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Whither Radio?

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THE remarkable thing about radio is not this new art itself, but rather the human element connected with it. Strange to say, those who are intimately associated with it seem to be least certain whither radio is drifting and what is in store for it during the years to come. There is nothing new in this condition, because it has ever been thus with radio since the days of Heinrich Hertz.

Indeed, when Hertz first discovered "wireless waves," no one took the new discovery very seriously; not even the scientists themselves, who thought of it as only a pretty lot of laboratory experiments, to which there could not be attached any practical future. It took almost two decades to yank Hertz's experiments out of the laboratory and, even after Marconi brought "wireless" out into the open, there was another long period of development when few took the new art seriously, and even the most far-sighted scientists could not see much of a future for it.

When the first book devoted to this subject, one entitled "The Wireless Telephone," was written by me in 1910, there was no such thing as practical radio telephony. Though, by that time, it was conceded that "wireless telegraphy," at some time in the future, would have an adjunct in the form of radio telephony, no one dreamt of such a thing as radio broadcasting. Indeed, even at that time, in the preface to that book, I ventured the opinion that within ten years everyone (particularly farmers) would have a "wireless" telephone whereby they could communicate with each other, instead of using the wire telephone. The prophecy was to some extent fulfilled in time, but not at all in the way I had imagined. Everyone now has his "wireless telephone"; but it is not used to talk to the neighbors. It is only a *one-way* instrument, whereby we now receive what is put out by the broadcast stations; but we do not use it to talk with our friends.

In view of the past history of the radio art, he would be a rash prophet who undertook to foretell just what is in store for radio itself.

Thus, for instance, we are now talking glibly about radio television, radiovision and the like; but, at this time, most of us imagine that television will parallel broadcasting. It is freely predicted by everyone who is seemingly "in the know," that the large broadcast stations will sooner or later put on television broadcasts; so that anyone who has a set can see what is going on in the distant studio or at a remote point where the television program would be picked up—at the night club, or on the Metropolitan Opera stage, or at a baseball game, or a prize fight, or any other scene of visual broadcasting. Other wiseacres say that nothing of the kind will happen and that what we really will get will be "radio movies" broadcast from some studio; in other words, the latest Hollywood production will be run through a projecting machine at the transmitting station and the result will appear on the screen in your own home.

But it is quite possible that both these schools of prophets are wrong, and that television will play an entirely different part, which we do not even dimly discern today. One thing is sure; that the young art of television will take on a most surprising form, once it becomes established. How television and "aural" broadcasting will finally be amalgamated, even the most daring prophet does not venture to say.

The art of broadcasting as we have it today is yet in its first stage. In Europe it is thought necessary to tax listeners with a definite fee every month, in order that the stations may derive sufficient revenue to keep going. In this country, such an idea seems un-American, and a proposal to tax the public directly would excite their violent opposition; therefore the taxation is *indirectly* maintained, through the advertising appropriations for programs put on the air by big corporations who thus seek publicity.

No one can foretell, at the present time, whether the "advertising tie-up" broadcasting scheme of today is the final one, or that something entirely new may not be evolved in the future.

The entire broadcasting industry is in constant flux and there is really nothing very much settled about it today; it is too young and too new for that. It is also to be doubted that, ten years from now, broadcasting will be done in the channels between 200 to 545 meters now used. It is frequently predicted that, sooner or later, there will be a stampede down to the lower wavelengths, where there are more channels and other advantages, as well as certain disadvantages.

So far, large radio manufacturers have turned out no radio set, which can be sold to the public, capable of being tuned as readily on the short waves as it can be on the high waves. But it is safe to say, that most of the large manufacturers are keeping a weather eye on the short-wave situation and, if one or more break the ice and a good set that makes tuning on the short waves easy is developed, we will have another silent revolution in radio. Then the old prevailing sets will be scrapped in favor of new models, just as the battery sets are now being scrapped for A.C. electric sets.

The good thing about all of these radio revolutions is that they are orderly and that they do not come over night. Indeed, it has been found that sets built even as far back as 1923 still give good service in 1928. The same will probably be found the case with the present-day alternating-current sets, when the broadcast stations take to lower wavelengths. Most probably, in that case, attachments for present-day sets will be available to make possible tuning them to the short-wave bands.

The objection has been frequently raised, what will happen when all the stations abandon the present wave channels and move downwards? It is well known that, because of the "skip-distance" effect, a local short-wave station will, in most cases, become almost inaudible at a short distance; in other words, it will be found that a broadcast station located in New York or Chicago cannot be heard at all or, at best, poorly in the very city where the broadcasting is done; though strong enough further away.

This, however, will not frighten the broadcast engineers, and it will be found that this will work out to the advantage of the chain stations. Suppose that all of the stations were to move tomorrow to the lower waveband; and suppose that you live in Chicago and find yourself unable to tune in your local station. The easy thing to do will then be to tune in the same program from a New York station which, it will probably be found, though 800 miles away, comes in just as a local station does today. Thus—unless some new scheme is developed whereby it will be possible to get short-wave stations just as well locally as you get the high-wave stations now—we will then listen, not to our local stations at all, but to DX stations exclusively in their stead.