, wireless telephone trials, which had stagnated during World War I, were resumed in earnest by amateur radio enthusiasts across the world. Especially in the U.S., beyond the traditional networks of enthusiasts, wireless broadcasting stations were created with commercial aims and the general public as their audience-consumers.

KDKA, operated by Westinghouse Electric Corporation, had the significance of being the first of such stations. It may or may not have been the very first broadcasting station, but Westinghouse used KDKA to promote sales of wireless radios to the general public. KDKA started regular broadcasting for the public without special knowledge of operating amateur equipment, using revenue from sales of the Westinghouse radio sets, and was successful beyond the company's expectations. Westinghouse soon opened stations in other areas, and GE and RCA followed. AT & T claimed that radio fell within the jurisdiction of telephone companies, and started network broadcasting. Eventually, manufacturing and telephone companies withdrew from the wireless industry, and by the late 1920s, the basic format for commercial broadcasting had been established.

However, the formative process of American broadcasting was not entirely shaped by huge corporations. Rather, in the 1920s, the corporations were only a part of the activity surrounding broadcasting. The main thrust of its development was provided by a broad spectrum of individuals and organizations, including amateur enthusiasts, universities, religious groups, amusement parks, and newspaper companies. All of this created frequent radio interference, which prompted the government to begin public regulation of the airwaves through a legal system of frequency band allocation.

After KDKA's commercial success drew national attention, "radio" quickly became transformed into a mass medium, and radios became household appliances for the public, with reception as their sole function. Naked coils and crystals were packaged into shiny mahogany boxes with friendly looking dials, meters, and speakers. This rapidly popularized and "domesticated" the radio. Magazines for general readers, such as the *Lady's Home Journal*, carried articles that recommended putting such new radio sets in the living room rather than in the garage, and from about the mid-1920s, radio sets were to be frequently found in the living room. The living room, of course, was a space where the housewife did her chores and where the whole family gathered. The radio set became an objet d'art of mahogany packaging, acknowledged as furniture that the housewife would feel comfortable with. The radio quickly became a mainstay of home entertainment for many people. The sociologists Robert and Helen Lynd, who conducted detailed social surveys in the latter half of the 1920s in a Mid-West American city, recorded such comments as, "We listen to the radio in the evening. Before, we used

to read” and “Radio has taken us away from the movies, especially on Sundays” [LYND and LYND 1990: 200].

The mysticism of the ether and the fascination with the technology of sending messages through the air waves had given way to the transmission content of comedy, popular song hit-charts, and drama, as the people’s focus of interest. In the 1930s, complete all-day programming, designed through detailed marketing research to meet broad tastes, infiltrated the home. At the same time, these commercial transformations deeply discouraged the enthusiasts, who believed that the wireless should have developed much like today’s Internet. But the amateur radio “activists” were being rapidly replaced by the passive listening general public.

As mentioned above, there were not so many Japanese wireless enthusiasts and amateur operators as in the United States, and the transformation of the wireless into the radio did not have as general an impact in Japan as it did in the U.S. However, the emergence of a notion of radio as a commercial medium directed towards a passive mass audience did shock many enthusiasts. The Japanese wireless development lagged behind the United States by several years, and was roughly equivalent to changes in the wireless in European nations such as Great Britain and Germany. In fact, such a delay gave the government authorities of these countries, including Japan, the opportunity to observe the multitude of activities surrounding the wireless in the U.S.; it prompted their early decision to intervene and regulate this “ether space.”

In Japan especially, there was a flurry of debate as to whether the presence of radio broadcasting, had it been available, would have prevented the massacre of Korean residents and other atrocities at the time of the Great Kanto Earthquake of 1923. At the same time, the government moved to eliminate amateur operators with such legislation as the Law for Maintenance of Public Order. This drew protests and lament from radio enthusiasts, which were carried in professional magazines around the time radio broadcasting started in Japan, including the following example:

On a certain day of June, he looked up at the sky after turning the corner as usual to see his antenna. Alas, the antenna that he saw was there on his way to school was nowhere to be seen. What a shock! He ran into the house, and his mother rushed out to greet him.... “Today, men with identification cards showing they were from the Ministry of Communications came, and with no explanation, took away your machine, after thoroughly searching the house....” Such incidents took place repeatedly over two or three days, completely wiping out the local radio fans. (*Wireless and Experiment*, August 1924, p. 397)

The grass roots movement of the wireless enthusiasts was thus brought to an end, and JOAK, JOBK, and JOCK started broadcasting in 1925. The significant point is that these three stations originated as private stations of private enterprises. From Meiji on, the start of new media, such as the telegraph, postal mail, and the telephone, had always caused a heated debate about whether or not to privatize the

services. Radio was allowed to begin as a private initiative, because it was not deemed to be as important as the media that preceded it, and because it was already advanced and privatized in the U.S. and Great Britain.

