

HANDBOOK OF BROADCASTING

How to Broadcast Effectively

BY

WALDO ABBOT

*Associate Professor of Speech and Director of Broadcasting,
University of Michigan; Member, Federal Radio Education
Committee; Member, Radio Council, Chicago Public
Schools; Educational Director of Station WJR*

SECOND EDITION
NINTH IMPRESSION

McGRAW-HILL BOOK COMPANY, INC.

NEW YORK AND LONDON

1941

14 Nov. 1969

HANDBOOK OF BROADCASTING

**COPYRIGHT, 1937, 1941, BY THE
MCGRAW-HILL BOOK COMPANY, INC.**

PRINTED IN THE UNITED STATES OF AMERICA

*All rights reserved. This book, or
parts thereof, may not be reproduced
in any form without permission of
the publishers.*

PREFACE TO THE SECOND EDITION

In the effort to condense the vast amount of material on broadcasting which I have endeavored to include in this volume, I have tried to avoid repeating any instructions. Because of this condensation, no single chapter in the handbook is complete within itself. For instance, in order to understand fully how to write for children, it is necessary that the student read not only the chapter on Preparation of Children's Programs, but also the chapters on Writing the Radio Play and Writing the Radio Serial. If a story for children is to be adapted for radio, consider the chapter on copyrights. Every writer should understand the problems which are faced by the production director; consequently the chapters on production and sound effects should also be studied by the writer for children. He must understand, also, the limitations that are placed upon the actor; consequently those chapters dealing with the radio actor and radio speech in general must be included. If the children's program is to be a sponsored one, he must consider the restrictions that are placed upon advertising programs and the service that radio can offer to the sponsor. Thus it is necessary in practically every aspect of broadcasting to understand the background, the purposes, and the problems that are to be found in other phases of the study of broadcasting.

In addition to the direct instructional approach to the subject of broadcasting, I have endeavored to add something of the case-book method through the analysis of student-written plays included in the Appendix. Many texts and compilations include a number of specimen scripts. These unfortunately cannot be broadcast or used because they are copyrighted. The plays that are included in the Appendix of this volume are not copyrighted and may be revised, in accordance with the suggestions, and presented by any local group.

The Suggested Class Assignments are not questions based upon the text but are outside research projects for the student of broadcasting, designed to carry him further into a study of broadcasting.

I am proud of the Index. While its composition is not particularly literary, its listing is complete. If the subject you seek is not included, it just isn't in the book.

The Handbook of Broadcasting is essentially a "how-to book" for the student, for the teacher of broadcasting, and for the individual who is called upon to make a radio speech. Since 1925, students have been asking me how to do certain things in radio; teachers engaged in graduate

study have questioned me about methods for teaching radio fundamentals, speech, dramatics, and writing; and faculty members, lawyers, doctors, and ministers have come to me with their broadcasting problems. It is for them that this handbook was written. It could be very amusing, but then it wouldn't be a textbook. It could be rigidly factual, but then it would be read only upon assignment. I feel that it is informative, instructive, interesting. As a broadcaster I hesitate to use the word "educational." Nothing discourages a radio-station manager, a listener, and probably a reader more than to have a production announced as educational. Radio speech, acting, or writing cannot be taught exclusively through the use of a textbook, but by assigning a textbook for foundation study the teacher is relieved of lecturing and can devote class periods to auditions, rehearsals, and the criticism of scripts—the idea being to lessen the work of the teacher and increase the knowledge of the student.

This revised edition has been built to conform to the specifications set forth by the teachers of broadcasting in the 57 universities and colleges which use the first edition of the *Handbook of Broadcasting*. I have endeavored to include all their suggestions in making this revision, and I anticipate that it will satisfy their requirements even better than did the first edition. I wish to express my appreciation to them for their valuable advice.

WALDO ABBOT.

ANN ARBOR, MICHIGAN,
April, 1941.

PREFACE TO THE FIRST EDITION

This handbook is designed as a guide for teachers and students of broadcasting, for those listeners who are interested in learning how programs are planned and presented, and for those who may be called upon at some time to speak to "Mike." It is not a text in speech, English composition, education, or journalism, although all these subjects and others are considered in their relation to broadcasting. In some fields the information contained herein is purely introductory, for such topics in radio as education, advertising, and law are too extensive to discuss completely in the limited space allowance of a handbook. While I feel positive that the facts necessary to the student in broadcasting are contained in the following pages, broadcasting itself cannot be taught by textbook, correspondence school, or lecture methods. Microphone experience, either over public-address equipment or in actual broadcasting, is essential.

The most general criticism offered by my students, on whom this text was tried out in mimeographed form, was that it contains too many facts and too little humor. Possibly these eleven years of introducing educational programs have eliminated any tendency upon my part to be frivolous. I have read a talk for an absent speaker on "How It Feels to Be a Mother." I have taken the part of a moral degenerate in an interview with a psychiatrist. I have stood ready to read a dignified introduction of a former president of the University, who was publicly interested in birth control, only to hear the student orchestra, which preceded him, unwittingly blare forth the selection "Whose Baby Are You?" I have struggled to introduce in a conversational style the Curator of Lepidoptera of the Insect Division of the Museum of Zoology, and the Curator of Phaeo-grams of Basidiomycetes of the University Herbarium. I hope that the students who plod through this book will understand my resultant seriousness.

WALDO ABBOT.

ANN ARBOR, MICHIGAN,
May, 1937.

CONTENTS

PREFACE TO THE SECOND EDITION	v
PREFACE TO THE FIRST EDITION	vii
CHAPTER I. TECHNICAL FUNDAMENTALS OF RADIO	3
Studios—Acoustics—Microphones—Transmitter—Radio Waves—Route of Radio Program—Frequency Modulation—Facsimile.	
CHAPTER II. RADIO SPEAKING.	21
Style of Delivery—Breathing—Position before the Microphone—Pitch and Volume—Speed of Delivery—The Manuscript—Commercial Speech.	
CHAPTER III. RADIO PRONUNCIATION.	36
Drill—Place Names—Classical Music—Foreign Names in the News—Regional Dialects—Pronunciation References.	
CHAPTER IV. ARTICULATION, INTONATION, RHYTHM.	46
CHAPTER V. NEWS PROGRAMS	51
Types—Selection of News—Writing the News—Presentation—Regulations Regarding News Broadcasts Code.	
CHAPTER VI. SPORTS PROGRAMS	61
Preparation—Spotters—Ad Libbing.	
CHAPTER VII. IMPROMPTU AND EXTEMPORE SPEECH PROGRAMS.	67
Public Events; Special Features—Round Table—Radio Interviews—Bull Session.	
CHAPTER VIII. POETRY PROGRAMS.	76
Choral Reading—Musical Background—Voice.	
CHAPTER IX. PREPARING THE RADIO ADDRESS.	84
Vocabulary—Sentences.	
CHAPTER X. RADIO IN THE PUBLIC SERVICE	91
Local Community Service—Medical and Health Programs—Serving the Farmer —Religious Broadcasts—Parent-teacher Programs—Politics and Government— Law-enforcement Programs.	

CHAPTER XI. WRITING THE RADIO PLAY	103
Plot—The Announcer or Narrator—The Beginning—Characters—Dialogue—Effects—Length—Taboos—Manuscript—Adaptations—Submitting Manuscripts—Television.	
CHAPTER XII. WRITING THE RADIO PLAY.	118
An Instructive Broadcast with Comments.	
CHAPTER XIII. WRITING THE RADIO SERIAL.	125
The Adult Serial—The Juvenile Serial.	
CHAPTER XIV. PREPARATION OF CHILDREN'S PROGRAMS.	135
Stage Plays Adaptable for Radio Use—Poetry Programs for Children—Performers for Children's Program.	
CHAPTER XV. DIRECTING THE RADIO PLAY	145
Studying the Script—Selecting the Cast—Rehearsing the Play—Studio Audiences—The Radio Actor—Ability to Read Lines—The Voice—Stage Diction; Radio Speech—Acting—Microphone Position.	
CHAPTER XVI. SOUND EFFECTS	160
Manual Sound Effects—A Sound Drama.	
CHAPTER XVII. WRITING COMMERCIAL CONTINUITY	179
Subject Matter—Style—Dramatized Commercials—Length—Diction—Sentence Structure—Rhetoric.	
CHAPTER XVIII. SERVING THE SPONSOR.	192
Department-store Advertising—The Service of the Agency—The Advertiser's Service of the Local Station—The Sales Appeal of Radio Advertising.	
CHAPTER XIX. BROADCASTS TO SCHOOLS	203
Program Types—Preparing the Program—Listener Participation—Music Instruction—Vocational Guidance—Elementary Science—Teaching History—Civics—Geography—Speech—Other Radio Classes—Teachers' Guides—The Radio Examination—Teacher Training.	
CHAPTER XX. PUBLIC-ADDRESS AND SOUND-RECORDING EQUIPMENT IN THE SCHOOL.	223
The Use of Public Address to Teach Backward Students—Sound Recording.	
CHAPTER XXI. ELECTRICAL TRANSCRIPTIONS	241
Electrical Pickup—Electrical Transcriptions—Libraries—Service—Transcription Networks.	
CHAPTER XXII. MUSICAL MIKE.	247
Radio Singer—Microphone Position—Vocal Setups—Song Selection—Orchestral Setup—Diagrams.	

