

BROADCAST ADVERTISING

The Fourth Dimension

TELEVISION EDITION

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TELEVISION EDITION

To
My Wife

HARRIET EUDORA ARNOLD

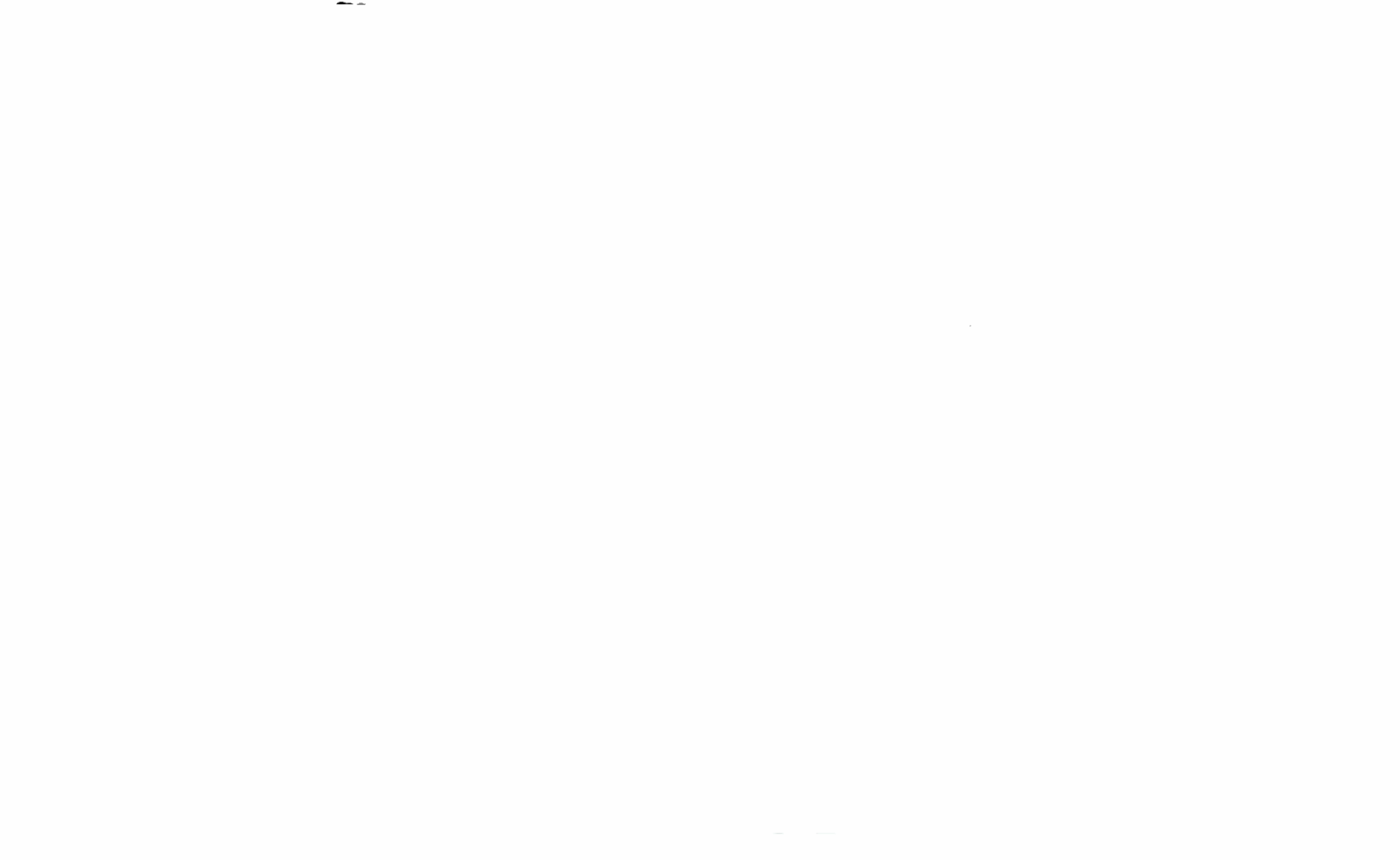


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ERRATUM

On page 2 of text for “Nova Scotia” read “Newfoundland” four lines from bottom of page, last word.

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Also to my many friends and associates who have contributed much through conference, including advertisers who have furnished information from their private files.

In the preparation of television material for this new edition, it has been my endeavor to place before the reader in historical sequence, and many times in the words of others, the story of television from its earliest beginnings to the present time, supplemented by my own personal experiences, observations and prophecies predicated on more than ten years' intensive study of radio broadcasting and its affiliates.

THE AUTHOR

New York
March 25, 1933

FOREWORD

Broadcast advertising is modernity's medium of business expression. It has made industry articulate. American business men, because of radio, are provided with a latchkey to nearly every home in the United States. When visiting in America's homes by means of radio programs, they are only asked to conduct themselves as good-mannered guests. An attentive public ear is attuned to this distinctly unique method of public information.

The American public owes a great deal to those industries and businesses whose use of broadcast advertising has, for the individual citizen at least, provided without fee, instruction, entertainment and amusement. Night and day in our country, and in fact in all parts of the world, there is broadcast a panorama of events in which those who participate represent the highest and best attainments in their respective fields of endeavor. All this the public has come to expect, without expense, and at the turn of the dial. Broadcast advertising has been of vast service to the public.

Radio broadcasting when first developed was conceived as a public service, and is today the greatest medium the world has yet known to perform that important function. Since "public service", in the fullest meaning of the term, requires that the donor and the benefactor alike should receive a measure of satisfaction from their participation, it is a logical outcome that the advertiser and the public should benefit from broadcast advertising.

Frank A. Arnold, Director of Development of the National Broadcasting Company, Inc., is thoroughly qualified to discuss the many interesting phases of broadcast adver-

FOREWORD

tising. His entire business life has been devoted to publishing and advertising and he brings to this new art a background of practical knowledge which is unique. His experience in this newest form of business expression is reflected in this book, which is an important contribution to radio and business literature.

HARRY P. DAVIS
Vice President Westinghouse
Electric & Manufacturing Co.

AUTHOR'S PREFACE

It was in November 1920 that broadcasting was literally forced on my attention. I was then in the Advertising Agency business as Secretary of Frank Seaman, Incorporated, and, as is quite often the case with an Advertising Agency man, I had been invited to speak before the Pittsburgh Advertising Club at one of its noon-day luncheons. The presiding officer, noting the complete absence of the Westinghouse group, said by way of apology that the Westinghouse people were trying out some experiments with their broadcasting station and had invited a number of members of the Advertising Club to be present on that occasion.

Later I discovered that the occasion referred to was practically a dress rehearsal for the first official broadcast program from Station KDKA.

During the following year I spoke at various Advertising Clubs throughout the country and among my wares was a speech which, for want of a better title, I called "The Romance of the Radio". Either because the title sounded interesting or because of sheer curiosity to see what an advertising man might say on the subject, the fact remains that practically every address that I gave during 1921 and 1922 was on the subject of radio.

I think it was in 1923 when advertising programs were being experimented with that I coined the phrase "The Fourth Dimension of Advertising", which has since become a classic and quite generally used as a descriptive title in connection with Broadcast Advertising.

During the period above referred to I was about the only Advertising Agency man in the country that was doing

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any serious platform work favorable to Radio Broadcast Advertising. To most of them broadcasting was an interesting stunt—a sort of curiosity, a thing to be featured while it lasted but without any promise of permanence. Either because of my New England ancestry or for some other reason yet to be explained, the love of pioneering has always been in my blood and I suppose it is because of that characteristic that I was so strongly attracted to radio and its possibilities.

In the meantime, radio continued to develop and with the impetus given to it by the amateur who, in my judgment, is largely responsible for its finally becoming an industry, radio and broadcasting reached a point where industry took notice, big business lent its financial support, and from that day things began to happen.

From what I have already recounted, the reader has gleaned enough not to be surprised at my forsaking the advertising and publishing business, with which I had been actively connected for twenty-five years, in order that I might give my entire time and talent, such as I had, to the developing of Radio and Broadcast Advertising.

When the National Broadcasting Company, Inc., was formed in 1926 I was invited to join their executive staff as Director of Development. During the four years that have elapsed since that time I have been privileged to be one of a relatively small group of men who have been making history in the development of this great new industry.

To fit advertising into the radio program structure was no light task and many adjustments were necessary before anything like a finished product could be presented. Much has been accomplished in the last four years and still more will be accomplished and much better work done in the years to come.

The publication of this book is largely due to the fact

AUTHOR'S PREFACE

that in the spring of 1930 I was approached by the Faculty of the College of the City of New York with an invitation to deliver a course of thirteen lectures on Radio Broadcast Advertising. I was told that this would be the first course on the subject to be delivered at a college in this or any other country. Again, my love of pioneering was weighed against the tremendous task of gathering material for such a course and, as usual, the pioneer side won out. These lectures were considered a great success and had the largest enrollment of any special course in the history of the college.

About this time I was asked by my publishers if I would write for them a book on the subject, presenting the facts in narrative form and including in the subject matter such reactions from the classroom as seemed pertinent to the subject, making for them a book which should acquaint the reading public with this great new thing we call Broadcast Advertising and, at the same time, take into account its possible college use as a supplementary volume on the subject. Again I was told that did I write such a book it would be the first one on that subject written from the viewpoint of an Advertising Executive and, again, the pioneer side won out. As a result you have this book, *Broadcast Advertising, The Fourth Dimension*. It is written entirely from personal experience and with what I believe to be historical accuracy.

New York

July 15, 1931

FRANK A. ARNOLD.

CHAPTER I

RADIO'S ANCESTRY

The history of radio may be roughly grouped into five periods.

The first period comprises the sixteenth and seventeenth centuries and contains records of primitive experiments resulting in the establishment of some of the basic laws.

The second period covers a little more than a quarter of a century, 1864-1898, to be exact. This period produced more experiments and some exceptional apparatus having to do with the detection of electrical waves.

The third period, 1896-1903, concerns itself with experiments at home and abroad in an effort to determine the practical place, if any, that radio might obtain in the field of communications. It was during this period that Marconi conducted that major experiment which resulted in sending his famous letter "S" across the Atlantic.

The fourth period, 1903-1912, covered the history of development of marine communications. Practically no progress in the further development of continent-to-continent communications was made during this period.

The fifth historical period, 1912-1917, contained the greatest and most far-reaching technical contributions to the art. Experiments in the laboratory developed into actual machinery that worked. It will be remembered that during this period the United States entered the Great War and while all laboratory work of this character ceased for the time being, yet the necessity for means of communication other than wire or cable resulted in a greater development

of the art of communications during this period than during all of the four preceding periods.

Having thus grouped the discovery and early progress of the art by periods, it may be of more than passing interest to examine a little more minutely what some of these periods actually contributed to the final development of the thing we now know as broadcasting.

The first and second periods were crudely experimental, contributing very little of a definite nature to the object sought.

During the third period the outstanding achievement was the consummation of many years of laboratory study by Senatore Marconi resulting in his successful demonstration of trans-Atlantic wireless. For many years scientists everywhere had been experimenting with the ether as a substitute for wires in the transmission of messages. In 1896 Marconi was in London conducting experiments and was successful in transmitting an electrical message without wires between the General Post Office and the Savings Bank Department in Queen Victoria Street—a distance of about one hundred yards. Later on, he established successfully land transmission without wires over a distance of a mile and three-quarters. Eventually, by increasing the power of his instruments, Marconi was able to send land messages without wires to a distance of eighty-five miles.

The story of how Marconi made history with his letter "S" is an interesting one and in telling it I quote from contemporary history. It was in December 1901 that preparations were made for the trans-Atlantic test. The English transmitter was located at Poldhu, England. The site of the receiving station was on a high bluff in Nova Scotia. Marconi, who had quietly left England and landed without announcement at St. John's, Newfoundland, on December 5th, set up his receiving instruments in the room of an old

barrack at Signal Hill near the harbor mouth of the City of St. John's. He had difficulty in supporting his receiving wire, his experiments with balloons having been unsuccessful. Finally by the use of a kite he succeeded in maintaining a wire at an elevation of about four hundred feet. This constituted what was probably the first receiving antenna of its kind ever made. This was on December 12th, 1901.

Before he left England Marconi had given detailed instructions to his assistant at the signal station that the test was to be conducted by the transmission of the Morse telegraphic letter "S" represented by three dots. This signal was to be transmitted at a fixed hour each day as soon as word had been received by them that the receiving station at St. John's was ready. At noon time on Thursday, December 12th, 1901, Marconi sat in his little room in the old barrack waiting for the appointed time to arrive when England would begin transmitting his signal. There were only two persons in this receiving room, Mr. Marconi and his assistant, Mr. Kemp. A telephone receiver had been provided and was strapped to the inventor's ear so that the faintest indication of a signal might be detected. For half an hour not a sound was heard, then suddenly the assistant, Mr. Kemp, heard the sharp metallic click of the tapper as it struck against the coherer. In a moment, faintly yet distinctly, there came the three little clicks or dots spelling out in Morse Code the letter "S", which had been sent out a fraction of a second before from the sending station in England. Again and again the signal came through until both Senatore Marconi and Mr. Kemp were positive that there could be no mistake.

It was thus that history was made, for on that day the principle of wireless communication over great distances was established constituting one of the greatest wonders of modern science.

During the fourth period marine communications obtained almost exclusive attention. Trans-Atlantic vessels were equipped with the Marconi wireless telegraph in conjunction with land stations originally operated by the De Forest Wireless Telegraph Company. This established the first ship-to-shore system of communication. As is often the case, it took a tragedy to impress upon the world the value as well as the necessity of marine radio. The sinking of the steamship Republic on January 23, 1909, and the flashing of CQD, which was then the call of distress, resulted in the arrival within five minutes of five steamships which turned from their several courses and reported for relief. In this instance all the passengers were transferred safely. The great Titanic disaster of April 15, 1912, was made less of a tragedy because of radio and at that time the distress signal had been changed to the S.O.S. call now so familiar to everyone.

Once under headway, the merit of this system sold itself so rapidly that within a comparatively short time all ships sailing the ocean carrying passengers and cargo were required by international law to be equipped with radio sending and receiving apparatus.

It was during this period, 1903-1912, that the first trans-oceanic radio service was put into operation by the American Marconi Company, which erected a high-power station at Cape Cod, Massachusetts. On January 19, 1903, the first message sent from this station was from President Theodore Roosevelt to King Edward VII. History tells us that the message got through safely and was published by the *London Times* the following day as the big outstanding news item. The successful demonstration of this service naturally resulted in widely extending the use of wireless, developing ultimately in a system of communication around the world.

It was during the fifth period that the art of radio recorded its greatest achievements. By this is meant that machinery and other apparatus was actually built as the consummation of years of laboratory experiment. Up to this time radio's greatest handicap was its inability to cover vast distances with any degree of certainty. Although enormous energy could be developed locally, it was impossible to send this energy over great distances with any certainty of a proper signal at the point of destination.

Dr. Ernest F. W. Alexanderson was the man who solved this problem. With the entire resources of the General Electric laboratory at his disposal and by the application without stint, of time, effort and money, he finally developed the high-frequency alternator which bears his name.

The Great War, which broke during this period, contributed through necessity to the rapid development of devices of this character, and the building for experimental purposes of a 50-kilowatt 50,000-cycle alternator. In 1917 this first alternator was installed in a station located at New Brunswick, New Jersey. The year following this 50-kilowatt alternator was replaced by one of 200 kilowatts. This served to amplify the facilities already at the disposal of the Government during the concluding months of the War, and also enabled President Wilson to conduct his peace preliminaries with Germany, which led to the signing of the Armistice. This alternator also made possible radio telephone communication with the President's ship when on the high seas en route to France in the spring of 1919.

As it might be expected, the Alexanderson alternator attracted international attention especially from those nations already engaged in wireless communication, and was the most widely discussed invention of that period.

At the close of the War the General Electric Company was ready to manufacture the Alexanderson alternator and

supply it to buyers anywhere in the world. In this connection a little bit of history may not be out of place. The British Marconi Company was really the only customer at that time that could use the Alexanderson alternator to advantage and it stood ready to place an order amounting to \$5,000,000 provided it could obtain exclusive rights to the use of the equipment. It is said that President Wilson, who at that time was in Paris conducting peace negotiations, sent a delegation consisting of Admiral Bullard, Director of National Communications, and Captain Hooper, U.S.N., to the General Electric Company, to discuss the international viewpoint of such a transaction. On April 7, 1919, the delegation was received by representatives of the General Electric Company at its New York offices. In the presence of this small group, presided over by Owen D. Young, now Chairman of the Executive Committee of the Radio Corporation of America, President Wilson's representatives discussed the actual as well as potential injury to America's position in the field of international communications if the Alexanderson alternator was sold exclusively to any foreign government or private company outside the United States. With the far-sightedness characteristic of the man, the President in his message argued for the opportunity that America had to retain complete control of the radio communication situation, not only in the United States but also in Central and South America. Greatly to the credit of the General Electric officials let it be said that, recognizing the international significance of President Wilson's message, they canceled all pending negotiations with the British Marconi Company, even though vast sums running into the millions had already been spent in the development and building of the Alexanderson alternator. This action automatically rendered it necessary for this company to tackle the problem in an organized way, which resulted in forming

the Radio Corporation of America, which was organized with the sympathetic coöperation of our Government and the pooling later on of patents and rights owned and controlled by the American Telephone and Telegraph Company, the Weston Electric Company, the United Fruit Company, and later the Westinghouse Electric and Manufacturing Company—all of which joined with the General Electric Company in forming one great organization for the coöperation and harmonious use of the principal radio inventions as well as the research facilities of the combined group.

Immediately this new Company, both financially and technically, found itself in position to compete with other organizations of similar character in the world. The natural thing was for it to acquire the property and rights of the American Marconi Company, which it did, and by traffic contracts place itself on an equally favorable basis with other companies in competing for wireless business throughout the world. Later on its field was amplified by the development of radio facilities in South America.

At the end of the fifth period the stage was all set, although no one knew it at the time, for the development of broadcasting and the transmission of the human voice through the ether in addition to the dots and dashes of the Morse Code.

CHAPTER II

PIONEER DAYS

Two names will always be associated with the pioneer days of broadcasting, Dr. Frank Conrad of the Research Department of the Westinghouse Electric & Manufacturing Company, and Mr. Harry P. Davis, its Vice President in Charge of Broadcasting.

The original apparatus was very simple, scarcely more than necessary for laboratory experimenting. Feeling however that the industry had great possibilities, these two men with the backing of their associates in the Westinghouse Company, notably Mr. E. M. Herr and the late General Guy E. Tripp, decided to go ahead and manufacture equipment suitable for broadcasting over wide areas. Thus it was that in the fall of 1920 a broadcasting station, known as KDKA, was installed in East Pittsburgh. The first broadcasting studio was on the roof of one of the buildings. One day a sudden shower caught the group as they were broadcasting, which resulted in the setting up of a tent. Broadcasting was continued in this tent until a little later a wind storm blew it down. Then it was that the studios were moved inside the building occupying a loft and, finding that there was some trouble in broadcasting due to the structure of the room, a tent corresponding to that which had been used on the roof was set up within this store-room constituting what was probably the first sound-proof studio in the world. It was under such primitive conditions that radio broadcasting was born. At that time no stretch of the imagination could have visioned the great service which radio broadcasting was to render the world.

The first program of national importance to be broadcast from Station KDKA was the Harding election returns on November 2, 1920. This was so successful that regular broadcasts were instituted daily which have been continued by Station KDKA without intermission up to the present time.

It is interesting to note that the main objectives of this pioneer station as laid down by the founders are essentially the same as are being observed at the present time. These objectives were as follows:

1. "To work hand in hand with the press recognizing that only by published programs can the public fully appreciate the broadcasting service".
2. "To provide a type of program that will be of interest and benefit to the greatest number, touching the lives of young and old, men and women in various stages and conditions of life".
3. "To avoid monotony by introducing variety in music, speeches, etc."
4. "To have distinctive features so timed as to assure their going on at regular periods every evening, in other words as a railroad does by its time-table".
5. "To be continuous, that is, to operate every day of the year".

It is interesting to note the difficulty which these pioneers encountered in obtaining an audience to listen to the broadcasts, with the result that quite a large number of simple receiving outfits were manufactured by the Westinghouse Company and distributed among the friends and officers of the company in order to assure a broadcast audience. Thus it was that the first audience was drafted, and this only ten years ago, at which time the audience of Station KDKA constituted mainly a few friends equipped with head-phone sets.

Among the next great historic stations to be counted

among the pioneers was WJZ, which sent out its first official programs on October 5, 1921. Station WJZ was located at Newark, New Jersey, where one of the Westinghouse factories housed the 500-watt transmitter, while an old cloak-room was hastily converted into a broadcasting studio. Old rugs were used to render the walls sound-proof. The only musical instrument was a piano which by the way was rented and, yes, there was an old-fashioned phonograph with horn attachment—a friend in need when other forms of programs failed.

At the start there were only four people in the WJZ organization. The late Charles B. Popenoe, first treasurer of the National Broadcasting Company, Inc.; Thomas J. Cowan, an announcer, now connected with the Municipal Station WNYC; a technical man and a porter completed the group.

This was real adventuring, especially as WJZ went on the air without any assurance as to the length, breadth or accuracy of its broadcasts. In fact, it was no unusual thing for a broadcast to begin on the air and end in the studio with no audience except the artists. But in spite of this the interest in broadcasting was so great and the attitude of the public so coöperative that the organization continued to expand.

Miss Bertha Brainard was the next one to join the staff of WJZ as Assistant to Mr. Popenoe. This is the same Miss Brainard who is now Eastern Program Manager of the National Broadcasting Company, Inc. Later Milton Cross was lured by the charm of the invisible and began to sing for the small radio audience, and so on until finally the studios were moved to the sixth floor of the old Aeolian building on Forty-second Street, New York City, where WJZ continued in operation until September 1927 when it

was transferred to the National Broadcasting Company's building on Fifth Avenue.

In the meantime the American Telephone & Telegraph Company had not been idle and on July 25th, 1922, what is now known as Station WEAF was opened at 24 Walker Street, New York. The original call letters of this station were WBAY, shortly afterwards changed to the familiar WEAF. On August 10th, 1923, studios were opened in the American Telephone & Telegraph building, 195 Broadway, New York, which were considered at that time to be the last word in modern up-to-date equipment. Soon after the establishment of this station the tremendous possibilities of broadcasting began to receive attention from the musicians of the country. The Philharmonic Orchestra was broadcast in 1922, while music from the stage of the Capitol Theatre became a regular part of the Sunday program on WEAF.

Station WEAF was also the pioneer in demonstrating the feasibility of the network system and one of the first networks to be successfully operated consisted of WEAF connected with WMAF in Round Hills, Massachusetts, and with WCAP in Washington. As the result of this experiment there followed a rapid development of the network idea, leading to a continual expansion of these interconnected lines. On January 1, 1923, the transmission of the first network program occurred involving WEAF, the originating station; WGY, Schenectady, owned by the General Electric Company; KDKA in Pittsburgh, and KYW, Chicago, both operated by the Westinghouse Company. By October of that year football broadcasts were being sent through a network consisting of WEAF, New York; WGY, Schenectady; WJAR, Providence, and WCAP, Washington. Three months later the network included not only WEAF, New York, but WCAP, Wash-

ington; WJAR, Providence; KST, St. Louis; WDAF, Kansas, and WFAA, Dallas. It was during 1923 that the World Series baseball games and the Army-Notre Dame football game were broadcast. Calvin Coolidge was heard reading the President's message to the 68th Session of Congress on December 4, 1923. Microphones were installed in the House of Representatives and his voice was heard through this station. This was considered at the time a most wonderful achievement.

A record of the early days of these pioneer broadcasting stations makes interesting reading. In 1924 WJZ engineers picked up the first broadcast from an airplane flying over Central Park. In 1925 a concert broadcast from Station 2LO in London was picked up and re-broadcast by WJZ.

As might be expected, personalities began to develop and in the early days of WJZ we find such well-known names as the late John B. Daniel, Andy Sannella, Keith McCleod, Ted Husing, Major Andrew White, Godfrey Ludlow and others.

The quality of programs kept pace with the improvement in mechanical devices until by the end of 1925 such outstanding events as the Democratic Convention at Madison Square Garden and the inauguration of President Coolidge had been described over the air.

The sponsored broadcasts were still very much of an experiment. The application of the first advertiser desiring to use the air via a sponsored program has become a historic episode, but it resulted in the establishment of a code of principles by the American Telephone & Telegraph Company which has been largely followed ever since.

It soon became evident to all that with the increasing use of the radio and the multiplication of sets of all kinds, shapes and sizes, something would have to be done relative to stabilization of programs. At the end of 1925 programs

were being considered in national instead of local terms. The rapid growth of network systems at that time covering more or less adequately the territory east of the Rocky Mountains necessitated program material that should be acceptable to a considerable cross-section of the American audience. This was no less true in the field of the sponsored or advertising programs, so it was not strange but rather the result of necessity that out of this chaos the National Broadcasting Company, Inc., should have emerged.

CHAPTER III

MODERN BROADCASTING

Modern broadcasting, broadly speaking, may be said to have dated from the organization of the National Broadcasting Company in 1926. In describing the circumstances that led to the organization of this company one cannot do better than to quote from the statement by Owen D. Young, published in the newspapers of New York City on November 15, 1926. Among other things Mr. Young said:

"The Radio Corporation of America is interested, just as the public is, in having the most adequate programs broadcast. It is interested, as the public is, in having them comprehensive and free from discrimination.

"Any use of radio transmission which causes the public to feel that the quality of the programs is not the highest, that the use of radio is not the broadest and best use in the public interest, that it is used for political advantage or selfish power, will be detrimental to the public interest in radio, and therefore to the Radio Corporation of America.

"To insure, therefore, the development of this great service, the Radio Corporation of America has purchased for one million dollars Station WEAJ from the American Telephone & Telegraph Company, that company having decided to retire from the broadcasting business.

"The Radio Corporation of America will assume active control of that station on November 15.

"The Radio Corporation of America has decided to incorporate that station, which has achieved such a deservedly high reputation for the quality and character of its programs, under the name of the National Broadcasting Company, Inc.

"The purpose of that company will be to provide the

best program available for broadcasting in the United States.

"The National Broadcasting Company will not only broadcast these programs through Station WEAJ, but it will make them available to other broadcasting stations throughout the country so far as it may be practicable to do so, and they may desire to take them.

"It is hoped that arrangements may be made so that every event of national importance may be broadcast widely throughout the United States.

"The Radio Corporation of America is not in any sense seeking a monopoly of the air. That would be a liability rather than an asset. It is seeking, however, to provide machinery which will insure a national distribution of national programs, and a wider distribution of the highest quality.

"If others will engage in this business the Radio Corporation of America will welcome their action, whether it be coöperative or competitive.

"If other radio manufacturing companies, competitors of the Radio Corporation of America, wish to use the facilities of the National Broadcasting Company for the purpose of making known to the public their receiving sets, they may do so on the same terms as accorded to other clients.

"The necessity of providing adequate broadcasting is apparent. The problem of finding the best means of doing it is yet experimental. The Radio Corporation of America is making this experiment in the interest of the art and the furtherance of the industry.

"In order that the National Broadcasting Company may be advised as to the best type of program, that discrimination may be avoided, that the public may be assured that the broadcasting is being done in the fairest and best way, always allowing for human frailties and human performance, it has created an Advisory Council, composed of twelve members, to be chosen as representative of various shades of public opinion, which will from time to time give it the benefit of their judgment and suggestion. The mem-

bers of this Council will be announced as soon as their acceptance shall have been obtained."

The National Broadcasting Company made its official program debut in the ballroom of the Waldorf Astoria on November 15th, 1926. It was a rare occasion. The list of invitations read like a roster of New York's Four Hundred. Men well known in the scientific and business world with their families filled the boxes. The inaugural program was heard by an audience of more than 10,000,000 people. There were featured such great operatic stars as Titta Ruffo and Mary Garden, such theatrical celebrities as Weber and Fields and the inimitable Will Rogers, Walter Damrosch and the New York Symphony Orchestra, Harold Bauer, the distinguished concert pianist, Edwin Frank Goldman and his band, as well as leading organizations in the field of more popular music.

The event proved that there were no physical confines to the broadcasting studios. Mary Garden's voice was "picked up" from Chicago, Will Rogers spoke from Independence, Kansas, and the entire program was rendered as though hundreds of miles did not separate these performers from the broadcasting station.

In order that the broadcast exercises might be as widespread as possible every available station that could be mustered into service was hooked up into what was probably the first great network broadcast of entertainment.

The National Broadcasting Company, Inc., immediately took over the studios and equipment of WEAf and occupied their quarters in the American Telephone & Telegraph building at 195 Broadway. These were not large enough to include studio facilities for WJZ, the management of which had been assumed simultaneously with the purchase of WEAf, with the result that WJZ maintained its separate studios in the Aeolian building until the studios of both

stations were combined in the facilities of the National Broadcasting Company's new building at 711 Fifth Avenue.

In the meantime the building of networks increased rapidly. The original red network with WEAJ as the key station was extended until it included stations north, south, east and west, covering the country geographically east of the Rocky Mountains. The blue network, with WJZ as the key station, was also developed, paralleling the red network in many of its important stations, thereby offering two outlets for either sponsored or sustaining programs.

In April, 1927, the Pacific Coast network was formed with KGO and KPO, San Francisco, as key stations and radiating north and south on the West Coast.

Other groups had simultaneously been formed to serve in an auxiliary capacity in other geographical sections. The first of these was the Southern group, consisting originally of Louisville, Nashville, Memphis and Atlanta, later augmented by the addition of Birmingham, Jackson and New Orleans and called the South Central group. Continued demand for service in other Southern States accounted for the formation of the South Eastern group, consisting of stations in Richmond, Raleigh, Jacksonville, Tampa area and Miami. The great Southwestern areas knocked for admission with the addition of Tulsa, Oklahoma City, Hot Springs, Dallas, Fort Worth, Houston, and San Antonio. Instead of relying on coverage through Chicago, the Northwest group, consisting of stations in Minneapolis, St. Paul, Milwaukee, Duluth, Superior, knocked for admission and got it. This left only the Mountain group and the Pacific Coast to be accounted for and, obviously, Denver, Salt Lake City and Phoenix were the Cities to be selected, while the Pacific Coast was adequately served with stations in San Francisco, Los Angeles, San Diego, Portland, Seattle and Spokane.

Thus it was that in a little more than twelve months after the formation of the National Broadcasting Company the system had developed to such an extent that programs could be broadcast literally from coast to coast and the owners of receiving sets in those areas could obtain a program broadcast from studios in New York with the same clarity as though it originated in their local station. As can well be imagined, this revolutionized broadcasting and almost over-night, as it were, transferred it from an interesting local experiment to a great national medium of entertainment, publicity and advertising of sufficient potentialities to be taken seriously by all.

CHAPTER IV

THE BROADCASTING STUDIO

The studio is the workshop of broadcasting. Here everything in the way of programming begins and ends. It is not the purpose of this chapter to go into the mechanical or engineering details of the studio other than in the briefest non-technical terms.

The modern studio should be so built as to be sound-proof and air-tight. The sound-proofing of studios is accomplished by building one wall within another, the inside partition being insulated from the main building by means of hair felt. This applies not only to the walls but to the ceilings and floors. An air-tight room must necessarily be ventilated, and with any ventilation system in operation the air ducts must also be made sound-proof. The system of ventilation most commonly used consists of an air washer where the water used is refrigerated. This also results in cleaning the air and extracting the humidity so that when it is delivered to the studios it can be at almost any desired temperature. In the winter time the air is warmed and in the summer it is cooled to any temperature desired. The walls of the studio are treated with special materials having at least an average absorbing character of 30%.

The floors are completely sound-proofed and drapes are arranged along the walls for supplementary use whenever necessary.

The prime essential in studio equipment is the microphone of which there are two types in common use—the double-button carbon type, and the condenser type. Of the

two it would seem at this writing as though the condenser microphone is leading in popular use.

All studios built within the last few years contain standard apparatus connected with the control-room and consist briefly of the announcer's panel and special microphone located in the studio itself and the monitoring apparatus in the monitor booth just outside the studio and separated from it by plate glass of triple thickness which gives complete visibility without interfering with sound-proofing. The engineer at the monitor panel is always in full view of the studio performance and his regulation of volume and balance is governed largely by close contact with the production manager in the studio who communicates with him either by a series of pre-arranged signals or by use of the telautograph.

By the use of microphone faders the engineer in charge can obtain what amounts to a perfect balance of volume and tone and when this desirable point is reached the program goes on the air.

While studios differ in size and architectural construction yet basically they are all alike and in operation are governed by certain fixed engineering rules.

The matter of balance in studio arrangement is very important. A studio of a certain size containing a known area in cubic feet of space can be used successfully only as it is used for a program which in point of numbers of performers, audience and other fixed quantities comes within the operating scope of the studio.

For instance, the maximum orchestra in number of pieces and volume of production would need the maximum-sized studio in order to preserve a right relation between the volume of sound and the capacity of the studio in which the program is produced. The number of people admitted to a studio during certain types of production is often limited

to a specific number. This is because engineers have discovered that favorable results on the air are sometimes rendered impossible if the studio contains more than a certain fixed number of individuals including the artists themselves.

Studio technique is continually developing and broadcasters are learning new things every day. Much of the difficulty which originally attended the grouping of instrumentalists and soloists has now resolved itself into a matter of routine. Experiments are being conducted frequently with new styles of microphones and other essential apparatus and there is no doubt but what the next five years will see perhaps as much improvement over the studio of today as those now in use are superior to the studios of five years ago.

For the purpose of this chapter we would like the reader to think of the studio in terms of a master workshop where the great musical, dramatic and educational offerings are put on the stage, so to speak, for the benefit of the invisible audience. By thinking of the studio in this way it will be easier for the reader to understand subsequent chapters in which matters of programming are discussed more intimately.

For the benefit of those of our readers who are technically inclined, we can do no better in amplifying this chapter than to quote from a paper prepared for the Institute of Radio Engineers by O. B. Hanson and R. M. Morris, engineers of the National Broadcasting Company, Inc.

In discussing the design and construction of broadcasting studios, they say:

"In the past decade of radio broadcasting, tremendous strides have been made in development of equipment, methods of operation, and program technique chiefly due to the stimulus created by its rapid general acceptance by the public. We have constantly been faced with the problem of

providing sufficient facilities, especially from a studio standpoint, to meet the increasing program traffic requirements of network broadcasting.

"Ten years ago our ideas on broadcast studios were very meager compared to our knowledge and information of the present day. In 1923 what was believed to be quite an adequate studio layout for years to come consisted of two studios, one 22 x 35 ft. and one 16 x 20 ft. with a main control room common to both. Little, if any, time was spent on rehearsals in those days with the result that the two studios were sufficient to keep a continuous program on the air.

"With the coming of sponsored broadcasting and the necessity for careful rehearsing and well worded announcements, much more time was devoted to rehearsals. As a comparison it might be interesting to note that on important programs it is now necessary to have anywhere from five to fifteen hours of rehearsal for one hour of program on the air. This fact accounts very largely for the increase in the number of studios required for one program channel today.

"For the operation of two networks, which would obviously involve an elaborate plant, at least four studios would be required for program service alone and a number of others of varying size to handle rehearsals and auditions.

"Since nearly all rehearsals and auditions require practically the same studio conditions and apparatus necessary for program service, there is no particular point in providing studios for rehearsal purposes only. All studios should be made part of a common system for the creation of broadcast programs. The variation in number of performers and type of performances necessitate considerable variation in the size of the studios. It is usually desirable that the same studio be used for broadcasting as for the rehearsal, in order that the carefully determined position of the instruments and microphone in the studio may be retained for the broadcast.

"The problem of handling the increased number of musicians and performers becomes serious when it is possible that two or more programs may be conducted simultaneously, with several rehearsals also in progress in other

studios. Such a condition might necessitate the presence of a total of three hundred or more musicians and other artists. It is necessary, therefore, to give serious thought to the placing of studios in order that they may be economically and efficiently operated not only from the technical standpoint, but also from that of reducing to a minimum the confusion which might exist among the musicians and visiting artists.

"What is considered to be the ideal layout for a group of studios has been worked up from what may be referred to as a central control system. This consists primarily of a central main control room surrounded immediately by individual control rooms directly adjacent to their respective studios. The studios are approached on the opposite side by corridors through which the artists and performers may enter the studios. This makes for efficiency in the technical operation of the system and makes the studios readily accessible from a common point, for the production staff. An illustration of this fundamental plan is shown in Fig. 1.

"It is obvious that with such a layout great pains must be taken in insulating the individual studio units against the transmission of sound, in order that each studio unit may function satisfactorily without acoustical interference from adjacent studios. Obviously any failure of the sound insulation system would render these groups useless. It is not only imperative that sound originating within the studio be kept within the desired bounds, but also that noises originating perhaps outside the building be prevented from entering the studios. Such rigid requirements call for elaborate methods of sound control and indicate that studios should preferably be constructed without windows or openings to the exterior. If it is necessary to provide such openings in studio walls special consideration will have to be given to making them incapable of sound transmission to any appreciable degree.

"A brief outline of requirements covering the design of a group of broadcast studios is given herewith:

(1) LOCATION.

The studio group should be located in that part of a

metropolitan area which is most accessible to artists. That is, of course, adjacent to the theater and concert hall centers. In the case of New York City, this section would be bounded on the north by 59th Street, on the south by 42nd Street, on the east by Madison Avenue, and on the west by 8th Avenue. It is also desirable for a studio group to be located on a street well known to the general public.

(2) TYPE OF BUILDING.

It is desirable to locate in a building which is under construction, or on which construction has not yet begun, so that the steel work may be readily modified to provide the area (clear of columns or supports) necessary for large studios. Although a studio group could be built on the lower floors of the skyscraper type of building, this is not economical as the cost of steel spans to support the tall buildings would be prohibitive. If it is necessary to occupy a finished building, a location in the upper floor of the loft type of structure such as used for department stores and light manufacturing is probably most satisfactory.

(3) SOUND INSULATION.

Means must be provided to prevent the transmission of sound from one studio to another or from the outside into any studio. Studios should be built as a box within a box, the inner box mechanically insulated against vibration from the outer, and the outer, of course, supported on the steel structure. To be highly effective complete soundproofing necessitates that the studio floor, walls, doors and glass partitions be to all intents and purposes hermetically sealed.

(4) AIR CONDITIONING AND VENTILATION.

A ventilating system of the ordinary type is not sufficient for broadcast studios. Large groups of musicians rapidly increase the temperature and humidity necessitating that the air be replaced frequently with cooled and dehumidified air. To accomplish this, a system of air conditioning is necessary.

(5) ACOUSTIC TREATMENT.

Perhaps one of the most important conditions as far as the production of the program itself is concerned is the acoustic condition within the studio. It is necessary to provide within the studio sufficient sound absorbing material

THE BROADCASTING STUDIO

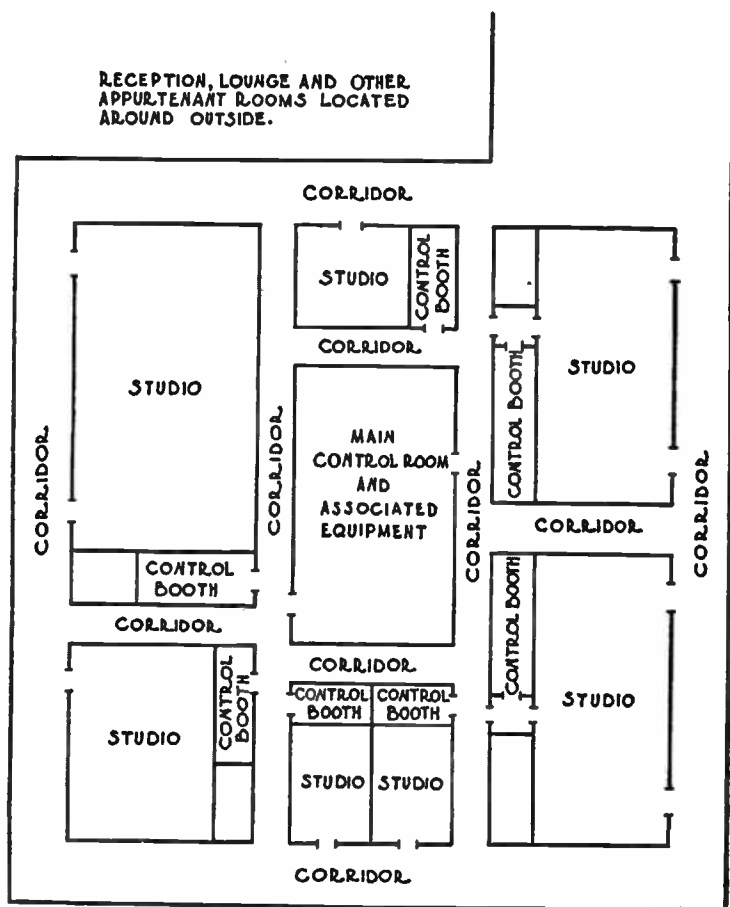


FIGURE 1

to reduce the reverberation time to the desired optimum value. Variation in the amount of sound absorption should be provided for, to compensate for variations in the size of the musical groups. The acoustic material used should of course have a frequency-absorption characteristic satisfactory over the entire musical range.

(6) LIGHTING.

The individual music stand lighting system used in concert is not adapted to broadcast studios as the location and size of the groups performing are too varied. Lighting cables laid on the floor are also somewhat of a nuisance. The lighting, therefore, must be from overhead and of sufficient strength to enable the musicians to read manuscript with ease. It has been found necessary to provide approximately 20-foot candles. Facilities must also be provided for supplying power to the portable flood lights used for taking photographs.

(7) DECORATION OF STUDIOS.

Although this problem does not immediately concern the engineer except wherein it may affect the acoustic condition, considerable stress should be placed on the importance of the proper architecture and decoration of the studios. This has a psychological effect upon the mood of the artists which influences their performance. In some of the later designs of the NBC studios, the decoration has been rather elaborate.

(8) TECHNICAL OPERATING REQUIREMENTS.

In the design of the main control room equipment and the equipment which is associated with the individual studio control rooms, it must be borne in mind that all studio equipment should be electrically interlocked in order to provide the necessary flexibility. Any studio should be capable of instantaneous connection with the outgoing circuits at the will of the master transmission supervisor. In operating a centralized studio group, it is assumed that a control operator will be stationed in the studio control booth of each studio in use to control volume and monitor the outgoing programs, and that a supervisor will be located in the main control room to superintend general technical operation. It is not intended in this article to describe the

technical apparatus used in connection with broadcasting but rather to describe in detail the design of studios and to discuss factors influencing this work.

The adaptation of the ideal plan shown in Fig. 1 to an actual building should be of interest as an illustration. Of course definite rules can hardly be set down to govern application of principles. It is a matter of careful study and thought, in each individual case."

CHAPTER V

MAKING PROGRAMS

Like the making of books there seems to be no end of making radio broadcast programs, so tremendously has the art developed in the last five years. The time was, and one does not have to go back but a few years, when three or four hours of programs on the air was considered a record. Today great national broadcasting units are putting out an average of eighteen hours a day consisting of programs, both sponsored and sustaining, of superlative quality.

The earlier programs put out by broadcasting stations of ten years ago were largely fugitive in character and dependent almost exclusively on local talent. Every community had its favorite soloists, a good church quartette, a popular reader, an excellent organist and a fair orchestra or two. For a while this local talent answered every purpose but with the development of the radio art, increasing interest in broadcasting and the rapidly mounting number of listeners, there resulted a demand for programs more comprehensive in character and of greater variety.

With the rapid development of network systems, bringing a national audience within the reach of a single microphone, programming became the most important thing in broadcasting from the standpoint of the public. Not only was it found necessary to rapidly increase the number of program hours but also to develop into the new technique all available musical talent as rapidly as possible.

The ready acceptance of broadcasting as a medium of publicity and the increasing demand for sponsored programs

of high grade resulted in a very rapid increase of the total number of program hours, until today there is hardly a five-minute period from early morning until long after midnight where the seeker after radio entertainment cannot find a selection of programs at his disposal.

It should be remembered that at the start no one knew the technique of programming, nor was anyone sure just what a cosmopolitan audience such as we have in this country really wanted in the way of programs. In consequence, there resulted what was probably the most paradoxical situation in the history of the amusement world. The broadcasters were facing a demand for more and better programs. Very little was known as to audience preference. Programs must be made that would obtain general acceptance nationally from coast to coast. The local program situation was bad enough but how much worse when transferred to the national audience!

In the early days of national broadcasting the thing which probably saved the day was the discovery that "the great common denominator of broadcasting" was music.

Among the one hundred and twenty million people or more now living in the United States, consisting of about thirty million families, we find a large group where every known language of the civilized world is spoken and where, in spite of our system of compulsory education, there are still sizeable groups to whom English is still a foreign tongue. In this group there will obviously be found reflected in the radio audience all grades of society, from the lowest strata to those who are entered in the Social Registers of our prominent cities. In this vast audience are also included great geographical sections—north, south, east and west—which, because of their environment and historical associations, have differed each from the other and hold many of their traditions sacred. Investigation also showed that in

every strata of society and without reference to wealth or personal occupation radio receiving sets are being used, comprising the most cosmopolitan audience from every standpoint ever assembled within range of the human voice.

It was for this audience that the National Broadcasting Company, Inc., and other national broadcasters were asked to provide acceptable programs. Programs of music saved the day. Regardless of his mother tongue or his lack of knowledge of the English language, every one in his group knew and appreciated the language of music. So it was through music and musical programs that this great national audience was first approached. The development of national programs from that time to the present has been largely by the process known as "trial and error". In other words, it was only by experimenting with the audience that one determined the acceptability of a program.

In this connection it should not be forgotten that the audience was very patient during this period. Everything was so new and broadcasting seemed such a miracle that the very act of receiving a program overshadowed any thought of criticism. This rendered the process of experimenting easier and more acceptable to the public at large, and for the most part they were not aware of the experiment. Audience reactions by mail and through other well-defined channels gave a fairly accurate indication of the popularity or permanence of certain types of programs.

Vocal artists of national and international prominence were attracted to the microphone and after accommodating themselves to its special technique found this an acceptable method of reaching millions instead of the concert hall audience of thousands.

Our great orchestras and symphonies, following the lead of that great indomitable prophet of music, Walter Damrosch, fell into line.

Specialists in the musical and dramatic fields came forward with auditions and demonstrated their willingness to contribute their art, until within a relatively short time the demand of the audience, together with the development of facilities, made possible programs which in point of quality and excellence would not have been dreamt of a few years earlier.

The advertiser knocking at the door and demanding a program of superlative excellence immediately made possible a type of presentation, musical or dramatic, far beyond that which would have been possible from ordinary program resources, thereby giving the audience on the sponsored basis a series of entertainment programs the like of which the world had never heard.

Radio programs as they are now being broadcast fall into two classifications—sustaining programs and sponsored programs.

Sustaining programs are those which are prepared and paid for exclusively by the broadcasting station and in which the advertiser has no participation whatever. These sustaining programs at the present time comprise more than two-thirds of the program hours broadcast nationally, based on an output of eighteen program hours daily.

Sponsored programs are those that are prepared for advertisers or organizations that pay for their time on the air and also pay for the program that is broadcast. Starting in a very modest way, the sponsored program idea has developed to a point where many of the outstanding musical productions of the year are now made available without charge to the unseen audience as a result of this class of programming. It should be borne in mind that a sponsored program, even though paid for by some great business organization, must in every way meet the standards of the broadcasting company, both as to type and quality of the

program itself and the subject matter contained in the advertising announcements, or "continuities" as they are called. It is not always an easy thing to regulate a proposition of this sort and some of the problems of sponsored programs will be discussed more intimately in a later chapter. On the whole, however, sponsored programs to date have contributed so much in the way of superlative entertainment that the audiences have been very generous both in their acceptance of the advertising message and their criticism of the way in which it has been phrased.

Programs collectively classify themselves about as follows: musical, dramatic, educational, religious, political, sporting and international.

The popular audience vote is overwhelmingly in favor of musical programs. In this division is included orchestral music, which has the largest popular choice; programs of general musical entertainment, which come next; and dance music, which is third.

Development of the dramatic art and its adaptation to radio technique is bringing this type of program into the field of larger acceptance, while short talks, lectures and programs of an educational character come last. It must be borne in mind that popular taste is continually changing, notably in the radio audience field, where the element of education to higher levels of appreciation is continually going on.

Dr. Damrosch says that radio broadcasting has done more to educate the people of this country to an appreciation of good music in the last five years than all other methods used in the preceding twenty-five years.

Dramatic programs are finding a field of increasing popularity in proportion as the technique of presentation is sufficiently improved so that a dramatic episode presented without visibility and by means of the ear only can secure

a similar reaction from the listening audience that would obtain in the case of a stage performance. In order to make dramatic presentations over the air possible it has been necessary to develop the faculty of imagination among the American people, a sense which was becoming almost atrophied. It is only as imagination supplies the picture which is lacking that the words themselves have any significance. It has been said that radio broadcasting has done more to restore the imagination of the American people than any system of education could possibly have accomplished. This, which was by far the most difficult field of programming, is now developing constructively along lines which assure for it a permanent place on the air.

