

## CHAPTER 2

### HOW TELEVISION GOT TO BE TV

The word "television" derives from the ~~to break into~~ tele and vision ~~the~~ ancient Greek and Latin words meaning "to see at a distance". ((1. )) It is the kind of word scientists and engineers love to coin, but the kind of word that is very unlikely to find its way into ~~the~~ easy everyday usage. Moreover, words often reflect the subject - and "television" is a rather formal word ~~for the~~ befitting the technology, but hardly suited to describe the bulk of the programming and commercials that evanesce across our living room or bedroom screens. It was probably inevitable, then, that the novel phenomenon of television would become known as "TV". ((2: note that the British call it "telley", and in other countries???)

This chapter traces the evolution of television in America from technological invention to its present state, but it is not a history of television. ((3: those readers who want a history of the technology or the industry, or the regulation can see other works; e.g., \_\_\_\_\_)) It is ~~rather~~ more nearly a history of the interactions between television and the outside world of advertisers, politicians, and viewers. Its focus is on how the medium of television came to have its present form and character ~~and~~ instead of other forms and other character.. The medium of television has a tremendously broad potential; the phenomenon ~~of~~ of few channels, three networks, strident commercials, sameness, and apathy that we have come to call TV is by comparison narrow and stagnant. As we will see, "television" isn't limited to "TV", but "TV" may keep us from ever having the medium of television used for anything else.

### The Invention of Television

Once radio broadcasting had been demonstrated to be practical, it could not be long before American inventors turned to the task of sending pictures as well as voices and music. \* As a matter of fact, it happens that the technology needed to send pictures over the airwaves is little different from that needed for radio. All that was needed was to trace out the pictureline by line, turning it into an electronic signal that could be transmitted over the broadcasting transmitter.

The first practical demonstration of television came in 1927 when \_\_\_\_\_ Farnsworth successfully operated a television camera connected to a radio transmitter. For the next decade, the technical experiments on television continued, and RCA and others conducted a limited number of experimental television broadcasts. By 1938 there were \_\_\_ experimental television stations operating and plans for commercial television broadcasting were being established. But for the interference of World War II, we probably would have seen television broadcasting develop much sooner than it actually did. (( note 4: however, the post-war boom in the economy and the ~~the~~ electronic technology probably left television farther along in 1950, say than it would have been without the advent of the War.))

Actually, experiments in the electronic ~~xxx~~ reproduction of pictures were begun earlier than Farnsworth's first successes in sending pictures over the airwaves. But unlike the transmission of voices or music, where transmission over the airwaves is a much greater feat than transmission over a wire, in television, the opposite is true.

So much information is crammed into a <sup>single</sup> television signal that it takes up ~~many connections~~ six times the space of the entire AM radio band; so broad is the signal in fact that like a radio wave it will naturally radiate away from any simple wire carrying it and disappear into the air with all the other radio waves. So it was very natural for television signals to be transmitted first by broadcasting over the airwaves.

This convenient fit between the nature of the television signal and the techniques of radio broadcasting made it very logical in the 30's and 40's to associate television with the broadcast industry rather than the telephone companies. For all practical purposes, television meant broadcasting. Broadcasting was a recognized technology, an established industry, and a section of the newly adopted communications act. From all these perspectives, it was the inevitable that the first practical commercial uses of <sup>the</sup> television medium would be ~~in broadcasting~~ as "radio with pictures."

Nowadays, of course, the technology of television is much more substantial and permits considerable diverse uses of television. Recording and playback capabilities are expanding; cable technology has been developed /for distributing large numbers of television signals over wire under the streets or by lasers around the city; and computer technology has made possible small and inexpensive control devices to permit the viewer to select the television images he wants from a very much larger selection than is possible with the "click-click-click" rotary channel selector. The future of ~~the~~ television is (hopefully) a future of growing richness and diversity in its content and uses.

But to understand what is possible in the future, we have to understand what characteristics of television are inherent in the medium and what are the ~~products of~~ consequences of the fact that television's early development was cast into the mold of "radio with pictures."

#### Radio Broadcasting as Precedent

~~Radio was one of the last great industries to ~~develop~~ develop in America as~~

The radio broadcasting business began in the spirit of small-scale invention and entrepreneurship characteristic of the turn of the century. Although the ~~basis~~ principles of radio waves were ~~discovered~~ <sup>discovered</sup> by \_\_\_\_\_ Hertz and other scientists, it was the technically inventive American amateur working in his garage or attic who made the broadcasting of voices and music over ~~radio~~ the airwaves a practical reality. Radio began, not with the advent of modern electronics, but with the crude spark-gap connected to an antenna. Any clever technically inclined person could set up his own radio transmitter to broadcast to those in the vicinity who had built their own crystal radio sets -- and many did just that. Some of these early "broadcasters" were using radio to talk back and forth as modern <sup>ham</sup> ~~radio~~ radio operators or those with citizens band radios do. Others put on amateur theatrical and musical "programs" to entertain friends and neighbors. No licensing was required (indeed the government took little note of radio in its early days), and most of the radio operators broadcast whenever and whatever struck their fancy. ~~and~~ As the radio phenomenon caught on more and more radio "stations" were in operation, ~~and~~ and some patterns began to emerge.

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It also deserves some discussion. When radio broadcasting first began, the use of the frequency spectrum was catch-as-catch-can. There was considerable self-defeating interference among stations. It became obvious that some order would have to be imposed, and the government stepped in to fill that role. Technical standards for noninterference were easily defined, but some rationale was needed for deciding who was to use what frequencies. As with every other resource, frequencies useful for broadcasting are limited; some are more usable and therefore more valuable than others.

There were many ways this assignment function could have been set up. Assignments could have been sold to the public, much as federal lands were. They could have been leased for specific uses; they could have been held by the government. Instead, we chose to give these rights to individual applicants for limited periods of time. The actual ownership was retained for the public and the licensee was required in return to use his public resource in the public interest. Under this approach there had to be some arbiter of whether the licensee is meeting his public interest test, and that has come to be for all practical purposes, the FCC.

Now this is all well and good so long as no one expects radio or television to be serious news media, and so long as television is a new and novel entertainment medium. But television has now become the

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major vehicle that informs the average American about the world around him. It is the major source of his exposure to the issues confronting our society. It is just a question of time under such a scheme until someone asks for a more precise definition of just what the blazes "the public interest" means. That question is now being pursued more and more vigorously. The FCC has been pretty vague about it for obvious reasons. But it basically means whatever they and the courts say it means. And that means federal regulation of content.

III

These are important matters, yet they don't weigh heavily in the public mind. For the public, television is what they see when they turn on their sets; but what do they see and why is it there? What they see is largely entertainment programs, principally network programs, prepared at great expense for a national audience. In the year July 1970 to July 1971, 57 per cent of network programs were music-variety shows, situation comedies and feature films alone, without even counting sports, "soaps" and game shows. Right now the networks supply 3,300 hours of this type of programming in prime time each year. These and other program hours produce some \$4 billion in advertising revenues. The 4 million channel hours of broadcast programs presented each year break down fairly evenly among network, syndicated and locally-originated programs, but the breakdown of program expenditures is strikingly different. More is spent on network programs alone than on all syndicated and local programs combined -- it works out to about three times as much per channel hour. Talent