CHAPTER XXIII. THE RADIO DAY.	258
Morning Programs—Afternoon Programs—Evening Programs—General Requirements—Surveys—Local Features—Special-day Programs.	
CHAPTER XXIV. TEACHING THE BROADCASTER.	269
Introductory Course in Broadcasting—Courses in Radio Speech—Courses in Writing—Radio Reading and Dramatics—Production, News, Advertising, and Law—Teacher-training Course—A Course for the Radio Educational Director—Semitechnical Course—Equipment to Be Used in Classes in Broadcasting—Forms, Reports, and Logs.	
CHAPTER XXV. THE LAW AS IT AFFECTS BROADCASTING	295
Radio Libel—Music Copyrights—Common Law and Statutory Copyrights.	
CHAPTER XXVI. RADIO AS A VOCATION.	316
The Studio Staff—The Announcer—Auditions—Radio Writers—Musical Staff—The Producer—The Actor—Technical Staff—Advertising and Sales Departments—Publicity—Staff Turnover—Women in Radio—Organization Chart.	
GLOSSARY.	333
Signals—Studio Expressions—Abbreviations.	
APPENDIX: SPECIMEN SCRIPTS	339
Michigan's March of Science—The Gray-eyed Man of Destiny—Game of the Week—Special Case—A Fickle Widow (Adaptation)—Bibliography of Continuity Specimens—Texts Containing Scripts—Radio Plays Published—Sources of Scripts for Broadcasts—Nonroyalty Plays for All Women Casts.	
BIBLIOGRAPHY.	371
SUGGESTED CLASS ASSIGNMENTS	379
GENERAL REFERENCES.	393
INDEX	411

HANDBOOK OF BROADCASTING

CHAPTER I

Fundamentals of Radio

This handbook is intended for the student of broadcasting, not for the radio technician. That field of instruction is in the capable hands of the physicists and electrical engineers. Even a broadcaster, however, should know something of the medium that makes his profession possible. Let us trace the speech of an announcer from him to his listener.

The announcer will either be broadcasting a special-event program (which is called a "remote") from a dance hall, an athletic field, a church, or some other location where the event is taking place, or he will be speaking from a studio located in the broadcasting station. If the program is a remote-control program, various acoustic problems will arise. There may be an excessive period of reverberation or an echo, or there may be a great deal of background noise. If he is broadcasting from a studio the faults which are apparent in the remote-control broadcast have been corrected by acoustic engineers.

When sounds are generated in an enclosure such as a room or a studio, the impulse that reaches the ear of the listener in the room comes from several places. Some of it comes directly from the source (50 per cent or less, depending upon the distance), the source in this instance being the announcer's vocal chords. Some comes from the ceiling, the side walls, and the floor by one or more reflections from these surfaces. In a hard-plastered room, where sound waves can reflect several times without being appreciably absorbed, a note may persist for 5 or 6 seconds after it has been sounded. A condition such as this, which engineers call "liveness," is intolerable in the majority of instances for broadcasting, and even conversation is difficult in such a room. To remedy this condition, sound-absorbing materials are placed on the surface of the room. There are various materials and methods for acoustically treating such studios. In many new studios additional deadening has been effected by the elimination of flat surfaces upon the walls and ceiling. A "saw-toothed" wall breaks up the sound waves reflected from it and helps further to diffuse the waves throughout the room. In other studios the side walls are hung at an angle, slanting gradually from the floor to the ceiling.

It has been found that the most desirable period of reverberation for a radio studio is from 0.8 to 1.2 seconds. When the reverberation period is greater than this, the studio is "live" and sounds persist too long.

When it is less than this, the studio is "dead" and sounds die out too soon. Singers complain that their voices seem to go out into the "dead" room and do not come back. In order to create certain effects, studios are now being built with "live ends" and "dead ends." The live end is one in which the walls are hard-surfaced and flat, built for the purpose of re-



FIG. 1.—Directional ultrasensitive crystal microphone, Type "US." (Photograph by Brush Development Co.)

reflecting sounds. The deliberate purpose of this arrangement is to introduce one relatively loud reflection into the microphone and help the naturalness of the pickup. An orchestra is placed with its back to the live end, which acts as a shell reflector. The presence of many people in a studio will tend to deaden it, since each individual's clothing absorbs the sound. Therefore it becomes necessary to provide means of varying the amount of sound-absorbing materials upon the walls in order that the reverberation period of the room may be kept right. In modern studios there are sliding panels which permit the sound-absorbing material to be moved to one side and a hard surface which will reflect sound to be exposed. With the development of frequency-modulated broadcasts, studios will require special acoustic treatment for frequency modification.

Reverberation should not be confused with echo. An echo is the return of a sound by reflection after a short period of silence. Since the shortest interval of silence that the ear can detect is $\frac{1}{16}$ second, it follows that, for an echo to be present, there must be a difference of at least 70 feet between the rate length of the sound reaching the listener directly and that returning by reflection. Reverberation is the successive return of the sound by reflection at intervals too short for the ear to detect so that the sound seems to be continuous as its intensity decreases.

In an acoustically treated studio the announcer speaks to a microphone. His words are carried by sound waves from his mouth to the microphone. These sound waves travel at approximately 1100 feet a second. Each note in his voice causes air vibrations or sound waves. Each sound

wave has its own frequency, that is to say, the number of vibrations set in motion per second. When these notes arrive at the microphone they cause the sensitive face of that microphone to respond at like frequencies and thus change the sound wave into electrical impulses.

There are three general types of microphones in current use in broadcasting stations today. These microphones, which are manufactured by more than 70 concerns, have many different trade names but fundamen-

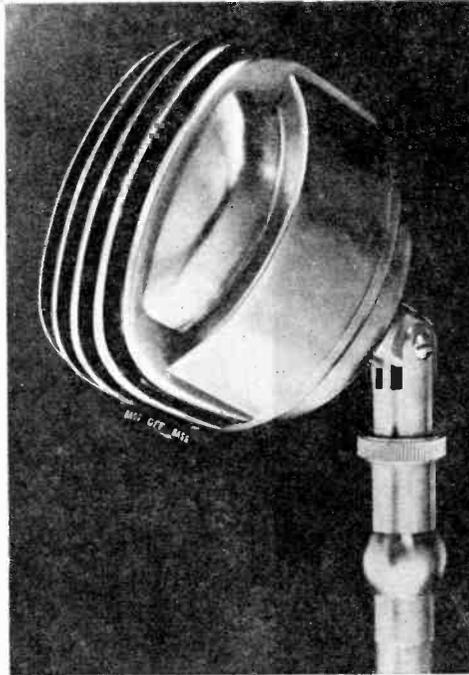


FIG. 2.—All-purpose crystal microphone "AP." (Photograph by Brush Development Co.)

tally they are either crystal, velocity, or dynamic microphones. The crystal microphone is constructed of Rochelle-salt crystals about $\frac{1}{100}$ inch thick. The sound waves hit these crystal slabs and cause them to vibrate and bend apart; the vibration sets up a weak voltage, which varies with the sound pressures upon the crystals. This type of microphone is very rugged, not easily damaged, and comparatively inexpensive. It may be constructed so that it is either directional or nondirectional, being responsive to sounds coming from all directions. It has very good tonal quality but is more frequently used for public-address and recording work than for actual broadcasting. Figure 1 is an inexpensive crystal microphone manufactured by the Brush Development Company of Cleveland, Ohio; Fig. 2 is the all-purpose Brush crystal microphone. These

microphones are protected by grills to prevent wind disturbances when they are used outdoors. Figure 3 is a nondirectional crystal microphone, also manufactured by Brush, of the diaphragm crystal character. Microphones of this type are very satisfactory for both speech and music.

The velocity type of microphone is frequently called the "ribbon mike," and justly so, because its operation depends upon the vibration of a very thin corrugated duraluminum ribbon suspended between the poles



FIG. 3.—Nondirectional crystal microphone "BR 25." (Photograph by Brush Development Co.)



FIG. 4.—Bidirectional velocity or ribbon microphone. (Photograph by RCA Manufacturing Co., Inc.)

of a strong magnet. When the ribbon is set into motion by sound vibrations, small electric currents are developed in it which are then further amplified. The ribbon microphone is equally sensitive on the two opposite sides which represent the broad faces of the ribbon, while it is comparatively insensitive on the other two edges. It is an excellent type of microphone to be used for a quartet or to be placed in the center of an orchestra. The duraluminum ribbon is hung in the bottom of a V-shaped trough. The result is that speakers do not talk across this microphone, but into the trough. The velocity type of microphone (Fig. 4) is manufactured by Radio Corporation of America and is of the standard broadcasting type.