Educational programs are in the making. While many programs of historical, musical and religious interest have been educational yet they have been too general in scope to come definitely within the field of educational programs as generally understood. The subject of education in its relation to the American public has always been difficult of approach. While we have a relatively small percentage of illiteracy in the United States, yet on the other hand we have a very large percentage whose education is by no means complete. Our great industrial areas where compulsory education is in effect show an almost universal termination of the child's education immediately the legal period arrives when he can be put to work. While there is no doubt as to the need and to some extent the desire of further education, yet the method of approach is uncertain and the type of education most desirable difficult to approach from any angle. This division of programming is very frankly in the field of experimentation. To be sure we American broadcasters might follow the plan of the British Broadcasting System which, being government owned and controlled, makes up its program along educational lines

and gives it to the audience "willy nilly". But somehow we are all reminded of the homely expression that "you can lead a horse to water but you cannot make him drink", and while it is very easy to map out a perfectly good educational program and feed it to the American people yet of what use is it unless a program of this type is listened to by a sufficient number of people to make it worthwhile?

In spite of all the handicaps and uncertainties, the serious-minded broadcasting units are making an excellent start in this field. One great national system is devoting over fifty hours a month to definite programs of this character. From the standpoint of general education, more time is being devoted each month to speeches from public officials, heads of government departments, the President of the United States, visiting dignitaries, all of which have their direct effect in creating a demand for educational broadcasting.

As yet programs of national character which have come directly into the public school systems are few in number. Perhaps the outstanding instance is the Damrosch Music Appreciation Hour, which at the time of this writing is reaching weekly upwards of ten million school children in various grades.

Educational broadcasting is still in its infancy but I am one of those who believe that once the needs of this vast audience are analyzed and the situation develops to a point where we can give the people what they want in the way of education, and not what we think they ought to have, that this division of programming will become one of the most important from the standpoint of the American audience.

Four years ago in addressing a public gathering I made the statement that eventually the leading colleges in our country would be endowed with Chairs of Broadcasting, not that there would be any regular profession of broadcasting,

but that the money thus made available would be used for the purpose of financing universal college broadcasts whereby a noted lecturer, say, from Oxford, visiting in the United States for a limited period, could by arrangement deliver his lectures at stated periods from a central broadcasting station to audiences gathered in the various colleges listed for the course. I still believe this is possible.

The development of religious programs early presented problems peculiar to all forms of united religious effort. The present policy of the National Broadcasting Company, Inc., in allowing a national broadcast to be made only from its studios has resulted in solving a difficult problem with general acceptance to the national audience. Handled entirely by an inter-denominational committee, the broadcasting company simply making its facilities available, there has come about the first real union in thought and purpose of all the great religious denominations that has ever existed. By this arrangement and on a common platform of broadcasting ethics the Protestant, Catholic and Jewish faiths are now using the facilities of network broadcasting and attracting huge audiences to every service.

The advent of broadcasting has practically revolutionized political campaigning. The first real test was during the Presidential campaign of 1928, when with the issues sharply drawn between the two leading candidates it became more than ever a matter of decision on the part of the American home. The use of broadcasting, with facilities available to all parties on exactly the same basis, brought about for the first time in the history of politics an opportunity for the American voter to listen to the arguments and presentations of all parties while sitting quietly in his own home and without the distracting and sometimes misleading influence of political campaigning. There is no question but what radio broadcasting will be looked upon in future campaigns

as one of the most important facilities for the use of the politician.

Sporting programs are in a class by themselves, and interest for the most part a specialized audience, but the tremendous impetus given to broadcasting by portrayal of great sporting events, like prize fights, football games, baseball, tennis, golf, horse racing, etc., has resulted in the development of a type of program exclusively its own. The dramatic manner in which an otherwise colorless game can be described, play by play, with sufficient interest to hold the listener a thousand miles away is its own answer as to national acceptance. With the advent of television sporting events will profit largely and the audience be augmented. At the present time great sporting events of national importance are looked forward to with anticipation by the audience.

This chapter would not be complete without just a word on international broadcasting. At present nearly all the larger nations of the world have high-power broadcasting stations within their borders. Programs of suitable character have been interchanged between the United States and these countries. By the use of the short waves there is no doubt but what this will become increasingly frequent and as the technique of covering great distances becomes more highly developed and our engineers find some way in which to overcome static and magnetic influences, communications between the nations of the world will become more frequent and more valuable. At the present time it is easily possible for the human voice to travel around the civilized world, and undoubtedly some of the most important international programs, of which sufficient notice has been given in advance, have been listened to by many millions of people in every civilized country.

To illustrate the extent to which programming is having

the attention of the broadcasting stations of the country, it may be interesting to note that in the studios of the National Broadcasting Company, Inc., alone over six thousand microphone appearances are made a month, while it is estimated that the broadcasting stations of the United States total the enormous figure of one million microphone appearances a year.

CHAPTER VI

FOURTH DIMENSION OF ADVERTISING

Commercial broadcasting is the "Fourth Dimension of Advertising." The term "Fourth Dimension" is not used in any technical sense but simply as identifying another great division of advertising media that has only recently been discovered.

Go back fifty, seventy-five, or even one hundred years, and we find the first media group consisting exclusively of newspapers and, as our country has developed and the science of advertising kept pace with it, we still find newspapers ranking as the first group for they still are the bulwark of our civilization and the institution upon which advertising depends for its first great dimension.

The second great dimension of advertising media consists of magazines and periodical literature, that have contributed so largely to the literary culture of our people and which group over a period of nearly fifty years has held its position as the second dimension of advertising media.

The third dimension includes all forms of outdoor or display media, whether electrical, paint and paper, window display or direct mail.

These three great divisions of advertising media comprised, broadly speaking, the entire field of advertising possibilities up to a short time ago and constituted what might be called "the length, breadth and thickness" of advertising media.

With the advent of broadcasting, there was added a fourth dimension, "height", a medium actually extending to the roof of the sky and radiating therefrom to all parts

of the ether. This I have had the privilege of naming The Fourth Dimension of Advertising.

The advent of this fourth dimension completes a perfect unit in that advertising now covers a field where all human senses are employed and where audible advertising is making for itself a worthwhile place.

This fourth dimension, "broadcasting," differs from all other forms of media in two important essentials. First, the advertising message is invisible and, second, it is audible and reaches its audience only through the sense of hearing.

Broadcasting is sometimes likened to a magazine of the air and, while the analogy is not perfect, it is perhaps as good a one as we can use for purposes of comparison. The magazine which we read in our homes contains within its covers a variety of literary material consisting of articles that are educative, entertaining, amusing—in short, covering every avenue of appeal to the reader. The modern magazine also contains advertising skilfully prepared, carefully written and beautifully illustrated. Many of these advertising pages are works of art and the best known illustrators and most famous painters have contributed of their best in the making. Some of these advertisements occupy whole pages, a few spread over two pages and are known technically as "double spreads." Still others in single column and double column style insert themselves temptingly into the reading pages. The covers of our modern magazines represent the best artistic talent of the world, backed with advertisements which in their copy preparation and cost of white space represent in many instances a small fortune. With the make-up of the modern magazine all are familiar, so why carry the description further? Now, take this great new magazine of the air, *Radio Broadcasting*. Its content is its programs and of these there is a great variety and increasingly large number. The well-balanced

program sheet of a national network stretching from coast to coast and furnishing eighteen program hours a day will show an arrangement of material very similar to that of the magazine. There are sustaining programs, paid for entirely by the station and consisting of programs of amusement; education; a variety of musical offerings both vocal and instrumental; presentations by well-known lecturers, journalists, statesmen, dramatists, story-tellers, poets, humorists, editors and, in fact, just the type of material that you will find in a modern magazine and in many instances supplied by the same individuals.

Then you have sponsored programs, paid for by the advertiser, during the presentation of which mention is made of the advertiser and his product. These furnish both entertainment and education but at the same time should be classed as the advertising part of the magazine and located as such in this magazine of the air.

Broadcast Advertising as it reaches its audience contains more of entertainment and education and dramatic art, etc., than is possible in the printed advertisement. In fact, it serves a double purpose of entertainment plus advertising, never obtainable in the use of printer's ink.

In our best conducted magazines there is a fixed ratio of advertising to pure reading matter, varying in amount according to the nature and type of the periodical. This same thing appears in the make-up of the magazine of the air. At no time is the advertising or sponsored program allowed to encroach too much on the field of the sustaining program and the time will never come when the programs of our great broadcasting systems will be 100% commercial.

As these pages are being written, in the spring of 1931, figures have been published showing nearly 70% of the total program hours of one of our great broadcasting systems is

devoted to sustaining programs, not sponsored by any advertiser.

The integrity of this new advertising medium depends on keeping faith with the public and observing proper division of time between these two types of programs. This great magazine of the air, now national and potentially international in scope, as already stated counts among its contributors the leading vocal and instrumental artists of the world as well as authors, and a long list of others who are making their contributions to the cultural and social life of mankind.

So our comparison is not so far fetched, if you consider that the program builders are the editors of this magazine; the sustaining or non-commercial programs are the reading matter, while the commercial or sponsored programs correspond to the advertising.

In considering this new medium of advertising and publicity, one thing should be continually borne in mind and that is that broadcasting appeals exclusively to the ear. It is the only medium where a blind man is just as good a prospect for the advertiser as the man with two good eyes.

For years the national advertiser and his agency had been dreaming of the time to come when there would be evolved some great family medium which should reach the home and the adult members of the family in their moments of relaxation, bringing to them the editorial and advertising message. Many efforts had been made to attain this desirable objective. The best business and editorial brains of the country had been used in developing and marketing splendid magazines addressed primarily to the home. Other publishers, feeling that specialization would solve the problem, invested millions in beautifully designed, exquisitely printed class magazines appealing to certain classes of society and exclusively devoted to their needs. Others who felt that the newspaper, as the first great dimension of advertising

media, was the vehicle with which to reach the home, developed the magazine idea with the newspaper as its carrier, developing in some instances into huge circulations of attractive magazine literature entering the home via the Sunday newspaper. But none of these solved the basic problem. No one of them proved to be the universal family medium.

Then came radio broadcasting, utilizing the very air we breathe, and with electricity as its vehicle entering the homes of the nation through doors and windows, no matter how tightly barred, and delivering its message audibly through the loud speaker wherever placed. For the first time in the history of mankind, this dream of the centuries found its realization. In the midst of the family circle, in moments of relaxation, the voice of radio brings to the audience its program of entertainment or its message of advertising.

Merlin H. Aylesworth, President of the National Broadcasting Company, Inc., in answering the question "Who pays for radio broadcasting in the United States?" says:

"There is no direct charge to the owner of a radio receiving set, for the American family sits by the fireside in the winter and on the porch in the summertime and is entertained by the great artists of the world, informed of the greatest public events, reported as the events take place, while the leading ministers of the land talk for the first time directly to millions in the peaceful environment of their homes.

"Many large American industries sponsor programs over the National Broadcasting Company's systems which are made up of seventy-six associated radio stations. Fundamentally, there is no more reason why American institutions or men of wealth should sponsor Grand Opera or endow institutions of learning and religion, than there is for American industry to make possible radio programs free to the American people. The business leaders of the United States have quickly grasped this new instrument as a constructive

force in the development of better understanding, sympathy and support for the industry and its products by American families.

"National radio broadcasting has become a new dimension in industrial advertising. It is quite different from newspaper, magazine or billboard advertising and accomplishes different results, with a service that is unique and easily distinguishable from the others. All these media are important and all go to make up our daily lives. Radio broadcasting has no conflict with the newspaper or the magazine. Those types of service are entirely different and serve their specific purposes.

"From the operation standpoint, however, there is no great distinction between the National Broadcasting Company or any other radio broadcasting company or radio station and the national magazine or daily newspaper. All of us know that the magazine with its fiction, editorials and descriptive articles and the newspaper with its important news of the day, are made possible at a low price because of the paid advertising of legitimate business firms. This is as it should be and the same thing is also true of radio broadcasting.

"So my answer to the question 'Who pays for radio broadcasting?' is that insofar as the National Broadcasting Company and its many programs including talented artists, fine music and information sponsored by American industries is concerned, the listener pays. He does not pay directly five or ten cents to receive this 'Magazine of the Air,' nor does he pay a regular tax on his radio receiving set, but by his response to the institutional and indirect advertising of American industries, he is today paying for the entertainment he receives over the air.

"The radio station today which can show a profit is a rare exception to the rule. Most of the radio stations in the United States are owned by local interests, whether in the radio business, newspaper or some other industrial activity, and the institution so owning a radio station must ordinarily charge the deficit for the year to goodwill or institutional advertising."

No wonder radio broadcasting has been called the modern miracle. There has been nothing like it since the world began. That the voice of a single human being can be so amplified and distributed that the families of the entire civilized world can hear the message, taxes both imagination and credulity to the utmost. It is a tremendous power viewed from any angle and its development involves great responsibility.

As an advertising medium to reach the family it is ideal and today sponsored broadcasts of entertainment programs are holding the attention of the largest number of people in the history of advertising. The universal use of the radio receiving set and the potential audience in this country alone of over fifty million people makes the broadcasting medium eagerly sought after by advertisers anxious to obtain access to the attention and the pocketbooks of the nation.

CHAPTER VII

OBTAINING RADIO CIRCULATION

The term "circulation," as applied to newspapers and periodicals, concerns itself with the number of copies of the publication printed and distributed to its readers. Circulation, as applied to radio broadcasting, is basically dependent on the number of families owning radio receiving sets in any given area. The fact that a newspaper or magazine prints and delivers a certain number of copies to its readers is, of course, no guarantee that every page is read or that the entire publication is even superficially examined by the recipient. The same applies in the case of the radio receiving set. The fact that a set is purchased and installed in a family does not mean that all of the programs that are being broadcast find access to each individual family. It does mean that the method of obtaining access to that family is established in much the same way that the mailing list of a great national magazine establishes the fact, subject to audit, that a given number of families are regular subscribers.

The manufacture and sale of radio receiving sets during the last decade has marked the most extraordinary development known to modern business and placed this business as sixth in the industries of the nation. Beginning in a small way, with perhaps an annual sale of \$2,000,000 worth of sets scattered rather sparsely over the country, the growth has been so tremendous that on December 31, 1929, the total money value in terms of sets, parts and accessories sold during the preceding ten years amounted, in round figures, to \$3,500,000,000. Distribution of these

sets throughout the entire country has been the most rapid known in the development of any medium of entertainment and advertising.

Ten years ago there probably were not over 1,000,000 sets in the entire United States, most of which were home-made. Today, as this chapter is being written in the spring of 1931, the best estimate at my disposal indicates that very nearly 15,000,000 families in the United States own good radio receiving sets, or approximately 50% of the total number of families in the country.

Were we to divide the United States into grand divisions, we would discover a rather unusually even distribution of sets in each section. Recent surveys have shown that of the families in New England 54.6 own radio receiving sets; in the Middle Atlantic States, 54.5; Middle West, east of the Mississippi, 48.5; the same area west of the Mississippi, 45.2; South Central States, 25.7; Pacific Coast, 60.5. Again, take the ownership of sets among population groups and we find that the large cities have 46.3, small cities 51.3, rural towns 39.5, and farms 35.9.

This gives one some idea of radio circulation in terms of sets and the rapid acceptance of this latest addition to the list of family utilities. It is more difficult to arrive at satisfactory figures in estimating the audience than in the matter of sets, for one is a physical commodity the sale and location of which can be traced with reasonable accuracy. The radio audience is a more variable factor. In obtaining its 1930 figures the United States Census Bureau has established 4.1 as the number of the average American family. If we chose to multiply the number of sets established in our American homes by 4.1, as representing the average family, it would of course give us a potential radio audience in excess of 60,000,000 people. This figure, however, should not be taken too seriously for, while it would be humanly

possible for 60,000,000 people to listen at one time to a national broadcast, yet common sense tells us that this would rarely if ever occur.

Another factor in arriving at circulation in terms of audience is that all radio programs, regardless of whether or not they are paid for by the advertiser, are looked upon as entertainment, which leaves the audience reaction to programs largely dependent upon the taste or desire of the individual family groups.

It is possible by properly conducted surveys to obtain a fairly reliable figure indicating the average number of hours per day that the family radio set is in use. In fact, latest surveys on this point indicate the figure to be between two and one-half and three hours, dependent on the section of the country. Again, there is no exact knowledge as to the actual programs listened to by these families during the two and one-half or three hours that the radio is in daily operation. Fortunately, figures are obtainable which give some indication of the most popular periods on the air from the standpoint of listener interest. It has been established that three-quarters of the radio audience listen about equally on all evenings of the week, while one-quarter listen more on certain evenings of the week. It is interesting to note that reliable figures establish Saturday, Sunday and Friday as having the largest evening audiences, followed in order of preference by Wednesday, Monday, Thursday and Tuesday.

The relatively slight percentage of increase on certain specific evenings is undoubtedly due to a united national choice for certain attractive and well-advertised programs on the air, but even taking these cumulative preferences into account there still remains the 75% of constant listeners every evening in the week. These figures have to do largely with the evening audience. Within the last twelve

months there has been developed increasing interest in daytime periods until now there is not only a very large daytime audience listening to specialized programs but the value of these periods is coming to be increasingly appreciated by the national advertiser. It has been discovered that the daytime periods prior to six p.m. sustain to the evening commercial program much the same relationship as a specialized magazine like *Good Housekeeping*, appealing to the home, sustains to other media of more general interest. It is estimated that the daylight periods now available on our national networks, with the exception of the lunch or noon hour, command audiences in excess of 1,000,000 families, while the noon hour, so-called, due to the rapid development of the farm and home program commands the attention of nearly 4,500,000 families daily.

Having thus defined in general terms what constitutes radio circulation, it may be helpful to consider the methods by which the audience is increased, both in number and program preference.

Obviously, the first basic way to increase the audience is by increasing the sale of radio receiving sets. The Sales Departments of our various radio manufacturers have this point constantly in mind and their results are easily obtainable as tabulated from month to month in their own trade journals and, as before stated, the increase in this industry has been greater for the same length of time than that recorded by any other industry in the history of the United States.

The second basic method of increasing radio circulation is by longer daily use of the set. This can be obtained only by increasing excellence of programs. The making of bigger and better programs is now commanding the attention of broadcasters everywhere. No longer is a mediocre program acceptable. To command large audiences the radio must

bring the best in its particular division of programming. This has given rise to friendly competition and resulted in giving to the radio audience the best programs of amusement, entertainment and education that the world has ever known. The aim of every broadcaster is to put out programs so exceptional in quality and interest as to render the individual receiving set absolutely indispensable. This is especially true in the field of sponsored programs where, due to the fact that the program is labeled as advertising, it must present features so commanding in their importance and interest as to sustain the interest of the audience, even though the commercial credits occupy some of the time.

In building radio circulation through program development there must be taken into account the listening habits of the audience. The largest amount of listening occurs in the evening between 7 and 11 p.m., with the maximum audience regardless of the day of the week between 8 and 10 p.m. The noon hour (12 to 1) or the supper or dinner hour (6 to 7) have about the same audience. There is not much difference between the other hours listed, with the exception that 11 to 12 midnight is a little more important from the listeners' standpoint than the mid-morning or mid-afternoon hours. In the farming section we learn that farmers listen more throughout the day, especially between 12 noon and 2 p.m., while they listen a little less than the towns and city families from 9 p.m. on, which would seem to indicate that they go to bed earlier.

Radio circulation also divides itself arbitrarily into local and national. Local circulation is represented by the coverage of certain areas within the reach of the local broadcasting stations. This area may be intensively developed by the broadcaster in much the same way as does the local newspaper in obtaining its readers. In fact, in some ways the parallel is quite exact. Many local broadcasting stations,

by the employment of local talent at certain hours of the day, have built up a very real interest in broadcasting from a purely local standpoint. Obviously, methods of building audience circulation in a restricted local area will differ quite materially from the problem facing the national broadcaster but basically it has to reckon with, first, the number of sets in a given area and, second, the listening habits of the families and their program preferences.

National circulation is expressed in terms of network coverage. The two great broadcasting systems in the United States operating nationally have covered the country with networks of stations strategically located and connected each with the other by special wires and operated as networks from central or key stations. In building up radio circulation over a national network extending from coast to coast one has to take into account broad national preferences, many times disregarding purely local conditions. In building up national circulation the broadcaster has a much more difficult problem than the local man for this reason. The local man simply has his own community to take into consideration and its preferences and prejudices are pretty well understood. The national broadcaster in preparing programs of national acceptance as a means of building circulation must take into account not only local but also sectional prejudices and so gauge his program both in quality and content as to please the largest number and by the same method offend few, if any.

All sorts of methods are in operation as circulation builders and the air is full of experiments that are being tried in order to find the answer to the question "What constitutes the universal program?" There probably is no answer to this and perhaps it is just as well, for in building circulation on the air, as is true in building circulation among periodicals, novelty counts. It is the new thing that

draws the crowd; it is the exceptional offering that gets the subscription dollar; and if one will take the pains to check the great popular programs now on the air he will find that novelty and originality are the elements that are drawing the crowd.

In my judgment, we are just beginning to learn the technique of radio circulation building. The art is changing so rapidly and the mechanical devices improving to such a degree that there can be at the present time no fixed formula or any universal solvent of this problem. As radio broadcasting becomes more universal and the radio set less of a novelty, increasing ingenuity must be employed to lift broadcasting out of a rut, no matter how excellent the rut, and make of the radio set a source of continuing surprises.

I expect within the next few years we will have circulation managers and circulation builders in this field as we now have in the field of the newspaper and magazine. There is abundant need for it and an unusual opportunity for young men and young women of bright discerning minds. We have only just begun to appreciate the possibilities that come from having free and untrammelled access to the homes of 15,000,000 families. To keep this tremendously large and important group interested and alert and looking forward to each day's programs is no light task.

CHAPTER VIII

BROADCAST ADVERTISING TECHNIQUE

For many years the national advertiser and his agent duly recognized the fact that there is such a thing as "Psychology" of advertising, and that certain basics ought to be obtained in order to work through to its logical conclusion the essential type of advertising campaign. The advertising copy must have attention value, and through attention make its appeal. Once these two elements were satisfactorily at work, there came into operation, decision, and ultimately, action, on the part of the potential customer. We were also mindful of the fact that in analyzing copy and its purpose, and also the individual for whom it was intended, there were such known facts as biology, anatomy, and optics, that must be taken into account. Out of all of this, was built the "copy structure" which resulted in an association of ideas, and the conveyance of these ideas through the channels of thought and appeal to the imagination.

The copy writer was impressed by the fact that in his appeal, he must keep well within the reasonable, in order to hold the attention of the reader, and in working out the details of his story he used either "Suggestion Copy" or "Attention Copy" or "Direct Command Copy," as seemed best suited to the purpose in mind, and the group to be reached. From this, hopefully, there was obtained a cumulative effect, which, in the reaction of the ideal copy on the ideal group, accomplished the desired result.

With Broadcast Advertising we find it necessary to use a new technique. Whereas, in all the usual forms of advertising, the eye has been the means of conveying the message

to the brain, we find we now have a new physical attribute, the ear, or hearing, that must be considered in preparing Broadcast Advertising "copy" or the program, as it is more commonly designated.

In this country we have attained first place among all the nations of the world in the excellence of our newspaper and magazine advertising copy, and the attractiveness of our billboards and electric signs. We now have before us the duty of maintaining this record in developing Broadcast Advertising which, in its approach, finds its avenue to the brain exclusively through the sense of hearing.

Few of us realize until put to the test, the extent to which eye and ear when working together are influenced by the impressions that come through the eye. Take a musical comedy, a public speaker, a performance on the stage, and if we stop to analyze our impressions, we find that much we hear, if heard alone, would leave a negative impression, but when combined with the brilliant setting, and the numerous cunningly devised combinations of color and attractive groupings, produces a result altogether satisfactory and to which we respond with applause.

We early found by experimenting that when the sense of hearing alone is involved, and no artificial or spectacular appeal through the eye is summoned to assist, we have a very different and much more difficult problem on our hands. To make a long story short, an entirely new technique of approach to the radio public has been made wherein the program is so constructed, even to its smallest details, as to produce the same effect on the listener that he obtains from the printed page and its accompanying illustrations.

For the most part, the public has responded to broadcasting in a way both enthusiastic and coöperative. Many mistakes were made at the start, for when you blaze a trail through a virgin wilderness, you are sure to get lost once

or twice before you find the true direction, but out of these mistakes there has evolved a well-known avenue of approach that even at this early stage is both productive and reasonably satisfactory. There is a universal common denominator in all matters that pertain to advertising. This, in the usual form of printed advertising media, is represented by an arrangement of words and illustrations, making a combination of the artistic and practical, which we call "An advertisement."

In Broadcast Advertising, we find that the universal common denominator is music, or music combined with some form of dramatic art. It has been by a combination of these and the ability to obtain a right balance, that there have been worked out some very extraordinary and worthwhile programs, both sustaining and sponsored.

A musical number has to be prepared quite differently for the microphone than would be the case if it were to be presented on the concert platform. If the numbers are orchestral the musicians must be rightly positioned, and properly balanced, in order that a uniform tone may reach the microphone. New combinations, involving rewriting the complete score of an opera is many times necessary in order to produce the same result that would be obtained in a concert hall. The technique of handling the human voice is also just as different, and has had to be learned even by Grand Opera Stars with their many years of training.

With this in view, it will be recognized how difficult was the task of preparing a microphone interpretation of a nationally advertised product, for this is just what had to be done.

It was early discovered that the radio audience would not permit the sponsor of a program to talk unduly about his own product, even though he was paying for the entertain-

ment, and that the most favorable reaction came when the sponsor made himself known indirectly.

A good-will program sponsored by a national advertiser and carrying an announcement to this effect at the opening and close of his period on the air was found to be not only satisfactory, but resulting in thousands of good-will expressions, and eventually developing an increased volume of tangible business.

But, as in all forms of advertising, the necessity for variety and the novel and exceptional soon became apparent. The result is, that today, out of two hundred or more national accounts on the air, there are no two exactly alike, and in this number there are represented a dozen or more entirely distinct and separate methods of approach. A sparkling water, or a ginger ale, or a summer drink, chooses for its copy program, a type of music suggestive of and thoroughly in keeping with the product itself. A nationally advertised chewing sweet dramatizes its newspaper and magazine advertising to an extent where it produces a unique and universally acceptable program, each appearance of which renders more valuable all other forms of advertising in which it is engaged. No program is ever 100% at the start, any more than the average copy is a perfect advertisement at the start, but in spite of this, the major programs on the air at the present time are producing, not only approval on the part of the radio audience, but are resolving themselves into good-will and business bringers for the national advertiser.

Just a word about the radio audience. Never visualize it as a tremendous number of people seated in an audience hall listening to a performance. This never occurs. Instead, visualize a family group about the radio receiving set, listening to the programs that come from the favorite station or stations to which they are accustomed to turn for their

entertainment. Here you have the advertiser's ideal—the family group in its moments of relaxation awaiting your message. Nothing equal to this has ever been dreamed of by the advertising man. For years he has strived to obtain it by creating magazines of distinct personal appeal, but to be able to place his message directly within the home and before those who are his potential buyers—this, I say has never before been remotely possible.

Things that one might say in print, or lines that an actor might utter on the stage, would not be permitted in a program coming boldly from the loud speaker, before a small select group such as I have described. This fact, however, instead of being a deterrent, has increased the value of right approach, and has resulted in a delicacy of contact, and fine quality of reference to the advertiser and his product, reacting favorably on both parties. What could be more enjoyable than one of our most popular programs that reaches the maximum radio audience every week, and which is so attuned to the quality of the product sponsored as to be almost synonymous with it. "Quality begets quality" and in this particular instance, the program has become not only a great national favorite, but the product also has shared the same degree of popular approval.

Disabuse your mind of the feeling that programs "happen" or are simply groups of musicians or artists assembling without any special objective in mind. Every musician, every artist, every actor, appearing on any program, is just as carefully selected as ever an advertising agency selected its copy writer, typographical expert or commercial artist.

And what does the public think of all this, you ask? Well, if one is to be governed in his reply by mail response, the reply would be that the American family has so generally accepted Radio as a permanent part of home equipment, that it will never willingly give it up. It has brought educa-

tion, entertainment, religious privileges, and a contact with the great world, into hundreds of thousands of homes that have heretofore been barren of these things. It has given to the music lover his choice of the greatest artists of the world at no extra cost beyond that of his receiving set. It has brought the world into the cabin of the lonely rancher thousands of miles from his nearest city, and made life for him more endurable. It has eased the pain, and made less long the days of thousands of those confined in our hospitals. It has ministered in the broadest possible way in its contribution of those things which men and women most need, and in such variety that whether it be the cowboy on the Mexican border, or the society bud in her city home, each finds in the radio something to be desired.

The reaction of the public to sponsored programs is distinctly favorable. Here and there, we find the chronic objector—but who does not find him everywhere?

There is being built into the structure of advertising today a great new factor, which frankly is not competitive but coöperative, acting much as the keystone to the arch—by its presence making the entire structure more solid and more capable of performing its complete function.

Broadcast Advertising is coöperative with newspaper, magazine and outdoor advertising. I will go still farther and say, that without these other long established forms of advertising, Broadcast Advertising would fail of its greatest accomplishment. With them it serves as a binder, bringing thousands of family groups to a realizing sense of this great invention that is contributing so much to their comfort and convenience. It is also bringing them to the psychological point of having the "will to do" and it is this "will to do" that crystallizes into favorable consideration of the sponsored program, as the only way by which they can discharge their debt of personal obligation.

CHAPTER IX

PLANNING A BROADCASTING CAMPAIGN

When the subject of Broadcast Advertising was first broached to the national advertiser, his attitude towards the subject was one of complete indifference or mild interest. Just how Radio Broadcasting, which a few years ago consisted almost entirely of fugitive programs of music and entertainment, would fit in with the serious-minded advertising campaign, seemed difficult to answer. From the beginning, advertising in its progressive development had depended entirely on impressions obtainable by sight. Out of this development there had been evolved the most beautiful and finished types of illustrated and purely typographical advertising the world had seen. Nothing had been left undone to produce the impression on the human mind intended by the advertiser and his agency. As such, modern advertising had obtained a rightful place for itself under the sun and had proved its value to industry by gradually increasing its distribution and, ultimately, the buying capacity of the public.

Along comes broadcasting, appealing exclusively to the ear—the only medium where a blind man is just as good a prospect as the man with two good eyes! Here was a potential medium, presumably with a technique of approach, but what that technique was no one knew. Rarely has any industry come into general recognition about which so little was actually known or where there was a record of achievement or failure to act as a guide for further progress. It was indeed an industry in the throes of development. As a business and as an advertising medium, it was starting

from scratch. All that was to be learned must be learned by experiment. Radio Broadcasting was the only industry in the world 100% electrical and, as such, subject to the uncertainties and freakish manifestations peculiar to electricity, but the great element of novelty loomed far and above everything else and, as you all know, the advertiser is always interested in a new thing.

Again, the national advertiser and his agent, together with the publisher, had for years been dreaming of a great medium that would reach the home and the family in their moments of relaxation, a medium that would appeal to young and old alike and to all classes and conditions of society. The newspaper did not accomplish this and, far less, the magazine. When it became known that Radio Broadcasting as a medium brought its message directly before the family group, regardless of physical or atmospheric barriers, and through the receiving set made possible entrée into the heart of the American home—when this became more widely known, Broadcast Advertising received its first definite encouragement.

The year 1930 marks the Tenth Anniversary of Radio Broadcasting, five of which have been definitely devoted to the development of programs both sponsored and sustaining. During this decade, the manufacture, sale and distribution of radio receiving sets has been so rapid that up to January 1, 1930, confidential surveys revealed the fact that 43% of the 29,000,000 families in the United States own sets and use them to the equivalent of two and one-half hours each day in the year.

This automatically provides for a potential family audience throughout the nation of over fifty million people, all of whom can be reached in their own homes through the medium of Radio Broadcasting.

With these basic facts before us we can more intelligently

consider what it means to plan a Broadcast Advertising campaign.

In the first place, it is to be assumed that those using this "Fourth Dimension of Advertising" will be largely national advertisers, who have already conformed to the requirements of good advertising that I have previously mentioned, with the result that there already exists a careful study of their product, the cost of manufacture and distribution and the volume of sales. The profits are a matter of record. Sections of the country have been surveyed with their results on file. The selection of fixed media—newspaper, magazine, outdoor advertising, etc., etc.—has already been made, experimented with, and decided on as the backbone of their national advertising. The objective of each annual or semi-annual campaign is well worked out. The forms of advertising already employed are coordinated as to copy and illustration. Now along comes Broadcast Advertising. Where does it fit into the picture?

I am one of those who believe that this "Fourth Dimension of Advertising" represents the only medium that has ever come into public acceptance which has added to and not detracted from other forms of media. Broadcast Advertising from the start has been coöperative and not competitive. Now that we understand this relationship better, there is less distrust or opposition. Five years ago only one or two advertising agencies in the United States felt any confidence in Broadcast Advertising or recommended it to their clients. During the year 1929 the National Broadcasting Company, Inc., alone sold through its various networks thirteen million dollars' worth of time on the air, billed through fifty-seven separate agencies for the use of their clients, and incidentally paying the advertising agencies nearly two million dollars in cash commissions.

Broadcast Advertising, if it fits into the plan and scope

of the national advertiser, can be made one of the most productive forms of media in existence.

Let us assume for the moment that a product is under consideration that is in every way suited to the air. It has already been advertised sufficiently in established media so that the name of the product and its characteristics are generally known. Its campaigns of advertising have been normally successful. It is an average national advertising account showing a satisfactory increase in sales and distribution each year as the result of its advertising campaign.

When such an advertiser knocks at the door of Broadcast Advertising the procedure that ensues is largely as follows:

A conference is called by the Sales Department of the broadcasting medium at which there are present the advertiser and his agency and representatives of the Sales, Executive and Program departments of the Broadcasting Company. As a general thing, the advertising agency lays on the conference table a résumé of his client's previous campaigns accompanied by samples of the advertising and, whenever possible, a tabulated inventory of results.

In addition, the advertiser and his agency present their plan for the next national campaign which is still in the process of development. Assuming that this is the campaign where it is desirable to use Broadcast Advertising, attention is immediately centered on the plan and objective of the client's future advertising.

Assuming that there is a definite objective in view, either that of obtaining good-will, additional sales or something else equally important, the problem before the meeting resolves itself almost automatically into finding a place where Broadcast Advertising can be helpful and productive.

It is found on examination that the historical background of the Company, processes of manufacture, description of the values of the commodity—that all these have been ade-

quately covered in the printed advertising that has been before the public for several years. It has also been found that a situation has arisen whereby, in spite of the continued presentation to the public of the best obtainable in the advertising art, a point has been reached where sales are either stationary or beginning to lag behind the normal annual increase.

It is at this point that Broadcast Advertising rightly used becomes extraordinarily effective. A program is suggested which shall be in line with the product and its potential audience, and which shall serve to bring to the attention of the family, advertising that may have become so common as to have lost its first efficiency or which, for one cause or another, may not have reached the point of actually influencing the family to purchase.

It must be borne in mind that in Broadcast Advertising very little opportunity is given for a description of the product or extended sales argument. It is in the best sense of the term a form of "reminder" advertising and as such the "sales continuity" or "commercial credits," as they are known, should contain the minimum number of words and be phrased with such skill and subtlety as to convey in tabloid form the desired message.

It may be that several conferences are necessary before even a sample Broadcast Advertising program is evolved. When this program is sufficiently developed so that an audition is possible, it is put on in one of the Studios and this original planning group around the conference table has an opportunity of listening critically to an initial presentation.

The program at this point is in the stage comparable with the "roughs" of the printed campaign and just as subject to criticism and alteration. This little conference group listens, criticizes, suggests, with the result that certain numbers are strengthened, others eliminated; new artists sub-

stituted; change in announcers recommended, and, in short, all the changes equivalent to the erasures, additions and revisions in printed copy are made.

After a sufficient interval, a second audition is heard in which all of the corrections have been made. This passes the Board unanimously with, perhaps, a few minor suggestions.

With this first program as a guide, it is not at all unusual for three or four other programs to be built in advance of the first broadcast. This is done in order to accumulate sufficient material to take advantage of the publicity necessary before a first-rate national program goes on the air.

Right here it may be interesting to note that most of the great broadcasting companies prepare program publicity material three weeks in advance. This applies to commercial, as well as sustaining programs.

With the program material under way, it must be borne in mind that the selection of time for each program requires much careful study. Every period on the air from dawn until midnight represents a corresponding type of audience. The listeners between the hours of 8:00 and 10:00 in the forenoon form an altogether different audience from those who listen between the hours of 8:00 and 10:00 at night. Pure entertainment, whether of music or dramatic art, finds the largest audience during the evening hours. Other programs which have to do more intimately with the household and are designed to attract an audience exclusively of housewives find greatest acceptance during the periods prior to the noon hour. Other advertisers desirous of bringing certain commodities that appeal to personal beauty, luxury, and the like, again exclusively appealing to the feminine audience, find favorable reactions during the hours from 1:00 to 5:00 p.m.

The length of the program is also an important matter

for decision. For some programs fifteen minutes is ample; for others an hour is none too long. For the average program, scheduled for the evening periods, a half hour is found to be the average unit of measurement.

Let us suppose that the program under discussion has decided these various points and is scheduled for a half hour of entertainment during the evening. Ample publicity has been given the program, the newspapers, magazines and other forms of media have been used by the advertiser sufficiently in advance, so that the radio families of the country are aware of the fact that a new program of exceptional interest and variety is scheduled for a certain evening hour. Too much emphasis cannot be laid on the importance of this as, otherwise, the potential audience may be ignorant of the treat in store for them. Everything is "all set," the last half second has been ticked off and the announcer states to the radio families the title and purpose of this new program and the name of the sponsor who, of course, is the advertiser and, quite likely, the manufacturer of the product. If the program has been as carefully worked out as indicated in the preparatory steps previously mentioned, the audience response is almost automatic. A beautiful program, let us say, of music, with artists who are stars and whose names are household words; everything is timely; the selections are well chosen; the whole half hour is a perfect gem of artistic production. At the end, the audience is simply reminded that the half hour of entertainment to which they have just listened has been made possible by the sponsor, whose name is given. What is the immediate result?

If the program is of such character as to command widespread interest, the première audience will run literally into the millions. Visualize the fact that these millions are not a mass audience but innumerable family groups of four or

five—the very purchasing backbone of the Nation. Let us suppose the product being advertised is one of such universal consumption as, say, coffee. What actually occurs at the conclusion of the program is something like this:

The man of the house, who has been listening with appreciation to the musical treat, turns to his wife and says, "Mary, what kind of coffee are we using?" She replies, giving the trade-mark name. He counters by saying, "Do you know anything about the brand whose program we have just heard?" His wife replies that she does not other than that she has many times seen it advertised, but never taken sufficient interest to make a purchase. Nine times out of ten the comeback of the man of the house is this: Addressing his wife he says: "My dear, tomorrow morning when you make out your grocery list, I wish you would order a pound of that coffee for me," and then he adds, "If it is as good as the program, it must be some coffee."

The next morning 100,000 or more housewives buy their first pound of this particular commodity. These figures are more likely to be under-estimated than over-estimated, and if the coffee is any good it stays in the family and becomes its own recommendation, to say nothing of the word that is passed along from one family to another calling attention to the program of excellence and thereby adding to the swelling numbers of the audience.

There is a sort of psychology in this matter of sponsored programs which is hard to analyze but which appeals to a very simple type of human reactions. It must be remembered that every radio program on the air is free to whoever chooses to listen. There is no way whereby you can pay for a program, even if you wished to do so. There are only two ways whereby satisfactory acknowledgment becomes possible. First, by a purchase of the goods, and, second, by a letter of appreciation. Many times both forms

are used and increasingly the purchase of the article is looked upon by the listener as being the least that he can do in the way of tangible recognition of the service being rendered by the advertiser.

The radio audience represents such an intimate cross-section of the American family that everything is being done by those who are conscientiously discharging this obligation to the public, to safeguard the family from the intrusion of anything in the way of program material that would be in the least objectionable to this group of listeners. For this reason, the advertising "credits" many times have to be revised to a point where their acceptance is guaranteed and where a tendency to over-sell is eliminated. Again, there are certain types of light entertainment that are all right on the stage but which it would be wrong to bring into the family circle via the radio. It has been found that any attempt to make a direct sale, with mention of price, has been reactionary from the audience standpoint and detrimental to the best interests of good programs. It is permissible to furnish samples of a product which is acceptable to this method of advertising, provided this thought is not made a dominant one on the program.

Wherever artistic talent, combined with good judgment and sustained by a continuance of other forms of national advertising previously used by the manufacturer, is used in the make-up of a Broadcast Advertising campaign, I have yet to recall a failure. Instead, some most remarkable successes have been noted and their number is steadily increasing.

It should not be forgotten that, even though a Broadcast Advertising campaign has registered 100% on all of the points, it may yet fail of its greatest opportunity unless it adequately fulfills its obligation to the audience. I refer to audience mail. In many instances audience mail runs into

hundreds of thousands of letters. It should be remembered that each letter represents a communication from some member of the family who has deliberately taken the time necessary to write and post the letter.

This, in turn, deserves equal attention on the part of the recipient. Those advertisers who are most permanent and most successful in their use of broadcasting make a fixed rule that all radio mail shall be acknowledged and, whenever necessary, a personal letter written. This acknowledgment can be in various forms according to the type of program and the character of the correspondence, but the fact that a letter is acknowledged by an outstanding commercial institution brings back into the home the flush of pleasure and the feeling of appreciation and solidifies the contact between the broadcaster and his unseen audience. Unless an advertiser is prepared to do this regularly and intelligently he had better keep off the air, for it should be remembered it is just as easy to make enemies as it is to make friends in broadcasting and indifference on the part of the individual family results in simply tuning you off the air, which is the thing above all to be avoided.

Speaking of the audience, there is still one further step. Let us suppose that this hypothetical example, which we are following step by step, has thus far registered satisfactory care and attention to all these details. There is still one last matter of great importance. I refer to holding the audience from week to week and retaining their sustained interest. While this is a difficult thing to accomplish, it is by no means impossible, as evidenced by a number of programs that have been on the air for a series of years, holding and increasing audience volume by so arranging program material that the broadcast is looked forward to eagerly as the event of the week.

Of course, it means work and study and attention and a

lot of other things to obtain this. The same thing is true of all forms of advertising. The banner advertisement in some one issue of the *Saturday Evening Post* did not come there as an accident. It was the result probably of weeks and months of hard work, combined with the best obtainable in the way of creative advertising art. The outstanding programs on the air at the present time holding the attention of the largest audiences are those where the same sincere work, skill, intelligence and good sense, and all the rest, are brought into play with every appearance.

It would probably surprise most laymen to know the amount of hard work that professional artists devote every day to the perfection of their art. It would probably be news to many advertising agencies to learn that great broadcasting institutions, like the National Broadcasting Company, contain creative departments where the best brains of the entire country are being focussed on the production of outstanding musical and dramatic programs; that other departments keep busy, men of national reputation in furnishing advertising continuities which in their preparation and technique shall contain, in subtle convincing form, the same appeal that another writer may have taken an entire page in a newspaper to present to the reading public. It may be news to some to learn that an entirely new field, that of Studio production, has been created in order that whatever comes into the Studio a masterpiece shall also go out of the Studio equally a masterpiece. Also it should be remembered that "there is many a slip between the cup and the lip" and an otherwise perfect Studio presentation might be so marred and bungled by awkward production and inefficient musical supervision so as to reach the outside audience in anything but an acceptable manner.

Broadcast Advertising is no longer an experiment. Broadcasting is an established advertising medium. Over

two hundred national advertisers used the networks of the National Broadcasting Company alone in 1929. This new medium now has back of it enough years of actual record to prove its profitable acceptance by the general public. It is a very rare occasion indeed that a national advertiser having a desirable location on the air willingly relinquishes his position. Unlike the newspaper or the magazine that can add additional pages to take care of additional advertising, we in broadcasting cannot create additional hours of the day.

The art is still new. Much has yet to be learned, both as to the technique and application of Broadcast Advertising.

I anticipate that the next five years will bring as much in the way of additional knowledge and development as have the five years just passed. I am strongly of the opinion, however, that with this great new "Fourth Dimension of Advertising" continuing under the leadership of men actuated by sound business principles, desirous of giving the Nation the best obtainable through its facilities and not unmindful of the great responsibility coming to them as trustees of this great new method of publicity and entertainment—that under such auspices, as we go forward it will be with the purpose of making broadcasting not only better technically, more interesting as to programs, but of such general widespread value as to make it the one outstanding essential of the American home.

CHAPTER X

COMMERCIAL CREDITS

Commercial credits represent that portion of a program continuity devoted to the mention by the advertiser of his name and product. A program continuity is that part of the program which is conducted by the announcer and, for the most part, is descriptive or informative and has to do with the main features of the program. As a part of this program, there may appear at various points in the continuity these commercial credits which carry the advertising message of the individual or firm sponsoring the program.

The sponsored or advertising program and the inevitable commercial credit as a part of the continuity is receiving much critical attention. Under our present system of free broadcasting of all programs, the only revenue obtainable is through the sponsor or advertiser who, by paying for a program of entertainment, becomes automatically entitled to a proper amount of advertising in return. Four or five years ago, when broadcasting was still a novelty, very little objection resulted from this procedure. At that time good programs were at a premium and, when a well-known manufacturer of radio sets for the first time put on the air free of charge the finest Opera Stars in the world of music, everyone acclaimed him as a universal benefactor and none criticized the mention of his name and product. The same was true when, a year later, another great manufacturing concern in the Middle West put on a program consisting of Walter Damrosch and his orchestra, giving the radio audience—without respect to income or profession—an equal share in this great symphony. And, again, although

the advertiser made proper use of his name and product, there was no objection but, rather, universal commendation.

During the last three years commercial broadcasting, as sponsored programs are sometimes called, has developed so acceptably as a great advertising medium that as a natural consequence there are today more programs on the air of greater variety, some of which are carrying more advertising in the way of commercial credits than applied in the two instances to which I have referred. At the same time, it must be remembered that the commercial credit, as an integral part of the program of entertainment, is the only thing that makes possible the presentation free of charge of the most exclusive as well as expensive programs of exceptional talent the world has ever known.

One of the first advertisers to use broadcasting was Browning, King & Company, of New York, and when their application for the use of the air for advertising purposes was presented to the American Telephone & Telegraph Company, at that time owning and operating Station WEAf, there were laid down a few simple rules of policy that were to apply whenever a commercial program was put on the air. These rules were essentially as follows:

First—The program of entertainment suggested by the advertiser must be in every way up to the standard set by the broadcasting station for its own sustaining programs.

Second—The advertising message of the sponsor should be confined as far as possible within reason to the mention of his name and the product that he is advertising.

Third—No direct selling or quotation of prices is to be allowed under any circumstances.

Fourth—Failure to observe these conditions or strenuous objection on the part of the listening audience to this type of program would give opportunity for the broadcasting company to terminate the arrangement.

This early arrangement represents in spirit, although not in detail, the operating basis of sponsored programs of national distribution. There are today upwards of two hundred national advertisers using the network systems of the country with greater or less regularity. These advertisers are all using this new advertising medium for the purpose of acquainting the people with the nature and excellence of their special product. The only opportunity for doing this is by the use of commercial credits. The ideal commercial credit is that which confines itself to the minimum number of words necessary to acquaint the audience with the essential facts relative to the manufacturer and his product. If three commercial credits are allowed in a program repetition should be avoided at all cost. There is nothing which so annoys the radio audience as unnecessary repetition, especially of a descriptive character. Great care should be exercised in the placing of commercial credits in the continuity. Obviously, there is a right place and a wrong place for this material in every program and the public have been treated to demonstrations of both types of procedure.

It is quite generally admitted by both advertiser and audience that the greatest opportunity for acceptable advertising is offered by the opening announcement. At this time the audience is assembled for its hour or half hour of entertainment, attracted by advance announcements of a star program presenting perhaps artists of international renown. Any reasonable amount of prefatory remarks, advertising or otherwise, will be accepted by the assembled audience in good nature and with courteous attention. This is the advertiser's great opportunity and should command the best knowledge of copywriting and broadcasting technique available, for here is where the advertiser really gets over his advertising message to his audience. If he fails at

the beginning he is not likely to again obtain his audience in a like receptive mood.

With the program once under way it is poor policy, as well as bad taste, to interject commercial announcements of a pronounced character between the entertainment numbers. Such a procedure is inevitably reactionary and directly harmful not only to the advertiser and his product but also to the broadcasting system putting on the program. What could be more incongruous than to follow a wonderful aria by a well-known Opera Star with an invitation on the part of the advertisers to buy such and such a product. This procedure practically makes a sandwich board of the performers to their disgust and that of the public.