#### 4. CONCLUSION: FROM ETHER TO CYBERSPACE

The preceding sections have briefly sketched the process by which the wireless was transformed into radio. In concluding, I would like to pose the following issues.

First, the people involved in the early wireless and the first radio activity were quite distinctive and unlike our expectations. Broadcasting as a medium is usually thought of and discussed as a matter of a small number of professional organizations transmitting to the mass general public. Studies of mass communication and theories on mass media have established themselves as an academic area that deals with the various problems that arise from such a communication structure. It has also been the presumption in the continuous audience surveys conducted for practical purposes. However, how is this understanding challenged when we consider the wireless enthusiasts that I have depicted above, who are, in effect, activist intermediaries, neither the professional transmitting organizations nor part of the passive listening audience? The enthusiasts transmitted messages as well as receiving them. They circulated information, retaining their identity as a full participant in modern communication media. Their period of activity did not last long, but their significance in the early twentieth century was undeniable in imagining communications beyond the radio as well as contributing to its emergence.

It is important to note that the enthusiasts were fairly autonomous participants in civil society, in opposition to the organized powers of the state and capital. This was particularly notable about the wireless situation in the United States. Such a spirited enthusiasm became the heritage for the youths fascinated with the Internet and personal computers on the West Coast in the 1970s. In contrast, the enthusiasts in Japan were primarily maniacal about the technology, and more rarely expressed themselves in civil society. It is true that JOAK, JOBK, and JOCK were founded in the Taishō period by private groups. However, less than a year after their start, they were reorganized top-down, taking on bureaucratic features familiar since the Meiji period in Japanese organizations. But this reorganization did meet strong resistance from the broadcasting professionals. Such liberal resistance survived the wartime period and resurfaced afterwards in the form of the Electromagnetic Wave Supervisory Committee (*Denpa Kanri Iinkai*).

Unfortunately, this group, too, was dissolved two years after its inception. Until now, the early radio enthusiasts and their activities were not taken to be a significant element in the early days of broadcasting. This was an assessment that was premised on contemporary broadcasting in mass media as a technologically advanced wireless transmission. Probably such a view did not invite criticism ten

years ago, certainly not in Japan. However, the contemporary situation of the Internet and multimedia—rapidly transforming and still in considerable flux—invites comparison to the situation surrounding radio in the 1930s and 1940s.

It would follow that we must reassess the significance of the radio enthusiasts and others who have been allocated peripheral historical importance. Indeed, other developments heretofore passed over, such as the emergence of colonial broadcasting in Seoul, Shanghai, and Taipei, the work of such prewar television engineers as Takayanagi Kenjirō and Kawarada Masatarō, and the educational and scientific television technologies that were planned and sought by the early private stations, also merit reassessment.

Thus, it seems evident that the understanding of radio broadcasting as having started in 1925 is a rather formulaic distinction. To emphasize this risks overlooking that the reality of media creation lies amidst social dynamism. Such phrases as “seventy years of radio” and “seventy years of broadcasting” are only slogans to justify broadcasting as today’s mass media. About a century has passed since the birth of wireless, and the tectonics of media are again producing fundamental shifts. The new digital media have yet to develop into fixed forms. I believe that the future of multimedia and the Internet will bring in more far-reaching changes than those produced by the transformation of wireless to radio.

Those in the early twentieth century who operated their wirelesses believed that it would some day become the global and interactive media that many today believe the Internet will become. However, the wireless was deformed through the dynamics of sociocultural, political and economic factors. As this took place, the early activists were displaced, and divided into and relegated to either the large transmitting organizations or the passive individual recipients of the mass audience-consumer. The digital media space is called cyberspace, reminiscent of the ether of the old days, with its scientific hope and religious mysticism mystifying and soothing those who use the word. It must not be overlooked that in the American society that cultivated the Internet to this extent is to be found not only the Pentagon and the information industries but also the volunteerism and curiosity of computer buffs all over the country. They share the same spirit as the radio fans and amateur operators of an early era.