Smaller velocity microphones are made for public-address and recording work.

The principle of the dynamic microphone is essentially that of the dynamic loud-speaker. It consists of a diaphragm on which is mounted a small coil of fine wire. This, vibrating in the field of a strong magnet, generates minute electric currents proportional to the incoming sound impulses. Its diaphragm is moved back and forth by the air or sound waves. This causes the coil to move in a powerful magnet field and electrical impulses result. The dynamic microphone may be constructed as either a directional microphone or a nondirectional microphone. The two

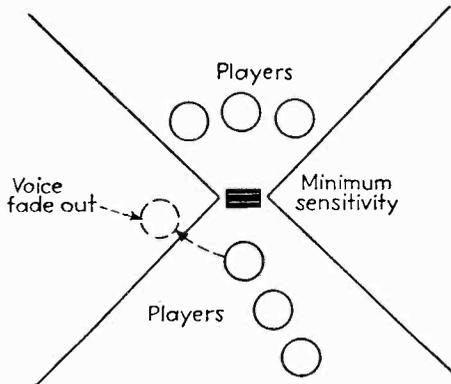


FIG. 5.—Velocity mike fade-out.

most popular types at the present are the “eight-ball” and the “salt-shaker” types. Figure 6 shows the eight-ball microphone which was developed in 1939 by Western Electric Company. This is nondirectional when it is upright as shown in the picture, but, by using a swivel and the acoustic baffle assembly, it may be converted into a semidirectional microphone for speech and announcing. The eight-ball is probably the most popular of the high-quality broadcasting microphones. Figure 7 portrays the salt-shaker microphone developed by Western Electric in 1937. This is a high-quality microphone designed for general utility work in broadcasting, including those pickups made outside of regular studios. When upright and used in such a way that the speakers talk over the microphone, it is nondirectional, but when used as illustrated, with the swivel faced toward the speaker, it becomes a semidirectional microphone. In 1939 Western Electric developed the cardioid directional microphone, which was further perfected in 1940. This microphone (Fig. 8) is really two microphones, a ribbon microphone and a dynamic microphone, each of which can be used independently or in conjunction with the other. This was the first instrument to combine not less than three pickup characteristics in one instrument. By the use of a small switch located at

the base of the microphone, it is possible to convert this instrument into nondirectional, unidirectional, and cardioid or heart-shaped selectivity. Three other coverage areas designed to minimize reverberation are also possible with this microphone; Fig. 9 shows a diagram of three of the pickup areas for this cardioid microphone. Radio Corporation of America makes an all-purpose microphone consisting of two ribbon-type microphones operating in a common airgap (Fig. 10). This microphone also has

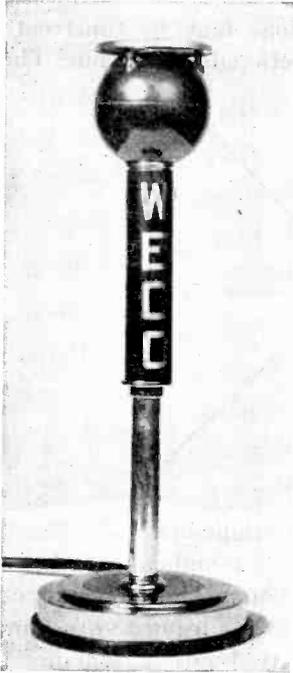


FIG. 6.—Nondirectional eight-ball microphone (dynamic). (Photograph by Western Electric Company.)

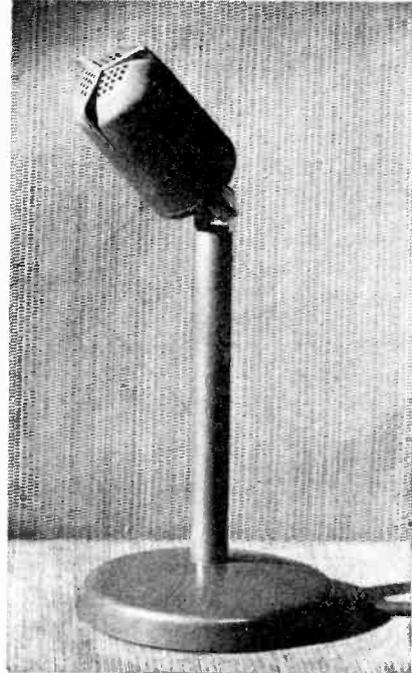


FIG. 7.—Nondirectional salt-shaker microphone, dynamic type. (Photograph by Western Electric Company.)

the three pickups—bidirectional, nondirectional, and cardioid. The grills or screens on all microphones are designed for protection and wind screening.

Two interesting microphones are the machine-gun and the parabolic. The machine-gun accessory (Fig. 11) consists of a series of tubes strapped together through which sound is conveyed to a dynamic microphone which fits into the end. This type of equipment is designed to reduce reverberation and extraneous noises in distant pickups. The muzzles of the tubes are directed at a speaker, soloist, or musical group at a distance and only that sound which enters the end of the tube in a direct line is

conveyed to the microphone. For the parabolic microphone equipment in this instance (Fig. 12), a very large wooden chopping bowl has been used to directionalize a distant pickup of a band or of a speaker in a convention. The microphone is placed in the focal point of the concave side of the bowl. The sound is reflected to the microphone. Equipment of this sort is used on gridirons and in convention halls. Various companies make parabolic reflectors.

The electric impulses that are developed in the microphone are carried to a control board adjacent to the studio in which the announcer is speaking. Here the control operator blends the output of microphones which are in use and amplifies the volume before it is sent out over special telephone lines. Special instruments calibrated in volume units (decibels), called "VU" by the technician, show the loudness of the programs at all times, and it is one of the duties of the control operator to keep the loudness within certain limits, namely, between 40 and 100 volume units. This is equivalent to -5 to -0 decibels.



FIG. 8.—The Multimike, a development of the cardioid microphone combining the features of the velocity and the dynamic microphones. (Photograph by Western Electric Company.)

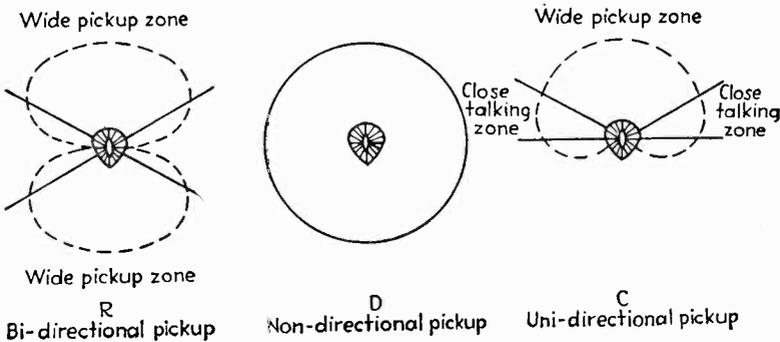


FIG. 9.—Cardioid directional microphone.

The operator also checks the quality of outgoing music and speech by

listening to it to see that no distortion is present. He formerly had to modulate sudden explosive sounds to avoid blasting; however, this is now accomplished automatically by equipment at the transmitter.

After the program has been amplified and monitored in the control room, it is put onto a telephone line. The electrical impulses are carried by this telephone line at approximately 30,000 miles per second. If the program is a network program, it is carried by these telephone lines to the various transmitters of the stations that compose that network throughout the country and is put into the air by the individual transmitters of these stations. If the program is a local one, it is sent by telephone line to the station's own transmitter.



FIG. 10.—All-purpose microphone (two ribbons) with cardioid pickup. (Photograph by RCA Manufacturing Co., Inc.)

In the early days of radio it was convenient to locate the transmitter on the same building in which the studios were housed, but it was soon found that this arrangement had several disadvantages, such as too much screening of the station's signal by large steel buildings in the neighborhood and unsatisfactory ground conditions. As a result, transmitters are now usually located several miles outside the city, where conditions are better for maximum efficiency. The Columbia Broadcasting System has recently built an island for its transmitter off the shores of Long Island, New York.

The straight vertical antenna with a height equal to 0.58 of the station's wave length gives better results than any of the older inverted L or T types. Some of these have small bases, large middle sections, and then small tops, much resembling two ordinary towers fitted together base to base. Others are straight vertical structures of uniform thickness throughout. In either type the steel structure of the tower is the actual radiating system. A necessary part of the transmitter's radiator is the system of ground wires that is buried in the soil around the base of the antenna. Although never seen by the visitors to the stations, these bare copper wires are laid out with great care at a depth of 6 to 12 inches beneath the surface in much the same pattern as the spokes of a wheel about the hub, each wire or spoke being almost as long as the antenna itself.