A second opportunity presents itself rather automatically to the advertiser in connection with the fifteen-minute break for station announcements now required by the Federal Radio Commission. Here is an arbitrary break in the program and an opportunity for tactful reference to the product in keeping with that part of the program that has preceded and at a time where it does not interrupt or react unfavorably on the program as a whole. A commercial credit at this period should be brevity itself—a "lest we forget" type of announcement to keep the audience from forgetting the name of the sponsor. In a sixty-minute program there, of course, will be further opportunity for this type of break at each fifteen-minute announcement, although many advertisers prefer not to take full advantage of this opportunity.

The closing announcement, if employed at all, should be brief and to the point and just precede the actual closing of the program, for it must be admitted that the great American audience is primarily interested in radio because of entertainment and not because of advertising, and when the

program is over the dial is turned and the closing announcement for the most part lost.

There is a wide difference of opinion as to what measuring stick, if any, should be used in limiting the amount of advertising permissible in connection with any program on the air. The measurement of time is not a good one. Nor, again, the number of words, for after all, more is dependent on how you say a thing than the actual number of words employed in the saying. In this connection we have numberless examples of the fine art of presenting a proposition in the fewest possible words contained in some of our outstanding visible advertisements. Our great national magazines contain wonderful illustrations of brevity in advertising, absence of repetition, concise statements of fact, employment of that subtle psychology which, after all, is the root of all good advertising. There would seem to be no logical reason why one great national account should be able to tell its advertising story clearly, concisely and intelligently to the great American public in a full-page magazine advertisement containing but two hundred words, and then feel obliged to smear six hundred or more words through a beautiful program on the air for the purpose of telling the same story. A study of the leading national magazines over a considerable period discloses the fact that the number of words comprising a full-page advertising message averaged between two and three hundred.

The possibilities of getting over a complete message delicately, without offense, and at the same time effectively, are so great when applied to Broadcast Advertising that I cannot understand why the brains of our best copywriters have not been drafted for writing commercial credits exclusively for the air, employing the same basic principles that have worked out so satisfactorily in the periodical advertising of the last decade.

The other evening I sat in a studio of a broadcasting station containing a large guest audience and studied the faces of those present as seven hundred and twenty-five words of commercial credits were read at various periods during the program. The opening announcement obtained attention for the first two hundred words; after that it was lost. The announcements that followed during this hour program at fifteen-minute intervals were regarded by the audience much the same as curtain drops at the theatre and, within the limitations of the studio restrictions, the period was used for purposes of relaxation. The closing announcement was lost altogether. If this can be taken as a sample of what happens in the case of a studio audience, consider how much easier it would be in the privacy of the family circle to ignore entirely long burdensome commercial credits.

There is no objection to the commercial credit in principle on the part of the listening audience. It is recognized as the price that must be paid for the program in much the same way that the advertising pages in a magazine make possible the minimum price of the periodical. It must be admitted, however, that commercial credits are on trial and already there is much discussion and some protest on the part of the listener. I have had opportunity of going through reams of correspondence constructively critical of broadcast advertising programs and I would say that the composite audience presents three indictments of commercial credits.

The first indictment against the commercial credit is that it is too long. This is something which can easily be remedied. In the majority of instances the things we say or write consume twice as much in time or number of words as absolutely necessary to convey the message. So perhaps this is the objection that might most easily be remedied.

The second indictment is that the commercial credit, as now composed, presumes too much on the ignorance of the audience. Assuming as basic that broadcasting is not a primary medium of advertising and is not used ordinarily for the purpose of introducing a new product, and that because of this it is most effective as a reminder of national advertising appearing in newspapers and periodicals—it is because of this that the listener maintains that it is presuming too much on the ignorance of the audience when an advertiser finds it necessary to go into repeated detail relative to his business or his product. This is a type of thing that is continually finding a place on sponsored programs. The American audience is a keenly alert group of people. It knows its advertising as it knows the everyday facts of life and no one is better aware of this than the advertiser himself. The thing that the advertiser overlooks is the fact that an intelligent audience of this character, knowing the basics of his product, does not need to be told the purposes of the product in detail more than once in a program in order to get the drift of the thought and purpose of the continuity. On the other hand, the opportunities for clever, delicately worked out and altogether acceptable sales propaganda are so possible in writing advertising continuities, and can be obtained so easily, that the wonder is that more advertisers have not made use of the technique. The best commercial programs on the air today and those obtaining the largest acceptance are those endeavoring to observe this method of treatment.

The third indictment of the listener against the present form of commercial credit is their placement. This is a matter which has already been mentioned. Admitting the fact that the audience will listen, without irritation, to a reasonable amount of commercial credits at the introduction of a good program, it naturally follows that the advertiser

must be very wise and very careful how he breaks into the program of entertainment when it once gets under way. The advertiser is an intelligent, far-seeing business man. Many of our national advertisers have made huge fortunes largely as the result of visible advertising. The trouble is that he fails to realize that in making use of this "Fourth Dimension of Advertising" he has entered an entirely new field with a distinctive technique that must be carefully followed. He just doesn't understand the harm that is being done to him and his product through the misguided efforts of those responsible for his advertising on the air. He may believe that his advertising is good because it represents a certain maximum number of advertising words delivered to an invisible audience. But this is because he has not thought the thing through nor, for the most part, has his advertising agency, which perhaps is only just beginning to realize that there is a technique applicable to commercial credits the same as there is a real technique now understood and applied very generally to the best advertising that appears in our newspapers and magazines.

In a genuine attempt to apply a specific remedy the suggestion has been made that commercial credits be limited to a certain number of words, dependent on the total length of the program. At first thought this would seem to be a logical measuring stick, but when one considers that there are today more fifteen-minute programs on the air than programs of an hour duration and that the half-hour period seems to be the major choice, and that all three groups are entitled to adequate commercial credits, it is then I say that the arbitrary limitation in number of words becomes impracticable. The paradoxical thing about this problem is that some advertisers occupying the largest amount of time on the air use the fewest words in their commercial credits of any on the entire list. Moreover, the type of pro-

gram has much to do with the length of commercial credits. Some programs lend themselves very acceptably to the interweaving of advertising into the very subject matter of the program itself. For instance, the travelogue type of program, sponsored by a tourist agency or a steamship company, might very largely consist of the most desirable type of entertainment but with a larger percentage of indirect advertising than would be permissible under any other form of program. Again, there are certain programs that are based entirely on domestic episodes and designedly built around the consumption of cereals or other products of every-day use. In such instances the very program itself is a part of the advertising continuity. On the other hand, there may be a great symphony concert scheduled for a prominent national advertiser, in which event good taste as well as good advertising procedure contents itself with the announcement that this great national concern is giving this wonderful presentation to the American public with its compliments and in appreciation of its patronage.

In discussing the matter of commercial credits I have thus far confined my observations to that type of program which generally finds acceptance over great national networks and may be considered in the classification of national circulation.

When it comes to local programs broadcast over local stations, we are confronted with a very different situation where extreme instances may be quoted and where all too frequently the ethics of broadcast advertising are disregarded entirely and programs presented which in my judgment react unfavorably on the cause of good broadcasting everywhere. For the most part our great networks engaged in national broadcasting refuse to allow direct price quotations on the air. I don't know at this writing of a single large national advertiser, employing a coast-to-coast net-

work, who is allowed to sell anything at a directly specified price. Of the four hundred or more local stations distributed throughout the United States, all of whom sell commercial broadcasting, most of them permit direct selling and the employment of actual price quotations in that connection. In my judgment, this form of continuity requires most careful handling in order not to kill the value of the program on which it is dependent for its access to the American home. For the most part I believe it to be reactionary, not but what many examples can be shown whereby the advertiser has used this form of broadcasting profitably. I am speaking broadly in saying that entertainment must be the first objective of broadcasting, either local or national, and that whenever entertainment is subordinated to direct advertising to just that extent does broadcasting lose favor with the great mass of its audience. There are exceptions to this rule where, for instance, a shopping service has been sponsored by a great department store in a way where price information, style data, guidance in the selection of various commodities, etc., have been worked out in a type of conversational continuity both pleasing and valuable, thereby creating a service without any attempt at a program of entertainment. Whenever direct price quotation or direct selling can come into a local proposition as a form of acceptable service we find one of the exceptions to an otherwise well-established rule.

A short time ago I was in a suburban hotel some miles from New York City and while waiting for my appointment the clerk turned the radio receiver to a local station. For one solid hour, and from a station that I never knew existed, I heard everything offered for sale with price quotations ranging from dry goods and women's wear to meats and groceries, while the makeshift of a program was so absurd as to lead me to wonder if there really was any

audience at all interested in that type of thing, especially as at that very hour and within reach of every receiving set in the same territory there were going out on the air programs of national and even international importance that could just as easily have been obtained by the listener. It is this misuse of commercial credits and such blatant examples of direct advertising that cheapen the industry and lend color to the wave of protest that is now sweeping over the country against the use of the air for advertising, much of which may be directly attributed to a wrong use of advertising by stations more interested in temporary income than a permanent franchise.

This general subject of commercial credits and the relationship between the Advertising Agency and his client on this important matter was ably discussed by Mr. L. Ames Brown, President of Lord & Thomas and Logan, in the paper read before the annual meeting of the American Association of Advertising Agencies in May, 1931.

Mr. Brown said in part:

"The American public operates its own censorship. Every day it censors the output of the printing press, and every day it censors the output of the broadcasting stations. Its censorship of radio is very direct. The 15,000,000 owners of radio sets decide by a snap of the switch whether or not they want to listen to radio at all. By turning the dial they pick out the programs they want to hear, and silence those that do not interest them.

"This is the kind of censorship that brings into the head offices of the National Broadcasting Company 20,000 letters a day from listeners all over the country. The letters, post cards, telephone calls, and telegrams received in the course of a year by national advertising on the air run into the millions. This nation-wide audience response is so sensitive that no intelligent advertiser can long misuse this wonderful medium for mass communication.

"But we have with us a good many standpatters, or ad-

vertising reactionaries, who are still thinking in terms of 1923. They first told us that advertising could not be done over the air. The American Telephone people might be very expert engineers—but they didn't know what the American public wanted. The standpatters retreated from that trench.

"They made their next stand when some national advertisers boldly advanced from the mildly 'sponsored' program to the use of sales 'spots' placed between entertainment features, like advertising pages between the editorial features of a magazine. The standpatters vigorously asserted that this would ruin radio. It didn't.

"Now they are retreating from this trench and making a final stand to regulate the amount and character of copy an advertiser may use on the air. Some of them advocate tuning out the advertiser whose announcements are too long or too commercial. But the listener is not the only one who can tune out. The advertiser can also tune out, and spend his money in other media if they make radio unprofitable for him. The whole future of broadcasting in this country, just as much as the future of newspaper and magazine publishing, depends upon its profitable use as an advertising medium.

"One often hears complaints about the amount of advertising in the papers, but usually the publications that carry the most advertising attract the most readers. Circulation attracts advertising, but the reverse is just as true. Advertising attracts circulation. Those who are still living in the past, pleading for uncommercialized radio, would resent any effort of newspaper or magazine publishers to relegate advertising to the editorial backyard, or lay down rules as to the advertising format. Let us suppose, for example, that Mr. Curtis of Philadelphia should tell us advertising men that hereafter his *Saturday Evening Post* would be made up solely of articles, stories and pictures of non-commercial character, and that the only way a manufacturer could get his name on a page would be as the 'sponsor' of one of these editorial features, with a brief reference to the manufacturer's products.

"Would any advertiser pay Mr. Curtis \$8,000 a page

for the privilege of having his name mentioned at the beginning and end of a short story? But this is the way some people would have the advertiser spend ten to fifteen thousand dollars for an hour on the air. And some advertisers, in the early days of broadcasting, did delude themselves with the idea that the mere mention of their names as sponsors of fine musical programs was advertising. Well, it may have been advertising, but it wasn't worth what they paid for it, and that they soon discovered.

"Many publishers of magazines and newspapers now recognize radio as a profitable advertising medium for the sake of their own products. *Literary Digest*, *Collier's Weekly*, *Time*, *Adventure*, *The McFadden*, *Street & Street*, *Conde Nast*, *Butterick*, *Hearst*, and other publications have taken to the air. Thirty broadcasting stations, including some of the big network stations, are owned by newspapers, and forty-three other stations are operated by, or affiliated with, newspapers. Those newspaper-operated stations are spread through twenty-five states, from Maine to California.

"The success of some of these publishers' radio programs is known to everybody in the advertising business. Two of the great weeklies are using radio as a major advertising medium to build circulation and develop greater advertising acceptance. It was reported that one of the fiction magazines in six months on the air increased its circulation from 190,000 to 690,000. The advance in program technique gives publishers of fiction a unique opportunity for nationwide sampling.

"Some of our friends in the publishing world seem to be unduly disturbed by the growth of radio advertising, and its possible effect on the future of printed advertising. I think their fears are not founded on a logical analysis of the situation. There is a very definite limit to the amount of time that can be profitably bought by advertisers. There are only twenty-four hours in the day—and a radio set can get only one program at a time.

"While the volume of radio advertising is now large enough to be impressive, there are a number of daily newspapers whose annual advertising revenues are in excess of

the receipts of the broadcasting chains. One of the national magazines last year carried nearly twice as much advertising in its fifty-two issues as the two great chains did in 365 days. I have heard no complaint from any newspaper publisher because Mr. Curtis sold nearly \$50,000,000 of space last year in one of his publications. The radio industry itself has grown to be one of the largest buyers of newspaper space, and it is going to be a very much larger buyer in the future.

"In discussing this subject of radio advertising at a meeting of the Association three years ago I said: 'To what extent time on the air can be given over successfully to talks about products or services of national advertisers, and to what extent radio advertising can be made to resemble printed advertising, are problems that can only be solved by trial and experience.

" 'We are going much further now than was thought possible several years ago—or a year ago, for that matter—and in my opinion we have only begun to learn the possibilities of the use of the air. We started out with the assumption that many of the things that could be done on the printed page could not possibly be done on the air. Now we are beginning to believe that nearly everything possible in printed advertising will eventually be duplicated with radio.'

"At that time I cited the Lucky Strike program as the answer to the problem confronting all of us trying to make broadcasting profitable—that is, the problem of how to make broadcasting an integral part of a newspaper and magazine campaign. It was in that year that we took Lucky Strike printed advertising and put it on the air virtually unchanged. That was considered quite a bold experiment. But what was experimental in radio broadcasting in 1928 has become a standard of practice in 1931.

"If you will compare the radio copy used by leading advertisers with their printed copy, you will find the character of the printed copy now largely determines the character of the radio copy. Advertisers who for years have successfully used fairly long copy naturally use long copy on the air, and products which have been advertised for

years with 'name' publicity, with little or no copy, use the same formula on the air. In other words, veteran advertisers who cannot waste their money in costly experiments, now regard broadcasting just as another medium in which the spoken word takes the place of the printed word. It is oral salesmanship instead of salesmanship in print.

"Some manufacturers went on the air in the earlier years of broadcasting with the idea that, if they gave the public a first-class musical program without any direct advertising, listeners would express their gratitude by buying the manufacturers' products. I think they have all been disillusioned. If you give the public something for nothing, the public is glad to get it. Some small portion of the public may say 'thank you,' and your generosity may create a certain amount of good-will and public acceptance that slowly and indirectly becomes translated into sales, but this is a very expensive way to sell goods.

"It is a significant fact that nearly all of the programs that rank high in public estimation, as shown by many local and national surveys, are programs sponsored by national advertisers, although 70 per cent of the time used by such popular stations as WEAf, WABC, and WJZ in New York is devoted to non-commercial programs.

"The reason for this is plain. There is no great competition between sustaining programs for public approval. There is no incentive to pay high prices to attract the very popular artists to appear in these sustaining programs. The natural and business-like course for the broadcasting stations to follow in filling out their time between sponsored programs is to get the best possible features at the lowest possible cost. Advertisers, on the other hand, are bidding for the best talent. They are bidding for men who have the genius to build programs of great national appeal. Expenditures for talent are now running upward of \$15,000,000 a year. Probably 90 per cent of this is spent for advertisers' programs.

"We have made a study of the advertising content of the program continuities of 109 advertisers on the National and Columbia chains. The ten most popular programs have an average advertising content of 8 per cent. Three of the

first-rank programs run about 11 per cent. Only one runs less than $6\frac{1}{2}$ per cent.

"The most popular 15-minute sketch—and the one that has probably been the most productive in sales—uses an average of 11 per cent of advertising divided between the beginning and end of the program. In the full hour programs, the one that undoubtedly has achieved the greatest results for the advertiser, uses an average of $11\frac{1}{2}$ per cent of straight product advertising. But in the 109 programs, advertising content varies all the way from 1 per cent to 100 per cent.

"I don't believe we can set any arbitrary rule as to the amount of advertising that can successfully and profitably be put into a radio program. While an advertising content of 10 per cent has been found to be markedly successful in programs that have high public acceptance, there are other successful programs with a considerably higher advertising content, and there are some programs that are virtually 100 per cent advertising—and big sales builders.

"Listener acceptance doesn't depend upon the length of the advertising content of programs, but upon the skill with which the entire program is staged from the opening to the closing announcements. Comparison of lengths of advertising copy with nationwide tests of program popularity conclusively proves that popularity of programs has no relation to the length of copy.

"I have great confidence in the air as a full-fledged, dependable advertising medium, and I have a similar confidence in the advertising education of the public. All in all, I think there is very little need for wet-nursing solicitude. I think we will probably hear the controversy about long copy and short copy for many years to come, but I don't think either side is going to have very much influence on the so-called American system of broadcasting, which provides a rich variety of entertainment at the expense of the advertiser, instead of an anaemic flow of entertainment as in England at the expense of the set owner.

"Mr. Curtis is able to sell 35 cents worth of *Saturday Evening Post* every week for 5 cents, and make a handsome profit, because the advertisers pay the difference. We are

able to put a \$15,000 concert program on the air—and charge no admission to the millions who hear it—because the advertiser pays the bill, and gets his money's worth. He gets his money's worth if he can use, say, 10 per cent of this very costly broadcasting time to tell the audience something of real interest about his merchandise.

"If he doesn't know how to use this time acceptably to his audience, and profitably to himself—and can't find any one to show him how to do it—then he is simply wasting his advertising money. I believe there is no other form of advertising in which money can be so easily wasted as in radio advertising when it is handled with the wrong technique.

"Radio advertising is no plaything. A \$20,000 all-star program on a coast-to-coast network may get fine press notices, and win the sympathetic applause of those self-appointed advertising critics who are working for high cultural standards—but it's a dead loss to the advertiser if it's all showmanship and no salesmanship.

"I believe in radio as an established advertising medium. I have seen the results obtained from it by our own clients. When I see a million people responding to a sales message on one of our programs—and spending nearly a million dollars for the privilege of sampling a new product announced in a radio program—I know that radio has taken rank with the printed page as a real power in advertising."

CHAPTER XI

FITTING PROGRAM TO PRODUCT

The ideal sponsored program should contain four essentials. First, it should be the best of its kind. Second, it should be fitted to the product. Third, it should be adapted to its audience, and fourth, it should occupy a suitable time.

In adapting the technique of the air to advertising there are certain things that should be remembered. In the first place, direct statements such as would find an acceptable place in the printed advertisement must be supplied by suggestion when they are heard over the air. In the same way the matter of illustration, which today occupies such an important place in modern periodical advertising, must be supplied through imagination in the broadcasting advertisement. And, finally, the descriptive material, which furnishes the backbone of visible advertising, must be supplied in a highly condensed form in making the suitable sponsored program.

When we consider the limitations and the opportunities that exist in broadcast advertising I think we will all agree that the opportunities, if rightly understood, far exceed the limitations.

Any series of sponsored programs should, as far as possible, stand for the product. I will go still further and say that the nearest approach to the ideal in the field of audible advertising is where the program personifies the product. Every product advertised on the air must have its vehicle of presentation. With some it is music; with others, dramatization; and still a third, it may be the educational approach, etc., according to the type of presentation.

Probably the most elastic, as well as most common vehicle of presentation is music. This has been referred to elsewhere in this book as the great common denominator of broadcasting, the one language of universal appeal to all classes and conditions of society. The language of music is so flexible that, skilfully handled, it can almost become the product itself. Take, for example, Clicquot Club Ginger Ale. This was the first sparkling beverage to experiment with broadcast advertising. It was suggested that a musical program be offered that would in some measure personify the product and produce the effect of an effervescent beverage together with the clinking ice in a crystal goblet. As a result the radio audience went wild over the "Eskimos" and the music, to a great extent, was made from week to week to conform with this idea of personification until the Eskimos and their tinkling musical program became synonymous with Clicquot Club Ginger Ale.

Again, take as another illustration Maxwell House Coffee with its well-known slogan "good to the last drop." This beverage did not lend itself to the same type of musical personification as a ginger ale, lacking certain of the characteristics referred to, so it was suggested that the program be built around the slogan "good to the last drop" and be made to stand for it musically, as far as possible. Those of you who may have followed the Maxwell House musical programs since their inception will remember that they contain from week to week gems of orchestral music, sweet and tunefully appealing, directed to the average listener and in every way winsome and acceptable. Each program was built so that, paraphrasing the slogan, it might be "good to the last number." The audience was not slow to realize what was being attempted and gave its wholehearted support, through letters of appreciation and constructive criticism, to make these programs increasingly

better and to maintain a week-to-week average comparable with the quality of the product that it represented. This standard has not been lost sight of in the four years or more that this account has been on the air and today, as with its first presentation, the program of Maxwell House Coffee is "good to the last number" and recognized as such by millions of listeners.

Coca Cola in its initial broadcast desired to personify the product and for this purpose created the "Coca Cola Girl" whose adventures were followed with great interest by listeners throughout the length and breadth of the country. Each episode represented Coca Cola under conditions so cleverly dramatized that the winsome Coca Cola Girl brought pleasure and refreshment wherever she appeared. This was one of the earliest personifications of a product by a living person and paved the way for still further adaptations of this principle in programming.

Collier's Radio Hour is another example of fitting the program to the product and in this case the product is the program itself. The dramatization of the leading features of a weekly periodical would a few years ago have been considered impractical, if not impossible. Today this form of dramatization is among the most popular types of programs and in the case of Collier's has proved its value many times over in the good-will and added reader interest that has resulted from its weekly presentations. In a program such as this, one has no doubt as to the relation between the program and the product for they are identical.

Another outstanding example of fitting the program to the product has been the presentation at appropriate times of the year of Cook's Tours. This program consists of what amounts to a Cook's Tour over the air dramatized, of course, and somewhat imaginary in some of its minor details, but on the whole comprising a highly intelligent, as

well as entertaining replica of an actual Cook's Tour. What is the result? Thousands of listeners have taken such trips and many thousands more have had the urge to do so at some future time.

Many people wondered what the National Surety Company would do for a program when they knocked for admission to the air. The very nature of their business proved to be the answer, and many of us will never forget the series of thrilling episodes based in many instances on actual occurrences taken from their files, constituting from start to finish the most thorough and complete merging of program with the organization service that they were selling.

Lucky Strike was looking about for a musical vehicle on which to ride into the homes of the American people. Recognizing the fact that dance music was one of the great program choices of the families in this country, they made the happy decision of building a program of dance music which should be so exact in its tempo that groups anywhere might dance to its measures and, taking advantage of the thing which inevitably occurs today in groups of modern young people between dances, they tied their product and their program together most effectively using the between-the-dance period for that purpose.

In what better way could the R.K.O. make their program stand for their product than by using in their program over the air the very stars that were headlined and playing to packed audiences throughout their chain of theatres?

When the Baldwin Piano Company first used broadcast advertising the sentiment as well as the policy of broadcasting companies was unfavorable to the offer of samples in connection with a broadcasting program. Again, in making a program for the Baldwin Piano Company the piano was used almost exclusively and in every instance actually stood for the product that was being advertised and, with-

violating any of the rules then in operation, the Bald-Piano people literally sent a sample of their own prod-
throughout the length and breadth of the nation.

Perhaps these are enough in the way of case examples to
show the infinite possibilities of making the broadcast pro-
gram stand for the product. Among the more than two
hundred national advertisers broadcasting regularly there
are hardly any two programs which are exactly alike. Each
commercial program is worked out by itself with the pur-
pose in view of ultimately obtaining the objective that the
advertiser has in mind. I would like to emphasize this fact
as there is sometimes a feeling that all programs are pretty
much alike and that perhaps, after all, there is not as much
constructive thought put on the preparation of a program
for broadcasting as is involved in a program for visible
media. I think, if anything, more time and attention is now
being given by advertising agencies to broadcast programs
than to the ordinary run of display advertising. This is un-
doubtedly due to the newness of the medium and the com-
petition for talent in the preparation of programs, which is
increasingly keen.

I have spoken at some length on programming by per-
sonification. Certain programs may also be made to stand
for their product by subtle suggestion. This is particularly
true when good-will and not direct sales is the primary ob-
jective. Take as an illustration Cities Service program. The
objective at the start was obviously good-will and, by giving
an outstanding program of band music at a time when no
great bands were on the air, this objective was quickly ob-
tained, and by subtle suggestion and the distribution of a
well worked-out budget book Cities Service Company made
their program stand for their product and at the same time
obtained their objective—good-will—in large and satisfac-
tory measure.

"Soconyland Sketches" obtained their objective through the suggestion that ran through their historical episodes, in many instances combining the dramatic interest in a historical episode worked out with great fidelity with the obvious suggestion of its availability in connection with an automobile trip.

We are all more or less familiar with that type of broadcast advertising that centers about the family and its physical needs. Here, as perhaps in no other field, the program and the product mesh very closely. One of the most popular program skits in this field at the present moment is "Raising Junior" which, as you know, ties in so closely with Wheatena as one of the very necessary things in raising this interesting youngster to vigorous boyhood.

The morning hours are well filled with programs of interest and importance wherein the product is tied very closely to the domestic needs or, if in the field of personal hygiene or beauty hints, appeals to the vanity or comfort of its special audience.

In discussing this subject of fitting the program to the product one should not overlook the fact that there are exclusive programs of appreciation which have no direct reference to the product itself in the actual program. The General Motors "Family Party" is of this character—a sponsored program put on the air primarily as a gesture of appreciation—paid for by the General Motors Corporation following a period of unprecedented prosperity. To be sure, credit lines mention the various members of the General Motors organization, but the program itself is pure entertainment of the higher character and, as such, appreciated by the audience.

The Damrosch concerts, sponsored by the General Electric Company, are also in this class, although preceded by

Floyd Gibbons who recounts in his inimitable way trips through the research laboratories of this great company, and while in the commercial credits products bearing the G-E monogram are mentioned, yet the Damrosch concert stands out by itself as a magnificent gesture of appreciation as well as a splendid contribution to the music-loving people of America presented with the compliments of General Electric Company.

One could hardly close this chapter without referring to the great element of "human appeal" that is now entering so tremendously into program-making. I sometimes think that human interest is the one subject of which people never tire, but to hold the audience it must ring true and be sound to the very core. One of the earliest attempts to adapt this element to programming was Chesebrough's "Real Folks." This, you remember, was a reproduction in dramatic form of the actual scenes and events characteristic of the corner store of fifty or seventy-five years ago. Reproduced with exceptional fidelity, even to the publication of the local newspaper, it gripped the imagination and held the attention of millions of people and through its human interest appeal brought into renewed prominence an old and well-known trade mark.

Later on "Uncle Abe and David" in their inimitable dialogues produced a similar atmosphere with a somewhat different setting, which was used to publicize another great national product—Goodrich—that needed to have its trade mark and merchandise brought anew to the attention of the people in a field highly competitive.

Speaking of the human interest appeal, Amos 'n Andy are the outstanding example of the most nearly universal program that radio broadcasting has yet produced. This is an illustration of a human interest skit used solely as the

vehicle for the commercial announcements that precede and follow. At no point in the episode is the product mentioned directly or indirectly and yet, out of these intimate, homely and altogether human incidents Pepsodent has reaped a harvest of approval in terms of sales almost beyond belief.

The purpose of the writer in citing these concrete examples is to leave no misapprehension in the mind of the reader as to just what is meant by "fitting the program to the product." Frankly, this is what we are all striving after regardless of the niche we may be occupying in this great structure of broadcast advertising that is being built so rapidly. I believe that, more and more, we are to learn the technique of doing this thing more delicately and with that intuitive sense of values which comes only as the reward of experience. To a growing extent our leading advertising agencies which control the destinies of our great national advertisers are appreciating the necessity and value of this approach to the broadcast advertising program. In the language of the shop, they call it "copy." We of the studio call it "program." But we know that both of us mean exactly the same thing. In my judgment, we of the broadcasting medium are making exceedingly rapid progress in this matter of adapting our "copy" to the product. It is not so many years ago—anyone with a tinge of gray in his hair can easily remember the period—when the visible advertisement had very little connection with the product it was supposed to advertise. Now the advertisement is hardly worthy the name unless it leaves the name of the product firmly embedded in the mind of the reader.

There are those who feel that, young as it is, broadcast advertising is already exerting a beneficial influence on periodical and newspaper advertising. Those copywriters who are working on both are being impressed with the oppor-

tunity of producing copy so delicately attuned to the reactions of the American family that the things that are said in the printed word may be, in spirit at least, set to music in the broadcast program. This may sound idealistic, but is it impossible?

CHAPTER XII

BROADCASTING AIDS DISTRIBUTION

In these days when over-production is our major problem the question of adequate distribution is of paramount importance. From start to finish our present set-up is as follows:

First—The manufacturer, whose problem is that of manufacturing his particular line of goods in such volume as to meet the consumer's demands. His completed manufactured product, branded and ready for sale, goes to the middleman who forms the second link in the chain. This middleman may be either agent of the mills or a jobber. Whichever it may be, the function of the middleman is primarily that of distributing the merchandise to the retailer, who forms the third and final link in the chain between manufacturer and distributor. The retailer, of course, functions in displaying, advertising and selling goods to the ultimate consumer.

Or, we have a second set-up which eliminates the jobber or agent altogether, leaving the manufacturer to sell his product directly to the retailer.

Or, finally, we have a few exceptional instances where the retailer represented by a chain of huge department stores either owns or controls the manufacturing end, giving color to the statement often seen in advertising "from manufacturer direct to consumer."

Under whatever one of these systems business is conducted, the problem of adequate distribution remains the same.

Heretofore the promotional channels for increasing dis-

tribution have been arbitrarily limited in number and operation. Chief among them is the newspaper which, because of its large local circulation, affording opportunity for a daily message, stood for about all there was in the way of quick action media. The use of newspapers by the large department stores throughout our cities evidenced the value of this medium in distributing merchandise directly to the consumer. Direct-by-mail methods, more slow in operation and adaptable only to certain types of merchandise, have found a prominent and satisfactory place in the picture. Staple-branded merchandise dependent on wide publicity for consumer acceptance found satisfactory results in the use of great national weeklies and established monthly periodicals.

When, a little less than five years ago, broadcast advertising on a national scale became operative, it immediately made available the most direct as well as quickest approach to the consumer. Everyone will admit that there is no more direct method of approach between individuals or groups than that of speech. The ability to convey an advertising message by speech so that it could instantly be heard simultaneously by millions of families was, to say the least, revolutionary in the field of advertising procedure.

Distinctly coöperative in spirit and purpose, broadcast advertising has offered to supplement and coördinate the advertising message embodied in the slower mediums of communication by bringing directly to the millions of American homes now owning radio receiving sets the message of the advertiser and offering it as a distinct aid in solving the problem of distribution of merchandise.

Broadcast advertising gives the distributor something to talk about in addition to the merchandise itself, while at the same time it gives the consumer something additional to think about. The combination of the two is likely to be resultful.

Leaving for a moment the consumer and entering the field of the distributor of specialty merchandise, it is interesting to note the quick and efficient service that broadcasting has rendered on more than one occasion. When the Seiberling Rubber Company contemplated entering the automobile tire field one of their greatest problems was that of obtaining local dealers or distributors. Intensive merchandising of their broadcast campaign prior to its commencement resulted in their obtaining five hundred new Seiberling dealers. One month after the program went on the air so immediate and satisfactory was the result that this number was increased to eight hundred and from that point by progressive stages until satisfactory distribution through dealers was accomplished.

The employment of broadcast advertising as an aid to distribution brings to the problems an added note of general interest. I refer to the program which, if properly balanced and adapted to the potential buyers of the article in question, is likely to create an advertising feature of itself which, rightly used, gives the distributor an additional subject for his sales promotion talk.

I well remember a few years ago being invited to address an annual sales conference of men representing one of our great domestic coal-producing companies. One cannot imagine a more prosaic, ordinary, unromantic type of merchandise than plain black coal. Up to that time coal had been distributed to the dealers and sold to the householder simply as an item of fuel. By arrangement, prices were practically the same everywhere for the equivalent grades. This left the retail sale of coal dependent very largely on the popularity of the dealer or other purely local considerations. The company to which I refer conceived the idea that, as one of the oldest operators in the business, it might be a clever move if they capitalized their premier position

in the industry by putting a program on the air bearing the trade mark of their product and releasing it simultaneously over the network stations positioned within their selling area. It was a new idea. It had all the elements of novelty and interest that comes with pioneering. If adopted, it would give the local dealer something to sell besides coal. Properly merchandised it offered attractive opportunities for reaching the home through direct mail, using the program as the basis of the message. It only needed the proper presentation to secure its immediate endorsement and the entire approval of the salesmen's conference. Best of all, the results proved completely the wisdom of the decision. The presentation of the program in one section after another brought to the attention of thousands of homes for the first time the fact that coal was more than a commodity and that at least one operator was enterprising enough to furnish a first-class half-hour program of outstanding musical quality for the purpose of emphasizing the name of the product and the local dealer—all without any extra charge per ton for the coal. What was the result? Local dealers everywhere found an increasing demand for the product and the good-will factor involved switched many customers from the old-type indifferent dealer, who merely took orders, to a representative of Old Company Coal whose organization was using this new and acceptable method of advertising.

Take another commodity of common and universal consumption. I refer to bread. There was a time when a loaf of bread was just another loaf of bread. The difference, if any, was one of price. The price itself was pretty thoroughly stabilized. Along came the Continental Baking Company looking for increased distribution and sale, and by the program of the "Happy Wonder Bakers" not only increased sales in stores already carrying their product but

opened up new business with stores previously refusing to stock this bread.

These illustrations, if time permitted, could be amplified by mere reference to such obvious successes in point of distribution as Pepsodent and Ipana toothpaste, Goodrich tires, Lucky Strike cigarettes, Tastyeast, a long list of food products, etc.

Admitting that the use of all types of advertising forms the basis of obtaining increased distribution, the matter of locality must also be taken into consideration. The huge buying area of the United States divides itself almost automatically into four major divisions—Atlantic Seaboard, the South, Middle West, and Pacific Coast. Turning for a moment to the Pacific Coast; the use of broadcasting as an aid to distribution early found acceptance among manufacturers, jobbers and retailers of that section. Broadcasting also developed very rapidly, due to the fact that a larger per cent of radio receiving sets will be found in the three States on the West Coast than anywhere else in the United States.

In an address by Don E. Gilman, given before the District Convention of the Pacific Coast Advertising Clubs a short time ago, the following illustrations were quoted by the consent of the advertisers mentioned.

“One of the largest concerns of its kind on the Pacific Coast is the Associated Oil Company who first used NBC Pacific Coast facilities for re-emphasis of its products. The purpose behind the broadcast was first, to stimulate travel; second, build community good-will; and third, to build good-will for Associated products. A series of programs were suggested for an advertising campaign in which all media were coördinated. The immediate reaction, while satisfactory, was not sensational but the continued growth in the sale of the product, the continued interest in the radio program, and now the fact that the radio program has become

the coordinating factor upon which all of the advertising plans are predicated, is proof of the soundness of the method. They rejected any plan which would be sensational and have adhered to a persistent grind, creating interest by quality and variety. A recent survey of their territory by the advertising manager of this company who called at many of their retail outlets in person, and upon all of their distributors revealed in answer to the question—"what is your opinion of our present advertising plan?"—that the radio program was the outstanding feature.

"Again, a survey made by a Northwestern Power Company was directed to the stockholders of the Company. One question asked of these stockholders was—"do you approve of broadcasting as part of the effort of this company?"—The returns on this questionnaire revealed only one stockholder who said 'no' and two others who did not answer. All the rest, representing many hundreds of stockholders, answered 'yes.'

"In the field of high-grade paints a well-known Pacific Coast Institution is the W. P. Fuller Company. This company has used the facilities of the National Broadcasting Company to interest the housewife in home decoration. Naturally this presented a problem in that the manufacturer did not wish to eliminate the painting contractor. The campaign which was decided upon was one which brought the painting contractor definitely into the picture. It also encouraged the re-painting of household articles. After a year's trial radio has become the basic element in the whole campaign. As a result of radio this company distributed 15,000 new folders through 2,000 radio outlets. Interest in this distribution is secured with 2,000 special folders or booklets for the retailer and 4,000 for the painting contractor. The audible discussion of the use of paints has definitely increased the distribution and home interest in the W. P. Fuller Company product.

"Another prominent example was the Johnston Ayers Company of San Francisco, a member of the Hamman Advertising Organization, Inc., representing their client, the Pacific States Electric Company, who planned an advertising campaign to increase the number of electrical outlets in

the home. The plan included the use of radio. Two characters in whom each family would see themselves formed the means of humorous situations resulting from not having the home efficiently equipped with electrical outlets. The broadcast program became the basis of the entire advertising campaign. The participation of Power Companies and others serving the public with electrical products was secured and as a result of three months' campaign sales were developed which far exceeded any in a similar period in the history of the company. It resulted in more direct contact between the public and distributor than any previous effort. Thus was obtained distribution of electrical products and incidentally electrical household appliances and the additional sale of electrical energy."

The rapidly increased building of networks has made possible for the most part adequate coverage when radio broadcasting is used as a means of stimulating distribution. Although this coverage is not as yet 100 per cent geographically, yet a proper use of a network on the various systems operating nationally will result in obtaining for broadcast advertising a potential audience in an area representing from 75 to 90 per cent of the present distribution of advertised goods.

Again, in using broadcasting for this purpose it must be borne in mind that the technique is new, the approach novel, the message out of the ordinary and the results dependent entirely on obtaining and holding the family audience. Much has yet to be learned about this new medium in its relation to distribution, but enough has already been discovered by experiments and made a matter of record so that the manufacturer entering this field for the first time has at his command sufficient in the way of case examples and records of trial and error which, if rightly applied to his own problem, should serve as a guarantee of reasonable success.

It must be borne in mind that over-production is indirectly the result of under-buying. To stimulate buying which, speaking broadly, means the placement of goods all the way along from the manufacturer to the purchaser at the counter, every known method of advertising and promotion must be employed. With the present interest in radio and broadcasting and the tremendous audiences that are gathered every day and night of the week for the purpose of listening to programs of amusement, entertainment and education, does it not seem reasonable that broadcast advertising and the use of the sponsored program should find an acceptable as well as important place in solving this great national problem of distribution?

CHAPTER XIII

RE-SALE OF BROADCAST ADVERTISING

In a recent copyrighted article appearing in the *New York Herald Tribune* Calvin Coolidge said:

"When I was a boy the only merchandise I saw was in a country store. But my horizon was widened by certain publications containing pictures and descriptions of things that appealed to youth. I read and bought. The man who supplied them became rich and died a great philanthropist. He advertised. It is essential in the first instance to make good merchandise. But that is not enough. It is just as essential to create a desire for it. That is advertising."

The advertiser has learned in recent years that the original advertisement in a series of publications is not enough. It must be re-sold. The re-sale of advertising on the face of it seems rather paradoxical. Is not advertising supposed to accomplish its primary purpose? If so, why this talk about re-sale of advertising? It has become apparent to every student of advertising that the initial appearance of an advertisement in any great national medium results only in a certain type of appeal and, as such, it is worth the price paid for the space. Every great national medium has its special type of readers, all of whom believe in the magazine and patronize it. Outside of the regular readers of the magazine, however, there may be a class, not necessarily readers of the medium, but to whom the knowledge that there is a large following among the readers of this magazine who are potential buyers of their product will be of vital interest.

I think it was the *Saturday Evening Post* that first suggested the by-product value of merchandising its advertising

pages among the trade. The first experiments were successful and now the re-sale of advertising pages taken from leading periodicals is looked upon as one of the essentials of a well-balanced national advertising campaign. Attractively arranged in portfolio form, or as actual reprints for direct mail purposes, the beautifully produced two-, three- and four-color advertisements find ready acceptance and an acknowledged second value in their use in other avenues than those included within the circulation of the magazine of issue.

It is the application of what is now a generally accepted procedure that attention is being focussed on the re-sale of broadcast advertising. This field affords a greater variety and a wider approach than in the case of visible advertising, while the need is still greater.

Please bear in mind that "the listener rules broadcasting." Results in broadcasting depend on the existence of this audience listening to a particular program at a specified time. At the present moment when the broadcasting networks of this country are crowded with programs to the extent, in some instances, of eighteen program hours a day, the general public dependent on newspapers and other listings for its program information is likely to be in ignorance of even a master program until it has been on the air for some little time. The necessity of building audience interests in advance of the program is now looked upon as one of the primary essentials. Take a hypothetical example. A well-known national advertiser plans to go on the air for the first time with an outstanding program. It will be musical in character and contain among its artists men and women of national and international fame. It is to run for fifty-two weeks and eventually become perhaps the great program of the year. The time is contracted for, the artists hired, and the opening date selected. How is the public to know anything about this? What

will lead them to tune in to a certain station at a certain hour in order to listen to the première of this wonderful program? How are they to get the facts and general information relative to the program itself? The answer, of course, to this is perfectly obvious. It is only by the use of newspaper and periodical space and the employment of direct mail sufficiently in advance of the opening program that intelligent knowledge of the event will be diffused to render possible a "first night" audience.

When once on the air and the initial audience secured, the work has only just begun. Programs are planned three and six weeks in advance. All the necessary material for spot values in advertising is at hand and the re-sale of this sponsored program, which, of course, is comparable to the display advertising in a national periodical, begins.

Many are the varieties of approach in this re-sale of broadcast advertising. Chief among them is direct mail. The cleverly provided descriptive material, illustrated if the nature of the program permits, renders the subject matter unusually acceptable from a direct mail standpoint. Hundreds of thousands of direct mail pieces are often prepared and placed in the hands of dealers and distributors who, in turn, mail them to their lists of prospects, charge accounts, potential customers, etc., in their given territory. Every mailing piece of this character calls direct attention to the broadcast program and its time and place.

Another great avenue of re-sale of broadcast advertising which is coming into increasing use is the local newspaper. This may be urban or rural; it makes no difference, for both are local. The local newspaper, especially the evening edition, reaching thousands of homes can be a very direct aid in the re-sale of the broadcast program. To be sure, there may be a single line in the newspaper's radio time-table calling attention to this program, but the chances are if it

is new you will pass it by without even seeing it. On the other hand, the re-sale of the program through newspaper advertising in space proportionate to its value and the community reached by the newspaper will bring its own returns in the way of an augmented audience. It has been interesting to note the very direct and favorable reaction to this suggestion on the part of national advertisers who are now using this form of "attention-getter" increasingly.

Another interesting form of re-sale of the broadcast program will be found in posters, cutouts and window stickers displayed by distributors and retailers particularly interested in the product sponsoring the program. A recent widely known national program was supplemented by cutouts and window displays in stores extending half across the country.

The very obvious tie-in between the regular national advertising of a product in newspapers and periodicals is resulting in increasing use of a paragraph or catch line appearing in such national advertising calling attention to the specific broadcast, giving time and initial station or in some cases the call letters of the entire network used. Billboards and street-car advertising are also being employed to some extent in calling attention to great programs that are being periodically broadcast. Even electric signs are here and there flashing information that will reinforce the broadcasting schedule and result in greater audience attention.

When we consider that Broadcast Advertising depends for its ultimate success very largely on its worth as a co-operative medium, the value and even necessity of its re-sale in the way suggested becomes more apparent.

Although this question of re-sale of advertising as applying to the sponsored program has been under active consideration only a couple of years, yet it has grown so in

favor and demonstrated so effectively its fundamental value that I am told that radio is credited with being the largest new source of direct mail material, such as booklets, folders, cutouts, post cards, window stickers, letters, etc., that is now going to printers, lithographers and others engaged in its manufacture.

A word regarding audience response is not out of place in considering this subject. The statement has been made with some truth that it is relatively easy to make a first sale but the necessity of obtaining repeat orders is why we have advertising departments. The same thing is true of the broadcasting program. By the employment of perfectly well-known methods it is relatively easy to get your initial audience to a worthwhile program. To keep this audience sold and looking forward to your program from week to week, increasing its volume as satisfactory comments are passed from one to another—all this is vitally essential and much of value to the advertiser will be found as he reads his audience mail.

A rightly reviewed audience mail is the barometer of broadcasting. This statement may be applied either generally or specifically. It is a wise advertiser who acquaints himself with his audience mail, especially that portion of it which contains constructive criticism. You may like a program or your wife may like it or your whole family may like it and you may think it is the most wonderful program in the world, but this is no reason why you should think that 15,000,000 families like your program, for probably such is not the case. In your audience mail you will find out sooner or later just what the audience thinks about your product and your program. Don't be afraid to make changes if they seem worth while. Give heed to every criticism that is sent you in good faith. Keep your ear continually to the ground for suggestions and helpful program

hints. It is from this source that you are likely to obtain your most important suggestions as to the re-sale of your program from week to week to your audience on whose reactions in the final analysis depend the success or failure of your investment.

CHAPTER XIV

DOES BROADCAST ADVERTISING PAY?

The question most frequently asked in relation to all forms of advertising is, "Does it pay?" So it is not strange that this same question should be asked regarding Broadcast Advertising even though it represents the newest addition in the field of advertising media. Broadly speaking, the question "Does it pay?" depends entirely on what the man who pays expects to get in return for his money. It is something like defining the phrase "a successful life," for the attainment of success depends almost entirely upon the objective sought. So were I to answer the question "Does Broadcast Advertising pay?" in any didactic way it would be by stating at the outset that my answer would depend entirely upon what the advertiser was seeking.

All advertising, whether audible or visible, is for the purpose of obtaining one or more of the following objectives:

1. Good-will.
2. Trade-mark publicity.
3. Increased sales.

Radio broadcasting has been called a medium of publicity and good-will. Not a bad title, but not quite comprehensive enough to tell the complete story.

During the five years that network broadcasting has made possible a comprehensive national campaign there have been numerous examples of programs sponsored by large national advertisers entirely for their good-will value. Now, good-will is one of those intangible things often carried on the books of large corporations at the nominal figure of

one dollar but which perhaps represents the most valuable and at the same time the most intangible of their assets. One does not have to study long or even deeply to discover that good-will is the cornerstone of business development and that obtaining and keeping it is a thing greatly to be desired. Broadcast Advertising lends itself psychologically to the production of good-will to a greater extent than any other form of advertising. Of all the forms of good-will, that which is obtained by the subtle presentation of a gift without involving undue obligation obtains the largest results. This, radio broadcasting does almost with precision. The presentation of an acceptable program of entertainment, amusement or maybe education, carries with it that intangible something which in absence of any other method of payment produces its toll of good-will. There probably is no more effective method of advertising at the present time than the sponsored program for the advertiser, big or little, who is desirous of creating an atmosphere of good-will surrounding himself and his product. Among programs of this character there stand out prominently the General Motors Corporation with its "Family Party" idea, and the Atwater Kent program introducing Grand Opera to the American home.

Obtaining trade-mark publicity marks perhaps the second in the field of resultful advertising by radio. More and more national advertisers are adopting distinguishing trade marks or, in case of large corporations formed by the amalgamation of many units, an all-embracing monogram which assumes trade-mark importance as it stands for the hall mark of quality of the entire group. Coupled with distinctive advertising of an institutional character, where emphasis is placed on the trade mark or monogram, broadcast advertising invariably does an exceptionally fine piece of work. It reminds you in terms of speech of the illustrations

you have seen and the paragraphs you have read descriptive of the thing itself but, somehow or other, it seems more human and more real as the same thing, told in a little different way, comes to you through the radio message. This type of advertising has already been tested sufficiently to prove without question the value of broadcast advertising as a means of obtaining trade-mark publicity. One of the outstanding examples of this type of advertising is the General Electric Company, which is capitalizing its monogram G-E under the caption of "initials of a friend." The fact that this trade mark appears on all their products shows how far-reaching this type of advertising may become.

The third objective—increased sales—is that which concerns 95 per cent of national advertisers. Good-will and trade-mark publicity are all right in their way but unless they develop into satisfactory sales and adequate profits the enterprise becomes a losing business. So that perhaps the acid test upon which every advertising medium stands or falls comes through the annual sales report and the profit and loss sheet. The production of increased sales, at a cost which shall not be prohibitive, is the objective of every advertising manager. In the present day, where everything is speeded up to the breaking point and where sales methods become obsolete almost before they have had a fair trial, it is not surprising that broadcast advertising with only five years of experimenting should be asked to prove in terms of increased sales its right to a place in the field of great national media.

The first two years of national broadcast advertising were frankly experimental. There were indications that the medium was bringing results but how permanent or how impressive in terms of dollars no one was really sure. To-day, with some advertisers able to show a continuous rec-

ord on the air of four or five years during which time checks and surveys have been made for the purpose of establishing the point, it is possible in many instances to give a concrete answer to this question in terms of case examples. As is usual when favorable returns have been obtained as the result of a well-worked-out campaign in a new field many advertisers, because of their success, are loath to publish the fact for fear that this knowledge will be taken advantage of by their competitors. There is just enough truth in this fear to give reason for this feeling of conservatism resulting, as it does, in the inability of those who have confidential figures at their command to make this information available to the business world, even though by so doing it would greatly advantage the medium they represent.