In the multimedia debate in Japan, the government and information industries are quite conspicuous, but it is hard to detect the activities of neutral volunteers. Just as radio with its civil background soon found itself controlled by the state, will the digitalization of Japan also be controlled top-down? Or will Japan become a truly open multi-network society? There are still many lessons to be learned from that new medium called radio at the last turn of a century as we try to read the future of new media.

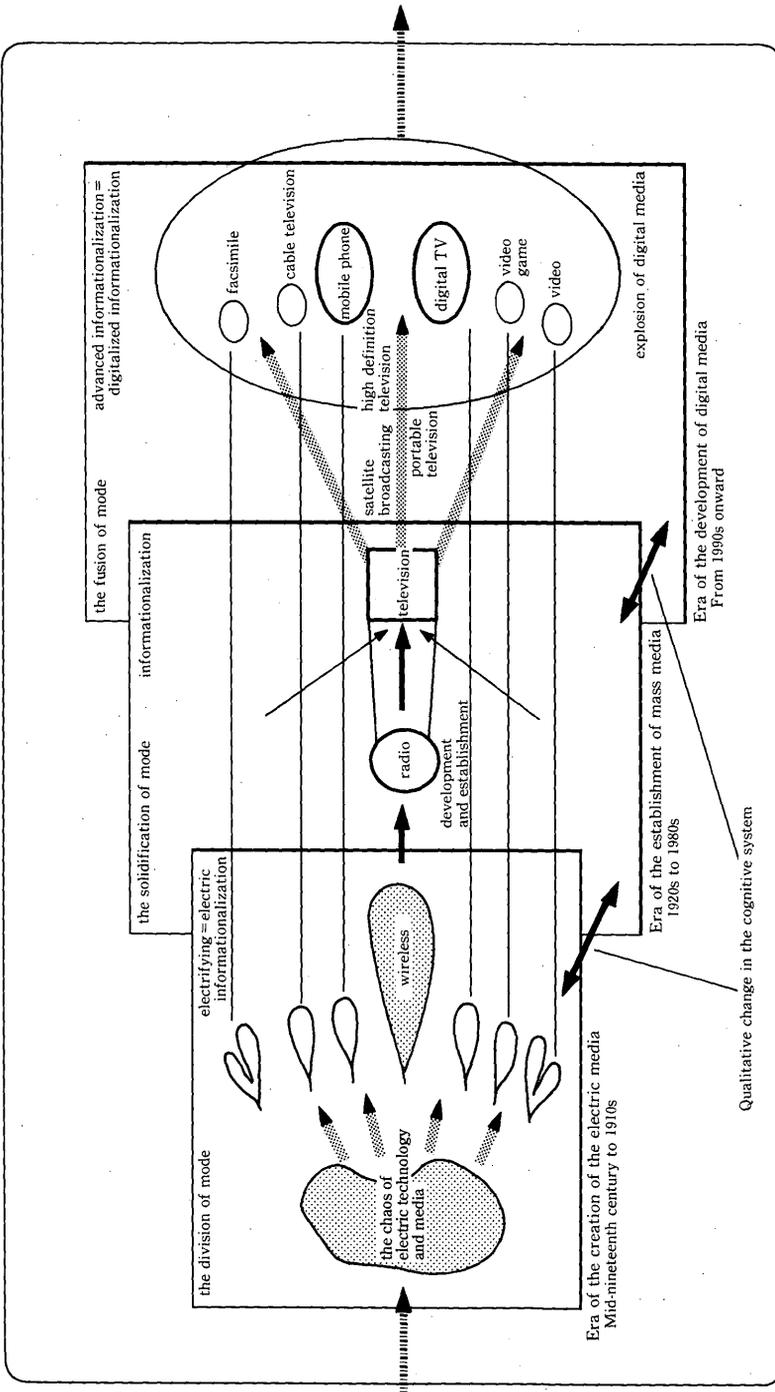


Figure 1. Historical Periods in Understanding the Electric and Electronic Media, Centering on the Development of Radio and Television

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