The transmitter proper (Fig. 13) consists of a quartz-crystal oscillator which generates the radio frequency (the quartz crystal to maintain the

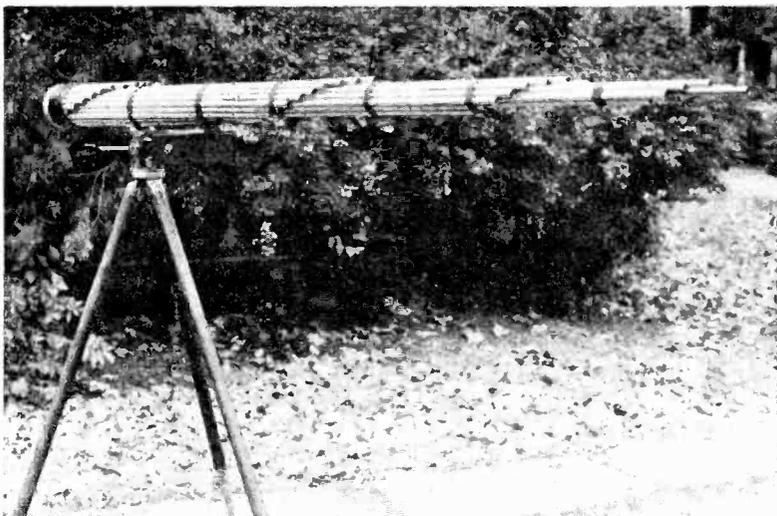


FIG. 11.—Machine-gun attachment for dynamic microphone (very directional).



FIG. 12.—Improvised parabolic microphone.

exact frequency, the number of kilocycles of the station). This crystal oscillator is followed by several more stages of radio-frequency amplification which increase the power to a value suitable for modulation. The speech which comes from the microphone or incoming telephone line is amplified by a series of audio-frequency amplifiers which terminate in a stage called the "modulator." This modulator in turn is connected to the radio-frequency stage previously mentioned. It is at this point that the mixing of the audio frequency and radio frequency takes place. Further amplification follows, and the resulting power is fed into the antenna and radiated in all directions. This modulation or mixing process gives rise to other frequencies in addition to the carrier frequency, which is the frequency of the quartz crystal. These other radio frequencies, called "side

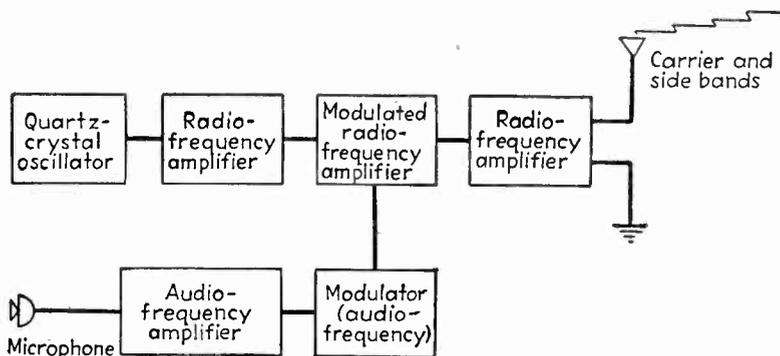


FIG. 13.—Radio transmitter.

bands," are located in the assigned channel on either side of the carrier and contain the speech of the announcer whose program we are tracing from his mouth to the radio listener. The Federal Communications Commission limits the width of this channel to 10 kilocycles.

Every station has its own carrier wave located in the center of its assigned channel. These carrier waves vary between 550 and 1600 kilocycles for the regular broadcast band. These waves travel at the speed of light. All carrier waves travel at the same speed, but those having fewer kilocycles do not oscillate so fast as those having more kilocycles. A station operating at 550 kilocycles has a rate of oscillation of 550,000 cycles per second for its carrier wave.

The carrier waves which are sent out by the radio station may be divided into two categories; first, the ground wave, and second, the sky wave. During the daytime the sky waves have no effect upon the coverage of the station because they travel upward and are lost, but at night these sky waves play a very important part because they go up and hit the Kennelly-Heaviside layer and are reflected back to the earth. These

reflected sky waves are evident usually only after sunset and extend the nighttime coverage of stations. The reflected sky wave is important only to the most powerful stations in the clear-channel classification. Such stations can be heard ordinarily during the daytime between 100 and 200 miles by means of their ground waves, but at night, through the medium of the reflected sky wave, they are heard at great distances because the sky waves are not absorbed by ground conditions as the

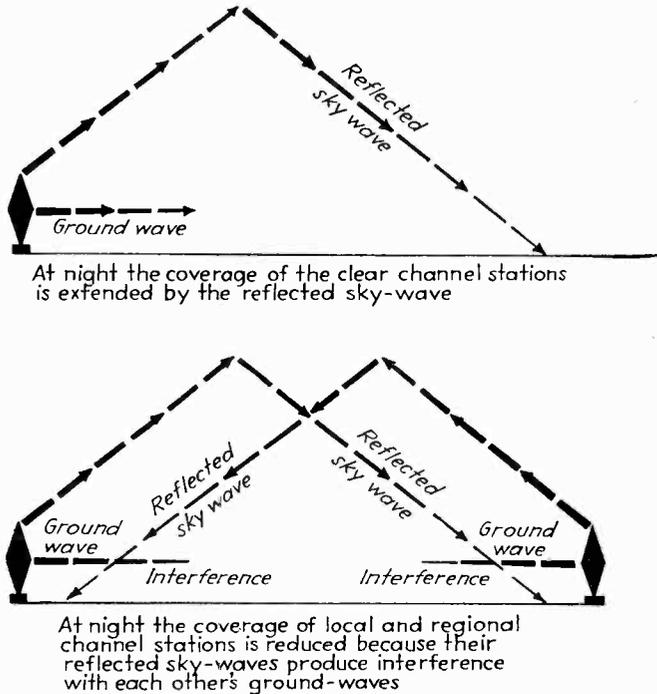


FIG. 14.

ground wave is. The sky wave is not so dependable as the ground wave of the station, and generally this extended coverage is considered as the secondary coverage area. It is this reflected sky wave that causes fading, inasmuch as the fading area exists where the ground wave of the station interferes with the reflected sky wave of the same station. Despite the faults and unreliability of the sky wave, a very large proportion of the radio audience depends upon sky-wave reception for its evening programs. Local and regional stations do not benefit from their reflected sky waves because they are located closer to one another than are clear-channel stations and, instead of having an area cleared of interference for their sky waves, they have merely an area in which their sky waves interfere with those of another station upon the same wave length. If a listener to

a regional or local station has his receiving set near the outside limits of the ground wave of a local or regional station, he will find at night that there is interference with another station because he is picking up the sky waves from one or more stations operating on the same frequency. Thus the coverage of a regional or local station is less at night than it is during the daytime, and the coverage of the clear-channel station is greater (see Fig. 14).

According to the North American Regional Broadcasting Agreement of 1940, entered into by the United States, Canada, Mexico, and Cuba, the 106 channels in the standard broadcast band are divided into three principal classes—clear, regional, and local.

1. **Clear channel.** A clear channel is one on which the dominant station or stations render service over wide areas and which are cleared of objectionable interference, within their primary service areas and over all or a substantial portion of their secondary service areas.

2. **Regional channel.** A regional channel is one on which several stations may operate with powers not in excess of 5 kw. The primary service area of a station operating on any such channel may be limited, as a consequence of interference, to a given field intensity contour.

3. **Local channel.** A local channel is one on which several stations may operate with powers not in excess of 250 watts. The primary service area of a station operating on any such channel may be limited, as a consequence of interference, to a given field intensity contour.

The number of channels of each class shall be as follows:

Clear channels	59
Regional channels	41
Local channels	6
	106

All countries are permitted to use all regional and all local channels subject to power limitations and standards for the prevention of objectionable interference. The clear channels were assigned definitely to the various countries, 63 clear-channel stations being permitted to the United States. Twenty-four of these channels are used in conjunction with other countries. The remaining 39 are exclusive United States channels. With only 59 clear channels available and with the United States permitted to operate 63 clear-channel stations, it is obvious that certain of these stations must be located far enough apart so that interference of the sky waves will be negligible. With only 106 channels available for broadcasting in the United States and with 881 stations operating on January 1, 1940, it is equally obvious that a great many of these stations have to be in the same frequencies, but by placing them far enough apart so that the

ground waves of regional and local stations do not interfere and that the sky waves of clear-channel stations do not interfere, it is possible to obtain good reception from all these licensed stations. This is achieved by the Federal Communications Commission, which limits the power of the various stations and the hours in which certain stations may broadcast.