Here and there will be found an advertiser whose vision is broad enough, who has belief in the ability of his own commodity to withstand competition and who, like the pioneer discoverer of old, enjoys waving the flag of achievement from the hill-top of discovery. Such advertisers, I say, have allowed their results in the field of broadcast advertising to be publicized.

Among the earliest pioneers in the field of broadcast advertising was the M. J. Whittall Associates, Ltd., of Worcester, Massachusetts. These people made rugs. They were good rugs and the business had been handed down from father to son and stood for the best in the field of rug-making. This company put on one of the outstanding programs of the period and called it "The Whittall Anglo Persians." It was a beautiful program of oriental music and you were wafted on the magic carpet to the tune of exquisite music, and transported in fantasy from one point to another—all in keeping with the spirit of the industry and pervading every note was the atmosphere of the Orient.

The object of the campaign was to create a wider knowledge of Whittalls and to awaken a desire on the part of the listening audience to examine the product at the nearest dealer and from this introduction, hopefully, lead into sales. During one period of the campaign a poll taken of the actual dealers showed that over 60 per cent were in favor of broadcast advertising, while yet another survey made by a distinterested agency showed that out of 1,000 dealers questioned 84 per cent said that they handled Whittall rugs and 96 per cent declared that it was the rug most universally asked for. Mr. Matthew P. Whittall, President of the company, writes as follows:

"Whittall Dealers appreciate our broadcasting and recognize its value. I have always felt that for some reason or other, radio is particularly adapted to carry our message into the homes and that the Anglo Persians and their Magic Carpet are known to many thousands whom we would reach in no other way."

One of the pioneers in its field to use broadcasting was the Bristol-Myers Company, makers of Ipana toothpaste. Their first program was given on April 8, 1925. It was frankly experimental and went out over two stations only. It was called the "Ipana Troubadours" and so rapidly did it grow in popularity and favorable audience reactions that it soon occupied the major stations of an entire network. The program was distinctive, original and attractive and the Troubadours soon found that their playing each week, while unseen, was very real and going into hundreds of thousands of families who considered it one of the bright spots in their list of radio programs. Mr. Lee Bristol, Vice President of the Bristol-Myers Company, writes as follows:

"We have watched with interest the growth of commercial broadcasting. We were one of the earliest users of programs for advertising purposes. We believe that the use of

the Ipana Troubadours has been a splendid good-will builder for Ipana toothpaste and has contributed its share in obtaining the present success of that product today."

The Chesebrough Manufacturing Company with their distinctive program called "Real Folks" aroused a tremendous interest developing into huge audience mail. Speaking of one of the issues of their paper they write:

"On Monday, January 27, 1930, 'Real Folks' issued and announced the Fourth Number of the '*Tomkins Corner Enterprise*.' Within twenty-four hours the Chesebrough Manufacturing Company received over 5,000 letters asking for copies of this typical country newspaper. Within three days 50,000 requests had been received; and a total of 225,000 requests came in altogether."

Cities Service Company offered a family "budget book" and their statement of requests is interesting reading. The period from January 1 to December 31, 1930, showed 200,000 requests, more than double the entire 1929 figure. Each book carried a coupon and one person out of every thirty-seven receiving the book has mailed back one of the coupons.

Collier's Weekly advises under date of July, 1930, that

"The circulation of Collier's magazine is climbing steadily upward in a very rapid manner, and there is no question but that radio is playing an important part in its growth. The circulation of Collier's at the time of its Broadcast Advertising Debut was 1,283,888. This was in January 1927. By June 1927, the circulation had risen to 1,387,332, while in July 1930 the circulation had climbed to 2,200,000." Collier's Hour is recognized as the finest piece of commercial dramatization on the air."

Fuller Brush Company is one of the newer advertisers on the air and manufactures a product sold entirely by canvassers in the field. They write:

"The success of our broadcasting has been so marked that the field organization has demanded additional stations. It is one of the biggest things we have ever done since national advertising in color was first started."

The Goodrich Rubber Company was among the early pioneers in this field and was looked upon for many years as radio's most successful advertiser. A member of the Wm. H. Rankin Agency in an address makes this statement:

"I believe radio doubled the value of every dollar Goodrich spent in any form of advertising."

The first of the great railroads to use broadcast advertising consistently was the Great Northern Railway. As the result of their programming they said:

"Travel to and from California, via the Northwest, increased 25 per cent during the summer of 1929. Travel to and from California, via the Great Northern Railway, during the fall and winter of 1929-30 and up to the first of October of that same year has shown a gain of nearly 40 per cent over the preceding year."

A very recent and outstanding success from the point of audience mail is Edna Wallace Hopper. This is a program sponsored by Affiliated Products, Inc., which went on the air twice a week commencing November 21, 1930. The first broadcast brought over 25,000 requests for a sample of the product. Up to December 10 the totals were in excess of 100,000 and, best of all, they added more than 10,000 new dealers in the first month of the broadcast.

Quaker Oats Company's morning program with Phil Cook brought an extraordinary volume of mail. From April 21, the starting date of the program, until July 22, 1930, 129,139 requests for the Quaker Crackels Doll had been received.

One of the very unusual successes based on the introduc-

tion of a new article by broadcasting is that of Tastyeast. During the first four months of 1930 Green Brothers Company, manufacturers of this product, received 117,000 letters. The greatest problem facing the manufacturers of Tastyeast has been that of keeping their factory output abreast of their orders.

Another one of the "old timers" on the air is the Metropolitan Life Insurance Company. The *New York Herald Tribune* of March 29, 1931, referring to this Company says:

"With the record of being the oldest daily feature on NBC networks in point of broadcasting hours, the Tower Health Exercises directed by Arthur Bagley enters its seventh year. While establishing a record of more than 23,000 broadcasting hours, Bagley has built up a following easily of 4,000,000 people who have mailed more than 1,000,000 fan letters."

Up to the beginning of 1931, 856,000 booklets and 784,000 charts were distributed in response to requests. The regular daily mail resulting from these broadcasting exercises averaged 1,200 letters.

Libby, McNeil & Libby write:

"Six carloads of Libby products sold as a result of Broadcast Advertising!"

Mr. Guy C. Smith, Advertising Manager, says that careful investigation showed Broadcast Advertising to be directly responsible for selling thousands of dollars' worth of Libby products.

Dixie Drinking Cup Company. Promoting the sale of a paper drinking cup is no easy matter, but Broadcast Advertising achieved one of its distinct successes with "The Dixies Circus." The Agency handling this account writes as follows:

"Broadcasting has proved peculiarly applicable to the advertising problems of the Dixie Drinking Cup Company. In spite of the obvious 'copy' limitations of such a program as The Dixies Circus, we have found the medium surprisingly flexible and adaptable to the various requirements of a somewhat complex marketing problem."

This has been regarded by many as one of the outstanding successes in Broadcast Advertising.

There might be mentioned other equally conspicuous successes, such as Palmolive, which for over three years has retained a tremendously large audience, estimated by many to be 10,000,000, which week after week voices its approval in tangible fashion. Also Pepsodent, the outstanding success in its field and with probably the nearest approach to the program of universal acceptance—Amos 'n Andy. While official figures are not available, this product is said to have risen to first place in point of sales, largely as the result of Broadcast Advertising. Lucky Strike Cigarettes which, due to their type of program and its peculiar tie-in with their product, increased their sales in a few months 47 per cent over the corresponding period of the previous year.

In the "Revised Study of Radio Broadcasting" made by Dr. Daniel Starch it is shown that of the audience listening regularly to sponsored programs 26.07% of those in the territory east of the Rocky Mountains stated that they have bought goods directly as the result of listening to advertising programs. In a separate survey of the Pacific Coast the percentage was still larger, as 37.70% of the audience place themselves on record as buying goods directly as the result of Broadcast Advertising.

In brief, Broadcast Advertising does pay the advertiser and usually in the coin that he is after. If it be good-will and he is wise in adapting his program to his potential audience, he receives good-will in large measure. If trade-mark

publicity is sought after and his program "copy" is attuned to this objective, he will very likely find at the conclusion of a year's contract that his product is known by name in millions of new families. If the advertiser is seeking increased sales, he should take this into account in the preparation of his program, adjusting it to the level of his audience, tying it in with other forms of advertising, making the whole campaign one great coöperative effort and then rely on his sales sheet at the end of the year to give him his answer.

CHAPTER XV

BROADCASTING AND THE ADVERTISING AGENCY

The relation of broadcasting to the Advertising Agency is most important, not only because broadcasting is a new advertising medium with a technique entirely different from that used in visible advertising, but also because of the peculiar value of broadcasting as a coördinating factor in planning a schedule of national advertising. In the early days of its development radio broadcasting was so new that its exploitation was necessarily confined to the broadcasting stations that had learned something of the technique to be used and were burning midnight oil in their laboratories to discover the answer to many important technical questions. Our great network systems still maintain service departments for the purpose of furnishing expert knowledge and advice to Advertising Agencies and national advertisers who have decided to use this new medium. At the end of four years of intensive work in acquainting Advertising Agencies with the thought and purpose back of broadcasting, an intimate survey shows very little in the way of sales resistance to this new advertising medium and still less in the way of hostile antagonism.

3 Broadcast Advertising and the use of the broadcasting medium present an unusual opportunity to the Advertising Agent, be he large or small, as regards the volume of annual business. There are two methods of operation available to the Advertising Agent.

First, he may build up a Broadcast Advertising Division as a part of his organization. This involves finding men who

have had sufficient training in the field and are well enough acquainted with the technique of broadcasting to function successfully as executives of such a department. To operate a department of this character it is necessary, in addition to the sympathetic coöperation of the head of the business, that a man be appointed as managing executive of the department in full charge of its operations. Such a man should not only have had a wide and thorough experience in general advertising and advertising agency procedure, but he should also have had at least two years of direct training in the broadcasting field.

Having selected the big chief, how about the men and women down the line?

Obviously, there should be a good Number 2 man—an understudy of the department manager—who can function for him and attend to the execution of details of the department. There should also be idea creators, both men and women, constituting the program or copy division of the department. Here is where the initial work is done in originating the program idea which shall be a little different from anything on the air and, if possible, the best of its kind. There should be a publicity division for publicity and radio broadcasting walk hand in hand and the merchandising or re-sale of the program from an Agency standpoint is of increasing importance.

Assuming that the entire facilities of the Agency are at the disposal of the Broadcast Advertising Department and that it can call upon the machinery of the organization for such service as is necessary, a department such as I have described can be built on the shoulders of five key men. In addition to these, there of course should be the adequate service of such secretaries, stenographers, file clerks, etc., as the department requires.

All this means a considerable overhead and addition to

the payroll and is warranted only by such Agencies whose radio accounts are now reaching such importance, both in volume and relationship to other forms of advertising, as to render departmental handling necessary to their preservation and development.

The second method in successful operation in several large Agencies is as follows:

Several of the first line executives of the Agency, including the President and perhaps a Vice President or two, all of whom are enthusiastic over broadcasting and its possibilities and have a flare for programs, undertake to add this new medium while in the development stage to their other responsibilities, thereby functioning as a department without actually creating it. Of course, this involves probably as much value in time and attention, if figured on the money basis, as would result in the other method of operation, but it has these advantages. First, it impresses the client favorably when the president of his Agency takes enough interest in the broadcasting program to function personally as a copywriter and a service man. Second, it insures the permanency of the sale for usually the president of the Agency talks directly to the president of the Company that he is serving, thereby reducing the chance of misunderstanding and greatly strengthening the working arrangement. When this method is employed, these chief executives usually work directly with the chief executives of the broadcasting system which, in turn, places all of its facilities at the disposal of the Agency, functioning for it departmentally and with a corps of experts in every division of the business available at all times for service.

Again, this method has the distinct advantage of bringing to the client only such plans and program suggestions as have been proven successful in the experience of those who have been operating directly in the field. The use of

the Program Board of a national broadcasting system immediately places at the disposal of the client the best brains and talent obtainable for the purpose. The use of its continuity department, dramatic writers, publicity group, etc., again furnishes to the Agency, without additional cost, the best men in these fields. By the time this type of Agency has worked out an acceptable program for its client it will have arrived at about the same level of comparative values as a competing Agency which may be operating exclusively on the basis of an organized Broadcast Division within its Agency organization. Two of the largest Agencies, from the standpoint of Broadcast Advertising billing, are operating in these two ways.

Again, broadcasting has offered a wonderful opportunity to the smaller Advertising Agency with one or two potential accounts. Such an Agency, operating through its principal, can come directly to the headquarters of the broadcasting organization and be furnished with exactly the same type of service and coöperation and helpful suggestion as is being given to the larger Agency operating in the same way but with a larger number of clients to be served. Such an Agency should delegate one man as its executive point of contact. He should be responsible for his Agency's relations with all forms of broadcasting. He should be the man with authority and whose decision should be final. Such a man will have no difficulty in working out his problems successfully with the broadcasting system and in obtaining satisfactory service for his client, even on a competitive basis.

One of the most important factors in broadcasting is the matter of talent. As long as a considerable percentage of programs on the air are musical, employing a wide range of artists, from the individuals who comprise the orchestra to the Grand Opera star, there will be need for expert advice and practical knowledge of the entertainment field.

The relation between the Advertising Agency and the Artists Bureau of the broadcasting unit should at all times be cordial and cooperative if the best results are to be obtained.

The Artists Bureau, as now set up, is organized primarily for the purpose of stabilizing prices and preventing one customer competing against another for talent until a prohibitive price is set. The right selection of talent for any program is most important. It is equivalent to the proper choice of artists or engravers for a masterpiece in the field of visible advertising. Only those who have had long years of training in the entertainment and concert field can judge of what is desired and have the ability to deal successfully with temperamental groups that have to be approached in terms of diplomacy as well as money.

I do not believe the time will ever come when the Advertising Agency, no matter how large and relatively important, will attempt entering the concert and entertainment field directly. This does not mean that in certain specific instances direct contacts may not be necessary. I am speaking in terms of universal operation.

With the development of the dramatic art in broadcasting and the successful solution of television, there will be necessity for a still closer working arrangement between the Advertising Agency, the Artists Bureau, and the Broadcasting Company, especially those who have mastered the fundamentals of this new technique.

The Advertising Agency, without exception, has from the very start been placed on the same commission basis as obtainable in the use of other media. Fifteen per cent on time, as contracted for, has been paid every Agency since the great broadcasting units have been in operation. No commission has been paid on talent as this corresponds to art work, engraving and typography which, in the judgment

of many qualified to voice an opinion, should be taken up and treated individually between the Advertising Agency and his client without any direct commission from the Broadcasting System.

Beginning with 1927, which was the first full year of the National Broadcasting Company, the pioneer of national network systems, there has been built up a relationship between broadcasting and the Advertising Agency that is the wonder and admiration of all. Partly due to the novelty of radio and also because it gave a new note to the ordinary advertising solicitation and, still more, because the advertiser himself was unusually interested in this new form of publicity—because of these things the Advertising Agency and the Broadcaster have practically worked out their problems side by side and traveled along hand in hand, each striving to help the other and both endeavoring to give the advertiser the best obtainable service in this new field. Let any one take the best brains in the electrical and radio broadcasting business and combine them with the best brains in the advertising and advertising agency business and there automatically comes about a combination hard to beat. This is perhaps why during the four years that have elapsed since 1927 Broadcast Advertising has paid increasing sums in commissions to the Advertising Agencies of the country, amounting in 1930 to a sum well in excess of \$3,000,000 if local stations are also included.

There are still many problems yet to be worked out. There are only a certain number of hours on the air available and no resources of the laboratory can extend nature's restriction in this most important detail.

The development of the art of broadcasting, as Advertising Agencies and Broadcasters continue to work together, indicates ahead of us a period of splendid progress when television shall have joined hands with radio broadcasting

and the fine art of photography and visible effects are joined with increasingly fine broadcast programs, making a unit of sight and sound which can be delivered directly into the homes of the nation. This sounds like an Arabian Nights' dream, but it is no dream. It is hardly a prophecy, for these very things are possible today experimentally and it will only be a brief tomorrow before they are actually marketable. It is then that the Advertising Agent, for the first time in the history of his art, will be able to develop a complete unit of advertising and in accomplishing this he must needs keep step with the broadcasting organizations now working so efficiently.

CHAPTER XVI

RADIO AND THE LAW

The art of radio broadcasting is so new that the matter of law as it pertains to this industry is in the making.

It is rarely that any industry starts so completely from scratch as to find itself literally without any law. One of the very able lawyers, who is pioneering in this field and has already obtained a most enviable reputation on account of his clarity of thought and fair-minded decisions, is A. L. Ashby, Vice President and General Attorney of the National Broadcasting Company, Inc.

Feeling that a volume on radio broadcast advertising would not be complete without a chapter touching on the legal aspects as they affect its operation, I have obtained permission from Mr. Ashby to use extracts from his lecture on "Legal Aspects of Radio Broadcasting" given at the New York University School of Law on April 22nd, 1930.

In discussing the subject from its various angles, Mr. Ashby makes the following points:

"What are the legal aspects of radio broadcasting? Why does a broadcasting organization require a legal staff and what problems do these lawyers have? The radio lawyer must file applications for the renewal of the station license. If it is desired to change the location of the studios or transmitter, application must likewise be filed. If it is desired to change the type of transmitting apparatus, permission must similarly be obtained from the Federal Radio Commission. If a broadcasting organization desires to erect a new transmitting station in place of its old station, it must first apply for a construction permit. If the commission feels that it might not grant a broadcasting license

to such a station it will set the application down for a hearing. The attorney must appear and prove that the granting of the construction permit, to be followed later by a broadcasting license, would be serving public interest, convenience or necessity. He must at all times be prepared to prove that his station is serving public interest, convenience or necessity, and that it is doing the job better than some new organization which may be applying for the channel now being used.

"A situation which radio lawyers are having to deal with is the pirating of programs. The Radio Act, of course, prohibits the re-broadcasting of a radio program without the consent of the originating station. This does not cover the situation where an organization picks up a program originated by some other organization and by means of a selective radio receiving set and by means of amplifiers and wires re-transmits that program to the homes of listeners who are furnished with a loud speaker for a toll charge of a few dollars per month. Neither does the Radio Act in specific terms forbid the picking up of radio programs, amplifying them, and putting the program over the loud-speaking equipment of a theatre, to which theatre admission is charged and a profit made. Such use is virtually a re-performance for profit and an unauthorized use of the broadcasting organization's property. An analogous use of a similar product has several times been enjoined by the courts on the ground of unfair competition,¹ although no radio broadcasting cases involving the retransmission of programs by wire, or re-performance in theatres, have come before the court for judicial decision.

"Several amendments to the proposed Couzens Communications Bill have been offered to cover such situations, one being introduced in the Senate by Senator Watson (S.908), and one in the House by Mr. Darrow. Similar bills should be introduced to amend the Radio Act of 1927, as the Couzens Bill may never become law, certainly not for some time.

¹ *International News Service v. Associated Press*, 248 U. S. 215, 39 Sup. Ct. Rep. 68 (1918); *National Telegraph News Company v. Western Union Telegraph Co.*, C. C. A., Seventh Circuit, 1902; 119 Fed. 294.

"It has been held in a number of cases that the radio broadcasting of a copyrighted composition is a performance for profit, and if unauthorized, an infringement of the copyright, even though the broadcasting station may have received no direct return for the performance.¹ The copyright law, now more than twenty years old, is, of course, far behind the state of the art of broadcasting, as well as the art of talking pictures and other similar industries. Steps are now being taken to thoroughly revise our copyright laws so that, for instance, a program, after it has left the sending antenna, will still be protected by the copyright and may not be rebroadcast, retransmitted or reperformed for profit without the consent of the proper parties.

"One which has been brought on this question of copyright is that of the American Society of Composers, Authors and Publishers v. Jewell-La Salle Realty Company. In that case the defendant hotel company had a master receiving set by which it picked up programs from the air and sent them on to each of the rooms in the hotel, where loud-speakers were installed. The United States District Court for the Western District of Missouri, Western Division, denied the injunction against the hotel company, holding that there was no new performance for profit within the meaning of the Copyright Act.² The case has been appealed by the plaintiffs to the United States Circuit Court of Appeals."

On April 22, 1931, Mr. Ashby issued the following statement to the press concerning the action of the Supreme Court in reversing the United States District Court in the above mentioned case:

"Considerable discussion has resulted from the United States Supreme Court decision of April 13, 1931, in the case of Gene Buck v. The Jewell-La Salle Realty Company.

¹ M. Witmark & Sons v. L. Bamberger & Co., 291 Fed. 776; Jerome H. Remick & Co. v. American Auto Accessories Co., 5 Fed. (2nd) 411, U. S. C. C. A., certiorari denied 46 Sup. Ct. Rep. 19, 269 U. S. 556; Jerome H. Remick & Co. v. General Electric Co., 4 Fed. (2nd) 160 U. S. D. C., S. D. N. Y., 1924.

² 32 Fed. (2nd) 366.

The defendant Hotel Company was charged with receiving on its master radio receiving set and distributing to its public rooms and to its 200 private rooms the copyrighted musical compositions, "Just Imagine" and "I'm Winging Home (Like a Bird that is on the Wing)". These selections were received as a part of a radio program from a broadcasting station which held no license from the copyright owners for the performance of the said two selections. The United States District Court on April 18, 1929, in a decision reported in 32 Fed. (2nd) 366, held that the Hotel Company did not perform the selections within the meaning of the Copyright Act. The plaintiff, Gene Buck, appealed the decision to the United States Circuit Court of Appeals for the Eighth Circuit, which Court certified to the United States Supreme Court the question as to whether or not the acts of the hotel proprietor constituted a performance of the compositions within the meaning of the Copyright Act. The Supreme Court on April 13th decided that the Hotel Company had performed the compositions and answered the certified question accordingly. Further action will have to be taken by the United States Circuit Court of Appeals and possibly by the United States District Court on the question of whether or not the performance was for profit.¹

"Justice Brandeis in his opinion for the United States Supreme Court called attention to the case of *Buck v. Debaum*, 40 Fed. (2nd) 734, and stated: 'If the copyrighted composition had been broadcast by Duncan with plaintiff's consent, a license for its commercial reception and distribution by the Hotel Company might possibly have been implied.' Only on rare occasions does the Supreme Court of the United States refer to a lower court decision and when it does it is a rather sure sign that the Court is going to follow that decision unless it specifically disapproves of the decision cited. It is to be noted in the *Jewell-La Salle Case* that Justice Brandeis did not disapprove the decision reached in the *Debaum Case*, although it may well be that

¹ The Circuit Court of Appeals has since decided that it was for profit, following the precedent established in *Herbert vs. Shanley Co.* (242 U. S. 591).

the Supreme Court would disapprove the ground for the decision given in that case, which was that there was no performance by the operator of the receiving set.

"The Debaum Case is the law today, except as modified by the Jewell-La Salle Case, as to all reception of copyrighted music broadcast by stations licensed by the copyright owners. The Jewell-La Salle Case covers only the facts present in that case, to wit, the reception by a hotel (including distribution by the hotel to its rooms) of a radio program containing a musical composition which the radio station was not authorized by license to broadcast. The decision does not in any way prevent the reception in the home of radio programs even though the broadcasting stations were not licensed to perform the copyrighted compositions, for such could not by any stretch of the imagination amount to a public performance for profit by the listener. There are no court decisions preventing hotels from receiving and distributing to their rooms programs containing musical compositions which the radio station was licensed to broadcast. The public may be fairly well assured that when tuning in a program from any of the broadcasting networks or from any of the large independent stations the copyright owners or their agents have licensed the radio station to broadcast the compositions contained in the program."

Mr. Ashby, continuing his aforesaid lecture at New York University, stated:

"Although it is impossible to copyright an idea, a character or a title of a work in the United States, the infringement of such ideas, characters, titles or trade names, may give rise to a right of action. Broadcasting organizations are frequently confronted with claims of infringement of program titles, characters in programs, and the infringement of ideas claimed to have been originated by some other party. It generally develops that the other party's idea was not original. A more serious question is presented when an author is engaged to write dramatic sketches for radio presentation when that author originates the idea on which the sketch is based, builds the characters and names

them and is later discharged. Suppose the broadcasting organization continues with the same type of sketch under the same title, using the identical characters. Such a question has been brought to the courts in the case of *Brown v. L. Bamberger & Company*, reported in the *New York Law Journal* for May 31, 1928. The author's motion for a temporary injunction was denied, apparently on the theory that there was no unfair competition at that time. The complaint was not dismissed, however, for the reason that the author might still be able to prove that his ideas and characters had been infringed.

"Frequently, a broadcasting organization receives letters from attorneys representing some commercial product to the effect that a trade name or slogan being used on the air by one of the broadcaster's advertising clients belongs to the client represented by the attorney. In such a case the broadcasting organization usually examines the facts, and if they are too complex to warrant a decision one way or the other without a court proceeding, it will secure from its advertising client an indemnity agreement.

"Defamation over the radio is oral as between the person speaking into the microphone and the radio listener, and in such case constitutes slander and not libel. But if the announcer or speaker reads a written defamation before the microphone, there would be elements of both slander and libel—the utterance of slander and the publication of a libel. In some states, notably California and Illinois, statutes have been enacted making defamation by radio punishable as a crime. Slander by radio may reach millions of people, even more than newspapers and magazines. Most of the laws relating to slander do not make it punishable as a crime, the criminal provisions being limited to libelous defamation.

"In Illinois a successful candidate for office commenced a civil suit against a defeated candidate for damages for slanderous statements made over the radio during the campaign and caused criminal charges to likewise be instituted pursuant to the Radio Slander Act (*State of Illinois v. Fred Broucek*). The criminal charge came on for hearing in a court having no jurisdiction over the city in which the de-

fendant made the slanderous statements, viz., where the broadcasting station was located. Nevertheless, Justice Levitan held that because of the radio waves, the damage to the plaintiff's reputation was done in his jurisdiction as well as in the jurisdiction where the words were actually spoken.

"This case merely went to a question of jurisdiction for the act was a crime in both cities. It gives us an insight though to possible litigation to come where a citizen may have uttered a lawful statement in one state which by means of radio is heard by thousands of listeners in another state where such statement would be slanderous. Quaere: Could the latter state prosecute the speaker or the radio station if it could acquire jurisdiction over them? In other words, what is the situs of a crime committed over the radio?

"It has been held in a case arising in California that oral utterances made over a radio broadcasting station calculated to prejudice the conduct of a pending criminal trial was a contempt of court by the speaker. Probably the broadcasting station would in such case not be liable, but if the station's announcer should make the unlawful statement, the broadcasting organization would undoubtedly be guilty of contempt of court.

"Instances have arisen where advertising clients using facilities of a broadcasting organization have engaged in alleged unfair trade practices. In such an event the broadcasting organization would not be brought before the Federal Trade Commission, for the reason that it is merely a medium by which the advertiser expresses himself—a medium similar to the newspaper or magazine.

"An interesting question arises when an advertising client proposes to broadcast a dramatic program portraying the characters of living persons, some of which may be prominent in public life and some not. This program, like all commercially sponsored programs, is intended to enhance the good-will of the advertiser and indirectly to increase the sales of the advertiser's product. In New York State, we have a statute known as the Civil Rights Law, which makes the use of the name of a living person, for advertising purposes or for the purposes of trade, without having

first obtained the written consent of such person, a misdemeanor, and provides a civil remedy for damages and injunction. It has been contended that since this statute was written in 1895, long before radio broadcasting was even thought of, the use of a person's name in a broadcast program is not forbidden. That argument, of course, is untenable. Witness the Copyright Act of 1909, written long before radio broadcasting, and yet when the courts came to decide the question of whether or not an unauthorized broadcast performance of a copyrighted composition was an infringement, it decided that it was.

"It sometimes happens that certain organizations wish to broadcast programs which the broadcasting organization feels should not go into the American home. It is justified in its refusal. It is not a public utility except as to the listening public. Neither is it a common carrier, although certain legislation has been proposed which would make it such. Such legislation is, of course, unwise in so far as radio broadcasting is concerned. Were it enacted, any person or organization could come to the broadcasting organization and successfully demand time on the air.

"Program balance would be ruined; speeches unfit for the American home would be broadcast wholesale, and although the revenue of the radio station might be presently increased, yet in the end the listening public would drop off, and revenue with it. The broadcasting organization is able to operate only because of the fact that radio listeners are tuned in. Were the listeners to keep their sets turned off, every broadcasting station in the country would be forced to cease operation. To keep the listeners on the air, the broadcasting organizations must furnish the best type of programs. This is the aim of all good broadcasters, but it would be impossible were radio broadcasting stations classed as public utilities and common carriers.

"The Radio Act does not provide for censorship of programs; in fact it specifically provides that the licensing authority shall have no power of censorship over radio communications. It does state, however, that no person shall utter any obscene, indecent, or profane language by radio. Congress was wise in withholding the power of cen-

sorship, for it is too strong a power to delegate to any commission or department. After all, the public is the best censor. There is no censorship of the press and there should be none of radio.

"There are a great number of complex questions relating to the contractual relations of the broadcaster with the advertising agencies, advertising clients and the artists. There is the legal question as to what extent the broadcaster may restrict the activities of the artist it engages. It may wish to provide that the artist shall not broadcast on any other program during the period beginning sixty days preceding the broadcast and ending sixty days following. This is commonly done in the case of the higher priced artists. Dealing with so many advertising agencies, many complex questions relating to the law of principal and agent continually come up. Then, too, there are the problems arising in connection with the Musicians' Union. In all of the metropolitan centers, at least, the members of the orchestra and house musicians are members of the union. Interesting legal problems frequently arise in this connection.

"There should be very little legislation in order that the growth of a fast developing art, with international broadcasting here and with television just around the corner, bringing with it many new problems, may not be unduly hampered. If new law is enacted, it must be based on sound engineering principles, otherwise, the art of broadcasting will be tremendously hindered in its development.

"Congress would do well to consider radio legislation only upon the recommendation of the foremost radio engineers. It might be worthwhile for Congress to have available for consultation a group of these leading engineers. Then law could be built to fit the engineering features. This would be far more desirable than the usual procedure of first making the law and then requiring engineers to build to fit the law. The engineers and legislators should work hand in hand."

CHAPTER XVII

WHAT THE PUBLIC THINKS ABOUT BROADCASTING

With program broadcasting only ten years old there are estimated to be 25,000,000 radio receiving sets in use in the world, of which there are 15,000,000 located in the United States. Taking this estimate as the basis of further compilation, there is one radio set for every 80 persons in the world; one set for every 50 persons in Europe; and one set for every 10 in the United States. The total number of Broadcasting Stations in the world is 1225, of which 613 are located in the United States. This represents a money value in receiving sets alone of over \$2,000,000,000, with the additional cost of Broadcasting Stations estimated at \$27,000,000.

These figures would seem to indicate that the world wide public is pretty thoroughly sold on broadcasting. Taking the United States alone, with its 15,000,000 sets representing approximately that same number of families, this means that one-half of the total families domiciled in our country own good radio receiving sets capable of receiving national and local broadcast programs.

The attitude of the public towards the radio receiving set has changed greatly during the last year or two. Whereas it was originally looked upon as a toy, an experiment, a novelty, today ninety-nine out of one hundred homes consider the radio receiving set a permanent fixture. This term "fixture" is not used lightly. The American home today contains certain things that are looked upon as holding a permanent place, such as, hot and cold water, the modern

bathroom, the gas range, the electric light—to this list of permanent fixtures has been added the radio receiving set.

Broadcasting has won for itself such a permanent place in millions of American homes that, were the modern conveniences above outlined to be eliminated one by one through stress of war or economic necessity, I believe that the radio receiving set would be one of the last to go.

The term "public" embraces a tremendously large and varied audience. No country in the world includes in its population such a conglomerate mixture of all races and tongues the world has ever produced, speaking every language known to civilization and some that are spoken exclusively in the United States.

This audience represents every degree of intelligence, from no schooling at all to those who are over-educated. It includes those who are acquainted with the pinch of poverty and also the ultra rich with their mansions and country estates. This audience, moreover, represents every degree of taste preference in the entire scale of programs from jazz to Grand Opera, and from the comedy skit to programs of spiritual uplift.

In the majority of American homes the radio is used for the purpose of obtaining programs of entertainment, educational, or spiritual uplift. There are those who use their radio set almost exclusively as a means of entertainment and find a degree of appreciation in direct proportion as their special brand of entertainment finds a place on the station programs. Those who use their sets primarily for purposes of education are relatively few, speaking in terms of national coverage. This is partly due to the fact that there are very few national programs so labeled that are being broadcast from Coast to Coast. Instead, one finds educational work rather sugar-coated and more likely to be offered in the form of dramatic episodes of historical ac-

curacy, travelogues, or other similar methods of teaching history, geography, or literature.

A very large number form the regular Sunday audiences of some one of the religious services offered from week to week. It is here that one finds an expression of appreciation rather remarkable and worthy of serious consideration. For the first time in the history of world religions, it is possible for the owner of a radio receiving set to pick from the national network just the type of religious service that he prefers, be it Protestant, Jewish, or Catholic—all subscribing to the same general rules of procedure that govern national religious broadcasts. An ever-increasing number of listeners to these programs is its own best commentary as to the approval of the public.

The public is becoming more discriminating in the matter of programs. It is demanding better programs and more variety. It is insisting on certain standards of excellence and certain safeguards to the American home that must continue to be observed. The broadcasting of national programs is already on a high standard of excellence. No less an authority than Dr. Walter Dill Scott, President of Northwestern University, made this statement:

"The ethical standards of the air are symbolic of the new standards of the twentieth century. They are not negative, they are positive. No station can assume the right to use the air to exploit the public. The air belongs to the public and it may be used only when and insofar as it serves the public welfare. It presents wit and honor of the highest form and does not depend on vulgarity and profanity to produce a laugh. It presents the best examples of all classes of music from jazz to classical. It presents messages from the great leaders of all the world and is heard gladly by all the members of the household in the most exclusive families. The radio is the only agency for general communication that delivers only those messages that serve the

interests of the people. The radio reflects the high ethical standards of the present and helps in the development of an ever-rising standard for the future.

"The improvement of the spoken voice, the development of the singing voice and the elevation of ethical standards are no mean by-product. The radio is an invention and an institution of incalculable benefit to the human race."

This safeguarding of the American home has probably been appreciated more than any one service of similar character that has arisen in connection with the art of broadcasting. The public as a whole will go to the theatre or the vaudeville show and look at and listen to many things without taking offense. But let the stories and the wise cracks of the comedians, some of them, be brought directly into the home over the radio and immediately there arises a storm of objection indicated by thousands of letters of protest mailed to the offending broadcasting station. This safeguarding of the American home has, of course, proved to be a very distinct asset as it provides an entrée for messages of commercial as well as entertainment value that otherwise might be shut out.

With the education of the public to an appreciation of better programs along this line there has also come about a corresponding discrimination in the acceptability of sponsored or advertising programs. In general the public approves of the sponsored program. It welcomes the music and the entertainment as many times the best of the kind and without parallel in the field of sustaining programs. The public listens to the sponsored program primarily for purposes of entertainment or information. The public does not listen to an advertising program primarily for the advertising. The advertising or commercial credit is accepted as the admission price one pays for the half hour or hour of entertainment. The public does not seriously object to

the proper use of the advertising continuity, or commercial credit. It does object to the improper use of the advertising privilege and is at present voicing its disapproval in no uncertain language.

It must be admitted that the proper use of advertising in connection with the sponsored program is a debatable question and most of us agree that finally it is the audience which will decide the question. In the meantime, it is a wise advertiser who has his ear close enough to the ground to detect the rumblings of dissatisfaction that attend the presentation of his program.

This much, however, speaking for the public can be said with propriety and good faith. The advertiser who pays his good money for time on the air and then perhaps adds an equal amount for program talent should have some opportunity for adequate mention of his name and product, which is the franchise that he has bought. Good taste usually dictates its answer to this question but, unfortunately, there are being broadcast daily advertising programs in which the element of good taste apparently never enters. It is these forms of blatant advertising, direct selling, reiteration of price, undue use of superlatives, statements reflecting on competitors, repetition on repetition, until one tunes off his set in self defense—these are the type of advertising programs that are gradually contaminating the entire structure of broadcast advertising.

Of course, the public has its own method of self protection. The listener may either tune off and find some program less offensive, or preferably, may write directly to the advertiser stating his objections and stating, perhaps, that the continuance of such a form of advertising would result in driving customers away from instead of attracting them to the product being advertised.

A part of this deplorable situation is due to the fact that

altogether too few among those entrusted with the writing and placing of advertising on the air have learned the proper technique and are still obsessed with the idea that the value of their advertising from the listener standpoint is in proportion to the number of words of direct and indirect advertising that can be crowded into a program period. I am inclined to think that the answer to this problem rests with the public and that letters either of objection or appreciation mailed directly to the advertiser will be the only means of bringing about anything like a general change in policy.

The seriousness with which the public takes radio broadcasting is indicated by a letter which I have received from a friend on the Pacific Coast, at one time a prominent publisher in New York. He says:

"My reactions to radio could not be very helpful because my use is sporadic. I hit the high spots between 7:00 and 10:00 p.m. four evenings a week with a tune-in on the biggest features that come occasionally. I mean during the day. Your National programs are very much more considerate than the local in the matter of advertising and infinitely more skillful.

"There is one point I might bear down on. The radio is, or seems to me, the most searching revealer of personality. It is as if the performers were stripped to the soul. It is a highly dangerous method of approach for the hypocrite as public speakers must be learning. (For the tyro it is pitiless.) Some of the vaudeville artists that earn big figures on the stage where their limitations can be compensated by clothes or antics, coming over the radio, disclose pathetically their indifferent talents. Reveal why they are vaudeville artists and not real stars. Some of the political candidates, stripped of accessories and compelled to rely on mentality, make sorry figures before the microphone. Only real men and real artists can afford the luxury of the microphone. The man must have something to say and must know how to say it. The artist must have personality as well as talent. For the radio finds him out. This is to me the most

amazing by-product. The platform helps a man to conceal himself if he wishes it. The microphone reveals him willy-nilly. Clothes do not make the man, nor flesh, nor smiles, nor words. The radio searches and finds and broadcasts his very soul. Amazing it is, and priceless. You and I who have had to size men up for a living can appreciate how priceless. If I were in the harness I should make every applicant for a job, for a big job, broadcast. I'd get his number sure."

During my public work, which has taken me into many States and all sections of the country including the Pacific Coast, I have noted a sustained interest in radio broadcasting that is very encouraging.

In developing this great new industry and hitherto untried medium of direct contact with the family, we should never overlook the fact that radio broadcasting is still on trial, and those of us who are responsible for broadcasting nationally are charged with the delicate and most important mission of so continually whetting the appetite of the public and intriguing their imagination as to make a family radio receiving set the continuing source of the best things obtainable which contribute to the welfare and upbuilding of the American home.

An advertising agency man, William H. Denney, has written a description of Radio from the audience viewpoint which is both a tribute and an appreciation. He calls it

THE VOICE OF RADIO

I am the Triumph of Man's Mind over Matter—

For me there can be no earthly barrier—
Distance only offers the wings upon which my message rides—

Countless Millions hear me when I speak—
over limitless leagues of Land and Sea,
in Heat and Cold, Rain and Fog, my voice rolls eternally onward.

What I say To-day goes echoing through the Ages.

Who knows but what the Ages to come may hear my voice of To-day.

Or that, through me, To-day's ears may listen, from the dawn of Creation, whenever song or story, rule or reason, praise or protest, has inspired mankind to publicly proclaim.

To the Arts and Sciences I mark a new epoch in Human events—

To Music, I am the sounding board of the Universe—the songs of Humans, the blaring of brass, the fluttering of flutes, the strumming of sibilant strings—(one for all, all for one, or the many to the millions)—Science's greatest contribution to the Art of Melody.

Although Mankind's varied hosts view me as a new Empire of Entertainment, yet my service in succoring humanity, in times of dire need, oft transcends all my other virtues.

To Education, I am the Universal Super-College—only through me may world-contact be had with the Master-Minds of Literature, Art, Industry, Science and Statesmanship—lengthening the span of Knowledge—enriching the span of Life.

To Religion, I am the supreme equalizer of Creeds—Intolerance and Dogmatism are untranslatable to the composite Audience which comprises the Brotherhood of Man.

To Science, I am the Soul of World-Unity—Mankind's most stupendous force for Universal Understanding, Love and Peace.

In my million-minded amplification of Man's spoken thoughts, I speak only as Man directs—Let him remember, therefore, that not only his own Life and Happiness, but that of the whole World depends upon his directing me as a force for the greater good of Humanity—

I AM RADIO!

CHAPTER XVIII

FUTURE OF RADIO BROADCASTING

No one can prophesy with any accuracy what even the next ten years will accomplish in an industry developing as rapidly as radio.

We of the American people often feel that we are unusually clever in our prophecy as to the future, but are we?

A couple of years ago while in a dining-car of one of our great railroad systems I picked up a little folder entitled "In 1828" and this is what I read:

"Someone has dug up the records of the Lancaster, Ohio, school board back in 1828. In these records there is an account of a proposed debate as to whether railroads were practical or not. Permission was asked to hold the debate in the school house and the minutes of the school board meeting ran as follows: 'You are welcome to use the school room to debate all proper questions in, but such things as railroads and telegraphs are impossibilities and rank infidelity. There is nothing in the word of God about them. If God had designed that His intelligent creatures should travel at the frightful speed of 15 miles an hour by steam, He would have foretold it through His holy prophets. It is a device of Satan to lead immortal souls down to hell.'"

This shows how inaccurate was our prophecy one hundred years ago as to the ultimate development of railroads. Yet, smile as you may over this evident miscarriage of prophecy, I make bold to say that, if as recently as ten years ago I had ventured to prophesy developments in radio that today have proven their value and are in practical operation, you would have placed me mentally at least in much the same

classification as the railroads were placed by this school board.

One is tempted to let his imagination run riot in contemplating the future of an industry having such tremendous potentialities. Everyone knows what has been accomplished up to the present time. What of the future?

I will confine myself to the next ten years. During that period there will naturally follow refinements approaching to perfection in the things we are now doing fairly well. By the year 1940 we will have learned how to overcome static and magnetic barriers, and by our additional discoveries in the short wave field render international broadcasting as possible and as practical as the best we are now doing locally. Ten years from now to broadcast around the world will be just one item in the day's work. By that time our field will be international—not simply national. The great broadcasting organizations in the United States will be operating their studios and plants on a twenty-four hour basis. Differences in time will be utilized so that while the rest of us sleep the night shift will be sending programs abroad, reaching countries during their daylight periods.

We shall be exchanging programs with every civilized nation of the world. The Oxford lecturer will no longer be obliged to leave England in order to give his message to the colleges of America, for it will be easily possible, even though at some inconvenience to him due to the difference in time, to speak to audiences gathered in the assembly rooms of our American colleges for that purpose.

Speaking of colleges, the time will come when our major institutions of learning will have endowed chairs of broadcasting—not that there will be professors of radio broadcasting—but the money thus provided will render possible the wire charges and other incidentals whereby such a college may be in a position to obtain either an international

broadcast or a broadcast distributed from some central point in this country.

Ten years from now, and quite possibly in less time, we shall be handling advertising on an international basis. The advertiser, who is now employing a national network for the exploitation of his goods and at the same time has foreign contacts, can place a contract with the American broadcaster with the assurance that his foreign message will be conveyed to its destination in the established form and delivered in the language of that country. In other words, we shall be following the same procedure that now exists in the field of visible advertising and to that extent the entire world will be drawn so closely together as to be operated as a single unit.

Synchronization of stations, now in a favorable experimental stage, promises great opportunities for further development and out of this there may grow ultimately radical changes from our present systems of network communication.

Television, which for the last year or two has been peeking around the corner, will be walking up and down the street long before the next decade is finished. It is already a laboratory success. It simply awaits its development along practical and business lines, acceptable to and in accord with the desire of the radio audience.

This is something which will affect the American home more intimately than any one of the great developments of the future. I can picture the modern living room a few years hence, equipped for radio with loud speakers concealed in the walls and regulated by a simple wall switch. There will be sound movies, compactly installed and easily operated, whereby the family at pleasure may see and listen to the best offerings of the silver screen. Television in its more perfected form will render it possible for you (by synchroniza-

tion between the two instruments employed), to see an actual football game in action as well as hear the announcer giving his play-by-play account. Your radio receiving set ten years from now will be so attuned and synchronized for television that in connection with certain radio programs you will have the pleasure of seeing the prima donna, the quartette or the musical ensemble, as well as listening to the program. In the ultimate development of the Damrosch Music Appreciation Hour millions of school children will be able to see the conductor as well as listen to his message. Dramatizations will then be in costume and the wonderful dramatic offerings that you have now been hearing, but greatly improved in technique, will be given to you by television with a fidelity comparable only with the actual stage presentation.

The advertiser will early take advantage of the more completed forms of television. Provided his product is of such a character as to make it possible, the audience will be able to see it on the screen as well as to hear about it on the radio. It is not beyond the realm of possibility to consider television ten years from now as a practical working method of selling merchandise at a distance. We already have a premonition of this in tel-photography. Just think what it would mean if a salesman here in New York were able to project samples of his merchandise via television to his San Francisco prospect and at the same time describe its good qualities!

The ultimate development of radio and television within the next ten years is bound to have a great effect on general conduct of business. Important meetings will undoubtedly be held by television with perhaps the Chairman of the Board in one city and certain of the remaining members scattered throughout the United States. Letters of a certain type, instead of being written, will be spoken and in some

convenient form, records of these utterances sent for private reproduction in the home, whereby the recipient can obtain spoken messages from a correspondent thousands of miles away.

Methods of education in 1940 will be in process of reorganization. History, literature and art will then be universally taught by radio and television and our up-to-date educational systems will by that time be fully equipped with radio and television sets for that purpose.

In the field of religion, the rural sections will have their solution of the problem now facing them of the abandoned church. By radio and television the humblest rural center so desiring can have at its command the visible presence on the screen together with the actual message from the great religious leaders of the day.

Speaking internationally, I believe that radio and television and the other kindred developments that are bound to come will mean the salvation of the world. The more closely we bring people together the less likely disagreements and misunderstandings will occur. Ten years from now international conferences will be possible through television and radio. Meetings of the League of Nations may be held at times in this way. A Convocation of the great rulers of the world might be so arranged that each would see and hear the other, although separated by miles of land and ocean. In spirit and partly in operation the nations of the world may gather about a conference table upon a few hours notice for the discussion of their problems and the ratification of their agreements.

From now until 1940 the world is going to be a great place in which to live. The things that we have discovered about radio and broadcasting in the last ten years are but an earnest of what the future holds in store. We have every

reason to suppose that there are still secrets locked in the universe as profound and startling as those already discovered by our scientists. Perhaps ten years from now if we are all here it may be interesting to check back on some of these prophecies in the light of their fulfillment.

APPENDICES

Appendix A

SAMPLE CONTINUITIES OF ADVERTISING PROGRAMS BROADCAST OVER THE NETWORKS OF THE N.B.C.

The following pages contain typical advertising programs actually broadcast on the dates indicated by the various sponsors. By title they are as follows:

WESTINGHOUSE SALUTE

One of a series of programs saluting great industries to which the Westinghouse Electric and Manufacturing Company has contributed.

NATIONAL SURETY COMPANY

A series of programs dramatizing actual occurrences, material for which was taken from the files of the Company.

MAXWELL HOUSE PROGRAM

A half hour of attractive music, like the coffee "Good to the Last Drop".

COCA COLA COMPANY

Attractive music combined with Graham McNamee and Grantland Rice on sporting events.

R.C.A. VICTOR HOUR

Featuring famous artists contributing to the Radiola Division.

PALMOLIVE PROGRAM

Orchestral and vocal selections emphasizing love and romance.

CLICQUOT CLUB ESKIMOS

Orchestral music of attractive character.

IPANA TROUBADOURS

An exceptional concert built about the group calling themselves "The Troubadours".

MOBILOIL CONCERT

Nathaniel Shilkret and Henry Neely, "The Old Stager", and a guest artist.

RAISING JUNIOR

The Wheatena Company's attractive family skit appearing daily except Sunday.

CITIES SERVICE RADIO CONCERT

A concert of one hour duration with Cities Service orchestra and Jessica Dragonette soloist.

GENERAL ELECTRIC HOUR

Floyd Gibbons on "Adventures in Science", and Walter Damrosch conducting his orchestra.

WJZ**WESTINGHOUSE SALUTE*****THE LIME MANUFACTURING INDUSTRY****10:00-10:30 P.M.****June 3, 1930****Tuesday****MUSICAL SIGNATURE****ANNOUNCER:**

The production which is now beginning is the Westinghouse Salute—sponsored by Westinghouse Electric, and one of a series of radio programs in which Westinghouse each week pays tribute to the great industries on which the prosperity of us all depends.

Tonight, Westinghouse salutes an industry that produces annually over four million tons of one of the world's basic commodities—Lime.