Various stations are allotted a certain amount of power for broadcasting their programs. Those which have clear channels are generally allowed 50,000 watts; those in the regional classification do not exceed, under ordinary circumstances, 5000 watts; and those in the local category have a maximum of 250 watts. Under ordinary circumstances a station with 50,000 watts would be able to send its carrier wave approximately three times as far as a station with 250 watts. However, there are factors that determine the coverage of a station in addition to power. A station which broadcasts upon a low frequency, as a 550-kilocycle station, will go farther with less effort than a station which is broadcasting upon a frequency of 1550 kilocycles, because the latter carrier wave has to oscillate so many more times in covering the same distance. In an article by J. M. Greene, circulation manager of the National Broadcasting Company, in *Printers' Ink*, April 26, 1940, the following illustration explains this:

To explain why one carrier wave travels farther than the other, let us compare them with two men, one tall and the other short, walking at the same speed along a soft, sandy beach. Each step absorbs energy and the result is that the taller man takes fewer steps (the radio station broadcasting upon the lower frequency) and is still going strong after the shorter man has given up (the radio station broadcasting on the higher frequency).

A second factor which determines the coverage of a radio station is the ground over which it passes. Various geological conditions affect the transmission and cut down the coverage of the station. Therefore the station which has the greatest power and the lowest number of kilocycles and broadcasts over the best ground conditions is the one that will be heard the farthest. Power is not the only factor in station coverage. It is entirely possible under certain conditions for a station operating on 250 watts to have a greater coverage than one operating on 50,000 watts. Ground conductivity alone can offset the advantages of both high power and low frequency.

Not only do such things as power, the frequency, and ground conductivity affect the coverage and reception of programs, but man-made conditions may affect it. Electrical disturbances caused by X-ray machines, power lines, etc., create disturbances which affect the signal received by the broadcasting set. High steel structures surrounding the antenna of the station's transmitter will affect its coverage.

As has been pointed out, radio signals travel farther at night by their sky waves than they do during the daytime. Therefore, in order further to avoid interference, the Federal Communications Commission grants licenses to certain stations which are located close to one another to broadcast with decreased power after sunset. More stations broadcast from sunrise to sunset than are permitted to air programs after sunset. There are other instances where stations share time, one station being permitted on the air for part of the day and another one for the balance of the day. These limitations permit the licensing of a greater number of stations.

Also in an effort to decrease interference between stations, directional antennas are sometimes installed. Under normal circumstances a vertical antenna will radiate almost equally well in all directions, but it is possible by proper modification to directionalize the radiation from an antenna. The bulk of the station's power may be sent in one certain direction, as is done in radio airway beacons, or it may be kept from radiating in that direction and left free to traverse all the others.

The carrier frequency and side band (sometimes called "side frequencies") come through space to be picked up by the aerial of the receiving set. Radio waves travel through the air at the speed of light, approximately 186,000 miles per second. If the announcer in a prize fight is talking to a person located in the 25-cent seats 500 or 600 feet away from the ring, and to a microphone, you who are listening to the program 500 to 600 miles away will hear his voice over the radio before it will be heard by the man who has paid his quarter. These radio waves, picked up by the aerial, are changed into electrical impulses (of the same frequency as the radio waves), which are conveyed to apparatus which tunes the set to the frequency of the station. After suitable amplification these impulses go into a detector in which the speech of the announcer, in the form of electrical impulses of the same frequency as developed by the microphone, is extracted from the carrier and side bands. Thence these impulses are further amplified and conducted to a voice coil mounted in a magnetic field. This voice coil is attached to the paper cone of the loud-speaker. The impulses cause the voice coil and hence the cone to vibrate. The vibrations of the cone result in sound waves just like those that were projected by the announcer in the studio (see Fig. 15).

The phraseology I have used in this explanation (channels, bands) is that used by technicians, specialists in electrical engineering and physics. However, it does give rise to a misconception on the part of the layman. In reality there are no definite layers in the air. Possibly a better illustration to use in connection with broadcasting is that there are two stations, one represented by a red light and the other by a green light. When these stations are broadcasting, both lights are illuminated and the air about

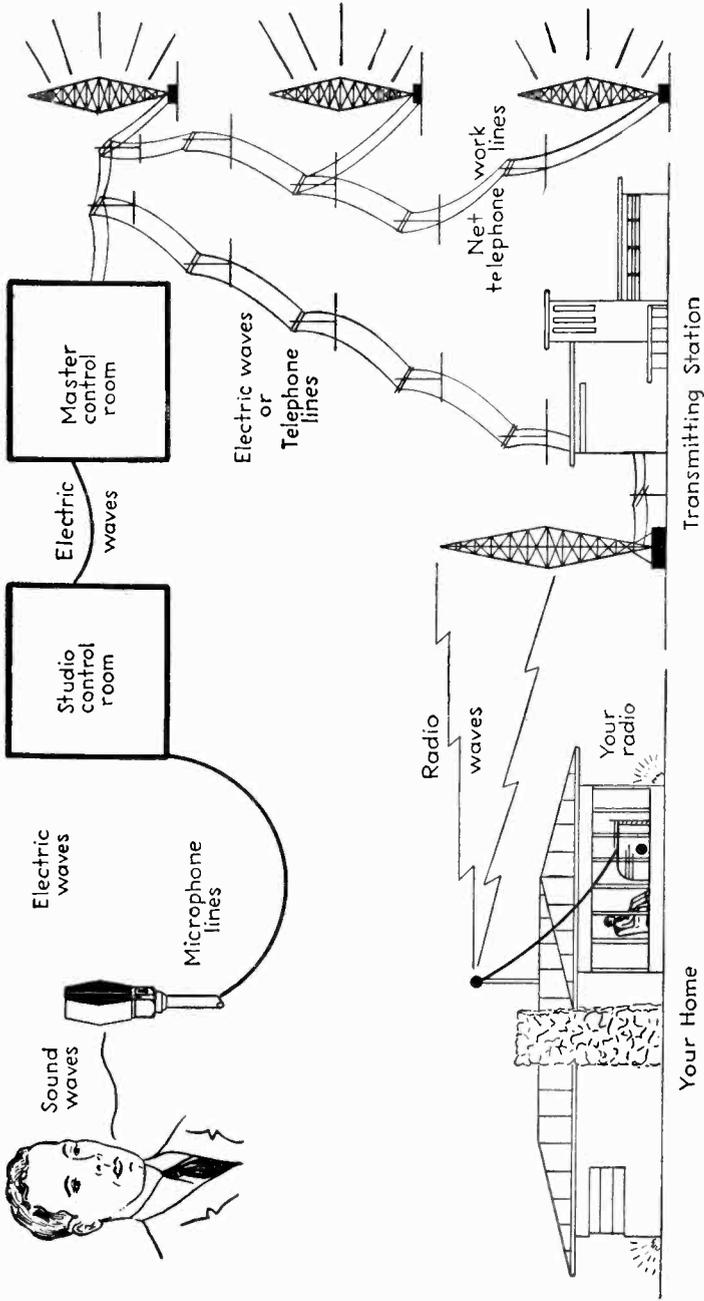


FIG. 15.—The route of a radio program.

them is filled with red and green rays representing their radio frequencies. Both colors are everywhere just as their radio waves fill the air. Your receiving set is a filter which picks out only the red rays or only the green rays as you tune that filter (receiving set) to the station to which you desire to listen. The red rays do not go in a definite pathway or band, but go everywhere, up and down and around the light which is the antenna of the station. If the red or green light were made brighter and dimmer according to some prearranged code, while the color was not changed, and the person watching the lights could interpret that message through the medium of a code, he would be using the light rays just as the receiving set picks up radio waves. The *intensity* of the signal is varied by the sound wave which is transmitted in the amplitude-modulated system of broadcasting.

Frequency Modulation.

Following the same illustration, if the code system sent out by the light is built around a change in the *color* of the light instead of in the brightness, we have the new frequency-modulation or staticless radio idea illustrated. In other words, the frequency of transmission is changed back and forth as a code. The receiving set under these circumstances must be sensitive to frequency changes or, in the illustration, to color changes.

The frequency-modulation system possesses several important advantages over the older method of amplitude modulation which makes its employment desirable. Man-made and natural interference is reduced by this method of broadcasting. Nearby stations do not cause annoying interference because of the wide band of frequencies needed by this system. To date the only real interference that is noticeable is that caused by automobiles. Frequency modulation is a short-wave form of broadcasting and covers a restricted area. Because of the high frequency of this type of broadcasting, there is room for a great many more stations than now exist in the broadcasting band. The frequency-modulation transmitter, furthermore, is much simpler than the amplitude-modulated transmitter and less expensive to operate; receivers can be serviced by regular radio-service men and can be combined with receivers for the regular broadcast band. At the present time seven companies are manufacturing frequency-modulated receiving sets. While only 17 stations are operated at the present writing, there are hundreds of applications filed with the Commission for such stations. There are two major reasons for not changing at once to this method of broadcast. Radio sets in existence today will not receive frequency-modulated radio waves, and, at the high frequency at which these transmitters are employed, the radio waves have begun to take on some of the properties of light and will not go very far beyond the horizon. In the majority of instances such stations cover

a radius of only about 25 to 50 miles. The width of the new FM channels has been adjusted to permit high-fidelity transmission, making more noticeable the high frequencies in the reception with the result that the listener has to be trained to appreciate these frequencies rather than to rely upon the lower tonal qualities of regular broadcast. However, frequency-modulated sets have tone control just as do regular receiving sets.

In order that all the frequencies may be broadcast under this system, it is essential to have equipment, such as microphones and studios, which will carry all the frequencies which are not being carried at the present by the amplitude system. Telephone lines are being developed to carry these frequencies so that frequency-modulated programs will be satisfactorily broadcast over a network of stations connected by telephone lines. It is also possible for such frequency-modulation broadcasts to be rebroadcast by radio relays established over a prescribed area. The F.C.C. has not yet ruled as to whether such relayed networks will be permitted. In making available such channels for frequency modulation, the government has set aside bands for educational purposes exclusively which adjoin the bands for commercial purposes, with the result that all the research that is conducted by commercial stations will be advantageous to the educational broadcasters. Furthermore, all receiving sets built to receive commercial frequency modulation will also be constructed to receive programs in the educational bands.

The band between 42,000 and 50,000 kilocycles is set aside to accommodate both commercial and educational FM stations. These FM stations can operate upon the same channel without objectionable interference with much less mileage separation than is possible for the standard broadcast station. FM has the ability to exclude all but the strongest signal; consequently the service range of such stations, though limited, will in many cases be greater than that obtained in the primary service area of comparable standard broadcasting stations. As the commission intends to grant licenses upon the basis of coverage without consideration of power, the coverage of the FM station will be substantially the same both day and night.

Facsimile.

Facsimile is the reproduction of an original picture or page of printing. It was first used commercially as wirephoto service and consisted of the sending of photographs by telephone methods. The same method of transmitting pictures and copy from radio stations to the home is now being used in the field of broadcasting.

Facsimile broadcasting equipment consists of sending and receiving instruments. The sending equipment utilizes the photoelectric cell or eye

to scan in orderly fashion all the line elements of material placed in the scanning machine. The photoelectric eye receives more or less reflected light, depending upon whether the subject matter is black or shades of gray or white. It transfers these light variations into electrical impulses which are amplified by conventional amplifiers and passed to a transmitter suitable for the transmission of voice or music. These electrical impulses are sent through the air just as a regular broadcast is but they are retained as impulses by the receiving set instead of being converted into sound waves.

At the receiving point some form of printing mechanism (an electric pen or scanner) is necessary to scan the receiving paper in exact juxtaposition with the sending point, and this reconstructs a large number of dots or lines across the page in exactly the same relative position and in the same density as they appeared upon the original, in a sense half-toning or screening the picture. The scanning machine can operate as high as 125 lines to an inch.

The equipment can be used on any wave length on which the transmitter is broadcasting; the normal broadcasting band or the ultra-high-frequency band. Technically the major difference in these two is that facsimile is permitted to be broadcast on the normal broadcasting band only in the early-morning hours, while all ultra-high-frequency stations are allowed to broadcast facsimile at any time of the day or night. The standard bands would make facsimile more suitable to rural coverage while the short waves would be used primarily for metropolitan coverage. The coverage of facsimile would be the same as the coverage of the station over which it is broadcast if the regular band were used in the early-morning hours. Up to the present time only experimental licenses have been granted by the F.C.C.

Facsimile is a very interesting device and like a great many other scientific devices its value will depend upon the ingenuity of the various groups employing it. It is being experimented with by various newspapers, who feel that it will be confined to a bulletin or headline type of news rather than used for the lengthy story. It is possible to use facsimile in connection with such programs as the cooking school, in which speech could be combined with the sending of a facsimile of the recipe. Fashion talks could be given in the same way. It is possible that facsimile might be used in extension teaching as an educational medium.

CHAPTER II

Radio Speaking

Basic Problems.

In discussing the problem of how to be effective via the microphone, my task really is to adapt modern principles of effective speech to their use in the particular case of radio. A study of speech principles will reveal the little-realized fact that, aside from a few allowances due to the mechanical limitations of a microphone, the best radio speaker is the one who follows most closely the dictates of a competent textbook on public speaking. The added difficulty that lack of a visible audience presents in broadcasting only increases the necessity of observing speech rules. The often-remarked fact that many good announcers know nothing of platform speaking, while many good platform speakers are a failure on the air, is not a refutation of my statement. Reference to a speech textbook would confirm the technique unconsciously used by these announcers, while an analysis of the so-called good platform speaker would show that his success grew more from showmanship and dramatics than from effective speech.

A textbook on speech usually is divided into chapters devoted to advice concerning each type in turn: the argumentative speech, the humorous talk, or the expository discussion. Obviously, all these possible types of talks have their turn on the air. In the case of the radio announcer, the same individual is compelled constantly to change his style from one form to another, so that he is confronted with the difficult task of attempting to handle all types of public speaking equally well. Very few announcers specialize in one type of work. The average announcer must be prepared in the same day to give the dramatic ballyhoo of a spectacular program, to read the 3-minute commercial advertisement for a so-called health salt, to read the announcements for a program of classical music, and to introduce a professor or a minister. All these variations and many more come as grist to his mill.

An added complexity in the study of radio speech is the increasing attempt of radio-program planners to get away from straight speaking, through the use of other interest-catching devices. The interview, composed of questions and answers, is being employed to hold the listener's attention. Round-table discussions by a small group of authorities are used to gain informality and, at the same time, to make the speakers feel

more at ease. Debates and dramatic skits are also heard over the air. All are interesting variations and require training different from that given to the orator.

The absence of a visual audience and the inability to aid his delivery by gestures is a serious handicap to the speaker. Allow me to make clear just what the lack of a visible audience means to the speaker. First of all he notes the absence of circular audience-speaker responses. In any speech textbook one will find a discussion of the stimulation that an audience gives to the man addressing it. Public speaking is usually a type of circular social behavior, in terms of social psychology. The speaker first stimulates his audience, but we sometimes overlook the fact that the audience in turn stimulates the speaker. This circular process goes on throughout the entire speech, playing an important part in its success. Anyone who has done much public speaking will realize the subtle but potent influences the audience has upon the speaker. The best speaker is inclined to be the one most sensitive and responsive to these influences, one who has the "feel" of the audience and who adapts himself to it both in his manner and in the content of his material while talking. It is needless to point out that the radio has entirely broken the chain of this circular process for the speaker. Radio performers drafted from the stage and platform are the first to feel the handicap of this situation.

Another important psychological factor in broadcast speech as differentiated from platform speech lies in the distribution of a radio audience, for an audience divided into a series of small family groups deprives a speaker of all the advantages to be gained from interstimulation, so commonly noticed in crowd psychology. Those infectious waves of emotion that sway a large mass of people, seated elbow to elbow, are lost in radio.

Furthermore, radio listeners are entirely free of those social inhibitions, compulsions, and conventions which dull speakers often rely upon to keep a visible audience in their seats. People who would be embarrassed to walk out of an auditorium while some would-be spellbinder is speaking do not hesitate to shut off the radio speaker. These factors force the radio speaker to be more painstaking in the preparation and in the presentation of his talk, if he expects to hold his audience.

The radio speaker has only one set of stimuli to work with instead of two. He can use only the audible speech symbols and he has no appeal for the eye. To quote from the *Little Book of Broadcasting* put out by the National Broadcasting Company, "Few of us realize, until put to the task, the extent to which the eye and the ear, when working together, are influenced by the impressions that come through the eye. We early found by experimentation that, when the sense of hearing alone is involved, we have a very different and a much more difficult problem on

our hands." The problem that must be met here is not merely that of more strenuous effort at good speech, but it also involves more careful attention in the writing of the speech.

Added to this complete dependence upon one set of stimuli is the fact that this concentration seems to help the auditor more easily to detect the mental attitude of a speaker. Harvard psychologists recently announced that insincerity seems to be detected more easily over the air than from the lecture platform. This is a note of warning to the careless radio announcer who may tend to allow his lack of interest in or his disagreement with his announcements to reflect itself in his voice. An exercise in mental hygiene seems to be indicated for one who would be successful. As Milton Cross put it, "An announcer's voice must be healthy, well dressed, and cheerful." A continual conscious effort must be made toward that end.

As a last preliminary consideration of the subject, remember that practically all programs of every kind are prepared in advance to be read. Those which are extemporaneous are rare exceptions when compared to the general mass. This rule is due to several factors: (1) the necessity of split-second timing makes it imperative that a speaker be chained down to a definite timed manuscript; (2) lack of a visible audience makes extemporaneous speaking a difficult task for anyone, even if it were allowed; (3) self-imposed rigid standards as to the nature of material allowed on the air requires the station to ask for a manuscript in advance of its broadcast. The necessity for reading imposes a preliminary hurdle which must be jumped in attempting good public speaking on the air.

Style of Delivery.