Widely available, and one of the least expensive of all manufactured products, lime is an example of Nature's splendid generosity. She has a way of being niggardly with non-essentials, such as gold and diamonds, but she is always liberal in meeting our vital needs—and lime, as we shall see, is, like air, water, and land, an absolute necessity.

And so, because the lime manufacturing industry provides us with this necessity; because, though one of the oldest of industries, it has always kept abreast of modern progress; and because, through con-

* By permission Westinghouse Elec. & Mfg. Co.

tinuous scientific research, it is making its product ever more useful to humanity, Westinghouse salutes it tonight.

WESTINGHOUSE OVERTURE

VOICE:

Lime is one of the most versatile materials known to man. It has 17 distinct applications in building construction, 19 in agriculture, 7 in medicine, and it is employed in about 200 industrial processes.

But its most vital use is to build bones and teeth for human beings. Each of us carries around with us upwards of three pounds of lime, and we must secure from our daily diet constant additions of this material if we are to keep in health. Without lime, neither you nor I would be alive tonight, and our world would spin through space as barren as the moon.

MUSIC NO. 1—INDIANA STATE BAND MARCH—*Farrar* (C. F.)

VOICE:

Very shortly after fire came into general use our primitive ancestors must have noticed that certain greyish rocks, which we call limestone, were changed by the heat into a white substance, known to us as quicklime, which greedily absorbed water, became a thick paste, and then slowly hardened into rock again. Someone was brilliant enough to line his crude dwelling place with this curious paste, and thus the value of lime in building construction was learned long before the dawn of history.

The huge stones of the Pyramids of Egypt were bound together with lime mortar and in many places are still protected from decay by a coating of lime plaster. So thoroughly did those ancient workmen master their art that today we follow their practice with hardly a change, employing in our modern buildings the same invaluable substance used thousands of years ago in the construction of Babylon, Nineveh and Rome.

MUSIC NO. 2—HOMING—*Del Riego*—*Chorus and Orchestra* (*Chappell Harms*)

VOICE:

Towards the end of the Dark Ages, England, pressed by the need of growing more food for her increasing population, began draining vast tracts of marsh land. But the lands thus recovered too often

proved sour, heavy, and infertile. Then the discovery was made—and this must be classed among the great discoveries—that when such lands were treated with lime, they became arable, productive. And so today, the farmer spreads lime over his fields when they need it, that his crops may grow, his cattle thrive, and that we may be supplied with a vital necessity.

MUSIC NO. 3—LIMEHOUSE BLUES (*Braham*)—*Orchestra (Harms)*

VOICE:

In industry, lime has innumerable applications. Few people realize the important part it plays in our every-day life. Nearly all of the articles now within the range of your vision have consumed lime in the manufacturing process. The clothes you are wearing; the shoes on your feet; the evening papers you have just read; the draperies at your windows; the silver and the glassware, as well as the sugar, on your table; your automobile; your radio—in making all of these things, lime was used. It is also especially useful for purifying our water supplies, and in promoting our health in many other ways.

Because it is so inexpensive, economy is often served when it can take the place of some other chemical and its uses, therefore, are increasing almost daily.

MUSIC NO. 4—JUNE (*Schnecker*)—*Chorus and Orchestra (Buchard)*

ANNOUNCER:

You are listening to the Westinghouse Salute to the Lime Manufacturing Industry.

VOICE:

The Lime manufacturers of this country maintain an association whose special object is to find ways of making lime more useful to farmers, builders, engineers, and manufacturers; and we take great pleasure in introducing to you the president of this association, Mr. Norman G. Hough (pronounced Huff), of Washington, D. C., who will speak to you from Chicago.

Mr. Hough, Westinghouse salutes you and the industry you represent!

MUSIC NO. 5—FANFARE

ADDRESS—*Mr. Hough*

VOICE:

You have just been listening to Mr. Norman G. Hough, President of the National Lime Association. Copies of his address can be secured by applying to the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania, or to this station.

MUSIC NO. 6—ACHIEVED IS THE GLORIOUS WORK (*The Creation*)
—*Chorus and Orchestra (Haydn) (Schirmer)*

VOICE:

In the Lime Industry, electricity operates the shovels which handle the blasted rock in the quarry. It turns the rotary kilns in which much of the rock is burned. It drives the conveyors, grinders, and screens; provides light both indoors and out, and serves the industry in many other ways. And because Westinghouse engineers have long been familiar with the needs of the rock-products industries and have designed special electrical equipment to withstand the severe conditions of this service, Westinghouse apparatus is to be found in this work everywhere.

MUSIC NO. 7—INTRODUCTION TO BALLET EGYPTIENNE (*Luigini*)
—*Orchestra (Carl Fischer)*

VOICE:

And so to all engaged in this industry of supplying the nation with lime, Westinghouse dedicates this production as a tribute and a salute, pledging anew its engineering and research resources, to aid them in their work. And to you, our listening audience, we send greetings, and ask you to remember that, commonplace as lime may be, it is nevertheless performing many a priceless service for you.

MUSIC NO. 8—SIGNATURE

CLOSING ANNOUNCEMENT:

The Westinghouse production just concluded brought to you original musical arrangements by Cesare Sodero, including certain excerpts from outstanding compositions by _____ and _____ and _____.

This production is one of a series in which Westinghouse Electric each week salutes some great industry upon whose research, accomplishments and growth, the prosperity of us all depends. Next week

at this same hour Westinghouse Electric will salute the City of Chicago, with a program of music and interesting information.

The Westinghouse Salute has come to you from the New York Studios of the National Broadcasting Company.

WJZ

NATIONAL SURETY COMPANY*

7:15-7:30 P.M.

November 12, 1930

Wednesday

OPENING ANNOUNCEMENT:

The police whistle and the siren bring again for your entertainment one of the secret cases of the National Surety Company. Tonight's story is based on a residence burglary that baffled detective Harkness until he became perplexed over an incidental phase of the case. But the detective will explain all this himself. Detective Harkness . . .

HARKNESS: Good evening, friends. I'm not going to waste any time or words getting into tonight's story. One day, not so long ago, I entered my office in the National Surety Company's building just as the phone was ringing.

(FADE IN TELEPHONE)

HARKNESS: Hello! Hello! Mrs. Whiteside? Yes, this is Mr. Harkness talking. This afternoon, eh? Well, I'm glad you were covered by our burglary insurance policy—they got away with about \$15,000 worth of jewelry, did they? In broad daylight—no windows broken, and all the servants on duty! mmmm—no, no I'd rather not take it over the phone—it would save time if I came right up to see you. No trouble at all, Mrs. Whiteside, that's what I'm here for—I'll be right up. Good bye—(*hang up phone*)

(Pause)

HARKNESS: I immediately went to Mrs. Whiteside's house, and found that someone had entered her home during the afternoon ransacked her dressing table, and stolen her jewel box. But there was no other evidence that anyone had entered the house—no window or door forced open, no finger prints—nothing. At the time when the robbery must have been committed, the servants were in part of the house where they would have seen anyone enter. It certainly looked to me like an inside job—but you can

* By permission National Surety Co.—Copyright, 1931, National Broadcasting Co., Inc.

never be sure in cases like this, for a clever thief will leave no tell-tale clues. I examined the servants one by one—they all had excellent alibis. With the police, I searched every corner of every room—the jewels had not been hidden in the house. My next step was to go through the pawnshops. I had a thorough description of everything that was stolen, and at length after several days, in a little pawnshop where I had often found stolen articles before, I spotted a diamond ring.

JAKE: Well, Mr. Harkness, if that's the ring, then half your job is done.

HARKNESS: Yes—all I have to do is to find the thief. You must think I'm a magician, Jake.

JAKE: Well, I know what you've done before.

HARKNESS: You're sure he didn't pawn anything else, Jake.

JAKE: Am I sure! Of course I'm sure. I have to give him money for what he pawns, don't I? I give him two hundred and fifty dollars for that ring.

HARKNESS: And it's worth about four times that.

JAKE: Well, he wanted cash, didn't he? I should turn down a bargain!

HARKNESS: What name did he give you?

JAKE: Name? I should remember names?

HARKNESS: He signed a receipt for the money, didn't he?

JAKE: You should be a business man already! Sure, he signed a receipt.

HARKNESS: Then break out the receipt and let's see what he signed himself.

JAKE: Here you are, Mr. Harkness—"received two hundred and fifty dollars for diamond ring".

HARKNESS: Mmmmm—John Smith—that's an unusual name.

JAKE: Oh, he's an unusual fellow.

HARKNESS: 740 Third Avenue—well, I'll write that down, but I don't expect it to mean much. I may need this receipt as a sample of his handwriting, Jake—when I come across him. I'll take it, if you don't mind.

JAKE: Sure, go ahead—but give me a receipt myself for that ring.

HARKNESS: Of course. Now, Jake, do you remember what this fellow looked like?

JAKE: Say, for two hundred and fifty dollars I should remember a lot! He was a regular tough customer, all right, with a big scar

over his eye like someone hit him in a fight. He had black eyes and black hair, and one of them little sheik moustaches.

HARKNESS: Mmmmm—that could be anyone by the name of John Smith.

JAKE: You said it! He was one of those little guys what don't look you straight in the eye, and mamma! What a sob story he give me! I should laugh!

HARKNESS: What was his story?

JAKE: He was out of a job. Ha! Everybody's out of a job, that ain't no news!

HARKNESS: What sort of job did he say he used to have?

JAKE: I don't think he said nothing. It was probably so long ago he forgot.

HARKNESS: Did he say where he got the ring from?

JAKE: Sure—they always do. It was his wife's. He give it to her when they got engaged.

HARKNESS: And I suppose he wanted to sell it to pay the rent.

JAKE: He should worry about the rent. That's what they have landlords for. He said he wanted something to eat.

HARKNESS: Did he say anything else?

JAKE: Well, he said his wife was sick.

HARKNESS: And that he loved her very much and couldn't see her suffer.

JAKE: That's the story, Mr. Harkness. You said his very words.

HARKNESS: But he didn't say anything else. He just told you the sob story, sold the ring, and walked out.

JAKE: Well, he walked out, but he didn't walk out right away.

HARKNESS: No? Why not?

JAKE: Well, he took some time to put all that money in his pocket. Two hundred and fifty dollars. And while he was walking out he saw those pins under the glass counter, and he took a good look.

HARKNESS: Which pins? The Cameos?

JAKE: Yes. He asked me how much they cost. Say, I thought for a minute I was going to make a sale. He told me how his wife would like a cameo!

HARKNESS: But he didn't buy, eh?

JAKE: Him? Buy a cameo? For ten dollars? Ha! He should live so long! He needed the money to eat for a sick wife!

HARKNESS: O yes—I—I see —

(Pause)

HARKNESS: Finding this ring in the pawnshop led me to believe that the thief was more or less of an amateur, for a professional burglar would have probably disposed of his entire loot at one time, through a fence. I took the ring to Mrs. Whiteside, to be sure that it was hers. The door was answered by her maid.

MARIE: Oh, good afternoon, Mr. Harkness.

HARKNESS: Good afternoon, Marie. I didn't expect you to answer the door.

MARIE: No, sir, it's really the butler's place, sir.

HARKNESS: Well, I must say you fill his place very well.

MARIE: Thank you, sir, but I'm not sure about that. I never did answer doors before. May I take your hat and coat, sir?

HARKNESS: Yes. Thank you. Well, I suppose even a butler must have his day off.

MARIE: But it isn't his day off, sir. I do hope you won't be angry.

HARKNESS: Angry? Goodness, no!

MARIE: Mrs. Whiteside, she's awful upset. It sent her right to bed.

HARKNESS: Oh, that's too bad. She didn't seem so worried when she told me about it the other day.

MARIE: You mean about losing all them jewels, sir?

HARKNESS: Yes.

MARIE: Oh, that isn't what upset her, at all! It's the butler.

HARKNESS: The butler! Why, what has he done?

MARIE: That's just it, sir. He's done it all himself.

HARKNESS: What do you mean?

MARIE: I mean he's packed his bags and gone, gone right out of the house!

HARKNESS: Oh? Mmm. So the butler's disappeared, has he?

MARIE: Gone right out of the house without saying a word to no one. It's just a positive proof that he stole all them jewels, like Mrs. Whiteside said, "truth will out". And it struck her so hard that he should be right here in the house all the time working for her that she had to go to bed.

HARKNESS: Let's you and I sit down and talk this over, Marie.

MARIE: Yes sir. Thank you, sir.

HARKNESS: What was this butler's name?

MARIE: Johnson, sir.

HARKNESS: What was his first name?

MARIE: I think it was Arthur—I didn't know him so well, you see,

Mr. Harkness, I worked here now only one month. I always called him Johnson, like Mrs. Whiteside.

HARKNESS: Did Johnson have any relatives or friends who might know where he'd be now?

MARIE: I'm sure I can't say, sir. He never spoke to me about them, if he had any, and I wasn't going to ask him.

HARKNESS: Then as far as you know, there isn't any clue to where he might be.

MARIE: That's it, sir. But he's the one, alright, and you can't doubt that. He run away, and that proves it.

HARKNESS: Well, I don't know—I've seen other people run away just because they were suspected, when they were really innocent all the time.

MARIE: He knew you suspected him, all right, sir—like he couldn't answer why it took him so long to go to the post office that afternoon them jewels was taken.

HARKNESS: Do you know anything about his habits, Marie.

MARIE: His what, sir?

HARKNESS: I mean, what he did when he was through work, and how he spent his money?

MARIE: Oh, I don't know a thing about that, sir, except he used to go to the movies whenever he got off.

HARKNESS: Did you ever go to the movies with him?

MARIE: Me? Go with him? Oh, no, sir! I wouldn't go to the movies with no butler, sir, it wouldn't be respectable. Anyway, we never got off the same night together.

HARKNESS: Oh, I thought you lived at home, Marie, and got off every night.

MARIE: I do, sir, but, see Mr. Harkness, he gets his night off at seven o'clock, in time for the first show at the movies, and on his night I work till half past ten.

HARKNESS: Oh, I see. Well, I suppose Marie, now that there isn't any butler you'll have to work till half past ten every night.

MARIE: It looks like you say, Mr. Harkness, until they get a new butler.

HARKNESS: That will get you home pretty late, won't it. Why don't you live here till they get a new man?

MARIE: Well, you see, sir, it's my mother.

HARKNESS: Oh, you live with your mother.

MARIE: Yes, sir. I couldn't stay away from mother, sir. She's terrible

sick, she's in bed all the time. I have to cook her supper when I get home, and fix a bite of lunch before I leave in the morning.

HARKNESS: Oh, I'm awfully sorry about your mother, Marie. I suppose that ties you down a great deal, doesn't it? You can't go out very much, can you?

MARIE: Oh, I don't care at all about that sir. I'm not like all these silly girls. I have a good time just sitting home talking to mother, and reading one of them love stories in the newspapers. It's awful nice of you to talk to me this way, sir.

HARKNESS: Not at all, Marie. What does your mother think about Mrs. Whiteside's jewels and the butler.

MARIE: Oh, sir, she carried on something awful, and she got much worse, and I had to call the doctor. See, last night when Johnson left I came home at eleven o'clock it's a good half hour's walk from here, and she thought I was killed or something worse, and I had to tell her about Johnson stealing all them diamonds, she didn't know before, I didn't want to upset her, and when I told her she cried and went on so,—she just said, "Oh, my poor little girl!" all the time, like she thought it was me—(sobs) poor mother, she's so sick, sir, it would break her heart if she thought I could do anything like that! (Sobs)

HARKNESS: There, there, Marie, don't you cry. Why your mother knows you make a good salary here—you wouldn't need to steal.

MARIE: (Sobs) No, sir.

HARKNESS: And somebody else's diamonds don't mean anything to you, do they.

MARIE: Oh no, sir!—I don't care a thing for jewelry. Only a few things. This old family pin of mother's and this little turquoise ring Daddy gave me on my 17th birthday (sobs) the day before he died! (Sobs) He was so kind and generous, Mr. Harkness. (Sobs)

HARKNESS: There, there, don't cry, Marie.

MARIE: No—no, sir.

HARKNESS: No, suppose you dry your eyes, and then tell Mrs. Whiteside that I'm here, all right?

MARIE: Y-Yes, sir.

(Pause)

HARKNESS: When I showed Mrs. Whiteside the ring she of course recognized it as her own. I calmed her fears about the butler, then telephoned my friend Jake at the pawnshop, and made him promise

to meet me at a downtown hotel that night at eleven o'clock. He was there right on the dot.

JAKE: Well, Mr. Harkness, this is a fine time to take a man away from his business.

HARKNESS: Why, Jake, anybody but a detective is all through business by sundown.

JAKE: Say, let me tell you, in the pawnshop business, you do a lot of work after the sun goes down. That's a little hint to the detective.

HARKNESS: Thanks, I'll remember that.

JAKE: Now, what's all this about, anyways? Monkey business? For why I should meet you in this part of the town, at night?

HARKNESS: I have a hunch that we're going to find the man who pawned that ring.

JAKE: You don't say it! Mr. Harkness, you couldn't do it. You didn't have no clues.

HARKNESS: Indeed I did, and you gave me the clue yourself. Come on, Jake—we go into number 39—it's the next house.

JAKE: Okay, Mr. Harkness.

HARKNESS: Here we are. Quiet, now.

JAKE: Do we ring the bell?

HARKNESS: No. I've had a key made for the door. (*Open door*) (*Whisper*) Now, not a sound, Jake. (*Close door softly*) Follow me up the stairs.

JAKE: (*Whisper*) You shouldn't go so fast, Mr. Harkness—I ain't got such long legs.

HARKNESS: Sh—it's the last door at the end of the hall.

JAKE: This must be the one.

HARKNESS: All right now—in we go (*Aloud*) Hello, Marie!

MARIE: Harry; It's the detective.

HARKNESS: Well, Marie, won't you introduce me to your boy friend?

HARRY: Say, what do you want here, anyhow!

HARKNESS: Why, I just came over to see how Marie's mother was getting on.

HARRY: Funny, aintcha. Marie ain't got no mother.

MARIE: Harry! Shut up!

HARKNESS: That was a beautiful act you put on for me, this afternoon Marie. Well, Jake, is that the man pawned the diamond ring?

JAKE: Is it him? I should hope to smile!

HARRY: Oh yeah? Well, you gotta catch me first!

(MARIE screams, chair knocked down, door slam)

JAKE: You find him and let him get away, Mr. Harkness?

HARKNESS: He won't get far, Jake. The cop on the corner followed us up here—he's just outside the door. Well, there's the clue you gave me, Jake—see the brand new cameo pin Marie is wearing? A gift from Harry. Your cameo gave him the idea, but he didn't dare buy one in your store.

JAKE: Well, if that don't beat two and two makes four.

(Pause)

HARKNESS: Marie's old family cameo looked too new for me, and, remembering what Jake had said about Harry's enquiries about cameos, I had trailed Marie to the house at Number 39. And that is how we discovered Mrs. Whiteside's jewelry without loss of a single piece—we found in Harry's pocket the other jewels that Marie had taken. Concerning the missing butler: Often people who are entirely innocent run away to avoid suspicion—perhaps they fail to realize that flight immediately brings suspicion upon them. In the case of the butler he ran away, as we found out, because he had been connected with another crime and feared disclosure. National Surety thus rid Mrs. Whiteside of two criminals in her household, as well as reclaiming her jewels.

CLOSING ANNOUNCEMENT:

This story of the cameo pin clue is typical of many of the National Surety burglary cases. Even experienced thieves make the slips that the beginner Harry did, and start the trail that leads to their capture. Unfortunately there is always a new flock of thieves who take the places of those apprehended. And against this constant stream of crime, we should protect ourselves with burglary insurance policies.

In 1929 National Surety paid nearly \$800,000 in burglary losses and issued, 55,0000 policies in that year.

If a watchman armed with a machine gun were at each door and window in your home—on duty twenty-four hours a day, every day in the year—the protection afforded your valuables would not equal the security you enjoy under a Burglary and Theft policy in the NATIONAL SURETY COMPANY, because that policy not only protects you from loss due to burglars or robbers who break into your home, but also protects you from loss due to thieves masquerading as serv-

ants, fake repair men, meter readers, inspectors or window washers. Even in the dead of night there is a feeling of genuine comfort and security in having a Burglary and theft policy in the NATIONAL SURETY COMPANY covering your home.

For this protection, THE NATIONAL SURETY COMPANY recommends that both householders and merchants consult a first class experienced insurance broker. There are hundreds of them in New York who can give the best advice on surety bonds or other insurance. Or see the NATIONAL SURETY COMPANY, 118 William Street, or 11 West 42nd Street, New York City. In Brooklyn, 16 Court Street. In Newark, the Military Park Building, and in Philadelphia, Thomas B. Smith Company, Packard Building. National Surety representatives are almost everywhere.

National Surety Secret Cases program has come to you through the New York Studios of the National Broadcasting Company.

MAXWELL HOUSE PROGRAM*

9:30-10:00 P.M.

April 30, 1931

Thursday

OPENING THEME—*Peaceful Valley*

ANNOUNCER:

Ladies and gentlemen—MAXWELL HOUSE COFFEE—"Good to the Last Drop". There isn't any substitute for this flavor—the flavor that delights the taste of millions today just as it has for years and years. If your taste is attuned to modern luxury, you, also, will find complete satisfaction in MAXWELL HOUSE COFFEE.

Tonight we present not only a distinguished artist, but also a news feature which we are sure will be of unique interest. This feature will be introduced towards the close of our program by a gentleman who is almost a legend to coffee-lovers everywhere—the beloved "Old Colonel" of MAXWELL HOUSE fame.

Our guest artist brings us a voice of surpassing beauty. ANNA CASE, internationally-known soprano, formerly of the Metropolitan Opera, will sing for you immediately after our first orchestral selection. Don Voorhees conducts the MAXWELL HOUSE ORCHESTRA in a favorite of bygone days: "Poor butterfly".

ORCHESTRA—*Poor Butterfly*

* By permission General Foods Co.

ANNOUNCER:

MAXWELL HOUSE presents ANNA CASE, who has been styled the aristocrat of American sopranos. How many thousands of you have revelled in the beauty of her voice, in opera and in concert! For her recital tonight, MISS CASE has chosen some of the endearing melodies from her concert repertoire with which she has brought the greatest pleasure to thousands. A song of haunting beauty—opens her first group. "Summer and You", by Mabelanna Corbey, is sung for you by ANNA CASE.

ANNA CASE—*Summer and You*

A romantic ballad of never-fading glamour. The MAXWELL HOUSE ORCHESTRA accompanies ANNA CASE in that most beloved of mellow heartsongs—"Just A'Wearyin' For You".

ANNA CASE AND ORCHESTRA—*Just A'Wearyin' for You*

ANNOUNCER:

ANNA CASE, concert soprano, has just concluded her first group of songs in the MAXWELL HOUSE Concert. And now the orchestra brings us the sparkling allegro of Kreisler's "Tambourin Chinois".
ORCHESTRA—*Tambourin Chinois*

ANNOUNCER:

Good to the Last Drop. That's the fair verdict of coffee-lovers in 48 states. Canada, too, finds MAXWELL HOUSE one of the good things in life. It's a mathematical probability that your taste will be on the majority side—with the connoisseurs who prefer MAXWELL HOUSE COFFEE to any other blend. Try it at breakfast tomorrow.
(*Station Break*)

Again we present our famous guest artist, ANNA CASE. Introducing her second group of songs, she weaves a spell of mystic charm in a composition by Perle Curran. "Dawn" is sung for you by ANNA CASE, who is accompanied at the piano by Edwin MacArthur.

ANNA CASE—*Dawn*

ANNOUNCER:

"An Open Secret". ANNA CASE shares it with you in this whimsical bit of sentiment.

ANNA CASE—*An Open Secret*

ANNOUNCER:

Immediately following our next selection, we shall present a special feature of unusual interest. And now ANNA CASE joins with the orchestra in bringing you one of the most treasured of fragrant melodies—"The Last Rose of Summer."

ANNA CASE AND ORCHESTRA—*Last Rose of Summer*

ANNOUNCER:

ANNA CASE, famous American soprano, has just concluded her gracious contribution to our program.

Tonight MAXWELL HOUSE COFFEE literally brings a new light to American skies. Within a few minutes a dazzling electrical spectacle will spring to life in the heart of New York. MAXWELL's greeting not only to NEW YORK but to all the millions from the 48 states, from all the world, who at one time or another find their way to this crossroads of the world. It is fitting that this great beacon of friendship should be dedicated by the gentleman who first gave us MAXWELL HOUSE COFFEE. Millions know him affectionately as "The Old Colonel", the living spirit of those gracious days of the South where MAXWELL HOUSE was born. Ladies and gentlemen—permit us to present Joel Cheek, MAXWELL's famous "Old Colonel", who will address you from his home in NASHVILLE, TENN. (*Switchover Cue*).

COLONEL CHEEK'S ADDRESS:

About a year ago I had the privilege of saying "Thank You" to you all from coast to coast for your long friendship for the blend of coffee which I had the pleasure to originate so many years ago. That was a thrilling moment for me. But tonight brings me an even greater thrill. Some of my friends can go back with me in memory to the days when I rode through the mountains of Kentucky and Tennessee. A lonely young coffee salesman on a horse. My saddlebags were filled with samples—samples of that same blend you like so much today. On we went, my horse and I, plodding through the hills a few miles a day selling my blended coffee from town to town. What a contrast tonight! That trail started in the mountains has been blazed into the homes of millions. In a moment I shall give a signal here in Nashville and far away in New York a bright message will flash from the skies—a message of friendship to you all from MAXWELL HOUSE COFFEE. We are very proud, naturally, that our

electric display is to outshine all of Broadway's most brilliant, but especially we are proud of what it symbolizes. And now I have given the signal and it is shining over Times Square in New York. I would like to think of this bright display as an emblem of hospitality standing at the gateway of America. I hope it will always be that to you and that the coffee it represents will always bring you contentment and comfort. Thank you—God Bless You All and Good Night.

ANNOUNCER:

Thank you, Colonel Cheek. Your guest, ladies and gentlemen, was Joel Cheek, "The Old Colonel" to millions everywhere and the originator of MAXWELL HOUSE COFFEE, who has addressed you from the birthplace of this famous coffee.

And now you are to hear a description of New York's newest wonder—the brilliant spectacle that tonight illuminates the heart of Manhattan. This night-time display will be described for you by Graham McNamee, who is at this moment watching it from a point overlooking Broadway. We now turn you over to Graham McNamee in TIMES SQUARE. (*Switchover Cue*)

GRAHAM MCNAMEE:

Good evening, ladies and gentlemen—this is Graham McNamee, talking to you from Times Square. And what a spectacle this is! Seven thousand electric lights have just flared up in the most dazzling display of colors you ever saw! A kindly old gentleman, sitting in the library of his home down in Nashville, Tenn., has just flashed a signal to New York that sent all these thousand lights flaring out over the milling throng here in Broadway.

They tell me this is the biggest electric display on Broadway—and that's easy to believe, too. It's a gigantic affair, standing out brightly among all the tremendous electric signs that line this great White Way. Takes enough electric current to light up two thousand ordinary homes—and I'm glad I don't have to pay that light bill, too. Well, I'm not the only one that's staring at this "miracle". All this huge river of people, restlessly going and coming—it looks as if every blessed one of them is going to spend the evening gazing at this electric display. I expect you can hear plenty of this street noise through the microphone even though it's the middle of the theater hour and there's a comparative lull in traffic. More than a million people a day will see this new MAXWELL HOUSE sign, according to

some of these mathematical sharks who figure out things like that. Well, I hope they get as much thrill as I'm getting from it. It's worth staying here to see—a better show than some of the best fires we've had here lately.

Well, maybe you'd like to know what the sign looks like—it's all in color, of course—the most interesting figure is that of "The Old Colonel" himself—sitting in his easy chair, and there's his old butler, and what do you think the butler's doing? Yep. Serving a steaming cup of MAXWELL HOUSE COFFEE—you can just see the steam rising from the cup—in fact you can pretty near smell that fragrant aroma. The white-haired Old Colonel seems to be contentedly sipping at his cup of coffee while the old butler watches. The Colonel's figure is twenty feet high—and the butler, he's standing, of course, is twenty-five feet. I'm told that it took eleven thousand pounds of sheet iron to build these two figures—that's more than enough for business suits for all King Arthur's knights. And more than a quarter of a ton of solder just to keep them together, not to mention almost 9,000 feet of electric wire. It fairly dazzles you—in addition to those seven thousand lights flashing away, there's three huge searchlights playing on the sign. And words traveling along the bottom of the sign—letters six feet tall speeding across the lower part of it with their message about why it's "Good to the Last Drop". And on top there's two flaming words—huge words against the sky—two words that are pretty well known in all parts of the world—MAXWELL HOUSE.

What a crowd there is in Times Square tonight! You wonder where they all come from—probably only half of them are New Yorkers anyway—just a pale white sea of faces turned up toward this big new sign—it's certainly making Broadway look up! Well, I suppose this will go on every night now. But my time is getting short—so I'll say "good night". This is Graham McNamee speaking and returning you to our studio.

ANNOUNCER:

Thank you, Graham. . . . Tonight's program with ANNA CASE, concert soprano as assisting artist, and presenting the originator of MAXWELL HOUSE COFFEE, Colonel Joel Cheek, has been sent to you by GENERAL FOODS CORPORATION in behalf of MAXWELL HOUSE COFFEE, one of its many famous products, among them Swans Down Cake Flour, La France and Satina. The next MAXWELL HOUSE Concert will be devoted to the music of Jerome Kern. Until next

Thursday at this hour GENERAL FOODS CORPORATION wishes you "Good night."

This program has come to you from the NBC Studios in New York.

WEAF

COCA-COLA PROGRAM*

10:30-11:00 P.M.

November 12, 1930

Wednesday

OPENING ANNOUNCEMENT:

Coca-Cola Program.

SIGNATURE—*Orchestra*

MCNAMEE (*through modulation*):

Good evening, ladies and gentlemen of the radio audience. This is Graham McNamee, ushering in a delightful period of refreshment on the air—the Coca-Cola Program. Music in the beautiful arrangements and fascinating rhythms you have learned to expect from the Coca-Cola all-string orchestra conducted by Leonard Joy. Chester Gaylord's welcome voice. And Grantland Rice with Bill Roper, Princeton's great coach, in another of these right-up-to-now football interviews.

Our program comes to you in the spirit of the pause that refreshes—the same spirit that causes millions of us every day to stop a minute at our favorite soda fountains for ice-cold Coca-Cola.

SIGNATURE *full to close*

MCNAMEE:

Let's start proceedings with "I'm Learning a Lot from You", from the picture "Love in the Rough". Chester Gaylord sings the chorus.

I'M LEARNING A LOT FROM YOU (*Love in the Rough*)—*Orchestra and Vocal (McHugh)*

MCNAMEE:

You'll remember this sweet melody of the war days—"Dear Old Pal of Mine".

*By permission Coca-Cola Co.

DEAR OLD PAL OF MINE—*Orchestra (Goetz-Rice)*

McNAMEE:

A song that has set the whole world singing—"Body and Soul" from "Three's a Crowd" played with the generous permission of the copyright owners.

BODY AND SOUL (*Three's a Crowd*)—*Orchestra (Green)*

McNAMEE:

A tango with more than a touch of the high romance of Old Spain—"Adalai".

ADALAI—*Orchestra (Calleja)*

McNAMEE:

Let's give the orchestra a little time out now and a chance for refreshment. And if you haven't found out yet how delightful it is to enjoy the pause that refreshes right out of your own ice-box, you don't know what you've missed. Just include a case of bottled Coca-Cola when you order your groceries tomorrow.

(*Chimes*)

Here's Grant Rice at the microphone and with him is Bill Roper, who in addition to his success as coach at Princeton, is also a Philadelphia lawyer—or I guess he'd rather I said a lawyer of Philadelphia. It's been said that Bill is making this his last year of coaching at Princeton and this Saturday is his last game—the annual classic with Yale—always a game with plenty of thrills. All right, Grant, kick off with your questions.

(*Insert Interview*)

Thank you, Bill. And thank you, Grant. And just to give you the proper kind of send-off, here comes the orchestra, all refreshed, with "The Princeton Cannon Song". . . . And now to make our bow to Yale, the famous "Boola Boola".

PRINCETON CANNON SONG—*Orchestra (Hewitt and Osborne)*

BOOLA BOOLA—*Orchestra (Hirsch)*

Here's a bit of rhythm that will interest you—"Birth of Passion" from "Madame Sherry".

BIRTH OF PASSION (*Madame Sherry*)—*Orchestra (Hoschna)*

A swinging old song that John McCormack made famous—"Song of My Heart"—Chester Gaylord sings the chorus.

SONG OF MY HEART—*Orchestra and Vocal (Hanly)*

Just a little easy and sparkling melody—"An Armchair with an Armful of You"—Chester Gaylord joins in the chorus.

AN ARMCHAIR WITH AN ARMFUL OF YOU—*Orchestra and Vocal (Silver-Gordon)*

SIGNATURE—*Orchestra*

MCNAMEE:

Next week—same time—we'll all be back with another of these delightful Coca-Cola programs. Leonard Joy and his refreshingly different music. And Grantland Rice, playing a return engagement with Knute Rockne—that remarkable coach who seems to have one of the greatest of his series of great football teams this year. Listen in, everybody.

This is Graham McNamee bidding you—good-night all. And we hope that like Coca-Cola itself, we leave you with a happy after-sense of refreshment.

The Coca-Cola program has come to you from the New York Studios of the National Broadcasting Company.

WEAF

RCA VICTOR HOUR *

RADIOLA DIVISION—SPONSOR

10:00-11:00 P.M.

November 6, 1930

Thursday

OPENING ANNOUNCEMENT:

Ladies and gentlemen, the Radiola Hour.

SIGNATURE—*Orchestra*

Tonight we have some real news for you who are the guests of the RCA Radiola. We not only are going to present Nathaniel Shilkret and the Radiola Orchestra, but we are also going to introduce one of the most popular stars who ever appeared on a Broadway stage. More

* By permission R.C.A. Victor Co.

recently he has scored new success throughout the country in talking pictures. When we mention such well-remembered hits as "The Vagabond King" and "The Three Musketeers", you'll know that we are talking about Dennis King.

The other good news is that your Radiola dealer is now ready to demonstrate for you the new Radiola 48, a man-sized screen grid radio in a trim, compact cabinet; an instrument which in tone and value is a worthy companion to the Super-Heterodyne instrument whose astonishing tone and beauty have scored one of the greatest successes in radio history. This is the finest tuned radio frequency set . . . the lowest cost high quality set in RCA Radiola history. It is hardly taller than a table, yet is a full-sized, full-volume instrument in every respect. It is ideal for homes where space is particularly valuable. May we suggest that you call on your Radiola dealer tomorrow to see this remarkable instrument.

Mr. Shilkret and the Radiola Orchestra open our program with the brilliant overture to the operatic version of Victor Hugo's thrilling drama—"Ruy Blas".

1. RUY BLAS OVERTURE—*Orchestra*

Dennis King, Radiola's guest star this evening, is one of the most versatile young men who have ever appeared before the American public. Not only is he a star in musical comedy and on the screen, but his interpretations of some of Shakespeare's characters have received the critics' most superlative praise. We first hear him tonight in the role of singer as he brings us a group of three songs. First, a delightful bit: "Four Ducks on a Pond".

2A. FOUR DUCKS ON A POND—*Dennis King*

And now we hear Dennis King in a different mood as he sings "Vale"—"Farewell".

2B. VALE—*Dennis King*

The American composer, Manna-Zucca, provides Dennis King with a song completely suited to his talents in "Nichavo".

2C. NICHAVO—*Dennis King*

Again we hear Mr. Shilkret and the Radiola Orchestra in two familiar and favorite selections. First—"Gavotte" by Bach.

3A. GAVOTTE—*Orchestra*

And now the ever popular "Swan" by Saint-Saens.

3B. THE SWAN—*Orchestra*

In introducing Dennis King we referred to his great versatility. We have just heard him in a group of charming songs. Now he turns to the dramatic stage. Macbeth is the character he assumes. The scene is the first in the second act, a courtyard at Inverness. Macbeth is alone. He contemplates the dark course that lies before him.

4. SOLILOQUY (*Macbeth*)—*Dennis King*

Appropriately Mr. Shilkret and the Radiola Orchestra follow this great soliloquy by England's greatest literary figure with two arrangements by Percy Grainger of traditional British airs. First a group called "English Melodies". Then the familiar "Molly on the Shore".

5A. ENGLISH MELODIES—*Orchestra*5B. MOLLY ON THE SHORE—*Orchestra*

You are listening to a program featuring Dennis King, famous musical comedy star, and more recently, the lead in the great talking picture success, "The Vagabond King", together with your old friends of the air—Nathaniel Shilkret and his Radiola Orchestra. You are the guest of RCA, world's greatest radio organization, makers of the Radiola Super-Heterodyne which America has acclaimed one of the finest instruments of the year, and the new Radiola 48, the lowest cost high quality screen-grid radio in Radiola history.

(*Half-hour Break*)

As we continue the Radiola program we again introduce our guest star, Dennis King, whom we have already heard in songs of the concert room and in a thrilling dramatic interpretation of one of the great moments in Shakespeare's tragedy, "Macbeth", is still another field of expression—grand opera. Again the character he portrays is Shakespearean—Iago in Verdi's operatic version of "Othello". Mr. King sings the "Credo", Iago's grim confession of faith.

6. CREDO (*Othello*)—*Dennis King*

Tschaikowsky, the great Russian composer, wrote many symphonies, but none is more beautiful than his Fifth, composed at his

country home in the summer of 1888. The Radiola Orchestra under the direction of Nathaniel Shilkret, plays the second movement of this celebrated composition.

7. FIFTH SYMPHONY, 2ND MOVEMENT (*Tschaikowsky*)—*Orchestra*

And now versatile Dennis King expresses his talents through still another medium—that of lyric poetry. He recites Elizabeth Barrett Browning's poem, "How Do I Love Thee", to the musical background of Frieg's "Ich Liebe Dich".

8. POEM TO MUSICAL ACCOMPANIMENT—*Dennis King*

All of you remember Dennis King in "The Vagabond King". The Radiola Orchestra brings to mind the stirring scenes of this thrilling story as it plays a selection from the operetta.

9. VAGABOND KING (*Selection*)—*Orchestra*

No figure in history or in literature is more fascinating than Francois Villon, the character Dennis King played so triumphantly in "The Vagabond King". Once again—for you of Radiola's audience—he creates this daring poet who was King of France for a day, as he plays a scene from his famous starring vehicle.

10. SCENE FROM "VAGABOND KING"—*Dennis King and Orchestra*

And so we close our program dedicated to the new Radiola 48, announced on the air tonight for the first time. This new set introduces a new idea in radio—it is a full-sized, powerful screen-grid instrument in a compact cabinet. The women who have seen it are enthusiastic about the beauty and trimness of its cabinet. Men who have heard it say it has marvelous tone and uncanny ability in swiftly getting the stations they want, whether they are near or far. The cost is truly intriguing. Never before has RCA Radiola offered such a fine radio at such low cost. In value, performance and beauty, the 48 is a worthy companion to the sensational Radiola—Super-Heterodyne models which have already swept the country. Drop into your Radiola dealer's store tomorrow and see all the marvelous instruments in the Radiola line.

THE RCA VICTOR HOUR has come to you from the New York Studios of the National Broadcasting Company.

WEAF

PALMOLIVE PROGRAM *

9:30-10:30 P.M.

November 12, 1930

Wednesday

OPENING ANNOUNCEMENT:

Good evening, ladies and gentlemen. Palmolive brings you once more the tuneful romance and charm you have come to expect on Wednesday evenings from the celebrated Palmolive Hour.

Our program is opened with a merry song by the Palmolive Revelers—"She's a Great, Great Girl".

SHE'S A GREAT GREAT GIRL—*Revelers*

Although it is seldom heard nowadays, Verdi's opera, "The Sicilian Vespers", contains some of the most beautiful music of this great master of melody. Olive Palmer's first solo tonight is a famous aria from this opera—the "Bolero".

BOLERO (*Sicilian Vespers*)—*Olive Palmer*

George Gershwin can be trusted to produce popular song hits with steady regularity. He rings the bell for the first time in the new theatrical season with the fascinating, "I Got Rhythm", written for the musical comedy, "Girl Crazy". The Palmolive Orchestra plays it by special permission of the copyright owners.

I GOT RHYTHM—*Orchestra*

There is a wistful quality about the song, "Smiling Through" which no singer before the microphone today interprets more pleasingly than Paul Oliver. He brings us this favorite as his first solo this evening.

SMILING THROUGH—*Paul Oliver*

Again we hear the Palmolive Revelers—this time in that tuneful song from the motion picture, "Hallelujah"—"Waiting at the End of the Road".

WAITING AT THE END OF THE ROAD—*Revelers*

Olive Palmer and Paul Oliver have sung many novel love duets on Palmolive programs, but they have seldom found one with a more

* By permission Colgate Palmolive Peet Co.

whimsical idea than the one in which we hear them now—"When I Write a Song".

WHEN I WRITE A SONG—*Duet*

It is surprising how little women actually know about the skin. They forget that it is an organ of the body, that the millions of tiny pores keep opening and closing all the time.

Naturally, the pores must be kept clean. The health of the skin, just like that of the entire body, depends on scrupulous cleanliness; and cleanliness depends on the regular use of good soap.

When you are deciding which soap to use, let the real authorities on beauty care make your choice. Beauty experts—over 20,000 of them—recommend Palmolive. Their opinion is professional opinion. It really means something. There probably has never been—there probably never will be—such unanimous professional approval of any product, and Palmolive is justly proud of this recognition.

Palmolive is, as you undoubtedly know, a pure soap. It is made of olive and palm oils—no other fats whatever. It contains not one drop of artificial coloring matter. Such a wholesome cleanser is ideal for bringing out your natural loveliness.

The Palmolive program is continued as the Orchestra, under the direction of Gustave Haenschen, plays the exotic "Bacchanale", from Saint-Saens' opera "Samson and Delilah".

BACCHANALE—*Orchestra*

In all the range of opera no scene is a greater favorite than that in Donzetti's opera, "Lucia", in which the famous sextette is sung. Lucy Ashton has just signed the agreement which makes her the wife of a rich man whom she does not love. Edgar, her lover, enters—a moment too late. The conflicting emotions of all those present, poured out in flowing melodies and gorgeous harmonies, mount to a thrilling climax in the sextette. It is this celebrated work in which we now hear the Palmolive Ensemble.

SEXTETTE (*Lucia*)—*Ensemble*

From the role of the unhappy heroine of "Lucia", Olive Palmer turns to the bright and fanciful song by Lincke, so familiar to us all, "The Glow Worm".

THE GLOW WORM—*Olive Palmer*

Elizabeth Lennox and Elliott Shaw now offer as a duet one of the most tuneful songs of recent years—"Carolina Moon".

CAROLINA MOON—*Duet*

The Palmolive Orchestra plays another popular number—bright and fresh as a May morning—"I Still Belong to You".

I STILL BELONG TO YOU—*Orchestra*

We have a great surprise for you tonight. Get your pencil and paper ready. You'll have to take down an address. Ready? I'll wait a moment more while you get your pencil and paper. Now write down this name and address: Palmolive, Palmolive Building, Chicago.

And here's the surprise. You simply mail to Palmolive Building, Chicago, three of the black bands that you find around Palmolive Soap, with your name and address and you will receive, by return mail, a coupon which you take to your dealer and receive from him, a full-size package of the new soap for fine fabrics—Palmolive Beads.

Palmolive Beads, you know, is the soap that all the great silk manufacturers recommend for washing their own delicate fabrics. Such great makers as Cheney, Corticelli, Holeproof, Kayser, Luxite, Phoenix, Stehli, Vanity Fair and Van Raalte—names familiar to all of you as leaders in the silk industry—these great manufacturers have tested Palmolive Beads in their own laboratories and now recommend it on the washing instruction tags that accompany their garments to the user.

In addition to the unqualified endorsement of these great manufacturers, who make fine silk things you wear, Palmolive Beads is sponsored by a Committee of 17 distinguished American women—thirty-two world-famous Parisian dressmakers—smart shops like Sak's Fifth Avenue. You are advised by all of them to use only Palmolive Beads for washing sheer silk hosiery and countless lovely things that must be carefully laundered.

Surely, with such a world of authoritative recommendation you will want to try Palmolive Beads. Tomorrow morning, before you forget it, enclose three Palmolive Soap bands with your name and address—send them to Palmolive, Palmolive Building, Chicago, and get your package of Palmolive Beads.

Paul Oliver, Palmolive's exclusive tenor, continues our program with a new song—"Under the Spell of Your Kiss".

UNDER THE SPELL OF YOUR KISS—*Paul Oliver*

The Palmolive Revelers open Ferdie Grofe's "Mississippi Suite", and from it choose the musical picture of one of America's great festivals—"Mardi Gras".

MARDI GRAS—*Revelers*

Elizabeth Lennox has received so many requests to sing "Without Love", from the musical comedy, "Flying High", that she has chosen it as her solo this evening. She sings it with the gracious permission of the copyright owners.

WITHOUT LOVE—*Elizabeth Lennox*

For snappy rhythm and tuneful melody the number which the Palmolive Orchestra now plays is unexcelled. It is "My Baby Just Cares for Me".

MY BABY JUST CARES FOR ME—*Orchestra*

The happy songs and dances in "Hold Everything" gave that musical entertainment nation-wide popularity. The Palmolive Ensemble brings us pleasant memories as they offer excerpts from this tuneful piece.

HOLD EVERYTHING (*Selection*)—*Ensemble*

CLOSING ANNOUNCEMENT:

Earlier in our program tonight we told you how you might obtain a full-sized package of the wonderful new soap for fine fabrics—Palmolive Beads. All you have to do is mail three of the black bands that you find around Palmolive Soap, with your name and address, to Palmolive, Palmolive Building, Chicago, and you will receive, by return mail, a coupon which you take to your dealer and receive from him, a full-size package of Palmolive Beads—the new soap that all great silk manufacturers recommend for washing their own delicate fabrics.

The Palmolive Program has come to you through the New York Studios of the National Broadcasting Company.

WEAF

CLICQUOT CLUB ESKIMOS *

9:00-9:30 P.M.

November 7, 1930

Friday

CLICQUOT—*Orchestra*

The Clicquot Club Eskimos! Summoned for your entertainment from their igloos in the frozen Northland by the makers of Clicquot Club Ginger Ale. Clicquot is spelled C-L-I-C-Q-U-O-T. It is that famous mellow, old ginger ale made in three very different blends—Pale Dry, Golden and SEC—to suit different tastes or moods or occasions.

And now the Eskimos' spirits bubble over into zestful melody as they bring you a medley of tunes from "Whoopee"—"My Baby Just Cares for Me" and "A Girl Friend of a Boy Friend of Mine".

MEDLEY—MY BABY JUST CARES FOR ME and A GIRL FRIEND OF A BOY FRIEND OF MINE—*Orchestra*

Here is another medley—a blending of two melodies that suggests one of those International Alliances. From far-off Turkey comes "Constantinople", and as its companion tune the Eskimos choose that very Frenchy air, "Chilly Pom Pom Pee".

MEDLEY—CONSTANTINOPLE and CHILLY POM POM PEE—*Orchestra*

The Eskimos are thinking in terms of double headers for your musical entertainment tonight. Here's the next selection, a *single* tune with a *plural* title—"A Peach of a Pair" from "Follow Through".

A PEACH OF A PAIR—*Orchestra*

For their more substantial contribution to your musical entertainment tonight, the Eskimos now turn to the works of that beloved composer of our own day, Victor Herbert, and bring you as a special treat, his inimitable "Badinage".

BADINAGE—*Orchestra*

Pale Dry—Golden and SEC! What a trio of delicious, mellow flavors from which to choose for your own favorite ginger ale. Do

* By permission Clicquot Club Co.

you like that zippy, zestful, gingery tang? Then choose the full-flavored Golden by all means. Or do you prefer a more subtle mildness—a delicacy of flavor that is ideal for blending? If so, *your* ginger ale is Pale Dry. But if you seek a still different flavor, something very, very dry, yet with a piquant personality all its own, try Sec. All three of these Clicquot Club Ginger Ales come in the economy carton of twelve bottles. Moreover, only brand new bottles are ever used for Clicquot Club Ginger Ale—no bottle is ever used a second time.

(*Station Announcements*)

What! A crime wave in Eskimoland? Sounds rather like it as the Eskimos shed crocodile tears on their banjos and burst into a musical plea—"Don't Send My Boy to Prison".

DON'T SEND MY BOY TO PRISON—*Orchestra*

Now Chief Eskimo Harry Reser brings his banjo into the spotlight and is all set to coax melody from its strings. For his solo tonight he plays (*number is announced*).

BANJO SOLO—*Harry Reser*

Now all together the Clicquot Club Eskimos play another medley—two fox trots in their own characteristic way—"I'm Yours" and "My Bluebird Was Caught in the Rain".

MEDLEY—I'M YOURS and MY BLUEBIRD WAS CAUGHT IN THE RAIN—*Orchestra*

And then comes that signal from the far North. Obediently the Eskimos pile into their sleds and crack their whips as the dogs leap away into the night. They're off along the frosty trail to a stirring march—"Aces High".

ACES HIGH MARCH—*Orchestra*

CLOSING ANNOUNCEMENT (*to soft march refrain*):

As the shadows of night close in behind the departing Eskimos, they call a merry "Good-Night". Don't forget to tune in for them again next Friday evening at the same hour. And don't forget to choose *your* favorite from the three Clicquot Club Ginger Ales—Pale Dry, Golden and Sec.

The Clicquot Club Eskimos have come to you from the New York Studios of the National Broadcasting Company.

IPANA TROUBADOURS

ANNOUNCEMENT—to be made over complete NETWORK immediately after FIFTEEN MINUTE BREAK:

Before the Ipana Troubadours continue with the next fifteen minutes of their musical program they want to tell you that they will be glad to send you a generous ten day sample of Ipana Tooth Paste. If you would like to receive this sample, simply send your name and address to the Ipana Troubadours, 75 West Street, New York City, or, to the Ipana Troubadours, in care of the station to which you are listening.

WJZ

IPANA TROUBADOURS *

8:30-9:00 P.M.

November 10, 1930

Monday

SMILES—*String Section*OPENING ANNOUNCEMENT (*Starts after "Smiles"*):

And once again the Ipana Troubadours come to you with their famous Ipana Smiles—a whole program crammed full of smiling melody and sent to you with the compliments of the makers of Ipana Tooth Paste.

Tonight, the Ipana Troubadours are dedicating their program to the American National Red Cross. It is their pleasure to extend to you a most cordial invitation to join the Red Cross for another year during the annual Roll Call from November 11 to November 27.

(*Slight Pause*)

S. C. Lanin is directing the Troubadours as usual—and, as he gives the signal, they swing into a melodic group of 1930 favorite numbers which are justly popular for their irresistible swing and lilt.

1A. CAN THIS BE LOVE—*Orchestra with Tenor Vocal*1B. MAYBE IT'S LOVE—*Orchestra*

Those romantic rhythms were—"Can This Be Love"—and "Maybe It's Love". The Troubadours continue their program with a pair of tunes that have all the regularity of rhythm and the ear appeal that good dancers like.

* By permission Bristol Myers Co.

2A. GET GOIN'—Orchestra

2B. SINGING A SONG TO THE STARS—Orchestra with Tenor Vocal
“Get Goin’ ” and—“Singing a Song to the Stars”—were the names of the selections just played for you by the Ipana Troubadours. Two more captivating selections follow, and the first one is interpreted for you by Jack Parker, the Singing Troubadour.

3A. LOVING YOU—Orchestra with Tenor Vocal**3B. ALWAYS IN ALL WAYS—Orchestra**

The Singing Troubadour gave you his version of—“Loving You”—and the Troubadours contributed a special arrangement on that satisfying number from “Monte Carlo”—“Always in All Ways”. Next, a novelty number, to which the Troubadours apply their most enthusiastic tempo.

4. ADIOS—Orchestra

That specialty number was—“Adios”. In that next medley the Troubadours bring you two tuneful numbers, which they think you will be glad to hear.

5A. GOOD EVENING—Orchestra**5B. JUST A LITTLE DANCE, MA’MSSELLE—Orchestra with Tenor Vocal**

“Good Evening”—opened that brace of numbers and was followed by—“Just a Little Dance, Ma’mstelle”. The famous Ipana piano duo is featured in this next offering—a bright, sparkling, and light-hearted number, to which the pianists lend their own nimble-fingered technique.

6. SUNBEAMS—Orchestra with Two Pianos

That pianistic, novelty selection was—“Sunbeams”. The Singing Troubadour contributes a pleasing variety to the program now with a well-known waltz number.

7. SOMEWHERE IN OLD WYOMING—Orchestra with Tenor Vocal

You just heard the Ipana Troubadours and the Singing Troubadour—“Somewhere in Old Wyoming”.

BEFORE THE LAST NUMBER ANNOUNCEMENT:

Before continuing with their program this evening, the Ipana Troubadours want to call your attention to this important message. As you know, many of today's menus and recipes include soft, creamy foods. Good and delicious as these foods are, they do rob the gums of the circulation and exercise they need to remain firm and healthy.

As a result, thousands of people are subject to what is commonly known as pink tooth brush—as the records of the dental profession prove. However, modern science has come to the rescue with a tooth paste that not only cleans the teeth, but tones and stimulates the gums as well. This tooth paste is Ipana—I-P-A-N-A—the tooth paste in the red and yellow striped tube.

(Slight Pause)

The Troubadours continue their program with—"When I Close My Eyes and Dream"—and "Fine and Dandy" from the musical comedy of the same name.

8A. WHEN I CLOSE MY EYES AND DREAM—*Orchestra*

8B. FINE AND DANDY—*Orchestra*

SMILES—*String Section*

CLOSING ANNOUNCEMENT *(Starts after "Smiles")*:

If you have enjoyed their program, the Ipana Troubadours hope that the next time you are in a drug store, you will remember this modern tooth paste, Ipana—I-P-A-N-A.

If you want a generous ten-day sample of Ipana, simply write to the Ipana Troubadours, 75 West Street, New York City, or in care of the station to which you are listening.

THE IPANA TROUBADOURS have come to you from the New York Studios of the National Broadcasting Company.

WEAF

THE MOBILOIL CONCERT *

8:30-9:00 P.M.

May 27, 1931

Wednesday

ORCHESTRA—*Theme*

STATION ANNOUNCER *(Against Theme Song)*:

Ladies and gentlemen, once more the Vacuum Oil Company presents the Mobiloil Orchestra, under the direction of Nathaniel

* By permission Vacuum Oil Co.

Shilkret. And again, here's our friend Henry M. Neely—the Old Stager—to tell us about the program.

NEELY:

Good evening, everybody. And I'm saying good evening for Gladys Rice and for Mr. Shilkret and the orchestra and for the Mobiloil Male Chorus too—for they're all here and they've arranged a program that looks to me to be one of the best they have offered us. They're going to start off with their tribute to the national holiday which we'll all be celebrating on Saturday—Decoration Day. They bring us that fine patriotic march by John Philip Sousa—"The Stars and Stripes Forever".

STARS AND STRIPES FOREVER—*Ensemble*

NEELY:

Some time ago the Mobiloil Concert brought us a musical number featuring the zither—and that's an instrument we don't often hear by radio. It must have sounded particularly well in your sets because we've had a lot of requests by mail to hear the zither again. And we're glad to comply with these requests now. The Mobiloil Orchestra offers a novelty by Lumbye—it's called "The Dream of a Soldier" and the zither interludes are played by—

DREAM OF A SOLDIER—*Orchestra and Zither*

NEELY:

That remarkably versatile genius of the modern theatre—Noel Coward—has had another big success this year with his play "Private Lives". Coward and Miss Gertrude Lawrence have just finished a long run in this piece and the play is continuing with Madge Kennedy and Otto Kruger in the leading roles. Here's the popular theme song of "Private Lives"—a song called "Some Day I'll Find You". Gladys Rice will sing it for us, accompanied by the Mobiloil Orchestra.

SOME DAY I'LL FIND YOU—*Miss Rice and Orchestra*

NEELY:

By the way, Gladys Rice sang a little song last week called "Has Anybody Got a Li'l Yaller Dog". Well, somebody evidently had one for, on Friday, a cute little yaller dog, addressed to Gladys, was

delivered to the Mobiloil offices with a note signed "An Admirer". I think Miss Rice would like to thank Admirer now, wouldn't you, Miss Rice?

MISS RICE:

Indeed I would. He's the cutest little yaller dog I ever saw and he's already adopted my family and my family has adopted him so we're all happy.

NEELY:

What are you going to call him?

MISS RICE:

Oh, we've already named him. I started to teach him tricks the first day I had him and he learned to stand up on his little hind legs right away. So I called him Mobiloil—because he "stands up". So that's his name—Mobiloil—Mobey for short.

NEELY:

And here's that fine singing organization, the Mobiloil Male Chorus. With the Mobiloil Orchestra, they bring us a composition by Lake—"Old King Cole".

OLD KING COLE—*Male Chorus and Orchestra*

NEELY:

Reports have just been received from 500 automotive engineers on what make of oil they themselves use in their own cars. More than twice as many reported using Mobiloil as any other make of oil. One of these experts—an engineer in Chicago writes:—"In 1924 I purchased a Sport Touring car, which I drove 33,000 miles. At no time were any of the bearings even examined. Many persons remarked that my motor was the quietest they had heard. Since then I have driven two other cars, one 42,000 miles and the present one 25,000 and in neither one has the crankcase been opened. I attribute my freedom from bearing trouble to the use of Mobiloil". That ends the quotation. Drive in to your nearest Mobiloil dealer tomorrow. Have the salesman make a thorough job of cleaning out all the old lubricants from the engine, and gears. Then ask for Mobiloil by name. Have the salesman Mobiloil your car. You can drive away knowing that Mobiloil will stand up—no matter what punishment you give it—for Mobiloil is toughened and tested to fight heat and

wear. Mobiloil lasts longer—it gives better lubrication—it STANDS UP, because it is made—not found. Mobiloil is a product of the Vacuum Oil Company.

STATION ANNOUNCER:

You are listening to the concert sent to you at this time each Wednesday evening by the Vacuum Oil Company, makers of Mobiloil. (*Station Announcements*)—Again Mr. Neely tells us about our program.

NEELY:

The Mobiloil Orchestra begins the second half of our concert with a Spanish novelty by Lecuona. It is called "Malaguena".

MALAGUENA—*Orchestra*

NEELY:

Here is a charming and unique adaptation of a composition that we all love. Fritz Kreisler's Caprice Viennois arranged as a Cradle Song and sung by Gladys Rice, accompanied by the Mobiloil Orchestra.

CRADLE SONG (*Caprice Viennois*)—*Miss Rice and Orchestra*

NEELY:

Very few contemporary composers in our theatre have given us as many enduring songs as Jerome Kern. Three years ago he gave us "Show Boat" and that operetta added several more to his list of popular favorites. Our Mobiloil Ensemble offers a medley of the gems from "Show Boat" and perhaps you'd like to see how many of these you can identify from memory as we present them—and afterward I'll tell you what they were. Gems from "Show Boat" by the Mobiloil Ensemble.

GEMS FROM SHOW BOAT—*Ensemble*

NEELY:

Wonder how many of those songs you were able to identify? They were:

- 1.—"Only Make Believe"
- 2.—"Why Do I Love You?"
- 3.—"Can't Help Lovin' Dat Man"

4.—"Bill"

5.—"Ol' Man River"

And so we end another Mobiloil Concert. We're very anxious to know if it pleased you. Won't you write and tell us? Address the Mobiloil Hour, 61 Broadway, New York City, or the radio station to which you are listening. Good night.

STATION ANNOUNCER:

You have just heard another concert sent to you by the Vacuum Oil Company, makers of Mobiloil for your automobile, your airplane and your motor boat, and makers also of high-grade lubricants for all kinds of machinery on land and sea. This Mobiloil Concert has come to you from the NBC Studios in New York.

WJZ

RAISING JUNIOR *

6:00-6:15 P.M.

November 5, 1930

Thursday

OPENING ANNOUNCEMENT:

Raising Junior!

Every evening except Monday, at this hour, the Wheatena Corporation—maker of Wheatena—brings you these glimpses into the home life of Joan, Kenneth and Junior Lee.

One of the most important reasons for the amazing extent of undernourishment among school children is their habit of rushing off to school with only a hurried bite of breakfast. Every mother should insist that her children eat a well-balanced meal every morning. Food for these children is doubly important. Not only must it supply them with the material for strength and growth, but it must also carry them through a day of classroom work. We recommend this solution of the problem. Serve your children a bowlful of steaming, fragrant Wheatena each morning. Its delicious flavor will give zest to their appetites—and its abundance of health and body-building elements will insure their proper nourishment.

Additional information on the feeding of underweight children may be found in "Feeding the Child from Crib to College". This little book was prepared especially for The Wheatena Corporation by a well-known authority on diet. Besides its invaluable advice on

*By permission Wheatena Corp. (Copyright 1931, National Broadcasting Co., Inc.)

family feeding, it contains many attractive menus and delicious recipes. Just send your name and address to The Wheaten Corporation, Rahway—R-A-H-W-A-Y—New Jersey, and you will receive your complimentary copy by return mail.

And now let's go down to Greenwich Village—the new home of Junior, Joan and Kenneth Lee. Yesterday, we left Joan and Ken deep in the problem of redecorating their new apartment—and also celebrating Ken's bonus for his part in the Child Things advertising campaign.

But here comes Ken now—Let's slip in before he closes the door.

(Fade in on Joan sobbing)

KEN: Joanie. . . .

JOAN: *(Through sobs)* Hello . . . Kenny. . . .

KEN: Why, darling . . . what's the matter. . . .

JOAN: Everything's the matter.

KEN: Nothing wrong with Junior is there . . . ?

JOAN: Oh, he's healthy enough if that's what you mean . . . but you ought to see him. . . .

KEN: Why . . . what's wrong. . . .

JOAN: Look at that floor. . . .

KEN: My gosh. . . .

JOAN: And that door . . . and Junior looks even worse. . . .

KEN: Say . . . who spilled that yellow paint on my nice green floor and look at those marks on the door. . . .

JOAN: They're . . . they're Junior's hand prints . . . isn't it terrible.

KEN: It certainly is a mess . . . if that's what you mean. And this place looked awfully nice when I left this morning.

JOAN: Ken . . . will you ever forgive us?

KEN: Us?

JOAN: Junior . . . and me. It was partly his fault. . . .

KEN: His fault? I don't see how. . . .

JOAN: No. . . . I guess it was all my fault because if I'd been careful it wouldn't have happened. *(Sobs anew)* Oh, Kenny . . . I'm so sorry.

KEN: No use crying over spilt milk . . . or I guess it's spilt paint this time. Tell me what happened.

JOAN: And you will forgive me?

KEN: Well . . . maybe . . . but 'fess up and tell the old man all about it.

JOAN: Well . . . today I bought the cutest little chair . . . it was one dollar. . . . I got it at the second-hand store around the corner.

KEN: But what's that got to do with the paint on the floor . . . and on the door. . . .

JOAN: And it's on Junior, too . . . but anyway, I brought the chair home and cleaned it up and decided to paint it . . . and I thought a yellow painted chair would be nice in this room . . . so I started to paint it yellow.

KEN: And you spilled paint all over the place.

JOAN: No . . . here's how it happened. I had Junior laying on the floor on a blanket . . . and somehow or another he must have upset the paint can . . . and when I looked around he had paint on his hands and on his face . . . and it was running all over the floor.

KEN: My gosh!

JOAN: I guess the blanket is ruined.

KEN: Never mind about the blanket . . . how did you get the paint off Junior?

JOAN: I didn't get it off . . . and he looks terrible.

KEN: Why, honey . . . that paint might poison him or something.

JOAN: No . . . he didn't get any in his mouth . . . just on his face and ears . . . but I did call Dr. Miller and he said to rub as much off as I could . . . and that the rest would come off gradually. . . .

KEN: Gee . . . he must look funny. . . .

JOAN: He doesn't look funny either . . . there isn't anything funny about it. (*Starts to cry again*)

KEN: No, honey. . . . I'm sorry . . . it's all right . . . accidents will happen. . . .

JOAN: Oh, I don't care about the paint being spilled . . . but my nice lovely baby . . . all smeared up with yellow paint. . . .

KEN: Say. . . . How did he get it on the door?

JOAN: I was sort of holding him in front of me when I took him in to his room . . . oh, he was just dripping . . . with paint . . . and he must have touched the door.

KEN: Say . . . Joan did you notice . . . he left a perfect print of his hands on the door.

JOAN: Did he . . . you'll have to paint it over, I guess.

KEN: Paint it over! I should say not . . . it's on Junior's door.
I mean the door to his room, isn't it?

JOAN: Yes. . . .

KEN: I think they look cute . . . the print of baby hands, . . . why,
Joan it's kind of Poetic . . . those yellow hand prints on that
brown door look very artistic too. . . .

JOAN: I never thought of it that way. . . .

KEN: And another thing . . . those hand prints will remind our
guests that Junior is just in the next room and they won't get too
noisy or anything.

JOAN: I think you're awfully sweet . . . to be so nice about it. . . .

KEN: Oh, Honey . . . forget about it . . . now come here . . .
and give me a big hug . . . and a kiss . . . and I'll forgive you
completely.

JOAN: All right, daddy . . . (*Pause*). . . . Oh, Kenny . . . you
are awfully good to me. What would you like specially for supper
tonight?

KEN: I was just thinking about that. . . .

JOAN: Oh, you were, were you?

KEN: I mean on my way home . . . how about waffles?

JOAN: All right . . . waffles it will be!

KEN: I thought I was going to take it easy tonight . . . but I guess
I'll have to work on that floor.

JOAN: I got some paint remover, Ken . . . the man at the paint
shop said if you used the remover you might not have to repaint
the whole floor. . . .

KEN: I'll fix it up . . . and Joan . . . we can throw a scatter rug
over the place where the paint was spilled . . . gee . . . Joanie
. . . it isn't nearly as bad as you thought it was . . . and those
hand prints are the cutest things I ever saw. . . .

JOAN: I guess I was just naturally upset . . . and spilling the paint
was the final touch. . . .

KEN: Why, Honey . . . what else happened?

JOAN: It was that woman.

KEN: What woman?

JOAN: That woman across the street . . . let's see . . . her name
is Tonina.

KEN: Tonina? Tonina what?

JOAN: Oh, she says she doesn't use a last name . . . that Tonina
fits her soul personality.

KEN: What does she do?

JOAN: Well, she doesn't do her housework . . . I know that much.
She says she's a musician. . . .

KEN: Piano?

JOAN: Yes . . . she's the one we heard playing so loudly last night.

KEN: Yeah. . . . I was afraid she'd wake up Junior . . . well, she
may be a musician but a few lessons wouldn't hurt her any.

JOAN: Oh, that's music in the . . . now what did she call it . . .
oh yes . . . music in the mood of tomorrow. It's quite modern
stuff I guess.

KEN: So modern I never heard anything like it before . . . but Joan
when did you meet her. . . .

JOAN: Today . . . she came in to see me. . . .

KEN: She smokes doesn't she?

JOAN: Yes . . . how did you know.

KEN: I'll bet she was out of cigarettes and came over to borrow
some.

JOAN: Why . . . yes . . . how did you know all that?

KEN: Oh, I'm learning the social customs of Bohemia . . . she and
Tony Pendennis ought to make a good pair.

JOAN: Well, anyway . . . she chatted a while and then asked me
to bring Junior over to her place . . . she was conducting some
experiments in primitive rhythms and their effect on infants.

KEN: Say listen . . . you be careful about taking Junior around
and letting these people try out their funny music on him . . . it
might affect his whole life.

JOAN: She didn't play loudly . . . and Junior didn't seem to mind it.

KEN: He's a smart baby. . . . I'll bet he didn't even listen.

JOAN: And then we had quite a long conversation.

KEN: About art. . . .

JOAN: No about careers for women.

KEN: Unh-uh. . . . Listen Joan . . . don't you take this Village
talk too seriously . . . you don't need a career . . . you've got
one . . . as a wife and mother.

JOAN: And then the talk veered around to children and how to raise
them. Ken . . . we're all wrong in our methods of raising Junior
. . . that is from Greenwich Village standards.

KEN: Who says so?

JOAN: Tonia said so. . . .

KEN: What does she know about it? Has she any kids?

JOAN: Not this year.

KEN: Not this year . . . say . . . what does she mean not this year.

JOAN: Well, as far as I can gather she believes in having children and raising them for a year and then shipping them out to her family. . . .

KEN: What does her husband say about that?

JOAN: I don't imagine he has very much to say . . . she impressed me as being a woman who did most of the talking in the family.

KEN: Joanie . . . I think you ought to be careful about the friends you pick up down here.

JOAN: Why, Ken . . . I think the people in the Village are fascinating.

KEN: Maybe . . . but some of them are crazy, too.

JOAN: But you yourself told me the most interesting people in New York live down here.

KEN: Yes . . . but some of them aren't much good. . . .

JOAN: I was quite taken with Tonina.

KEN: I suppose next you'll want to ship Junior up to your mother's for good. . . .

JOAN: Why Kenny!

KEN: Well, I tell you I won't stand it . . . why . . . I'll. . . .

JOAN: (*starts to sob*) You're mean . . . and unjust . . . and. . . .

KEN: Listen Joanie . . . Junior stays here. . . .

JOAN: Ken . . . you're terrible . . . even to think I'd send Junior away. . . . I've never given you any reason to think anything like that.

KEN: But . . . gee . . . the way you were talking . . . I thought you were taking that fool woman's ideas seriously. . . .

JOAN: You—you're virtually accusing me of wanting to desert Junior. . . .

KEN: Now Joanie . . . you know I wouldn't do anything like that. . . .

JOAN: (*Letting up on sobs*) Well, it sounded that way.

KEN: But you know I didn't mean it.

JOAN: Haven't I always taken good care of Junior. . . .

KEN: Yes. . . .

JOAN: And I didn't want to send him up to mother's when we moved but it was the best thing for him . . . you . . . well . . . you don't just appreciate what a good mother I am.

KEN: I do, too. . . .

JOAN: I'm careful with his food . . . and I wash all his clothes . . . and stay home and take care of him. . . .

KEN: I know honey, . . . I'm not saying that you aren't a good mother.

JOAN: Yes you did, Kenneth Lee . . . and you said I was probably planning to send him away. . . . (*sobs some more*)

KEN: Now Joanie . . . you got me all wrong. . . .

JOAN: I guess I heard you.

KEN: Now sweetheart . . . please listen just a moment. . . .

JOAN: Well?

KEN: You said that she said. . . .

JOAN: Who said. . . .

KEN: Her. . . . I mean that Tonina woman . . . anyway you were saying that she was saying . . . that is she said that she believed in sending children away from home right after they were a year or so old. . . .

JOAN: Yes . . . and it's a horrible idea . . . and I'm not going to do it.

KEN: I know . . . I know . . . but what I was trying to explain.

JOAN: Well, what are you trying to explain?

KEN: Now let's see . . . where was I. . . .

JOAN: You were trying to explain that you didn't accuse me of wanting to go away and leave Junior. . . .

KEN: That's right . . . well when you said that she said. . . .

JOAN: Kenny . . . don't start that all over again. . . .

KEN: Joan . . . it's simply this. . . . I thought you were taking her seriously. . . . I mean I thought you might think there was something in the idea of sending Junior away. . . .

JOAN: Why . . . I don't see how you got that impression. . . .

KEN: Well, you said. . . . I mean you seemed to think she was interesting. . . .

JOAN: Maybe she is interesting . . . but she's wrong just the same. . . .

KEN: Sure she is.

JOAN: That's what I said all the time. And you accused me of wanting to send Junior to my mother's.

KEN: Joanie . . . I didn't. . . .

JOAN: Well, you inferred it.

KEN: Honey. . . . I didn't mean it that way . . . what I really

meant to infer was that you'd never do anything like that . . . and you wouldn't would you?

JOAN: Of course I wouldn't. . . .

KEN: And you'll forgive me?

JOAN: Yes . . . but don't ever do it again.

KEN: Do what again?

JOAN: Even hint that I might want to send Junior away . . . even for a few days. . . . I never want to send him away . . . and I just told you I didn't send him away because I wanted to when we moved . . . it was because it was best for him.

KEN: Yes, darling. . . . I'm sorry. . . .

JOAN: Anyway . . . it's all right now. . . . I'm sorry I acted up so I'm just nervous and tired I guess . . . and Ken . . . after supper you'll have to fix Junior's carriage.

KEN: What's the matter with it?

JOAN: One of the wheels is stuck. . . . I couldn't use it today . . . so I carried Junior when I went shopping. . . .

KEN: Oh, you poor kid . . . no wonder you're tired.

JOAN: He doesn't seem heavy . . . but he gets heavier with every block I found out. . . . (*chuckles*) I thought he must be growing every minute.

KEN: He is . . . but not that fast. . . .

JOAN: Daddy, don't you hate me when I get quarrelsome and cry and act like I'm a baby myself?

KEN: Course I don't. . . .

JOAN: You understand me, don't you. . . .

KEN: Sure I do. . . .

JOAN: And you know I really love you, don't you?

KEN: I hope so. . . .

JOAN: Because I do . . . only sometimes when things seem to go wrong . . . and I meet people who say things I don't agree with . . . and I'm tired out . . . oh, I had such a big washing to do today too, . . . well, I just behave terribly I guess.

KEN: No . . . dear. . . . I can understand . . . moving and fixing this place up and everything has been an awful strain on you. . . .

JOAN: Can I come over and sit in your lap a minute . . . before I cook your supper?

KEN: You don't see any no parking signs do you?

JOAN: Here I come. . . .

KEN: Gosh . . . seems like I have two children sometimes.

JOAN: I guess you have, daddy.

KEN: Feel better now, Honey?

JOAN: Uh-huh. (*Pause*) Listen!

KEN: What is it?

JOAN: I thought I heard Junior. . . . I guess he went to sleep though.

KEN: I sort of got cheated out of Junior tonight didn't I?

JOAN: I'm sorry . . . but he must have been sleepy because when I put him in his crib after trying to get some of that paint off he dropped off to sleep.

KEN: I'll slip in and see him later . . . he'll wake up for his bottle won't he?

JOAN: Yes . . . he's sure to do that . . . he's just like his daddy and never misses a meal . . . but Kenny . . . would you mind waiting just a little while for your dinner. . . .

KEN: No . . . you rest for a while . . . I can wait.

JOAN: Because I want to hear a new radio program that starts tonight. What time is it?

KEN: Let's see . . . about six thirteen. . . .

JOAN: Gosh . . . it goes on at six fifteen. . . .

KEN: What's the program. . . .

JOAN: It won't interest you. . . .

KEN: Why not?

JOAN: But it does interest me. . . . I'm going to listen every week. . . .

KEN: What's the name of it?

JOAN: The name of it . . . why it's . . . How to make your Husband Happy.

CLOSING ANNOUNCEMENT:

But Joan hardly needs to listen to a program on that subject—for, in spite of the little storms that sometimes sweep over the Lee household, Ken seems to be about as happy and contented as husbands can be—and, all reports to the contrary, there are some mighty happy husbands in this broad land.

Especially those who get cooperation in starting the day off right. It's a tax on any husband's good nature to come home happy in the evening when he's gone out cheerless in the morning. That's why Ken gets his bowlful of Wheatena at every breakfast. And that's one

reason why we urge you to try this delicious cereal at your morning meal. Just ask your grocer for the familiar yellow and blue package.

These programs come to you at this hour every night except Monday through the courtesy of the maker of Wheatena. . . . WH-EAT-E-NA . . . the delicious sun-browned wheat cereal that millions of children and grown ups welcome so eagerly every morning.

Good night.

Raising Junior has come to you from the New York Studios of the National Broadcasting Company.

CLOSING ANNOUNCEMENT:

But Joan hardly needs to listen to a program on how to make her husband happy for in spite of the little storms that sometimes sweep over the Lee household, Ken seems to be about as happy and contented as husbands can be . . . and all reports to the contrary, there are some mighty happy husbands in this land.

The Wheatena program has come to you from the New York Studios of the National Broadcasting Company.

AGENCY—

LD—11/3/30

WEAF

CITIES SERVICE RADIO CONCERT*

8:00-9:00 P.M.

November 7, 1930

Friday

Welcome, ladies and gentlemen, to the 224th Cities Service Radio Concert!

I. MARCH—Orchestra

Before continuing our concert, Cities Service Company again wishes to remind manufacturers considering the location for branch plant or distributing warehouse that the services of its industrial Development Department are available without cost. This department is equipped to supply answers to the many questions that arise when the matter of plant or warehouse location is under consideration. Upon request, this department will send a map showing the area in which this financial service is rendered, also list of suitable factory buildings in the territories reached by this service. For further in-

* By permission Cities Service Co.

formation, please write to the Industrial Department, Cities Service Company, 60 Wall Street, New York City.

Tonight, as her first solo, Jessica Dragonette has chosen "Amapola", that delightful and melodious Spanish song by La Calle, in which the composer tells of the charms of his beloved, calling her "Poppy, my beautiful Poppy, I love you more than life itself".

2. AMAPOLA (*Poppy*)—*Jessica Dragonette*

The Cities Service Orchestra, under the direction of Rosario Bourdon, continues our concert with the brilliant "Polonaise" from the opera "Mignon", composed by Ambraise Thomas. For many years Mr. Thomas was director of the Paris Conservatory of Music.

3. POLONAISE FROM OPERA "MIGNON"—*Orchestra*

A lilting, captivating strain runs through the melody "Three Little Words", one of the hit numbers in the new Amos 'n' Andy picture "Check and Double Check". The Cities Service Cavaliers now offer their version of this tune.

4. THREE LITTLE WORDS—*Cavaliers*

"Romance" by Rubinstein—the next selection on our Cities Service program—was originally written for the piano; then it became famous as a song. We now hear it as it has been arranged for full orchestra by Mr. Bourdon.

5. ROMANCE—*Orchestra*

Cities Service now presents Jessica Dragonette and Leo O'Rourke in a musical love story—"Falling in Love" from "The Chocolate Soldier" by Strauss.

6. FALLING IN LOVE—*Jessica Dragonette and Leo O'Rourke*

In response to many requests the Cities Service Orchestra now plays that musical gem "In a Monastery Garden" by Ketelby.

7. IN A MONASTERY GARDEN—*Orchestra*

Now for the miniature musical presentation! For this program Cities Service has selected "Sari". The Orchestra, Jessica Dragonette and the Cavaliers will now play and sing the delightful melodies written for this operetta by Kalman.

At the conclusion of this number, there will be a one-minute intermission during which time you will hear from your local announcer.

8. SELECTIONS FROM "SARI"—*Orchestra, Jessica Dragonette, Cavaliers*

Your automobile is a fine piece of mechanism which represents a considerable investment. It was built to give you long years of service—provided you give it reasonable care and, above all, high-grade gasoline and oil.

To assist you in getting this service from your car and to acquaint you with the romantic story behind gasoline and oil, Cities Service Company has prepared an interesting, attractively illustrated 70 page booklet. It is called "Gasolene and Oil—their origin and application to your car".

In the booklet, Cities Service presents briefly the story of motor gasoline and oil, telling you what they are, how they are made, and explaining those points pertaining to gasoline and oil that will be helpful to you in the everyday use of your car.

Your nearest Cities Service station or dealer will be pleased to present you with one of these booklets. Won't you drive in tomorrow for your copy?

"Liebestraume", by the celebrated composer Franz Liszt, is known and loved wherever music is played. The Cities Service Orchestra resumes our concert with this immortal composition.

9. LIEBESTRAUME—*Orchestra*

John Seagle, baritone soloist of the Cities Service Cavaliers, has chosen "All Through the Night" as his feature on our program.

10. ALL THROUGH THE NIGHT—*John Seagle*

Frank Banta and Jack Shilkret, featured pianists of the Cities Service Orchestra, have prepared an unusual arrangement of several popular tunes of the day, which they now play on their twin pianos.

11. MEDLEY OF POPULAR TUNES—*Frank Banta and Jack Shilkret*

This is the place on our program where the Cities Service Cavaliers sing their "Medley of Songs of Not So Long Ago". If your favorite numbers have not been included, won't you write to the Cavaliers

and tell them about it? We are sure they will be glad to sing your favorites at an early date.

12. MEDLEY OF SONGS OF NOT SO LONG AGO—*Cavaliers*

At this time we wish to thank the Cities Service Company for interrupting their program for a few moments in order that you may hear a brief talk by Colonel Arthur H. Woods, who was selected by President Hoover to head the Federal Committee on the Relief of Unemployment. At the conclusion of Colonel Woods' talk the Cities Service Program will be continued. Colonel Woods speaks from Washington, D. C.

Rudolf Friml's delightful score to "High Jinks" furnishes Jessica Dragonette with her second solo on this Cities Service Program—it's title is "Bubbles".

13. BUBBLES—*Jessica Dragonette*

"Just to Be With You Tonight" is our next selection by the Cities Service Orchestra.

14. JUST TO BE WITH YOU TONIGHT—*Orchestra*

"Neither a borrower nor a lender be;
For loan oft loses both itself and friend,
And borrowing dulls the edge of husbandry".

Those are famous lines from Shakespeare's "Hamlet".

Men and women who regulate their saving and spending—who plan ahead—who budget their incomes—seldom face the necessity of borrowing. In back of them is a substantial reserve fund which they have built up through their own efforts and by their own careful management.

They have money for traveling, for homes of their own, for greater comforts, for saving and investment. When sudden needs and emergencies arise they have the money to meet them.

If you would like to be able to buy what you want when you want it—if you would like to avoid the unpleasantness of worry of debt—why not let the Cities Service Personal Budget Book help you. You can obtain your copy of this booklet by addressing a letter or a postal card to Cities Service Company, 60 Wall Street, New York City.

And now, as our 224th Cities Service Radio Concert draws to a close, Rosario Bourdon, Jessica Dragonette and the Cavaliers leave you with the memory of White's richly melodious composition "I'se Gwine Back to Dixie".

15. I'SE GWINE BACK TO DIXIE—*Orchestra, Jessica Dragonette, Cavaliers*

OPTIONAL:

Cities Service cordially invites you to tune in again next Friday. Also to send for your copy of the Cities Service Personal Budget Book. The address is 60 Wall Street, New York City.

The Cities Service program has been announced by Neel Enslin and has come to you from the New York Studios of the National Broadcasting Company.

WEAF

GENERAL ELECTRIC HOUR*

9:00-10:00 P.M.

November 8, 1930

Saturday

MUSICAL INTRODUCTION

OPENING ANNOUNCEMENT:

Good evening, ladies and gentlemen. This is the General Electric program. Your host this evening is the General Electric Sunlamp created in the "House of Magic" to give you the tonic of midsummer sunshine day or night from any A.C. lighting outlet! The General Electric Sunlamp floods your skin with ultra-violet—the health-building rays. Like June sunshine it can improve the well-being of the whole family.

General Electric takes pleasure in presenting Walter Damrosch and the General Electric Orchestra.

Tonight once again as a feature of the General Electric Hour, Floyd Gibbons, famous journalist and adventurer, will take you with him on another of his "Adventures in Science". At the conclusion of his talk, Walter Damrosch will introduce the opening selection of the General Electric Orchestra.

We present, FLOYD GIBBONS:

(TALK BY FLOYD GIBBONS)

* By permission General Electric Co.

ANNOUNCER:

You have just heard Floyd Gibbons, famous journalist who next week, will take you with him on another of his "Adventures in Science". You are listening to the chimes of the General Electric Clock. When the final stroke sounds it will be — P.M. Eastern Standard Time. (*Gong*) The General Electric Clock has a telechron movement with neither springs nor pendulum. It is made in a variety of designs suitable for each room in the house. When connected with your lighting circuit and supplied with regulated alternating current, the General Electric Clock brings you correct time.

General Electric takes pleasure in presenting Walter Damrosch, who will introduce the opening selection of the General Electric Orchestra.

MR. DAMROSCH:

(MR. DAMROSCH introduces following selection)

I. SUITE FROM "HENRY VIII" (*Saint-Saens*)

- a. GATHERING OF THE CLANS
- b. SCOTCH IDYL
- c. DANCE OF THE GYPSY
- d. JIG

ANNOUNCER:

This is the General Electric Orchestra, conducted by Walter Damrosch.

(*Insert Local Announcement Here*)

ANNOUNCER:

Walter Damrosch will introduce the next selection of the General Electric Orchestra.

(MR. DAMROSCH introduces following two selections)

2. SECOND AND FOURTH MOVEMENTS FROM "SYMPHONY IN G" (*Haydn*)
3. WHISPERING OF THE FLOWERS (*Von Bloom*)

ANNOUNCER:

Walter Damrosch will introduce the next selection of the General Electric Orchestra.

(MR. DAMROSCH introduces following selection)

4. OVERTURE TO "RIENZI" (*Wagner*)

CLOSING ANNOUNCEMENT:

Do you know why we have so many colds in winter . . . and so few in summer? One reason is that *winter* sunshine is only about *one-twentieth as rich in ultra-violet* as that of midsummer. Ultra-violet develops Vitamin D potency within us . . . building health and vitality to resist sickness. For really good health we should have ultra-violet in plenty. Science makes it available in your home with the General Electric Sunlamp. There are four handsome models in white or bronze. This remarkable lamp provides the ultra-violet effectiveness of the summer sun at its best. In the nursery the General Electric Sunlamp is a mother's ally for sound sturdy growth. For the health of the family this winter get in touch with your General Electric Sunlamp dealer.

General Electric manufactures hundreds of electrical products, which make life more comfortable and the world a better place in which to live. When buying electrical equipment, look for the General Electric monogram—G-E in a circle. It is a symbol of research and a mark of dependability—"the initials of a friend".

The General Electric program will be broadcast next week at this same hour. The General Electric program has come to you from the New York Studios of the National Broadcasting Company.

Appendix B

A LIST OF RADIO THEME SONGS

Reprinted from *Printers' Ink*, issue of May 14, 1931

Allied Qual. Paint Group.....	Mod. from Rhapsody in Blue
American Tobacco Co.....	Happy Days Are Here Again
Amer. Mut'l Liab. Ins. Co.....	Perfect Day
American Chicle Co.....	Original
Amer. Maize Prod. Co.....	Estrallita
Anheuser-Busch, Inc.....	Under the Anheuser Busch
A & P Food Program.....	Trad. Russian
A & P Gypsies.....	Trad. Russian
American Radiator Co.....	Original
Armour & Co.....	Pomp and Circumstance
Armstrong Cork Co.....	There's a Quaker Down in Quaker Town <i>and</i> Original
Associated Oil Co.....	Siamese Patrol
Atwater Kent Co.....	Now the Day Is Over
Barbasol Co.....	Tammany (own lyrics)
Bourjois, A. & Co.....	Ca C'est Paris
Beiersdorf, P. & Co.....	Blue Danube
Berry Bros.....	By My Fireside
Bristol-Myers Co.....	Original <i>and</i> Lovely Lady
Blue Valley Creamery.....	Mysterioso No. 1 (Langey) <i>and</i> Deep River
Braz.-Amer. Coffee Prom. Comm..	El Sacristan <i>and</i> La Flor del Cafe
Breyer Ice Cream Co.....	Heligoland (own lyrics)
Brown Shoe Co.....	Upside Down in Love
Calif. Conserving Co.....	California Here I Come
Chas. Arnao Company.....	Just a Little Love, a Little Kiss
Chappel Bros.....	March Royal
Clorox Chem. Co.....	When I Am Housekeeping for You
Cream of Wheat Co.....	Fairy Tales <i>and</i> Junior March
Continental Baking Corp.....	Original

Coty, Inc.....	Paris
Cudahy Packing Co.....	Original
Congress Cigar Co.....	Boy of Mine
Consolidated Cigar Co.....	Smoke Your Troubles Away <i>and</i> Till We Meet Again
Calif. Fruit Growers Ex.....	Here Comes the Sun
Campbell Soup Co.....	Smile, Darn Ya, Smile (Loches)
Coca-Cola Co.....	Original
Cities Service Co.....	Original
Chesebrough Mfg. Co.....	Chicken Reel
Colgate-Palmolive-Peet	Somewhere in the World
Clicquot Club Co.....	Original
Cole, Inc., Rex.....	Waltz of the Hills
Conte Products Corp.....	Margarita
Cook & Son, Thomas.....	Sailing, Sailing
Dunn & McCarthy.....	Home, Sweet Home <i>and</i> Cherie Je T'Aime
Davey Tree Expert Co.....	Bird Songs at Eventide <i>and</i> Love's Old Sweet Song
Durham-Duplex Co.....	Oh How I Hate to Get Up in the Morning
Edward Tailoring Co.....	Didn't He Ramble
Eastman Kodak Co.....	Original
Fox Fur Co., I. J.....	Indian Love Call
Forhan Co.....	Ah, Sweet Mystery of Life
Florsheim Shoe Co.....	Original
Fuller Brush Co.....	Original
Fuller Co., W. P.....	When the Shadows Fall
Follmer-Clogg & Co.....	Singing in the Rain
Graybar Electric Co.....	You're Mean to Me
General Mills, Inc.....	Highways Are Happy Ways <i>and</i> Original
Gould Co., Barbara.....	Dreaming of You
Glass, Henry & Co.....	Peter Pan, I Love You
General Ice Cream Corp.....	Should I?
General Baking Corp.....	Across the Breakfast Table Look- ing at You
General Cigar Co.....	Comin' Through the Rye
Great Northern Ry. Co.....	Choo-Choo, <i>and</i> Original
General Electric Co.....	Original

General Motors Co.....	Original
General Petroleum Co.....	Original
Gruen Watchmakers Guild.....	Why?
General Foods Co.....	The Devil Is Afraid of Music
Gold Dust Corp.....	Dinah
Gray, Dorothy.....	Beautiful Lady
Green Bros., Inc.....	Original
Henry Heide, Inc.....	Original
Howard Clothes, Inc.....	Yankee Doodle Dandy
Halsey, Stuart & Co.....	Marche Militaire
Household Finance Corp.....	Songs My Mother Taught Me
Heel Hugger Shoes, Inc.....	Oh, Dem Golden Slippers
Individual Drinking Cup Co.....	Dixie
Interwoven Stocking Co.....	Original
Iodent Chemical Co.....	Original
Inter. Tel. & Tel. Co.....	Broadway Melody <i>and</i> Give My Regards to Broadway
Inter. Shoe Co.....	Sixty Seconds Every Minute
Jarman Shoe Co.....	Original
Jeddo Highland Coal Co.....	By My Fireside
Junket Folks.....	Original
Katterman & Mitchell.....	Original
Kellogg Co.....	Sing Me to Sleep
L. T. Piver & Company.....	Golden Dreams
Larus Bros.....	Carry Me Back to Old Virginny
Lea & Perrins Co.....	Nola
Lowe Bros. Paint Co.....	Home, Sweet Home
Libby, McNeill & Libby.....	Original (2)
Lambert Pharmacal Co.....	Georgia Moon
Luden Co.....	Original
Lorillard Co., P.....	Allah's Holliday
Leggett, Francis, & Co.....	Original
Lever Bros.....	Salut d'Amour <i>and</i> Bridal Chorus (Lohengrin)
McKesson & Robbins.....	Romance (Fradkin)
McAleer Mfg. Co.....	Original
Maytag Co.....	Let Me Call You Sweetheart
Moore & Co., Benj.....	Little Grey Home in the West
Manhattan Soap Co.....	Sweetheart
National Lead Co.....	Little Grey Home in the West

Northwestern Flour Co.....	Down by the Old Mill Stream
National Sugar Ref. Co.....	Mighty Lak a Rose
Niag. Hudson Power & Light.....	Flying Dutchman (excerpt)
Nestlé's Food Co.....	Emmet's "Lullaby"
Natural Bridge Shoemakers.....	Merry Widow Waltz
Northam-Warren Co.....	Wonderful One
Northwestern Yeast Co.....	Original
Nunnally Co.....	Crinoline Days
Nusheen, Inc.	Sylvia
National Biscuit Co.....	Original
Ocean Steamship Co.....	Nancy Lee
Pacific Borax Co.....	Original
Procter & Gamble.....	Bubble Dance <i>and</i> Sparklets
Penick & Ford.....	Gingerbread Man
Pennzoil Pet.....	Original
Pequot Mills.....	Rondo Capriccioso
Pepsodent Co.....	Perfect Song
Phila. Storage Batt. Co.....	Intro. to Act III Lohengrin
Phillips-Jones Corp.....	Original
Paton, John G. & Co.....	Honey, Bless Your Heart
Prescott Co., J. L.....	Original
Paramount-Publix	Just a Melody for Memory <i>and</i> Original
Quaker Oats Co.....	Original
Rainier Brewing Co.....	Busy Bee
R-K-O Corp.....	Original
R-C-A-Victor	Original
Reynolds Tob. Co., R. J.....	The Campbells Are Coming
Royal Typewriter Co.....	Original
Safeway Stores, Inc.....	In a Persian Market
Saratoga State Waters.....	At the Brook
Scull Co., Wm. S.....	Maori Melody
Seeman Bros.....	East Side, West Side
Southern Cotton Oil Trading Co...	Swanee River
Standard Brands, Inc.	
Chase & Sanborn.....	Original; Melody (Rubenstein) <i>and</i> Give Me a Moment, Please
Fleischmann	My Time Is Your Time
Salada Tea Co.....	In a Japanese Tea Garden
Standard Oil of Calif.....	National Emblem March

Stromberg-Carlson	Die Meistersinger (excerpt)
Shur-On Optical Co.....	Tell Me with Your Eyes
Sussman, Warmser & Co.....	A Cup of Coffee, a Sandwich and You
True Story.....	My True Story
Time	March of Time
Tidewater Oil Co.....	Mountain Greenery
U. S. Rubber Co.....	Original
Wallace & Son Mfg. Co., R.....	Tinker's Song
Washington Coffee Co., G.....	Original
Waitt & Bond.....	Spain
Ybry, Inc.....	L'Amour, Toujours, L'Amour

Appendix C

RADIO QUESTIONS ANSWERED

The following pages are reprinted by permission from a "Revised Study of Radio Broadcasting" covering the entire United States and revised as of January 1, 1930, made by Daniel Starch for the National Broadcasting Company, Inc. This material is protected by copyright.

Do You Have a Radio?

Percent of families in each district and population group having a
radio receiving set.

DISTRICT

No. 1 (New England).....	54.64
No. 2 (Middle Atlantic).....	54.51
No. 3 (South Atlantic).....	29.84
No. 4 (Middle West, east of Mississippi).....	48.55
No. 5 (Middle West, west of Mississippi).....	45.27
No. 6 (South Central).....	25.69
No. 7 (Pacific).....	60.50
* Weighted Average.....	43.1

POPULATION GROUPS

Large Cities.....	46.30
Smaller Cities.....	51.30
Rural Towns.....	39.57
Farms.....	35.90
* Weighted Average.....	43.1

Total families, January 1, 1930 (Based on census estimate).....	29,756,000
Total radio families (i.e. 43.1% of 29,756,000).....	12,824,800
Total radio audience (total persons in radio-owning families—4.1† per family).....	52,581,680

* The percentage of families (43.1%) having radios as given above was obtained: (1) by utilizing the percentage having radios as of April 1, 1928 and projecting it on the basis of the growth in the number of radios over a period of years, (2) by the proportion of families who have acquired a radio since April 1, 1928 and (3) by the growth in the number of radios shown by the count of radios made for several successive years by the assessors in the state of Iowa.

† In 1900 there were 4.7 persons per family, in 1910, 4.5 and in 1920, 4.3. The 1930 census will probably show approximately 4.1 persons per family.

The number of families given above (29,756,000) was obtained by dividing the total population of the United States (as estimated by the Census Bureau as of January 1, 1930) by 4.1 persons per family. The total radio families as given above was obtained by applying the percentage of families having a radio (43.1%) to the total number of families. This number includes those owning home-made sets. In the April 1928 report, 14.96% of the families having radios had home-made sets. This represented a total of 1,349,896 at that time.

If Yes, How Long Have You Had It (a Radio)?

	Per Cent of Families	Total Number of Families
1 year or less.....	30.41	3,900,022
1 - 2 years.....	30.39	3,897,457
2 - 3 years.....	21.60	2,770,157
3 - 4 years.....	9.20	1,179,882
4 - 5 years.....	4.07	521,969
Over 5 years.....	3.25	416,806
Uncertain.....	1.08	
	<hr/> 100.00	

1. Average length of time—1 year and 8 months.
2. The majority of families (51.99%) have had their radio from 1 to 3 years. Only 3.25% have had one more than five years.

Number of Tubes?

	Per Cent of Families	Total Number of Families
1 tube.....	1.61	206,479
2 tubes.....	2.82	361,659
3 tubes.....	8.21	1,052,916
4 tubes.....	8.20	1,051,634
5 tubes.....	33.19	4,256,551
6 tubes.....	31.38	4,024,422
7 tubes.....	4.03	516,839
8 tubes.....	5.36	687,409
9 or more.....	1.10	141,073
Crystal set.....	2.75	352,682
Uncertain.....	1.35	
	100.00	

1. Most common number of tubes—5 and 6.

2. Two thirds of the families (64.57%) have either five or six tubes in their radio set. About one-fifth (20.84%) have less than five tubes. Only 10.49% have over six tubes.

When Did You or Your Family Last Listen?

	Per Cent of Families	Total Number of Families
Today.....	39.48	5,063,231
Yesterday.....	42.25	5,419,478
2 days ago.....	4.68	600,201
3 days ago.....	1.84	235,976
4 days ago.....	1.10	141,073
5 days ago.....	1.61	206,479
Over a week ago.....	8.37	1,073,436
Uncertain.....	.67	
	100.00	

1. Over four-fifths of the families (81.73%) listen daily or practically daily, that is "To-day" and "Yesterday". Probably not quite all of those who reported listening "Yesterday" are daily listeners.

2. Only 8.4% last listened more than a week ago. In a large portion of these instances the sets were out of order.

Do You or Your Family Listen Daily?