The cardinal principle of good speech is the use of a direct conversational tone. The whole emphasis is upon a sincere direct contact with the members of an audience, which will achieve the effect of face-to-face conversation. A moment's thought will reveal that this is exactly the effect the radio speaker desires to achieve. Many delivering their first speech on the air seem to forget the distribution of their unseen audience and to remember only its size. While they are usually impressed with the fact that their potential audience runs into the millions, they fail to realize that this large number is divided into smaller groups of usually not over three or four individuals. A radio speaker must consider the atmosphere in which his voice is to be heard. He must visualize a small family group, distributed about the living room, engaged in domestic tasks or pleasures. People thus situated resent an oratorical or strident tone of voice in a guest, seen or unseen. They want the radio voice to talk to them, not shout at them. The speaker must fill the role of a guest, not that of an intruder.

Proceeding on this understanding, we have only to ask ourselves what are the most effective means of speech in an ordinary conversation? What is the winning and attractive tone to use? The situation calls for an intimate and informal tone; insincere gushing is to be avoided as in everyday conversation. The speaker must be warm, sympathetic, and sincere, eliminating any trace of ostentation. There is no need to raise the voice—that instinctive lack of confidence in the microphone's sensitivity is entirely unjustified. A quiet, easy voice is the best.

Many speakers put too much stress on the need of adopting a personal style when broadcasting. A few of them go to the opposite extreme, which is also unacceptable; it is equally wrong to change to a colorless discourse, in which the voice loses power to express the variety of thought and feeling needed to give life to an address. A good speaker, well qualified to speak on a subject, should maintain a tone in keeping with his topic even though it is not personal or conversational. The effort to carry on an imaginary conversation may result in the loss of forcefulness somewhere between the microphone and the listener. Words have eloquence and power, but, if the speaker neglects to consider the cardinal principle that he cannot be seen and relies upon the animation of his facial expression and gestures and indeed of his whole body to hold the attention of the listener, he has gone too far in his picturing of the radio audience in order to obtain a friendly, personal intimate connection. Possibly it is better for the radio conversationalist to visualize the imaginary listener who is sitting opposite him during his radio address as being blind. Thus, in order to convey his thoughts and the emotions which he feels, he must express everything in his voice by variations in volume, in pitch, in intensity, by pauses, and by holding certain words.

Of course, to create the mood of a face-to-face conversation successfully requires the right mental attitude. The speaker must have a sincere interest in the material he is delivering and in the people who are listening to him. This must be especially remembered by the radio announcer, for the necessity of continually reading statements that he does not believe makes it easy for him to allow a tone of insincerity or boredom, the hint of a sneer, or an indication of a supercilious attitude to creep into his voice.

The necessity of reading from a manuscript adds greatly to this difficulty of maintaining a sincere conversational tone. Reading is both the easiest and the hardest manner of presenting a speech. It is the easiest because all one has to do is to read the words without any effort at choosing them except with the eye. But for that very reason it is difficult to read them in an interest-compelling manner. It is so easy getting the words that most people merely find them with their eyes, say them with their mouths, and permit their minds to wander away from the subject. If the speaker himself falls mentally asleep, his unseeing audience will do

the same. Reading is a tremendous handicap to spontaneity. Again the difficulty is emphasized in the announcer's case, for, when a man is giving various items continually, day after day, in many cases repeating what he has read previously, the opportunity to wander mentally is all the more attractive. To avoid the trap of this too-easy job of reading words, one must concentrate upon the mood and the meaning of these words. Proper pause, stress, and intonation can be obtained only in this way. When the announcer or speaker has completed his radio address, he should be able to give a clear résumé of what he has said.

There is no better training for radio speaking than the reading aloud of all types of material. A person who is going on the air should sit down with a friend and tell that friend what he intends to say and then read a part of his talk. The listener can tell him just how his conversation differs from his reading style and tone. It would be a better test if the friend would close his eyes or turn from the speaker while listening. Of course, the faults in diction, pronunciation, and construction which are frequent in conversation must be avoided in good radio talking. Stumbling over an announcement is an unforgivable sin on the part of the announcer. There may be brief pauses—the slight hesitancy used by speakers to emphasize the choice of a carefully selected word. Unfortunately the radio address must be read, but the speaker should be so familiar with the material that he merely uses the manuscript as an outline. Talk from the paper, follow what is written, but do not worry about the exact phraseology of the written words.

It has been said that the system of college teaching by lectures "is a process whereby the notes of the professor become the notes of the students without having gone through the minds of either." This applies to most beginners in oral reading. The written symbols become speech sounds in a mechanical manner which in no way involves the understanding of the reader, with the result that they are produced in a steady patter totally devoid of expression.

Psychological experiment has shown that the muscles of the body respond in perfect accord with speech efforts. If one were to record in waves, on a strip of paper, the voice of a speaker and also the subconscious movements of any part of his body, for instance, the arm, one would find that these two curves agree. A close correlation exists between body movements and thought processes. When we watch a prize fight, we frequently become aware of the fact that we are duplicating the motions of the fighters, clenching our fists and tensing our muscles. Thus it is that, when we speak extemporaneously, our utterances are controlled by our thought processes and the correct grouping and stress are automatically achieved. While one is reading, one's speech organs are to a great degree controlled by the mechanical movements of the eye in following along

the printed line. This uniformity of movement is reflected in one's delivery, and there is but one way to overcome this. That is to think what one is reading. By so doing, the influence of thought processes in controlling the speech organs can be made to overrule the mechanical influence of eye motion. A little practice will convince the most skeptical that thinking can easily solve most of the problems of oral reading. The grouping of words into thought units, the placing of emphasis, and correct pauses are easily achieved in this manner.

Simple Anglo-Saxon words are the best—the ones in every person's daily vocabulary. Some words are difficult to understand over the telephone or the radio. Excessive use of sibilants, the recurrence of words ending in the same sound, alliteration, and "tongue twisters" should be avoided. Where there is difficulty in enunciation, chop off a word and use it as a springboard to leap into the next word. Dwell longer on the vowels of important words than on those of relatively unimportant words; for example, usually you should give more time to nouns, adjectives, verbs, and adverbs than to other kinds of words, especially the articles and expletives.

Inflections of the voice are vital to the good radio speaker for they give what he has to say color, life, and emphasis. Do not allow your delivery to have a seasick wave of equal highs and lows. The rising inflection is far more effective than the falling inflection, except for humorous effect, because it suggests "I am going on."

If the use of quiet gestures will help your delivery, by all means use them. Point your finger at an imaginary listener. Shake your fist. A smile is heard over the radio because it changes the quality of your voice. A person a thousand miles away will "hear" you lift your eyebrows. Do not neglect these aids to speech. Make no gesture or movement, however, which might cause extraneous sound. Do not shake the hand that holds the manuscript paper. Do not rub an unshaven chin. Do not smack your lips or snap your fingers. Do not sigh or pound the desk, for these sounds will not be understood by the distant listener. Here is the lament of a radio announcer:

I introduced the Duchess of Dundee
Over the facilities of WABC.
Her organs internal
Made noises infernal
And everyone thought it was me.

The most important thing for the radio speaker is that he should have a pleasing personality and be able to project this personality through the air to his audience. He should carry his eye picture of a scene through his mind and into his speech. He must never forget his listener in his own enthusiasm but should project this enthusiasm into the air. He must find

interest or thrill in the scene that he is describing and give the same feeling to his audience. He must have a purpose in his speech, his announcement, or his description, and know exactly what he intends to convey to his listening public.

William Shakespeare, although unacquainted with radio, once delivered some excellent advice to announcers when he said: "Speak the speech, I pray you, as I pronounce it to you, trippingly, on the tongue: for if you mouth it, as many of you players do, I had as lief the town crier spake my lines . . . the purpose of playing, at the first and now, was and is, to hold, as 'twere, the mirror up to nature."

Breathing.

Groups of words count more in a radio talk than individual words. The listener picks up phrases and clauses that constitute thoughts. The wise radio speaker does not rely on ordinary punctuation, but goes through his manuscript and marks off groups of words which, put together, bring out his thought. These groups should vary in length to avoid monotony but none should be too long for natural breathing. Correct breathing is natural breathing in the sense that it is free from physical restraint and conscious self-control. While the orator can take a deep breath through his open mouth, such an intake is clearly heard over the radio. Consequently the radio speaker must inhale more quietly and deliberately through the nostrils or above the tongue. The radio speaker should never permit himself to exhaust his breath entirely but should breathe quietly and naturally. Frequently speakers are hampered with tight-fitting collars or belts, which should be loosened to allow greater freedom in breathing. Do not breathe directly into the microphone, for you will sound like a windstorm if you do. Stand erect with squared shoulders, with your head up so that your throat will not be cramped, and with feet flat on the floor.

Position before the Microphone.