	Per Cent of Families	Total Number of Families
Yes.....	80.98	10,385,523
No.....	16.82	2,157,131
Uncertain.....	2.20	
	100.00	

Over 80% of the families (80.98%) report "yes".

Indicate in Order of Preference Five Classifications of Programs.

The following figures give the percentage of families in each group.

	Farmer Families	Town Families	Small City Families	Large City Families	Total Families All Groups	Total Number of Families East of Rockies
	%	%	%	%	%	
Orchestras.....	56.99	64.53	62.49	64.19	62.05	5,598,999
Popular Entertainers.....	53.32	55.36	49.06	55.19	53.23	4,803,138
Dance.....	38.17	47.48	42.92	54.32	45.72	4,125,483
Musical.....	46.68	54.39	34.07	36.16	42.82	3,863,805
Semiclassical music.....	24.10	41.02	48.89	44.52	39.63	3,575,960
Short talks on interesting subjects.....	46.51	42.57	34.15	36.22	39.86	3,596,714
Religious service.....	47.85	35.66	35.22	27.16	36.47	3,290,822
Classical music.....	17.29	27.58	41.03	43.30	32.30	2,914,547
Athletic reports.....	21.06	26.61	28.26	22.93	24.72	2,230,576

	Farmer Fam- ilies	Town Fam- ilies	Small City Fam- ilies	Large City Fam- ilies	Total Fam- ilies All Groups	Total Number of Families East of Rockies
	%	%	%	%	%	
Grand opera.....	10.93	16.60	27.85	31.75	21.78	1,965,289
Comedy.....	19.00	15.18	16.22	12.88	15.82	1,427,497
Crops and market reports.	45.16	11.63	5.65	4.59	16.76	1,512,316
Plays.....	14.43	11.18	11.79	13.81	12.80	1,154,991
Educational service.....	13.98	12.21	13.10	7.66	11.74	1,059,343
Children's programs.....	14.25	8.27	8.03	6.85	9.35	843,685
Domestic science service..	9.14	9.43	9.75	5.17	8.37	755,256
Drama.....	4.57	5.68	6.55	6.38	5.80	523,355
Physical exercises.....	3.67	4.20	3.19	4.88	3.99	360,032
Uncertain.....	3.86	3.30	2.71	4.24	3.53	

Preferences for most of the different types of programs are practically the same on the part of farm, town and city families. There are significant differences, however, with respect to several types of programs—semiclassical and classical music, and grand opera are preferred less by farm and small-town families than by city families,

Do You Enjoy Talks on Agricultural Subjects?

PER CENT OF FAMILIES

	Farm Fam- ilies	Town Fam- ilies	Medium Sized City Fam- ilies	Large City Fam- ilies	Total Fam- ilies All Groups	Total Number of Families
	%	%	%	%	%	
Yes.....	72.16	30.38	23.06	19.44	36.36	4,663,097 7,797,478
No.....	24.23	66.70	74.28	77.90	60.80	
Uncertain.....	3.61	2.92	2.66	2.66	2.84	
	100.00	100.00	100.00	100.00	100.00	

whereas religious services, crops and market reports, and children's programs are preferred more by farm families than by city families.

The above table is as of April 1, 1928. In view of the changes in programs and in public preferences this table could not well be revised in the light of the new Pacific Coast results alone.

Over seventy per cent of the farmers (72.16%) representing approximately one-fourth of the population of the United States; nearly one-third of the families in small towns, (30.38%), one-fourth (23.06%) of the families in medium-sized cities, one-fifth (19.44%) of the families in large cities, over thirty-five per cent (36.36%) of all families (including farmers) enjoy talks on agricultural subjects.

Do You Like Sponsored Programs Such as Eveready, Damrosch, General Motors, Collier's, Maxwell, Ipana, and So On?

	Per Cent of Families	Total Number of Families
Yes.....	81.13	10,404,760
No.....	15.73	2,017,341
	3.14	
Uncertain.....	100.00	

Over four-fifths (81.13%) of the families prefer programs like Eveready, Damrosch, General Motors, Collier's, Maxwell and Ipana.

This question was asked for the purpose of obtaining direct expres-

How Do You Express Your Appreciation of Programs Presented by Stations or Companies?

	Per Cent of Families	Total Number of Families
By letter.....	13.16	1,687,744
By purchase of products mentioned.....	26.07	3,343,425
By silent appreciation.....	57.85	7,419,147
Uncertain.....	2.92	
	100.00	

sion of opinion relating to advertised programs on the air. These mentioned by name were simply types of programs mentioned for the purpose of clarifying the intent of the question.

The figure of 26.07% indicating the proportion of the families who have purchased products as a result of hearing them advertised over the radio, is arrived at by using the new data from the Pacific Coast and Mountain States area, together with additional information and investigation along other lines. Such factors as increased number of sets, greater power of sets, more frequent listening and greater length of listening periods as well as general growth of acceptance of radio, have been taken into account.

Do You Use Your Radio in the Summer Time?

	Per Cent of Families	Total Number of Families
Yes.....	78.81	10,107,225
No.....	14.86	1,905,765
Uncertain.....	6.33	
	100.00	

Nearly four-fifths (78.81%) report that they use their radio in the summer time while only 14.86% report no use.

Do You Listen More on Particular Evenings of the Week than on Others?

	Per Cent of Families	Total Number of Families
Yes.....	24.64	3,160,031
No.....	73.14	9,380,059
Uncertain.....	2.22	

Three-quarters apparently listen about equally on all evenings, whereas one-quarter listen more on certain evenings.

If Yes, Mention Three Days in Order of Importance.

	Families Listening Equally, i.e., not Listening More on Certain Evenings		Families Listening More on Certain Evenings		Total Number of Families
	Per Cent	Number of Families	Per Cent	Number of Families	
Sunday.....	73.14	9,380,059	15.09	1,935,262	11,315,321
Monday.....	73.14	9,380,059	8.52	1,092,623	10,472,682
Tuesday.....	73.14	9,380,059	6.58	843,872	10,223,931
Wednesday.....	73.14	9,380,059	8.83	1,132,430	10,512,489
Thursday.....	73.14	9,380,059	7.26	931,080	10,311,139
Friday.....	73.14	9,380,059	10.29	1,319,672	10,699,731
Saturday.....	73.14	9,380,059	15.30	1,962,194	11,342,253
Uncertain.....			1.86		

The figures in the first and second columns of the above table represent the percentage and corresponding number of listeners among those families who stated that they do not use their radio more on particular evenings of the week than on other evenings. The 24.64% given in the table at the top of the page representing those who listen more on particular evenings of the week than on others is broken down into the percentages in column 3. These percentages do not total 24.64% since a family may listen more on one, two or more evenings than on the other evenings. The fourth column indicates the number of listeners as determined by the percentages in column three. The last column gives the totals of columns two and four.

Appendix D

SENATOR DILL IS INTERVIEWED

Stenographic transcript of an interview given by Clarence C. Dill, United States Senator from the State of Washington, to Martin Codel, Washington newspaper correspondent. Broadcast over a nation-wide network of the National Broadcasting Company, Saturday, June 13th, 1931, at 7:15 P.M.

THE ANNOUNCER: The National Broadcasting Company takes pleasure at this time in presenting an interview given by the Honorable Clarence C. Dill, United States Senator from the State of Washington. He has just returned from Europe, where he made a survey of radio in England, France, Germany, Holland, Belgium, and Denmark.

Senator Dill is a member of the Senate Committee on Interstate Commerce, which has charge of radio legislation in the Senate. He is the co-author of the Radio Act of 1927, under which American radio is regulated by the federal government, and is one of the best informed men in the United States on the subject of radio in general.

Senator Dill will be interviewed by Martin Codel, Washington newspaper correspondent, specializing in radio, whose Radio News Bureau represents more than two score leading newspapers and magazines of the United States and Canada. Mr. Codel:

MR. CODEL: Senator Dill, you are the author of rather an expressive phrase, "Radio by the American Plan," which, I take it, means broadcasting sustained by private initiative and enterprise and free from taxes upon the set owner and listener. Now you have been to Europe, to study the way they handle broadcasting there. What did you find to be the fundamental difference between radio in Europe and radio in the United States?

SENATOR DILL: There are two differences, Mr. Codel. First, the absolute government control of radio programs, and, second, the annual listeners' fees for all owners of receiving sets.

MR. CODEL: What about the taxes on receivers? How much do they amount to?

SENATOR DILL: The fee varies from \$2.50 per year in several

countries, such as England, Denmark and Sweden, to as high as \$6.00 per year in Germany.

MR. CODEL: How do they collect these taxes, Senator?

SENATOR DILL: The Post Office Department of each government collects the tax. In most countries the owners of the sets are required by law to register and pay the fee. In Germany the postman collects the fee of 50 cents each month.

MR. CODEL: How does the listener feel about paying the license fee?

SENATOR DILL: While the well-to-do and those with considerable money make no objection, I found that those who are poor, especially the working people, complain that it is too high. They object to it seriously and they say that many people cannot afford to own a radio set and pay the extra cost of the listener's fee, and that therefore a considerable number of people dodge payment of the fee.

In England they have a radio patrol wagon, a kind of a Black Maria that goes around the country from town to town to locate bootleg radio sets. They drive this radio patrol wagon in front of a house and by means of special instruments are able to detect the oscillations of the tubes in a receiving set. Then they go into the house and arrest the owner. The newspapers in the cities give wide publicity to the arrival and operations of the radio patrol. It gets results, too. In Manchester recently registrations increased 75 per cent within ten days after the arrival of the patrol. In Birmingham the increase was 100 per cent. So it is quite evident that a number of set owners are, to say the least, inclined to neglect the payment of the fees in England.

In Germany the theaters try to encourage the payment of fees by giving a 50 per cent discount on all theater tickets to those who present a receipt for the payment of the registration fees for the current month. In Denmark and Sweden I found very little attempt to dodge fees.

MR. CODEL: Where does the money go?

SENATOR DILL: In England, 60 per cent goes to the support of broadcasting stations and the programs, while the other 40 per cent goes to the government. There is much complaint about the government's keeping 40 per cent. In Germany, only 50 per cent goes to radio, the other 50 per cent going to the government. In Sweden, 92 per cent is used for radio and 8 per cent goes to the government, and in Denmark it all goes to radio.

MR. CODEL: Senator Dill, what do you think of the idea of applying a similar license fee in this country to support broadcasting?

SENATOR DILL: Mr. Codel, as you know, I have always opposed a listener's fee in the United States, and I am more opposed to it than ever since I went to Europe and studied conditions there. In the first place, radio should be free to all. The ether belongs to all the people and radio programs that are transmitted through it should be available to everybody. In the second place, if the government started collecting fees from listeners, it would immediately want to control programs and that would mean censorship and government interference. That is the last thing we want in radio here.

MR. CODEL: Well, now, about government control, Senator. What is its effect on programs?

SENATOR DILL: Government control of radio programs is necessarily bureaucratic. It tends to make the programs stiff and formal, heavy and serious. Those who prepare programs do not try to excel nor to please the listeners so much as they try to prepare programs that they can defend in justification of the expenditure of the people's money. There is always the tendency to give the people what the government officials think the people should have, rather than to follow the people's desires.

I am sure that government radio works much better in European countries than it ever would work in the United States. The people of Europe for centuries have had governmental favors handed down from above. With all of their overturning of monarchs and all of their establishment of parliamentary systems of government, they are still dominated by the idea that government comes down from above. They do not have the American idea that the powers of government officials come up from the people. Our method gives us a much wider variety of broadcast programs too. Why, in all England, with ten wave lengths and seventeen stations, there are only two English programs. In all Germany, with twenty-three wave lengths and more than thirty stations, you can never have more than two German programs. In Sweden, 1,100 miles long, as it is, and with thirty-two stations, there is never more than one Swedish program available for the listeners.

MR. CODEL: And now that you have studied European radio and fees, what criticism have you to make, Senator, of American radio?

SENATOR DILL: Mr. Codel, the first criticism I have is that the advertisers in this country think too much about themselves and not

enough about their listeners. All advertisers on the radio should desire to be popular. If wise, they will avoid too much direct and persistent advertising. Unless advertisers and broadcasters clean up the advertising programs, the American public will demand that Congress take steps, by the passage of laws, to prevent the abuse of radio privileges. The Radio Commission has full power to refuse to renew a license if the applicant has not conducted the station in the public interest. Too much advertising—especially objectionable and personal advertising, and, shall I say, ill-mannered advertising?—certainly cannot be construed to be in the public interest. The granting and renewal of licenses is based on the public interest.

MR. CODEL: Senator Dill, what, in your judgment, is the biggest advantage in having private ownership and operation of our broadcasting?

SENATOR DILL: Well, I think the biggest advantage is the fact that the competition for popularity with the listeners tends to make better programs. This means new features in radio. It means the expenditure of tremendous sums of money for program numbers. Why, in all England, with its 43,000,000 people, they only expended five and one-half million dollars on radio broadcasting. Germany, with 67,000,000 people, spent more, but Germany spent only \$11,000,000 last year.

In the United States, on the two great chains, the National and Columbia, more than \$50,000,000 were spent for radio programs last year. In all, more than \$150,000,000 was spent for radio broadcasting and programs in the United States.

Now, this is the difference in results between private initiative, with unlimited capital, and official activities through governmental bureaus, with small amounts of money applied to a new undeveloped art like radio.

MR. CODEL: Well, Senator Dill, were there any points of superiority at all in European broadcasting, to your mind?

SENATOR DILL: Yes, Mr. Codel. The European school programs are far superior to anything of the kind we have developed in America. The school programs of England, Germany and Sweden, are well organized. Their chief difficulty is to secure receiving sets for the schools. Only about twenty per cent of the English schools have sets, but ninety per cent of the head masters of the schools without sets answered a questionnaire saying they would use the radio school programs if they had receiving sets. The situation in Germany

and Sweden is quite similar. I think the United States must make use of radio for school purposes in the near future.

MR. CODEL: How do you think it can be done here?

SENATOR DILL: Well, that is a rather difficult question to answer, Mr. Codel. The first great need here is for the teachers and professors of this country to arrange to supply school radio programs. It is doubtful if this can be done until we develop some plan of financing these programs.

MR. CODEL: Where would you get the wave lengths, Senator Dill? Are there not already too many stations broadcasting on the wave lengths?

SENATOR DILL: That is true, but I think it can be solved. There are two possible methods. One is for the Federal Radio Commission to provide, in the licenses of all broadcasting stations, that the school authorities of the State or counties which a station serves shall have the right to use the facilities of that station for a certain period of time each day when schools are in session, by paying the bare cost of operation for that period. But, I am fearful that would not be as practical as is desirable.

The other method which I think can be followed is the use of certain wave lengths in the long wave band between 1000 meters and 2000 meters exclusively for schools and colleges in teaching and educational work. They use these long waves in Europe for school programs quite effectively, and Congress might set them aside for school purposes in this country.

MR. CODEL: Doesn't that mean, Senator, that we will need a new kind of radio receiver?

SENATOR DILL: Yes, either the existing sets will have to be equipped with coils capable of tuning in these long waves, or new sets will have to be produced with interchangeable coils, so that listeners can choose between the bands they want to hear. That is being done now in Europe, where most of the best stations use long waves, and where, incidentally, the listeners generally use much cheaper sets than we do here. In fact, I think radio manufacturers should begin to plan sets with three coils, one coil for the short waves, one for the broadcasting band, and one for long waves between 1000 and 2000 meters, so the listeners can go fishing in the air for whatever they desire.

MR. CODEL: Senator Dill, what were your observations of the use of radio in European politics?

SENATOR DILL: Mr. Codel, that question brings up some very interesting points. The fact is that, with the exception of Russia, no country in Europe really uses radio for political purposes. In Russia, the Soviet Government uses it for propaganda.

In England, previous to a general election, the radio officials allow each party 30 minutes in which to discuss politics. There is no personal discussion of candidates such as we have in this country. In special elections they do not use radio at all.

In Germany, they make even less use of radio for political discussions and political purposes. During the last presidential campaign, President Hindenburg and Mr. Marks, the two candidates, each spoke for two minutes. All they did was to express their greetings to the German people and declare their faith in the future of the German Republic.

In Sweden, they used the radio for 30 minutes for each party previous to one election, but the Communists secured so much greater response than any other party that there has been no political discussion in Sweden on the radio since that time. In fact, I was told that the principal reason why they do not broadcast the debates of Parliament in Sweden, Germany and France, is that they fear the Communists would use the radio to spread their propaganda. However, the Hitlerites in Germany insist that the radio should be available for all political parties and candidates, much as we have it here in the United States. If Hitler's party comes into control of the German government, there is likely to be a change in the use of radio in that country for political discussion.

MR. CODEL: Well, we have a much different situation here, don't we, Senator?

SENATOR DILL: Yes; our broadcasters here are free from censorship. I was determined when we wrote the law of 1927 that no government officials should interfere with the use of radio for political discussions and I wrote into the statute that provision that prohibits censorship.

This is just another illustration of how we have made radio broadcasters free in this country to serve the people by giving them what they want rather than what some government official thinks they should have. *Radio in the United States should be kept as free as the press so far as censorship is concerned.*

MR. CODEL: I take it then, Senator Dill, that you still believe in what you call Radio by the American Plan?

SENATOR DILL: Yes, especially for the American people. The people of Europe may endure governmental control, but such a plan would not satisfy the American people. In all European countries, the officials who manage radio are restricted and limited. Freedom in radio broadcasting, like all other kinds of freedom, may be abused, just as there is abuse of freedom of speech and freedom of the press but the benefits greatly overbalance the defects.

The Federal Radio Commission has abundant authority to protect the people against abuse of that freedom. If the Radio Commission fails to do its duty, the President can change the membership of the Commission. In addition to this, Congress always has the power to pass remedial legislation as new needs for it arise.

MR. CODEL: Thank you, Senator Dill.

Appendix E

THE NEWSPAPER-OWNED BROADCASTING STATION

Based on an interview with Maj. John S. Cohen, Publisher *The Atlanta Journal*, operating station WSB
From *Southern Advertising and Publishing* for July, 1931

"The radio broadcasting station", declares Major John S. Cohen, publisher of the *Atlanta Journal* and whose newspaper operates station WSB, "can never hope to even compete with, much less supplant, the daily newspaper".

That statement above was the keynote of an interview with Mr. Cohen on the newspaper-owned broadcasting station. Mr. Cohen is the publisher of one of the largest and most successful newspapers in the South as well as the operator of one of the South's most powerful broadcasting stations, that statement undeniably carries a great deal of real worth.

Newspapers have been vastly worried about the growth and popularity of the radio and the now vast amounts spent by advertisers for their programs over the air. Some alarmists have even gone so far as to state that the radio *was* taking the place of the newspapers and that it was only a matter of time before the press of the nation would very keenly regret their early help rendered the then mysterious novelty of radio broadcasting.

"But", continued Mr. Cohen, "this will never come to pass. The radio has its particular and peculiar niche in the field of advertising and entertainment. It will probably stay in that niche. Radio, with its cultural and entertainment possibilities, is a distinct need in the present-day life of the nation. It supplies a vast amount of courage and entertainment to thousands of people unable to get away from their drab surroundings. It has a broadening effect on the lives of millions who listen in to its programs almost solely for the entertainment it offers.

"But as to its competing seriously with the daily press, I should emphatically say that it is impossible—almost fantastic. I say this of

the radio and I can also say it of television should it become practical for ownership in the home. The radio does not compete with the newspaper nearly as much as does the billboard or the magazine".

Mr. Cohen is correct in the viewpoint given above. There is no denying the fact that the radio has a powerful grip on the imagination of the nation but, in many instances, it has been over-commercialized. But the American public is too newspaper conscious to let the radio supplant it. Scientists say we are able to grasp the understanding of a thing seventeen times easier and quicker through the eye than by the ear.

Mr. Cohen believes that it was the Democratic National Convention of 1924 that brought the eyes of the nation on the radio broadcast as a possible means of bringing the country closer together as well as offering entertainment features that otherwise could be heard by a comparatively favored few. It was at this time that the people of the United States had their curiosity satisfied for the first time as to the procedure in the election of a party chief. Radio had done it and, quite naturally, received its due credit thereby.

The Democratic Convention, and not forgetting Amos and Andy, are the two things most responsible for the success of the radio broadcast. Mr. Cohen is firmly of the opinion that the adventures of Amos and Andy contributed a great deal to making the radio an accepted entertainment feature.

"The publishers of the country seemed, at one time, to lay the whole blame of curtailed advertising on the radio", resumed Mr. Cohen. "They apparently forgot we were entering a period of stress just as the radio was coming into real prominence. The publishers laid the blame on the radio for the simple reason it was most in the public eye at the time. The radio and the advertising sent over the air was in no way contributory to decreased newspaper lineage. We were due for a depression and—we got it!"

A newspaper-owned broadcasting station—where there are other independent stations in the same city or locality—is better able to cope with unethical radio advertising practices should the independent station choose to use them. Having not only the freedom of the air—to a limited extent—but also the right of the public press, a newspaper-owned station may well serve the section it covers. Mr. Cohen believes his broadcasting station is a public servant and must be conducted as such to be really worthwhile.

The radio is undeniably beneficial to home influence and cultural

advancement. It is broadening to those millions of comparative shut-ins who are unable to leave the cities of their residence only at rare intervals. The radio, probably, has done more to make the people of the United States lovers of music than any other one medium. It is also making us conscious of cultural things of which we knew but little heretofore.

The radio broadcasting station is fundamentally at and for the service of the public and there has never been a time in the nine years of existence of *The Atlanta Journal's* station, WSB, that it hasn't well served its listeners. For seven years of this period, WSB entertained the public and broadcast no paid advertising programs. Then, after listeners were surfeited with local talent, it was deemed necessary to effect a hook-up with one of the national broadcasting systems. Quite understandably, it would have been quite unfair to serve national advertisers exclusively and not offer the same service to those local firms wishing to broadcast. But, many times since, station WSB has refused local advertising—at a higher income—when it conflicted with chain programs of real value.

"And not once to my knowledge", stated Mr. Cohen, "has the radio station we operate taken business away from any newspaper. Those advertisers not on the network using WSB are also large users of space in our newspaper as well as the other two newspapers of Atlanta. In fact, the radio has helped *create* business which, I believe, could have been found in no other manner. The radio and the newspaper can work admirably together. One is the complement to the other. Remember this—no definite yardstick has yet been devised to intelligently measure the value and results of broadcasting advertising. We are able to determine accurately what the newspaper can do. Newspaper advertising will always be the most important point-of-purchase publicity medium. The radio can never hope to supplant it. We may be held spellbound by the inspiring words which flow from the lips of an orator, yet the speaker could never hope to take the place of books.

"We can be entertained for the hour by the radio—so long as we are not bored by advertising which should always be supplemental to the entertainment features—but when we want news, whether or not it be of national or world import or of items which may be advantageously purchased from local or country-wide advertisers, we shall always turn to the daily newspaper first. I say, in closing, that the radio broadcast, properly conducted, is cultural and NOT detrimental to the newspaper".

Appendix F

ADDENDA

EXECUTIVE PERSONNEL OF NATIONAL BROADCASTING COMPANY, INC.

—IN 1927—

(This material was originally prepared for insertion on page 18 but was inadvertently omitted from the first edition)

BOARD OF DIRECTORS OF NATIONAL BROADCASTING COMPANY, INC.

H. P. Davis, Chairman of the Board Vice-President Westinghouse Elec. & Mfg. Co.	Edward W. Harden Jas. B. Colgate & Co. David Sarnoff Vice-President & Gen. Manager Radio Corporation of America
Merlin H. Aylesworth President National Broadcasting Co.	Gerard Swope President General Electric Co.
William Brown Vice-President & Gen. Attorney Radio Corporation of America	Melvin A. Traylor President, First National Bank of Chicago, Ill.
Edwin M. Herr President Westinghouse Elec. & Mfg. Co.	Owen D. Young Chairman of the Board General Electric Company Also Chairman of the Board Radio Corporation of America
Gen. James G. Harbord President Radio Corporation of America	

EXECUTIVE STAFF

M. H. Aylesworth, President; George F. McClelland, Vice-President and General Manager; H. W. Angus, Vice-President, Directing Programs and Sales; Charles B. Popenoe, Treasurer; Mark J. Woods, Assistant Treasurer; L. MacConnach, Secretary; Donald Withycomb, Assistant Secretary; Harry F. McKeon, Auditor; Frank A. Arnold, Director of Development; H. C. Smith, Assistant to Vice-President and General Manager.

George J. Podeyn, Pacific Coast Manager; Gerald Chatfield, Supervisor of Programs; Nicholas de Vore, Manager of Musical and Literary Research; O. B. Hanson, Manager of Plant Operations and Engineering; G. W. Johnstone, Manager Press Relations; Samuel L. Ross, Manager of Artists' Bureau; H. A. Woodman, Traffic Manager; W. H. Ensign and D. S. Tuthill, Assistant Sales Managers.

Miss Bertha Brainard, Manager of WJZ; Phillips Carlin, Manager of WEAF; Ralph Edmunds, Manager of WRC; Frank E. Mullen, Western Representative; Carl Dreher, Staff Engineer; E. F. Grossman, Supervising Engineer.

Appendix G

SPOT BROADCASTING

Spot broadcasting is a coined term applied to the use of records or electrical transcriptions mechanically played before a microphone by such local stations as allow this type of program.

Originally the ordinary record playing machine was used for broadcasting current records, but as the need for this form of entertainment increased, there were evolved special types of reproducing machines which now carry the recorded program directly to the transmission apparatus.

This process will be described in more detail later on in this chapter.

Spot broadcasting obtained its first impetus because of the fact that many of the small local stations were hard pressed for programs of interest and variety. Obviously, local talent has its limitations both in number and quality, and while the commercial side of a station's time was being built up, there remained a continuing need for acceptable program material. Accordingly, the playing of records, later called electrical transcriptions, came into more common use, and today, with the further development of the art and the greater perfection of records, there are now available on every local station electrical transcriptions that approximate very nearly the full value of the original studio presentations.

The second opportunity presented in the development of this type of entertainment came through the advertiser who demanded programs that would tie in with his local distributor.

Even today, network coverage is by no means universal, for obviously there are many worth-while cities that cannot be included on a network because of the expense even though it were desirable to do so. Given the ordinary network program, which rarely averages over 40 to 50 separate stations, and a careful check-up of an advertiser's coverage will probably reveal twice as many additional cities that he may wish to reach in addition to those on the national networks.

Accordingly, a business soon developed known as "Spot Broadcasting" which reduced to its simplest terms amounts to the playing of

an electrical transcription of the advertiser's program on a turn table located in an additional number of broadcasting stations corresponding to the advertiser's local coverage.

As a general thing, "Spot Broadcasting" is used in connection with and supplementary to a network broadcast, although this is not always the case. The program used by the advertiser in his "Spot Broadcasting" is usually different from the one appearing on the network. This is due to certain rulings made by the broadcasting networks and applying specifically to "Spot Broadcasting." This does not, however, prevent the advertiser from putting on an electrical transcription for the most part perfectly satisfactory in its promotional results to the local dealer.

There have been several outstanding national campaigns where "Spot Broadcasting" alone was employed—among them, the Chevrolet Motor Car campaign of 1931, reference to which is made in some detail later on. The desire for a cooperative campaign in which each dealer should share both in expense and also in direct benefits is often the actuating motive back of a universal "Spot" campaign. Chandu, the Magician, is another instance, and increasingly this form of broadcasting has claimed the attention of advertisers both national and local until today it figures to an appreciable extent in the total revenues of local broadcasting stations.

A few months ago, *Broadcasting* published an article by J. R. Poppele, Chief Engineer of Station WOR, descriptive of this new form of broadcasting, in which he says:

"Back in 1921 neither the phonograph record nor the broadcasting was very good. When broadcasting was combined with disks, the result was often downright terrible. Then broadcasting advanced, more quickly than the older phonograph industry, until within a short time broadcasting resorted to direct performance in order not to be burdened with the lower quality of the disks. And we have had direct performances ever since.

"But after broadcasting had been considerably improved, radio lent the phonograph a hand; in fact, most of its technique has been carried right over to the later phonographic industry. Whereas the old disks that had once done yeoman's duty as program material were mechanically recorded, the electrical transcriptions of today are electrically inscribed.

"Before radio technique had been adapted to disks, the actual voice of the singer, or sound waves of the instrument, would motivate the

engraving needle that cut the wax record. Often lack of volume in the voice made the impression indefinite. Or a great blast of sound made the needle tremble in all sorts of odd ways. And there were many other factors that prevented the old records from being even near perfect. To mention but one point, the frequency range was very limited. That is to say, neither the very high notes nor the very low were recorded. And many overtones were entirely lost.

"On the receiving end the difference between the old phonograph and modern receiver is enormous. The phonograph, prior to the use of radio technique, was a mechanical device, the vibrations of the needle caused by the grooves in the disk being amplified mechanically by the diaphragm and sound box. But now the radio receiver serves also as phonograph receiver, with its vacuum tube amplifier that steps up the volume any desired degree with absolute fidelity. In other words, the same refined methods now used to put broadcast programs on the air are used to make electrical transcriptions, and the same refined receivers, amplifiers and loud speakers that turn the electrical impressions back into sound for the direct broadcast do the same for the recorded variety.

"I speak of these matters lest the reader become prejudiced against electrical transcriptions on the basis that radio has gone beyond that stage; lest he say, 'Those electrical transcriptions are mediocre. Just another name for phonograph records, and you remember what these old records are like that we used to play on the talking machine.' In the first place, neither the disk nor the machines on which they are heard are the same as formerly. In the second place, electrical transcriptions are different from phonograph records; thirdly, minute tests assure quality of disk and reproduction; fourthly, as the December issue of *Fortune* says in an article concerning broadcasting and electrical transcriptions: 'The listener who should decry the Chevrolet broadcast as a recorded program is listening not so much with his ears as with his prejudices.'

"All this vast improvement came about through the efforts of radio engineers and the large electrical companies. A contributory factor was the rapid rise of the talkies. Western Electric used its vast experience in the telephone field in developing the talkies, and then it accumulated knowledge gained in this field as well as that of the telephone in perfecting electrical transcriptions.

"The speed of the synchronous turntables, 33 $\frac{1}{3}$ revolutions per minute for the large disks, or 78 r.p.m. for the small ones, is kept

absolutely constant by the cycles generated at the power house furnishing the current. Since the trend is ever more toward the large 16 inch disks that revolve at a slow speed and play for about 10 minutes or more, let us follow a program through on one of these. The process is the same for the small disks.

"Two waxes are set on two of the slow speed turntables. The motor is started, the signal given in the studio and the program commences; opening chord, announcement, commercial credit, music, announcement of selections, more music and so on. The microphones have been properly placed, the monitor in the control room has his cues by which he varies his microphone volumes as he hears the program through the loud speaker; another technician in the amplifier room sees that all is right there and in the recording room each of the two waxes is cut.

"This recording equipment, turntables, recorders, needles, advance balls and other refinements not even dreamed of in the old phonograph days is most intricate. The disks play from the center to the rim, the reverse from the usual commercial record.

"As the wax nears the end of its course, two more waxes are placed on two more turntables and set going; then slowly the inscription is faded from the first set of waxes to the second. Accurate stopwatch time is kept of the moment the first set is placed in motion, how many seconds and tenths of a second before the recording begins, when the second is set in motion, when its recording begins and so on.

"The selection having been recorded, one set of waxes is played back to the interested parties: the engineers, who look for technical flaws; the musical directors, who look for false notes; and the sponsor's representatives. Approved by all parties, the set of waxes which have not been played back are placed in the galvano baths.

"The cut sides of the waxes are prepared for electroplating, which takes place in the galvano baths, where the waxes swing back and forth on suspended rods in the baths. The resultant copper master is then peeled from each wax, the latter being carefully shaved for future use in recording.

"The master, of course, is a negative, its lines being raised above the surface, since it was plated from the wax, whose lines were indented. From the master are made two test pressings. These are of an earth-shellac material which is heated to approximately the consistency of kneaded dough, placed in the press with the master, and under enormous pressure and heat, baked. These test pressings are

then played before all the interested parties for approval or rejection. Thus it can be seen that tests accompany every process in the fabrication of the final disks.

"The test pressings approved, the master is in turn plated. The final disks, in sufficient numbers for all the stations booked to broadcast the program, are not pressed directly from the master because in the pressing there is always a slight danger of injuring the master. And if the master were injured no impression of the performance would remain, for the wax was spoiled in the plating. Again the factor of safety enters, the master being electroplated, the process resulting in a 'mother.' Then the master is filed for emergency use or in filling future orders for more disks.

"But the 'mother,' having been plated from the negative stamper, is itself positive, hence unsuited for pressing the positive final pressings. So the 'mother' too is plated and the resulting stamper is used to make the final pressings. These pressings are then shipped to the stations contracted.

"I should like also to dispel the erroneous impression that electrical transcriptions must be announced as such because they are inferior to direct broadcasts. The reason for this announcement is to insure against the infringement of copyright laws, which might otherwise be evaded by the malicious or unknowing.

"Some advocates of the direct broadcast speak of the transcriptions as canned music as contrasted to flesh and blood performances. The direct broadcast is not flesh and blood any more than the recorded. In each case the sound is transformed at the microphone into electrical energy and does not reappear again as sound until it reaches the loud speaker in your home. And, since the same microphones and amplifiers are used in each case, the electrical counter parts of the sound are identical.

"This brings up the point of broadcasting disks. Electrical transcriptions are not played in a phonograph, in front of whose sound box is placed a microphone. And here again is a divergence from former phonograph record practice.

"Let's listen to electrical transcriptions with our ears, and not become prejudiced by wild imaginings, past mediocrity or unfounded theories. Let us judge electrical transcriptions by the finest examples, which, fortunately, may be heard from the country's foremost stations."

Now let us turn for a moment from this comprehensive description to the practical use of electrical transcriptions as discussed by R. K. White at the time he was Manager of the Advertising Division of the Chevrolet Motor Company, in which he analyzes the basic reasons for his use of "Spot Broadcasting" exclusively for the Chevrolet program of that season. He says:

"You will realize that a sales organization of 10,000 dealers and 25,000 retail salesmen, scattered throughout the United States must be served by its advertising without partiality. In planning our radio coverage we plotted it in much the same way as we would plot a newspaper campaign to cover the same area.

"We took a map of the United States and found that radio-station facilities paralleled population to a great extent and also paralleled sales potentiality, so we started our national radio advertising with 135 stations. We resolved, however, that if any of the group of dealers wanted a station added to our list, we would add it without question, barring only stations inadequately equipped or of very low power.

"After nine months of an open mind policy on station selection, we found that our original list of 135 stations had grown actually just 32 stations, finally settling down to the total of 167. I am going to show you a map on which spots indicate the distribution of more than 500 existing licensed stations. Now I am going to show you a map which shows the stations (at present 167) that Chevrolet is now using. We hesitate to show the next map, but I am sure that my friends who are here representing the national chains will take this presentation in the spirit it is offered, that is, purely from a Chevrolet standpoint, which I assure you is not one of criticism and certainly not disapprobation.

"I merely am, as well as I can, trying to visualize for you the problem of national radio advertising as we encountered it. Here is the National Blue Network, and here is the National Red Network, and here is the Columbia Network.

"Far more important, however, than a discussion of what constitutes national coverage in radio, is the factor which I have endeavored to illustrate with this chart. As you all undoubtedly know, there are certain times of the day depending on the territory in which it is most advantageous to broadcast. Most of Chevrolet programs are broadcast in the evening—we have two stations, however, that broadcast at noon because they serve an agricultural community and we

know that the farmer is likely to be eating dinner at the time of the broadcast. We thought that it would be advantageous if we were buying a radio audience to buy as big an audience as we could. You will observe from this map that when it is 8 o'clock in New York, Eastern Daylight Saving Time, it is 4 o'clock in San Francisco.

"An outstanding advantage of electrical transcription lies in the fact that if the station does not have suitable time on Monday and does have it on some other day of the week, that is the time we broadcast.

"In conclusion, I would like to state a few important facts: First, based on our own advertising necessity, the use of electrically transcribed spot broadcasting was compulsory if we were to do any radio advertising nationally. Second, confronted with this advisability of using electrically transcribed spot broadcasting, there are four essentials—any one of which may cause great disappointment if not observed:

- "1. Programs must be of the highest quality, built, supervised and rehearsed on identically the same plan as a chain broadcast.
- "2. The recording and record production must be technically correct in order to get the maximum of frequency range with the least possible surface noise.
- "3. The station must have the proper equipment and be thoroughly drilled in its efficient use.
- "4. Each broadcast by each individual station must be checked for laxity in radiation."

As I intimated earlier in this chapter, the Chevrolet use of "Spot Broadcasting" was for the purpose of meeting a specific condition where broadcasting was demanded on condition that it appear as a local program in a sufficient number of cities so as to command the support and cooperation of the local Chevrolet dealers.

In following through with the further development of the Chevrolet account in succeeding years, it is interesting to note that they eventually became large users of network broadcasting, employing the studio facilities of one of our national networks.

It is interesting to note that there is no great economic advantage in the use of electrical transcriptions as compared with studio programs. In fact, broadly speaking, it is less expensive to put on the same show in the studio, broadcasting the program from that point to the stations on the network, than to take the same program, pay for

the original recording and the required number of duplicates, positioning them on the various local stations and paying the local rates for time on the air.

At the present time, neither of the great national broadcasting systems allows electrical transcriptions to be played over their networks, believing that the too common use of this form of program might eventually interfere seriously with the business of broadcasting. The basic reason for this conservatism is the knowledge that those of us possess who have been with the industry during its development, that the intriguing part of the broadcast program from the standpoint of the average listener is his knowledge and belief that he is listening to the actual presentation by living artists, performing in some studio perhaps thousands of miles away, which, through the miracle of radio broadcasting, he is picking out of the air through his home receiving set, enjoying it with the same zest as though he were actually a guest in the studio.

If by any chance the use of electrical transcriptions should become so generally universal that the family audience was in doubt as to whether it was listening to "canned" music or an original production, the industry would soon be facing the same problems which confronted the phonograph manufacturers a few years ago.

In my opinion, "Spot Broadcasting" has a real place in the picture as a necessary supplement to network sponsored programs and also as a very real contribution to the list of sustaining programs presented by the local station.

TELEVISION SECTION

INTRODUCTION

by

DR. ALFRED N. GOLDSMITH

Consulting Engineer; Past President of the Institute of Radio Engineers;
President of Society of Motion Picture Engineers

It is a significant tribute to the systematic development work in the television field and the confidence which is felt in the ability of the investigators that this book by Frank A. Arnold, a recognized leader in his field, should contain a serious consideration of the applications of television to broadcast advertising.

Television can carry to a large audience a number of different types of material. These include the following:

Pictures in motion can be transmitted showing scenes of considerable complexity and detail in such a way that limited groups of persons can view them comfortably. The moving pictures can be accompanied by related sound if this is desired. Synchronism between picture and sound is automatically maintained and adds to the entertainment effect.

It is also possible to transmit still pictures which can be changed at intervals. These pictures also may have considerable detail. Explanatory spoken text or musical accompaniment may be provided.

Printed material, with or without included drawings, can be sent, and this printed material may be either stationary, changed at intervals, or steadily and continuously shifted into and out of the field of view. It is likely that printed material can be sent at a rate more rapid than even

a fast reader could follow, so that the limitation in speed of word-transmission will probably be that of the reader.

And, finally, combinations of the preceding types of material can be readily provided. A shift can be made from one type to the other either abruptly or by the use of a gradual "dissolve." In dealing with the transmission of pictures in motion, it is possible to intersperse events taking place outside of the studio with acts which are presented in the studio. For example, a program of "health exercises" might show gymnastic exercises in the studio immediately followed by views of a football game actually in progress at a distant field.

As has been intimated, there are a number of ways of originating the material for television programs.

The studio presentation by a group of actors in suitable surroundings is an obvious and direct method of program production. It is subject to all the advantages and limitations of the theatre or studio.

Programs may also include actual events taking place outside of the studio, the scene being "picked up" at the distant point and relayed by suitable means to the control room and transmitter.

A third method of supplying program material is by the use of motion pictures on film. Permanent film records of any desired studio or out-door event can be made, and these may be utilized as desired to control a television transmission at a later time. In a general way, film records are related to television in the same way as disk transcriptions are related to present-day radio telephone broadcasting.

Television stations differ in at least two fundamental respects from the present broadcasting stations. They are required to transmit a far greater amount of "intelligence" per second than is necessary for a sound program—for, as is well known, a detailed picture has more significant ele-

ments or indications if transmitted in a brief time than are required for producing high fidelity music during the same time. In consequence, television transmitting and receiving equipment is in some respects more refined and highly developed than corresponding telephone equipment. The cost factor involved requires consideration.

In addition, the range of present broadcasting stations may approach one hundred miles or more for fair service, particularly in rural districts. The range of television stations, utilizing the particular wave lengths which appear most suitable for this service, will more likely be restricted to several tens of miles. It is possible that the covering of a given populated area by television will require a greater number of transmitting stations than is the case for telephone broadcast coverage in the present wave band.

We may view with considerable confidence the prospect that a combination of laboratory development, far-sighted station and network construction, program building and experimentation, and analysis of the public reaction will bring television ultimately to a stage of general public acceptance and commercial importance similar to that now enjoyed by telephone broadcasting.

CHAPTER XIX

WHAT IS TELEVISION?

It is an opinion often expressed of late by engineers that he who attempts to discuss television deliberately ventures "where angels fear to tread." This may be true but I am not an engineer and for that reason am not governed by any unwritten law of that profession which might render anything less than a complete and conclusive presentation of the subject unethical.

At no time in our modern civilization has any subject, not even radio broadcasting, so completely intrigued the imagination of the world as television. The very fact that it is difficult of acceptance up to date lends zest to everyone from the amateur to the expert in the laboratory in an endeavor to wrest from the storehouse of the infinite the secret solution that thus far has defied scientists and laymen alike. In view of the developments of the last quarter of a century the scientist in his laboratory hesitates to report anything as impossible. The very statement, "It can't be done," almost automatically resolves itself into the counter proposition, "Let's do it."

If any of my readers no longer than twenty-five years ago had prophesied the marvels that are now being daily accomplished through radio broadcasting and if by any stretch of imagination anyone had ventured to predict that the human voice could leap across the Atlantic and be restored into full power on the other side, he would doubtless have been termed mildly insane or, at best, a visionary enthusiast.

When one stops to consider the years spent by labora-

tories in an intensive series of experiments to determine the way by which radio impulses could be transformed into vocal utterance, we may be permitted to be correspondingly patient during the period that very genuine and worthwhile attempts are being made by the very same laboratories to propel images over equivalent distances, culminating in the synchronization of sound and sight.

Television even in its present admittedly crude shape is farther along than was broadcasting fifteen or twenty years ago, and when one considers the obstacles attendant to the development of broadcasting which have today been largely overcome and with the continued progressive improvements are likely to give us an adequate form of speech around the world, it is not out of reason to expect that television will ultimately take its place side by side with broadcasting.

Much has been written by both the layman and the scientist on this fascinating subject. Looked at purely from the scientific angle, it is a dry and uninteresting topic, and it is not my purpose to deal with that phase of the subject. Instead of attempting to discuss the scientific side, I believe a real service can be given the reader by weaving into a continuous narrative what is both frankly and designedly a careful compilation of some of the worthwhile things that have been said and written about television at various times and places during the last five years.

It was in the Fall of 1931 that I chanced to buy a copy of *Liberty Magazine*, and in the issue of November 21 I read an article, written jointly by Messrs. Thomas C. McClary and Harry Salpeter, containing the following factual information:

"Television was born scientifically a short time ago; but it has been dreamed of for centuries. The dream is as old as man. Long before he thought of sound from a distance he thought of the miracle of long-distance sight. The ancient

Greeks and Romans gave to their gods the powers they wished for themselves but lacked. About the only claim to fame of many of their gods and mythological heroes lay in their power to see thousands of miles away. For centuries necromancers and wizards, working alone in hidden dens and secret chambers, strove to pierce the veil of distance. Black magic and the beginnings of science were filled with attempts to transmit the sights seen by fast-traveling and far-ranging birds, beasts, and fish to the brain of man.

"Even in this enlightened age there have been cases of death or mental derangement caused by experiments intended to give long-distance sight to ordinary man—who under most favorable circumstances can see barely thirty miles away. Skilled surgeons have been sent to asylums for attempting to graft the optic portions of far-seeing animals on to the optic nerves of men.

"Like almost all other wonders of modern life, television derives from the all-embracing mother of action, electricity. Six hundred and forty years before the birth of Jesus Christ and almost 2,400 years before Franklin's kite and key, Thales of Greece, perhaps the first scientist of the western world, discovered and gave it a name. Rubbing a piece of amber, he noticed friction. This phenomenon he called *elektron*.

"In 1600 the Englishman Gilbert made valuable scientific discoveries which began the struggle first to find and identify and then to harness electricity. The Dutch inventor of the Leyden jar—which was the forerunner of the millions of dry-cell batteries—our own Benjamin Franklin, proving that lightning and electricity are the same thing, and many others contributed to our knowledge of the mysterious force.

"In 1838 a German named Steinheil identified the wave action involved in radio, wireless and television transmis-

sion, and started the era which has resulted in our mode of living today.

"From then on small groups of independent scientists worked under the most severe conditions to further discovery and development. Not for glory did these men spend their lives, but for the good of the human race! Almost all died as they had lived—alone, in extreme poverty.

"Working in drafty garrets, living on scraps of food, spending winters of intense cold with little clothing, enjoying none of the comforts of life, they squandered their little without thought of self that future generations might be benefited.

"In 1884 a Russian named Nipkow, so little known that none of the details of his life can be ascertained, discovered television and invented the scanning disk, without which we should not have had television at this time.

"However, Nipkow, living and working fifty years too early, did not have the electrical equipment at hand to develop his theories. He died leaving the scanning disk and the principles upon which television is founded.

"Television was put aside for the time being. The miracle of sight transmission had been fathomed, but the marriage with the other forces of electricity which were to produce it had to wait for more than forty years.

"Electrical research progressed, and in 1894 a youth of twenty began experiments with wireless telegraphy. Nobody paid him much attention as it was obvious he must be crazy. By 1896 he was able to send and receive a wireless message more than two miles at Salisbury Plain, England. The following year he built his first wireless sending station at The Needles, Isle of Wight.

"Four years later he astounded the scientific world by sending a message which was received on an aerial held

aloft by a kite near St. John's, Newfoundland, 1,800 miles away. His name is Guglielmo Marconi.

"Broadcasting proved commercially successful, and far-sighted men turned toward the future of radio and television. But, whereas every step in the advance and in the perfection of radio was with the full knowledge and the cooperation of the public, which included the tens of thousands of amateurs, television pushed forward from its pioneer beginnings in the secret chambers of research laboratories. Radio moved forward toward perfection in the full light of day; television's progress was kept secluded. But it also moved forward.

"In May, 1925, C. Francis Jenkins, the 'father of television,' was able to transmit a visual broadcast from his laboratory in Washington, D. C. Following this, he distributed hundreds of sets and parts at cost to amateurs here and there about the country.

"This made it possible for youthful inventors to conduct home research and experimentation, with their sets as the nuclei of their laboratories. It was from such amateurs as these that television recruited its strong corps of pioneer enthusiasts. In 1927 the Bell Telephone laboratories and the American Telephone and Telegraph Company held a more advanced demonstration in the same city, successfully transmitting images over both wire and radio to New York and Whippany, New Jersey.

"The following year more than 300,000 men and women jostled, sweated, and pushed in six lines, each more than a block long, outside the Radio World's Fair at Madison Square Garden, to catch a fleeting glimpse of the new child of science—television.

"By July 19, 1931 television broadcast stations were operating, most of them giving synchronized visual-audio programs. Chicago, Boston, New York, Philadelphia, De-

troit, and other populous areas were able to tune in their choice of two or more stations.

"In Chicago a survey shows that almost 8,000 television receiving sets are being operated in homes. There exists a tremendous interest in the art. The owners of sets enjoy the programs. There are stations operating on regular schedule. Programs include juvenile and adult educational matter, news flashes, lectures, concerts, specialty acts such as comedians and dancers, playlets, political meetings, stock-report ticker service, and other events of social and business significance.

"It is a curious fact that for the past fifty years each depression in this country has been followed by electrical progress, and each great electrical innovation has ridden in on the crest of returning good times.

"With the intensive experiment in television coming toward fruition today it is just barely possible that television may be the ladder industry to bring us up out of depression, as radio was credited with being after 1921.

"The leaders in television, like those in radio, are almost all young men. Philo Farnsworth, Hollis S. Baird, U. A. Sanabria, Lloyd Garner, Michael Nicolson, have yet to see their thirtieth birthdays. C. Francis Jenkins, Dr. Vladimir Zworykin, and Dr. E. F. W. Alexanderson are older, but not old. Their assistants are still in their twenties. All of these men have individual theories. Each leads a small army of youth. The leaders of television will be the brothers and the sons of men who burned the midnight oil back in radio's early days of 1921 and '22; men who often sat up until daylight to report the reception of some broadcast from a distant land.

"Not all of them made inventions worth millions. But all contributed substantially to the perfection of the programs we tune in so casually today.

"Television has arrived at a position parallel to that which radio broadcasting had reached in 1922. But the experience of ten years of radio broadcasting will give television a foundation of knowledge which radio lacked.

"Radio has provided a means of both adult and juvenile education where otherwise education would be impossible. It has raised the musical appreciation of the nation, as recent surveys show. It has become a dispenser of flash news. It is part of the housewife's and business woman's everyday life. And it has the distinction of offering entertainment to the entire family—to entire families throughout the nation.

"Television, correlated with radio, will add the missing factor to broadcasting—visible action. It, too, has obstacles to overcome. But, with the experience of radio to guide it, it should reach a stage of development equal to radio's present one within three years at most.

"How is a scene televised and projected on the screen of a television receiving instrument?

"If you will look closely at a half-tone photograph in your newspaper you will notice that the image of a human face, or of anything else, is made up of a great number of very small dots in gradations of light and dark. Perhaps sixty or ninety dots in line equal one inch, making 3,600 or 8,100 per square inch. The more dots, the finer the half-tone screen and the closer the resemblance to the original picture.

"Images are reproduced on your television screen by the same principle, roughly speaking. Within one-twentieth of a second, the time within which the image must be completed, 3,600 dots of different degrees of light and shade take their component positions on your screen to represent a scene, a human face, or whatever is being televised. The more dots that can be transmitted within one-twentieth of a second, the better the image.

"The principle is not the same as that of a moving-picture screen, for if you should stop a moving picture at any point you would still have a complete image, though an inactive one. If the transmission of the televised image should stop at any second, the image would be but one dot.

"It is the electric eye, a photo-electric cell sensitive to light and shade, that catches the light and shadings of the scene televised. Through microscopic perforations in the scanning disk or drum, the light and shade are received by the electric eye for transmission to your receiving set.

"The scene is transmitted on waves similar to those bringing the musical broadcast from a radio station, and when the impulses are picked up by your receiving set, they are translated back again into the scene.

"The broadcast problems which will beset television are many. Television 'types' will have to be found. Staging, suitable types of plays, make-up, scenery, the minute timing and coordination of action, and the very gestures and acting itself will be distinctly different from anything known before. Producers of television plays, in their present comparatively simple status, must have a wide knowledge of stage, screen and radio. Television programs, like radio, must be timed to the second."

This very readable presentation of the historical background of television leaves us in the mood to anticipate some of the wonders that have been worked in the laboratory.

It is said that the American Telephone and Telegraph Company expended \$1,000,000 in its laboratory over a period of years in order to discover whether or not radio broadcasting possessed commercial possibilities. This question was answered when it finally sold the fruits of its laboratory experiments as exemplified in Station WEAf

for \$1,000,000 in cash, the purchaser being the National Broadcasting Company at the time of its organization.

The same sort of careful, painstaking and expensive laboratory work is now being applied to television. We have not only the Bell Laboratories working with the American Telephone and Telegraph Company and already contributing splendid results, but we have the equally efficient experimental laboratories of the Radio Corporation of America at Camden together with the Jenkins Laboratories, those of the Philco Company in Philadelphia and others of perhaps lesser prominence, all of which are engaged in a sincere effort to obtain the basic answer to the many problems now confronting this little-known science of television.

The spirit of friendly rivalry is not the least among the many elements that contribute to eventual success, and profiting by the experience of those who fifteen years ago were struggling with the problem of radio broadcasting, these new discoveries as they come out are secretly guarded and patented without delay.

Moreover, the amateur is again playing an important part in this new science, and already his discoveries, many of them accidental, have contributed much in a suggestive way to the laboratory engineer.

During the last eighteen months much water has gone under the bridge in this matter of television, and we cannot do better than to leave this chapter with the history of television from its earliest beginnings fresh in our minds, and turn to the subject of television in the laboratory.

CHAPTER XX

TELEVISION IN THE LABORATORY

During my six years as Director of Development of the National Broadcasting Company, I was favored with many pre-views, if one may use that term, of experiments which hopefully might emerge from the laboratory or studio full fledged and in complete working form.

Among the many thrills which I experienced during that period, ranging in location from Hollywood to New York, I think perhaps the greatest was that which followed as the result of my invitation to be present on April 9, 1930, at a demonstration made by the Bell Laboratories, showing the development of two-way television. This demonstration was practically an announcement to the world that television was a laboratory possibility, and though far from being a workable commercial unit, it very clearly showed the basic principles on which further experiments would be conducted.

Those of us who were privileged to be actors in the historic drama which was enacted on that day will not soon forget the experience, when on being positioned in the booth there appeared on the screen the face and form of the gentleman seated in a corresponding booth several blocks away, with whom you were expected to converse. The ease with which this was accomplished, the inflections of the human voice, every detail of face, dress and expression minutely reproduced, gave one the feeling that he was participating in a miracle where unseen powers were being controlled for man's benefit.

Probably few outside of those personally interested have

read the full historical account of that occasion, prepared by the Bell Laboratories, which follows:

Television, as demonstrated by the American Telephone and Telegraph Company, has taken another step in its development with the production of a system of two-way television which can supplement the usual two-way telephone, permitting the parties to a conversation to see as well as to hear each other.

An experimental service between the Telephone Company's building at 195 Broadway and Bell Telephone Laboratories at 463 West Street, New York, which has been in operation for some time, was on April 9, 1930, disclosed and demonstrated to representatives of the press. Special telephone booths were installed at these two buildings and equipped with television transmitters and receivers, designed by Bell Telephone Laboratories, which have been very actively researching in television ever since their demonstration in 1927 of its scientific practicability.

In one of these television-telephone booths a person seats himself before a frame in which he will see the face of the person with whom he is talking. His own face is rapidly scanned by a mild beam of blue light which reflects from his face to the photoelectric cells and gives rise to the current which transmits his image to the distant booth. There is no fierce glare to the scanning beam; and one is not annoyed by its presence and may even gaze directly at it without inconvenience.

The first thing which strikes the observer when he steps into the booth, which is lighted with a dim orange light to which the photoelectric cells are insensitive, is the absence of the usual telephone. Special telephone transmitters and receivers are concealed in the booths. One talks face to face to the distant person, and a hidden receiver speaks the words which seem to issue from his mouth. An ordinary

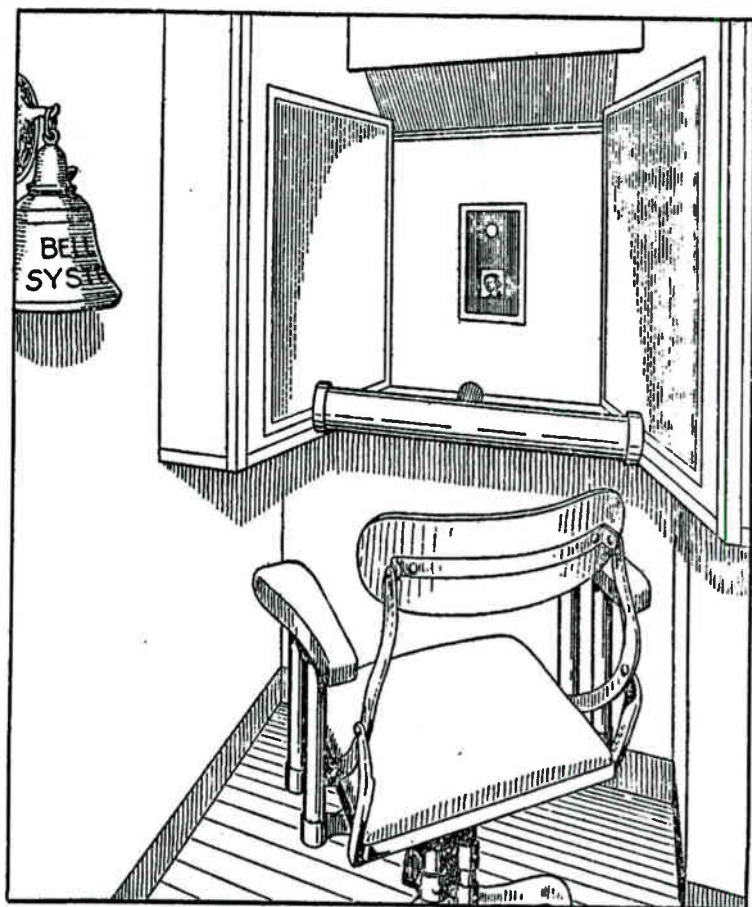


FIG. 1.—This illustrates the booth used in the two-way wire television demonstration conducted by the Bell Telephone Laboratories. The scanning light is projected to the subject just above the reproduction. The photoelectric cells are at each side and above the subject.

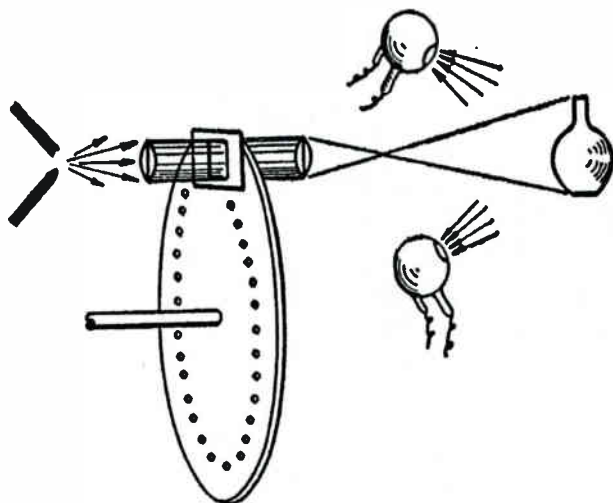


FIG. 2.—Light from a single source is projected as a small moving spot on the subject; the reflected light is received by several photoelectric cells. (Bell Laboratories.)

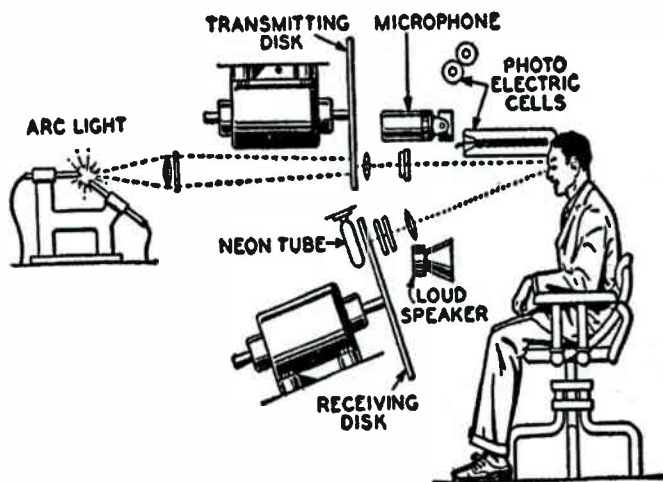


FIG. 3.—Schematic diagram of equipment used in demonstration of two-way television conducted by the Bell Telephone Laboratories.

telephone is not used because it would hide part of the speaker's face from his distant observer, but this novel arrangement of concealed transmitter and receiver avoids that difficulty and adds naturalness to the conversation.

The other party to the television-telephone conversation appears with sufficient detail for recognition of facial expression, but the effect is rather like looking at an animated cabinet-size photograph. This is because the image is produced in monochrome. What one sees is like an instantaneous moving picture done in black on a pink background due to the color of the neon tube, whose flashing light viewed through the synchronized scanning disc forms the image.

The television image is greatly improved over that originally demonstrated by Bell Telephone Laboratories in 1927, and is about twice as large with corresponding increase in detail. The image, which has the detail of about five thousand discrete points of light, is formed eighteen times a second. The photoelectric cells, used in picking up the face which is to be transmitted, have been much improved in sensitiveness and give rise to about ten times the current for the same amount of light as did those developed for the earlier demonstration. That increased sensitivity and the use of the blue scanning beam have made possible the reduction of the dazzle and glare which occurred to a certain extent in the earlier forms of apparatus. The person whose image is being transmitted is, therefore, practically unconscious of the fact that his face is being swept eighteen times a second by a scanning beam of light; and the beam is not bright enough to interfere with his seeing the image of the person to whom he is talking. The increased area and detail of the image necessitate the use of a wide band of frequencies, and the circuits between the Broadway and West Street Buildings have been adapted to the transmission of a frequency band of forty kilocycles.

As the experimental service is operated, if one at Broadway wishes to call a person at West Street he steps into a small anteroom and places his call with the attendant. She in turn ushers him into the television booth where he seats himself in a swivel chair and swings around to face the apparatus. What he sees is a blue spot of light and below that through an inclined plate of glass a small frame showing the familiar Bell System seal and the words, "Iconophone—Watch this space for television image." He is told that as soon as the party he is calling is similarly placed in the distant booth, this sign will be lifted and in its place he will see the other party and that when he does so he may start talking. Then the sign is drawn aside by the operator; and one finds himself looking at an animated picture of the person he has called. When this unique telephone conversation is completed; and he swings his chair around to leave the booth the sign reappears ready for the next conversation.

This system of two-way television follows in general principles that for one-way which was an earlier development of the Bell Laboratories. Continuous researches and ingenious developments, however, were required to perfect it for two-way operation. The particular advance which made possible the use of a scanning light which would not be annoying to the eyes was the development of more sensitive photoelectric cells, the electrical eyes of the television transmitter. At the same time the television image was made much brighter and sharper by the development of higher-powered water-cooled neon tubes.

Instead of the ordinary microphone transmitter, there is employed a sensitive condenser-microphone such as was developed by the Laboratories for radio broadcasting and sound-picture recording. The receiver is a small loud speaker carefully placed in the best position to avoid talk-

ing into the transmitter. To prevent the sound from the loud speaker from reaching the transmitter by reflection, the interior of the booth has been acoustically treated; and the entire booth is of careful sound-proof construction.

This important advance in television has resulted from the efforts of the same group in Bell Telephone Laboratories as was responsible for the earlier achievements in this field. The work has continued under the direction of Dr. Herbert E. Ives of the Laboratories' Research Department with most important contributions by Dr. Frank Gray and by H. M. Stoller, who developed synchronizing mechanisms. Amplifiers were the especial care of A. W. Horton and M. W. Baldwin.

Despite the obvious success of all their past efforts in developing television systems the engineers and scientists concerned refused to prophesy as to their next steps or the ultimate commercial importance of their experimental system. In response to inquiries as to the future relation of television and telephony, President Walter S. Gifford of the American Telephone and Telegraph Company issued the following statement:

"The demonstration by Bell Telephone Laboratories, of simultaneous two-way television and speech, shows some of the results obtained from our continued work in the field of television. At the time of the initial demonstration of television by the American Telephone and Telegraph Company in April, 1927, it was stated that we would continue our work on television. Partial results of this work were shown in the demonstration of out-of-door television in 1928 and of color television in June, 1929.

"The equipment which has been installed for operation over telephone wires between the Laboratories building at 463 West Street and the Telephone and Telegraph Building at 195 Broadway shows what it is possible to do technically

in the present state of the art in eliminating the element of distance as affecting sight and sound in the matter of telephone conversations. This can be accomplished over any distance where suitable telephone channels, either wire or radio, are available.

"Despite the fact that the research and development work of the past three years has resulted in a great improvement and simplification of the equipment required for television, it is still necessarily complicated and expensive, requiring expert attention and large units of apparatus. These facts arise out of the inherent technical requirements for satisfactory television transmission.

"While therefore substantial progress has been made on the technical side, the future commercial possibilities of television are still uncertain. In line with our long established policy of fully exploring and developing every field which gives promise of possible improvement in and extension of electrical communication, we expect to continue our work on television."

Dr. Frank B. Jewett, President of Bell Laboratories, continues by saying:—"The demonstration by Bell Telephone Laboratories of simultaneous two-way television and speech marks a further step in the development of this interesting though as yet commercially unavailable extension of electrical communication. While the equipment has for convenience been installed only a few miles apart, and while wire circuits in ordinary underground telephone cable have been employed for the transmission channels, it might equally well have been installed hundreds or thousands of miles apart. Also it might have employed either wire or radio for the connecting channels, as was shown in the initial demonstration of television by the American Telephone and Telegraph Company in April, 1927. With suitable telephone channels of whatever sort available, the element of distance

is not a controlling factor, although in this form of electrical communication as in all others greater distance ordinarily involves somewhat greater complexity and expense for channel facilities.

"At the time of the initial demonstration in 1927, of one-way television associated with two-way speech, it was stated that there was nothing inherently impossible technically in two-way television and speech. Existing knowledge at that time, particularly as regards methods of scanning, which then required intense illumination, would, however, have rendered the results rather unsatisfactory to those using the equipment. The work of Dr. Ives and his associates in Bell Telephone Laboratories during the past three years has been directed primarily toward simplification and improvement of equipment for two-way television, and particularly to improvement in the means for scanning the person whose image is to be transmitted. As the apparatus now in operation shows clearly, great progress has been made in this direction with the result that one is scarcely conscious of the scanning light or of the fact that he is doing other than looking at his distant correspondent.

"While the equipment now available for television is simpler and more efficient than that employed in the 1927 demonstrations and the results are very greatly improved, the terminal apparatus is still inherently complicated and expensive. This complication arises out of the necessity for producing, transmitting and reproducing a large number of distinct images each second if good results are to be obtained. No practical suggestions for eliminating this fundamental requirement have as yet been made and there appears to be nothing promising in our present knowledge of physical science. Correspondingly, the requirement that what is in effect a very wide band of frequencies be transmitted leaves the transmission channel problem essentially un-

altered. The requirement of an extremely wide transmission band, and the further requirement that during the period of transmission the channel or channels must have a high degree of electrical stability and freedom from extraneous interference, make the channel problem both difficult and expensive. Unlike telegraph or telephone transmission, where a limited amount of channel instability or a moderate amount of electrical interference can be present without serious impairment of service, telephotography and particularly television require practically perfect interference-free channels. For these services any marked instability in the channels or any substantial electrical interference registers at once as a serious defect in the received image. It is for this reason that while radio channels, if otherwise available, can be used for the transmission of television, they are not in the present state of the art as suitable as wire channels. Wire telephone circuits, particularly if in cable, can be maintained at a high degree of constant transmission efficiency and freedom from extraneous interference. Radio channels on the other hand are subject to the well-known vicissitudes of fading, static and interference, all of which result in a degraded received image.

"Although, on account of its present complexity and high cost, no substantial commercial field is yet in sight for television requiring good images, there is still a large amount of technical work which gives promise of decided improvements over the means and methods now available. Both because of this fact and because of the collateral influence which research and development work in the television field has on our general communication problems, Bell Telephone Laboratories will continue to explore the field of television."

The impetus given television by the magnificent experiment made public by Bell Laboratories resulted within a

year in various attempts to simplify television and make it practicable from a commercial or entertainment standpoint. The great broadcasting units got busy with the problem; the Radio Corporation of America in collaboration with the engineers of the National Broadcasting Company equipped elaborate experimental studios on the 85th floor of the Empire State Building, and secretly guarded experimental work was being undertaken in the Camden Laboratories. The Columbia Broadcasting System opened an experimental television station in connection with its broadcasting studios in New York. This, though frankly experimental, was for the purpose of making the radio public television minded as well as to afford to those who owned television receiving sets a reasonable amount of program material.

It so happens that the single face or figure is more easily televised than pictures or groups where several individuals are in motion. For reasons of publicity and also I suspect on account of the human interest story, a young woman, Natalie Towers, was selected as the first television test in the opening of the Columbia television station and as such goes down into history as "The Television Girl." The *New York World-Telegram* of July 14, 1931, has this to say about it:

"Natalie Towers sat in a flickering dimness today and smiled at a machine.

"So history was made. For that was a smile more significant than most. That was the smile of the one who is going to be called 'The Television Girl' by the Columbia Broadcasting Company, and that episode in the company's new television studio was proof that this network broadcasting system is going on the air with both images and sound.

"Substantiating proof was official announcement from the

company that it will begin daily broadcasts of television programs from its new studio at 485 Madison Ave. on Tuesday night, July 21. From that station, under the call letters W2XAB, the programs will sweep America by way of the eighty-seven stations that make up this broadcasting system.

"The premier program will be carried in New York by station WABC and to the remainder of the nation on the regular broadcasting wave lengths.

"Natalie Towers today was a hazel-eyed, brown-haired and personable young woman. She was a laboratory specimen, too.

"They had her move this way and that. They had her smile and frown and mimic sorrow. Then they caught her image in photoelectric cells. They transformed it into electric pulsations. They turned the pulsations back again into light and shadow. And they brought Natalie Towers in miniature into vision inside a little picture frame.

"The Columbia engineering staff will undertake an exhaustive study of television transmission characteristics, particularly as they are related to the metropolitan area,' Edwin K. Cohan, technical director said today. 'A special study of operating technique from the standpoint of organization, management and production is going to be made.'

"That is reproof to pessimists. That is rebuff to reactionaries. That means that television, so long spoken of as 'just around the corner,' has made an epochal turn.

"That admits, too, that television is still as frail as the movie film that used to break just as the United States cavalry rode to the distraught heroine's rescue; it admits, too, that television is still as wan as the movies' long shots in the train-robbing days.

"But it is an omen not merely of the approach of a new

form of entertainment, but of a force that research men in the laboratories today foresee will remarkably alter the comings and goings of most of the civilized dwellers on the planet.

"In the Madison Ave. studio the mechanical scanning disk, a fundamental in the television system most generally in favor, will be used, and Station W2XAB will operate as a separate unit, sending only television programs.

"Eight looking-in posts will be established in the metropolitan area; their reports will guide the experimentation that goes on in the room of the flying spot.

"Whenever voices are synchronized with the faces the transmissions will be made in the usual way over the key station, WABC.

"At the company's western station, though, experimentation in the new science is to be pushed along a mysteriously different front. There the cathode-ray tube is to be used, beginning within a few weeks, and that means that the effort to dispatch clear images through space is to be made by electrical means instead of mechanical.

"The station is KHJ, Columbia's Los Angeles link. It will match its enigmatical vacuum tube against the mechanical scanner of W2XAB here. No matter which eventually produces better images, Columbia wins.

"Although the programs are planned as purely experimental, they also are going to be novel entertainment for the lookers-in. As for the possibilities of television in the theatre, William S. Paley, president of Columbia, thinks they are meagre.

" 'I can't see any excuse for television in the theatre,' he said, 'except as a means of conveying important news events at the time they occur. There's nothing else that can't now be put into the theatre on sound film.

"So far as I can see the possibilities of television lie in the form of regular vaudeville presentations, or short sketches, where there would be comparatively little competition elsewhere.'

"M. H. Aylesworth, president of the National Broadcasting Company, will not yet go quite so far as that.

"'Even news television can't take the place of the illustrated newspaper or news service,' he said. 'That is because it is impossible for the best form of television to broadcast the picture news of the day, with its audience scattered over all the hours of the day.'

"But television, experts agree, sets many an odd doorway ajar, even if it does not budge the theatre's. Experts think of it as letting a farmer tomorrow sit in a Lexington Ave. office and see, in a glass brightly, just how his wheat crop in Kansas is doing after the brief shower, and as showing tomorrow's home folks how the snow glitters at the North Pole when a New Yorker scuffles it within range of photo-electric cells.

"So the laboratories are tussling with technique. They are probing nooks in the darkness at Camden, N. J., where RCA-Victor is concentrating research. They are asking answers from vacuum tubes in London, Chicago and Schenectady.

"It is easy to be specific. They take an electron brush and with it paint the image of someone on the other side of a stone and steel wall. They pick from a row of little globules the ones they want, as a shopper chooses peaches, and through them they filter pleasant hues, thus getting in a television receiver a robustly colored image of whoever happens to be the subject within range of the flying spot."

Following this practical demonstration of the possibilities of television with its frankly admitted crudities and imperfections, popular interest developed and grew to a point

where two years later regular programs were listed as for example in the *New York Sun* of January 21, 1933.

VISION PROGRAMS, THE WEEK OF JANUARY 21, 1933

Saturday

W2XBS—New York

Sight on
143 meters No sound
2:00 to 5:00—Experimental programs.

W1XAV—Boston

Sight on Sound on
179 meters W1XAU
193 meters.
8:00 to 9:00—Experimental programs.
9:00 to 10:00—Sketch.

Monday

W2XAX—New York

Sight on
6.9 meters No sound
4:00 to 4:45—Experimental programs.

W2XAB*—New York

Sight on Sound on
107 meters same wave.
8:00 to 10:00—Experimental programs.

W2XBS—New York

7:00 to 10:00—Experimental programs.

W2XR—New York

Sight on Sound on
179 meters W2XAR
193 meters
5:00—Experimental programs.
7:00—Cartoons.
8:00—Films with sound.
9:00—Cartoons.

W1XAV—Boston

8:00 to 10:00—Experimental programs.

Tuesday

W2XAX—New York

4:00 to 4:45—Experimental programs.

W2XAB—New York

8:00 to 10:00—Experimental programs.

W2XBS—New York

2:00 to 5:00—Experimental programs.

W2XR—New York

5:00—Experimental programs.
7:00—Cartoons.
8:00—Films with sound.
9:00—Cartoons.

W1XAV—Boston

8:00 to 11:00—Experimental programs.

Wednesday

W2XAB—New York

8:00 to 10:00—Experimental programs.

W2XBS—New York

7:00 to 10:00—Experimental programs.

W2XR—New York

5:00—Experimental programs.
7:00—Cartoons.
8:00—Films with sound.
9:00—Cartoons.

W1XAV—Boston

8:00 to 10:00—Experimental programs.

W2XAX—New York

4:00 to 4:45—Experimental programs.

* Service temporarily discontinued, February, 1933.

Thursday

W2XAB—New York

8:00 to 10:00—Experimental programs.

W2XBS—New York

2:00 to 5:00—Experimental programs.

W2XZR—New York

5:00—Experimental programs.

7:00—Cartoons.

8:00—Films with sound.

9:00—Cartoons.

W1XAV—Boston

8:00 to 10:00—Experimental images.

W2XAX—New York

4:00 to 4:45—Experimental programs.

Friday

W2XZR—New York

5:00—Experimental programs.

7:00—Cartoons.

8:00—Films with sound.

9:00—Cartoons.

W2XAB—New York

8:00 to 10:00—Experimental programs.

W2XAX—New York

4:00 to 4:45—Experimental programs.

W2XBS—New York

7:00 to 10:00—Experimental programs.

In the meantime, our neighbors in Canada had not been idle, and television was making real progress. This was particularly true in and about Montreal, where the French newspaper, *La Presse*, did much in a pioneering way toward acquainting the public with the possibilities of this new art. A newspaper account of February 4, 1933, states:

"Progress is now being made toward the commercialization of television in Canada. The French newspaper *La Presse* in Montreal, which operates CKAC, has installed television apparatus with call letters VE9EC.

"Sight and sound programs are being transmitted daily for lookers-in, and also for the purpose of determining the requirements for adapting the existing sound program to television presentations.

"Demonstrations which have been held for the general public have proved that television in its present stage of development has a real, definite value as an entertainment medium for the home. This is the opinion of William Clavell, president of Canadian Television, Ltd., who contends that the demonstrations have shown that pictures of good

detail can be received in the home under normal conditions, and that engineers have brought the art to a stage of development which will permit commercialization.

"It now remains, he believes, for the studio directors to present programs which are adapted to television and help to improve on sound technic. 'Our experience,' he says, 'has shown that properly directed programs unquestionably possess entertainment value. As a matter of fact, many radio programs being presented today can be greatly enhanced in entertainment value by television. On a number of occasions programs have been received with accompanying sound before audiences of a dozen or more persons. After allowing the program to be continued long enough to catch the interest of the audience the picture was purposely cut off the air while the sound was allowed to continue. Invariably the consensus of opinion was that the program became "flat" and lost a considerable part of its entertainment value.

" 'It is not to be assumed,' warns Mr. Clavell, 'that there are no further technical advances to be made in television development. There are many of those yet to come. Present indications are that these technical advances will be slow and that for some time at least they will take the form of improvements and refinements in the present equipment.

" 'It must be remembered that no invention, no matter how revolutionary it may be, was commercialized in a perfected state. Even as simple a device as a bicycle was first sold in a very crude form. Today these early models look ridiculous, but at the time of their introduction they were a commercial product. When radio was first made available to the commercial market it had by no means reached its present stage of perfection.

" 'Television is now much further along the road to per-

fection than radio was in the days of the crystal sets, and we are confident that television in its present stage of development will be commercialized.' "

As this chapter is being written, there comes to my desk the annual report to the stockholders of the Radio Corporation of America which carries an official statement relative to the progress of television in its laboratories during 1932. As such, the following statement is significant:

"The attention and time devoted to experimental television transmission and reception in the laboratories of your corporation makes desirable a concise statement of the present status of this development.

"Progressive experimentation and research have been conducted over a period of years with sight transmission by radio. This research has demonstrated the technical feasibility of television and has confirmed the hopes of your corporation that a practical service of television broadcasting will be possible. Experimental television receiving sets have been constructed that give a type of reception comparable to sound broadcasting reception in the early days of radio. A point was reached last year where the results of this research were demonstrated to the patent licensees of your corporation.

"Television transmission of a nature that will permit entertainment and information broadcasting on a national scale still presents unsolved problems, although much progress in the technical development of program transmission was made during the year. Public interest in this promised phase of radio service has remained keen, but much additional work must be done in the transmission and program field before this new art is suited for commercial use. Your corporation has adhered to the conviction that the introduction of purely experimental equipment of mere novelty

interest would not provide a satisfactory source of general entertainment on the basis of a regular service to the public.

"Television transmission, at the present stage of development, seems most practical on ultra-short radio waves. Not only have these waves given best results in the quality of picture reception, but they also promise the opportunity of creating a new service without the further overcrowding of the already congested short, intermediate and long wave sections of the radio spectrum. For that reason, an important phase of engineering and research work was directed in 1932 toward making ultra-short waves more serviceable. These waves were given their first practical, commercial function in the inter-island Hawaiian telephone system developed in 1931 by RCA engineers. This system has since been in successful and continuous commercial operation. The service range of these waves has been limited sharply, however, because of their resemblance to light waves, which do not tend to follow the curvature of the earth. Experimental stations have been operated by your corporation in the ultra-short wave band for a number of years.

"An important new aspect was given to this work in 1932 by the successful operation of an automatic repeater or relay station for ultra-short waves. Although the practical results of these tests have not yet been confirmed, they appear at this stage to have overcome the limitations of range that formerly seemed inherent in ultra-short wave communication. Active engineering work is being continued in this field.

"When the technical problems of television transmission are more nearly solved, there will remain the necessity of constructing transmission facilities, calling for vast capital outlay by those interested in promoting this new art, before television receiving instruments can render service in homes throughout the country. Nevertheless, so much of fundamental value is expected from this development that every

effort is being directed toward the solution of the remaining technical problems."

The reader now has before him the chronological development of television by years and periods up to and including the final word from the laboratory. With this as a background, one has at his command enough material on which to predicate a prophecy as to what we may expect when television arrives.

CHAPTER XXI

WHEN TELEVISION ARRIVES

There probably is no subject on which there is such a wide variance of opinion as the approximate time when television will cease peeking around the corner and show itself boldly walking down Main Street. This difference of opinion is by no means confined to the engineers but is quite universal. One laboratory expert claims that no material progress has been made. Another intimates that the major problems have been solved and that the economic situation is all that prevents an immediate announcement. Still a third class prefers to predicate any prophecy regarding the future on a comparison of television today with broadcasting as it was being developed fifteen years ago.

To illustrate. W. B. Lodge, a television engineer, in addressing the Institute of Radio Engineers at Cleveland, made this significant statement. "I'm not saying whether television will or will not eventually be of great entertainment value. Present television is crude. I don't know of any absolute proof that research engineers can ever develop a satisfactory, simple visual transmission system, capable of reproducing in the home detailed scenes from a distant point. The three great limitations at present to a satisfactory, well-defined picture are the difficulty of extremely detailed scanning, the accurate synchronization necessary in such highly detailed scanning, and the necessity of transmitting an extremely wide band of frequencies to reproduce the picture at the receiver."

Reduced to its simplest terms, Mr. Lodge means that in

breaking up the image to be televised into small dots and their reconstruction at point of arrival into a duplicate of the original subject is a far more difficult process than transmitting the moving picture from the projection machine to the screen where the processes of transmission are much less complicated.

All this is undoubtedly true, but when we stop to consider that a quarter of a century of research and experimentation elapsed from the time the first Morse symbol was radioed across the Atlantic to the day comparatively a few years ago when the method was finally discovered whereby this impulse could be transformed into speech—when, I say, one stops to consider the accomplishment of this miracle, why stagger or hesitate or consider impossible this still further development which we call television?

General James G. Harbord, for these many years at the head of that great organization which has devoted its energies and millions of money to the development of *radio*, holds quite a different view as to the ultimate of television. In that memorable and widely quoted address, "In Years to Come," delivered before the Cleveland Engineering Society, he describes prophetically how the great corporation meetings of the future may possibly be conducted.

"A great corporation whose directorate is scattered across the continent suddenly needs a meeting of its Board of Directors. Buzzers buzz, wires hum, and bells ring in a dozen distant cities. The call goes out. The hour is named. Switches are thrown and at the appointed time, say perhaps an hour after the call was issued, a quorum is assembled by electricity and called to order by the Chairman. To each man as he sits in the quiet of his own office, come in turn the voices of his fellow directors. Discussion is carried on with the same ease as if they were all gathered around the

table in the same board room. The discussion ends, the motion is put and carried. The Secretary types it, and a copy is flashed to every member involved. Each affixes his signature after verifying what he has heard and now sees. The facsimiles with various signatures affixed, are flashed back to the Chairman, and the Board of Directors adjourns. What does this mean for better understanding, closer co-operation and greater efficiency?"

By employing the same process, just think what might happen internationally.

"It is easy to picture some international peace conference of the future, which will truly be a 'world conference' because it will be of world-wide extent. No delegation will have to assemble bulky documents and carry them to some distant city. The American Secretary of State will sit at his desk in the State Department and the British Premier will remain on Downing Street. The Premier of Japan and his staff will not have to travel half way around the world. The conference will be held anywhere and everywhere. Conversation will be exchanged freely and each delegate will see the other conferees.

"From the standpoint of sound transmission, such a conference already is feasible. It is safe to predict that sight transmission, which will redouble the practicability of such a gathering, eventually will come. Diplomacy has already emerged from the 'star chamber.' It should be prepared for this new era in international intercourse and concord."

Such tremendously wonderful things have developed as by-products of radio as to impress the ordinary layman with the feeling that almost anything is possible in the realm of electrical discovery if enough time and money are allowed for intelligent research and experiment.

I listened spellbound a few months ago to an illustrated lecture by Orestes H. Caldwell, who demonstrated effec-

tively the actual sound of the human heart beats. Again, the perfection of the radio knife, which performs bloodless surgical operations. The use of short waves in agriculture, changing the very seed germs to unusual forms of productivity. The use of the electric eye and the light beam for purposes of protection as well as automatic action. All these things intrigue the imagination and give rise to the well-founded prophecy that, given an equal opportunity in point of time, television will some day be presented with most of the major baffling problems satisfactorily solved.

It should be borne in mind that television today with all its admitted crudities is farther ahead when viewed from the layman's standpoint than was radio broadcasting fifteen years ago. We should not forget that it was not until the amateur had developed broadcasting to a point where more than a million hand-made radio receiving sets were located in the homes of America that big business became sufficiently convinced of the commercial value of this "plaything" to take hold of the proposition and develop it into the field of major industries.

Speaking of the amateur and the important part he has played in the development of radio and television, there now lives in the northern part of Maine in the town of Houlton an amateur by the name of Guy H. Hanson who has a most remarkable record of television reception—one which would seem to prove the amazing possibilities of television when it is developed to a point where it becomes more generally available. Mr. Hanson has received clear pictures which were televised more than a thousand miles distant. He has received acknowledgments from stations on the West Coast, New England, New York City and the Middle West. The log is interesting reading. Following are six items as quoted by him in a recent article in the *New York Sun*:

"Clear pictures were received on my set in Houlton, Me., from the following points:

W1XAV	Boston, Massachusetts	500	miles	distant
W2XAV	New York City, N. Y.	625	"	"
W2XBS	New York City, N. Y.	625	"	"
W2XR	Long Island City, N. Y.	625	"	"
W9XG	Lafayette, Indiana	1150	"	"
W6XS	Los Angeles, California	3000	"	"

Mr. Hanson says that so satisfactory has been the reception that he has been able to detect the eyelashes, earrings, hair, lips, teeth, costumes, jewelry and other items of apparel and that many of the images received have been almost perfect in these details.

Dropping the domestic field for a moment to turn our attention to international television, there is before me a news release stating, "What is reported as the first international television broadcast to be given over water occurred recently when the British Broadcasting Company projected a program to Denmark, according to advices received in the Commerce Department. Both the voices and the pictures were remarkably clear, and even the details of the faces were easily seen."

Two years ago it was freely predicted that the next Presidential inaugural at Washington would be given the full benefits of television in order that the entire country might see as well as hear the new President take the oath of office. That ceremony has now become history and there was no television camera or electric eye in Washington. This does not mean that another four years may not see the original prophecy come true. It will depend almost entirely on the development of our laboratories and a final decision as to the most practicable method to be used.

Laymen, engineers, professionals and others are all agreed on one point, and that is that when television arrives it will

reach us via the entertainment route with very little in the way of immediate advertising revenue—all of which will again raise that all important question, "Who is to pay the bill?"

Having been identified with radio broadcasting at a similar period when this same question was being handed along the line from executive to executive, I am inclined to view this problem as one likely to be present whenever any extraordinary form of public service is in process of development. I think we are too likely to expect that television will be born full grown and able at once to line up side by side with the present highly developed form of speech broadcasting that we are now enjoying. I am of the opinion that this is one of the major reasons that is keeping television so long in the laboratory. It is of course desirable that television when it is offered to the public be in a form comparable with broadcasting so that sight and hearing may travel together in fairly equal step.

At the present time it is possible within limited distances to project a reasonably clear image of a commercial package, accompanying the same by a verbal broadcast description. Simple forms of geometric symbols have been radioed around the world. Radio telephony is giving us a regular system of pictures transferred from point to point with great speed and accuracy. It is only when one depends entirely upon the air waves for the transmission of the subject that the difficulties peculiar to the ether assert themselves. Given the progress such as we have made to date, and may I venture to add, given the present-day carefully guarded secrets of our laboratories, and place them before the public even in their partially developed condition and we would be able to use television commercially even though not profitably.

It takes no great stretch of the imagination to visualize

a music box of suitable size and design for the average home. This consists of two parts—one similar in operation to the present radio receiving set and the other consisting of a screen proportioned to the size of the set and connected with mechanism in the other half of the music box. We now sit down before this combination receiver and look.

Imagine that you are the average citizen, a commuter perhaps, and, on arriving home at night, you first tune in the station that is to carry the sound part of your program, using the ordinary method with which we are all familiar. After this is done, you will then tune in a combination short wave and television receiver. What happens? A pinkish glow appears on the screen and moves from left to right until the entire screen is covered. These pinkish lines move faster and faster until the television signals are accurately picked up and then, lo you behold the program! It may be an artist singing a song, a famous dancer, a lecturer or what not. Or possibly it may be the model of a new automobile. But whatever it is, the image, though not so good as those one sees at the movies, is still easily recognized.

A few years later and what will we see? Possibly a music box similar in construction to this experimental one, but in all probability concealed in the walls of the modern house. The swinging aside of a section of grillwork will disclose a screen. The touching of a button here and there will cause the screen to flash with the colors heralding the approach of the picture, and simultaneously the tones of music or speech become clearer and clearer.

When television approaches a degree of perfection such as has been described, then we will begin to appreciate what the combination of sight and sound may mean not only to the individual family, but also to society at large.

Television in color is also a part of the ultimate scheme. We have already seen its counterpart on the movie screen,

and it only requires a little more in the way of development and a continuing patience on the part of the audience to make this an actual fact.

I am among those who believe that perhaps the final answer to many of the problems that are now confronting broadcasting and television may be solved by a more universal use of the ultra-short waves. In case this experiment does not work out satisfactorily, wired radio and television suggest a combination hard to beat from the standpoint of individual results.

It has been intimated that the final development of radio and television may come about with the full realization of many of the dreams now centered in Radio City. A simple dial system similar to that now used on telephones is already in operation in certain broadcasting studios and could be applied to television reception in connection with a system which combined radio and wired communication. Imagine being able to turn a dial and bring to your room any program being given in any part of the world! In such a system, the initial transmission is over the radio and then is picked up by land wires, which does away with the present limitations in distance and many of the problems that are now vexing the television engineers.

And now what of the future? Let us apply the technique of broadcasting and television as it will have been developed in 1940, seven years from now, to the programs as they are now going out on the air, and this is what we will have presented to us.

It is 11 o'clock on Friday in the New York studios of the National Broadcasting Company. Damrosch is seated at the piano surrounded by his orchestra and waiting the exact moment to broadcast his next program in the musical appreciation hour. In thousands of classrooms and assembly halls of our public-school systems ranging across the continent

from coast to coast, groups of students, a total of six and one-half millions, are gathered before what to all appearances is a projection screen. Suddenly, the notes of the piano are heard, and there flashes across the screen the complete studio scene—Damrosch at the piano, the orchestra assembled each man in his appointed place and at a signal Damrosch explains to the waiting audience composed of these many separate units the thought and purpose back of the lesson of the hour. The piano sounds, the orchestra pick up the refrain and in the twinkling of an eye the students of a nation both see and hear Damrosch in his presentation. Imagine the thrill that under such conditions would come to a group of students and the extent to which the value of such instruction would be increased by the addition of vision to the already accomplished element of sound.

Again, it is Sunday evening at 8 o'clock in the Times Square Studio and millions of families from coast to coast await the announcement, "This is the Chase & Sanborn hour presenting Rubinoff and his violin and starring Eddie Cantor." Think of the added thrill when this great appreciative home audience can not only listen to this most entertaining program, but also have before it clearly portrayed on the screen the features of the actors, Eddie Cantor in person and Rubinoff actually playing his violin. Then, not to overlook the advertiser, how appropriately there might come into the line of vision a can of the actually dated Chase & Sanborn coffee.

Or yet again, think of the millions of people who will be able to see for the first time such great opera singers as Lily Pons, Jeritza, McCormack and others as they appear in connection with the General Electric hour and what an opportunity this gives to that particular advertiser in confining his continuity largely to the visible reproduction of the special articles that are sponsored.

It is Tuesday at 9:30 in New York, and if so arranged, one might see the Texaco Fire Chief driving up with his horse to a Texaco filling station, and on the screen there might easily be portrayed the half hour of give and take between this inimitable actor and Graham McNamee which today forms one of the outstanding sponsored programs on the air.

The combined television and radio broadcasting of the future is going to revolutionize broadcast advertising. Take the annual announcement of the automobile show at which for many years Graham McNamee and others sponsored either by General Motors or some other representative unit in the field have described the models as clearly as possible by the use of the human voice alone. When we have television as the eye of broadcasting, how effective it will be as there flashes on the screen each of the new models, and how much more impressive as well as intelligent will become the description.

Millions of people have never seen Rudy Vallee or B. A. Rolfe, or any one of the many great orchestral leaders. In 1940 every owner of the new-style music box will be able to make the acquaintance of these great musical leaders, thereby adding tremendously to his appreciation of music of all kinds.

Dr. Cadman, preaching each Sunday in the Cathedral Studio in New York, probably reaches the greatest audience that has ever listened to any preacher. Very few of the estimated audience of 10,000,000 people have ever seen Dr. Cadman, but were the new facilities which I am describing available today, his would become one of the best-known faces in all America.

One of the most important public utterances in the history of the United States was that of President Roosevelt when on Sunday evening, March 12, 1933, he spoke to the people

of the United States on the banking crisis. Just think of the tremendous emphasis that would have been added to the speech could it have been accompanied by the likeness of the President, his sympathetic voice being supplemented with the actual presence on the screen of the man who was delivering the message.

Internationally, take Ramsay MacDonald, who travels from point to point and from nation to nation on matters of great diplomatic significance. Imagine the desirability from the British point of view of using him as the mouth-piece of a group of nations desiring to express some form of policy to the rest of the world. What an impressive and magnificent figure he would make televised around the world, and how greatly his speaking presence would emphasize the message.

I am of the firm belief that what I have just described will be merely items in the daily programs of 1940. This is not the vision of a dreamer, but the prophecy of a man who has spent a lifetime in the study of advertising and advertising media and who has had some modest part in the development of commercial broadcasting to its present degree of efficiency.

We are undergoing a renaissance in advertising. The advent and development of broadcasting is only one of the elements that are going to make the advertising of the future one of the greatest and most important factors in our social and economic structure. No longer, after the advent of television, will it be necessary for the salesman to make a long and expensive trip across the continent, when, by the combined use of broadcasting and television in whatever perfected shape may apply, he can arrange to broadcast his samples to San Francisco, accompanying them by a description of their advantages and merits, laying the whole

thing down before a group of potential buyers thousands of miles away.

This is no idle statement, for today by the use of wire television this might be easily made possible, although the attendant expense takes it out of the field of commercial use.

With the increasing refinements in the technique of broadcasting and preparation of sponsored programs that are bound to come about when vision is added to speech and the whole fabric of the program is laid open before the audience, we will then see a larger use of this great new medium commercially and with a greater sense of responsibility to the audience than applies at the present time.

I can easily anticipate special music of the operatic type written exclusively for broadcasting. No longer will it be necessary to compress a three-hour presentation of some famous opera into the period of an hour. Much of this will apply to our commercial programs of the future. Instead of being a miscellaneous collection of disassociated items brought together for the sake of holding the attention of an audience for a limited time, there will be presented musical, dramatic and educational programs written for presentation where both eye and ear reception will be taken into account.

I look forward to 1940 as bringing to the individual home via radio the combination of sight and sound in a degree of perfection that now applies in our best movie theaters.

In saying this, I am aware that it is contrary to the belief and judgment of many of our expert engineers, who of course must be governed by the degree of progress that has been made to date.

I have confidence enough in the engineering fraternity to believe that these super minds that are devoting their entire lifetimes to wresting from nature the great secrets that

have been locked therein from infinity will surmount many of the obstacles that confront them today and make possible in increasing measure the dawning of a new tomorrow.

When the 1940 that I have described shall have arrived, we are likely to be in the midst of a new social and economic order. Nations will no longer be disassociated units, but may be convened on a few hours' notice at a conference where views may be exchanged and visible indications of approval witnessed. No longer will isolation be a factor in many sparsely settled sections of the country, but by broadcasting and television, each family will be brought visibly in touch with the great occurrences of the world and the amusement and educational programs of their own country. For, believe it or not, the day is coming when the simple twirl of a dial or the pressing of a button will set in motion electrical impulses that will bring to you and me voices and figures that will have traveled around the world to greet us.

EXPERIMENTAL VISUAL BROADCASTING STATIONS

Furnished by Federal Radio Commission, March 15, 1933

<i>Name</i>	<i>Location</i>	<i>Watts</i>	<i>Call</i>
Atlantic Broadcasting Corporation	New York, N. Y.	500	W2XAB
" " "	" " "	50	W2XAK
DeForest Radio Company	Passaic, N. J.	5000	W2XCD
Don Lee Broadcasting System	Los Angeles, Cal.	1000	W6XS
" " " "	" " "	150	W6XAO
First National Television Corp.	Kansas City, Mo.	500	W9XAL
Iowa State University	Iowa City, Iowa	100	W9XK
Jenkins Television Corp.	New York, N. Y.	5000	W2XCR
" " "	Portable	250	W2XAP
The Journal Company	Milwaukee, Wis.	500	W9XD
Kansas State College of Agri. & Applied Science	Manhattan, Kan.	125	W9XAK
National Broadcasting Co., Inc.	Portable	5000	W3XAK
" " " "	New York, N. Y.	5000	W2XBS
" " " "	Chicago, Ill.	2500	W9XAP
" " " "	Portable	750	W2XBT
" " " "	New York, N. Y.	5000	W2XF
Philadelphia Storage Battery Co.	Philadelphia, Pa.	1500	W3XE
" " " "	" " "	1500	W3XE
Pioneer Mercantile Co.	Bakersfield, Cal.	1000	W6XA
Purdue University	W. Lafayette, Ind.	1500	W9XGH
RCA Victor Company	Camden, N. J.	2000	W3XAD
" " "	" " "	2000	W3XAD
" " "	Portable and mobile	50	W10XX
Radio Pictures, Inc.	Long Island City, N. Y.	1000	W2XR
" " "	" " " "	1000	W2XR
Shortwave & Television Labrs., Inc.	*Boston, Mass.	1000	W1XAV
" " " " "	*Portable	200	W1XG
Sparks-Withington Co.	Jackson, Mich.	100	W8XAN
" " "	" " "	100	W8XAN
U. S. Radio & Television Corp.	Marion, Ind.	1000	W9XE
Western Television Research Co.	Chicago, Ill.	500	W9XAO
Westinghouse E. & M. Co.	E. Pittsburgh, Pa.	20000	W8XAV
WGAR Broadcasting Co.	Cuyahoga Heights Village, Ohio	200	W8XL
WJR, Goodwill Station	Pontiac, Mich.	500	W8XF
" " "	" " "	200	W8XF

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