It is unwise to give definite rules on how far from a microphone a person should speak. The rule would have to be changed for different types of microphone, for different voice qualities, for the acoustics of different studios, and, if more than one speaker is upon the program, with the placing of the speakers. However, if you are alone on the program and have learned to control your volume, 18 inches is about the right distance to be away from the ribbon type of microphone or the other modern types. Talk to a person who is presumably about 4 feet away. If you are to be confidential or sentimental in your style, you may talk very low and close to the microphone. This is the principle of crooning which is used by some singers and frequently by announcers. The majority

of microphones are directional, and the speaker must talk either at an angle to or directly into the mouthpiece. Formerly, a speaker whose voice was explosive, whose sibilants were noticeable, whose voice quality was husky or whining was advised to talk across the face of the older type of microphone in order to minimize these disadvantages. In every case, have a test before going on the air to determine where you should be placed in relation to the microphone. Also have the microphone placed at the right level so that you may comfortably talk directly to it. Physical comfort is essential. When you have an immediate as well as an invisible audience, use more than the conversational volume but stand a little farther from the microphone than for ordinary announcements, in order that the proper volume will enter the instrument.

Moving about the studio before the program goes on the air is certainly better than sitting rigidly with eyes glued to the "On the Air" sign. Place yourself in a comfortable position before the microphone. Some people prefer to sit, feeling that they will be more conversational in such a position; but the diaphragm of the seated speaker is cramped and, consequently, those who are giving longer radio addresses prefer to stand. Do not lean upon the pulpit while giving a long talk because you will have to straighten up in order to rest your muscles and when you straighten up you unconsciously recede from the microphone, so that the listener has the impression you are leaving. Maintain the same distance from the microphone all the time that you are talking and do not throw your voice from side to side away from the microphone as you would upon the platform. Do not rock back and forth while talking because when you come forward your voice will become very strong and as you sway backward it will become faint.

If it is necessary to cough or to sneeze, turn as far from the microphone as possible. While the platform speaker may pause and take a drink during the delivery of his address, the radio speaker would broadcast the sound of swallowing the water if he did the same thing. Do not play with a lead pencil, rolling it between the hands. The rattle of paper before the microphone sounds like sheet-iron thunder. If you are to use a manuscript or an outline, be careful not to rattle it. Do not allow the paper to touch the microphone and by no means bump into or handle the microphone or its standard in any way.

Pitch and Volume.

In radio the matter of volume is of utmost importance. If one speaks too loudly, the control operator must reduce the volume by mechanical means, thus interfering, to some degree, with its transmission in perfect naturalness. If one speaks with insufficient force, the control engineer must amplify it mechanically, again producing an effect that is not

entirely natural. It is important also not to use too great a variety of emphasis, producing sudden peaks in the energy delivered to the microphone. The volume resulting from the overemphasis of a word or syllable may be too great for the apparatus to carry adequately. The control engineer, taken unawares, is unable to neutralize the effect mechanically and what is called a "blast" results. This is an overloading of the sensitive apparatus and a discordant rattle in the transmission and reception results.

The microphone magnifies the qualities of the voice. If the microphone and loud-speaker are properly adjusted, free tone has its resonance enlarged. The good voice then comes over with all its qualities enhanced. A speaker with such a voice may stand close to the microphone and talk intimately into it. A speaker with a voice of less pure quality gets a better effect by standing at right angles to the microphone. The volume of voice that the speaker may use varies with the distance from the microphone. As the volume of the voice is varied, the speaker should move back and forth from the microphone. The rasp of the metallic voice and the twang of the nasal are always magnified; when the current of transmission is too great, they come over with ear-splitting harshness. Excitement and nervousness are obvious and cannot be minimized.

The student of speech, the minister, the actor, and the stump speaker have all been trained to throw their voices to a far-reaching audience, but when they come before a microphone they must learn to retain all the vibrant qualities of the strong voice, yet maintain a level of volume that will not force the control operator to impair their tone qualities by mechanical means. There are many points in common in the correct techniques of addressing a visible audience and in speaking over the radio but the factors of pitch and volume are decided differences. The pitch of the voice of the public speaker is inclined to be raised a tone or two. If you were in a great hall speaking very loudly, the volume would be considerably greater, and the pitch would be perhaps three or four tones above the conversational level. The radio speaker, on the other hand, must keep in his pitch down to his conversational level.

A good radio voice must have proper placement, range, flexibility, good control, and proper pitch. The pitch best suited to radio, owing to the fact that the microphone favors certain vibration frequencies, is baritone for men and contralto for women. The dangers, encouraged by reading, that the voice will fall into measured and rhythmical patterns with set inflections at regular intervals must be avoided. Voice variety of the proper sort is as important as the voice itself.

Speed of Delivery.

Speakers vary greatly in speed of talking. Some speak much faster than others, and the sponsors of programs may receive complaints about

the difficulty of following them. A commercial station generally sells a 1-minute announcement and limits the topic to 100 words. A speedy delivery tends to reduce sincerity. News commentators frequently get as high as 225 words a minute. However, the best speed to maintain for the longer radio talk is about 140 words a minute. Franklin D. Roosevelt speaks between 110 and 135 words a minute. The one variable factor that sometimes upsets all the advanced estimates of length is the emotional tension. This factor frequently affects the speaker's natural tempo. The radio address should never be given too fast, because it is hard for one who is listening and unable to see the speaker's lips to follow the talk. Speedy delivery also results in slurring, in the dropping of finals, and in the speaker's getting ahead of himself in his manuscript, with the result that he stutters or loses his place. On the other hand, too slow a delivery may make an audience restive. Suit the rate of utterance to the weightiness and importance of the material, not only to a passage as a whole, but to particular paragraphs, sentences, and phrases within the passage. The result will be not only a pleasing and *logical* (not mechanical) rate variation, but also that justly applauded quality of vocal composure.

One should rehearse at home to determine the preferred rate of delivery for each manuscript. The split-second requirements of the radio require that the speaker time his copy before going onto the air and maintain the speed of the rehearsal in actual delivery. The actual time of a 15-minute program is 14 minutes and 30 seconds, the remaining 30 seconds being used for technical shifts from program to program. The announcer's introduction and conclusion generally require 1 minute, reducing the actual speaking time to 13½ minutes for a 15-minute program.

The Manuscript.

The manuscript should be double spaced in order to allow for easy reading. It should be clean so that it will be easy to follow. It is best to have it typewritten. Be sure that the pages are arranged correctly so that you will not have to search for the correct page when you are before the microphone. Do not clip the sheets together. Use a type of paper that does not easily rattle. Onionskin paper is perhaps the worst. Typewriter bond paper is decidedly noisy. The pulp copy paper used in newspaper offices is probably the best. When you have completed reading a page, let it flutter to the floor. Do not attempt to slide it to the bottom of the pile, for this will be heard.

The announcer's voice must be natural, a universal voice—one not tied to any locality or sectional dialect; he must have ability to be formal without being stiff, to be informal without gushing; he must be versatile in his ability to handle names, musical terms, and foreign words.

The National Broadcasting Company, in the pamphlet on *The Selection and Training of Radio Announcers*, states,

An announcer in the N.B.C. is expected to average well in the following: a good voice, clear enunciation, and pronunciation free of dialect or local peculiarities; ability to read well; sufficient knowledge of foreign languages for the correct pronunciation of names, places, titles, etc.; some knowledge of musical history, composition, and composers; ability to read and interpret poetry; facility in extempore speech; selling ability in the reading of commercial continuity; ability to master the technical details in operating the switchboard; a college education.

The qualities that make the best announcers are personality, charm, naturalness, sincerity, conviction, enthusiasm, spontaneity, accuracy, culture, and salesmanship, to which add a dash of voice with an excellent vocabulary, and you will have an ideal radio announcer.

To be accepted by the radio listener, the announcer must avoid all forms of affectation such as gushing, evangelical exhortation, pleading sweetness, aggressive overemphasis, spiritual ecstasy, and the overprecise pronunciation that results in an obvious division of a word into its syllables. The three "E's" of the radio announcer have been said to be Egoism, Enthusiasm, and Elocutionary It.

Commercial Speech.

The commercial announcer must follow the principles that are laid down for radio speaking in general. However, he must also develop some special characteristics that are different from those used by the person giving a radio address.

Simply because all recognized announcers have good voices, it has been assumed that this is the most important requirement for the announcer. The ability, natural or acquired, to control the voice apparatus with which he is endowed is more essential than natural tone quality. Often the ability to control his voice earns for an announcer with meager volume and vocal equipment the reputation of having a good voice.

Physical relaxation of the vocal cords and of the muscles of the neck and throat is the foundation upon which all voice control is based. Without such relaxation, the tenseness of the throat muscles and vocal cords will limit the range of the voice and cause a readily detectable rasping quality; a breathy, harsh effect is imparted to the voice, and all opportunity for effective intonation is gone. Apart from the obvious restrictions of tenseness of the mechanism upon the voice, the listener is aware of the uneasiness, the strain, on the part of the announcer, and this destroys his confidence in what he hears. Tenseness is seldom obvious in ordinary conversation; therefore, it is obviously produced by a mild form of "mike fright." Even experienced announcers feel some excitement

when they are addressing the mike, but they do not allow their feelings to tighten their throat muscles or to influence their speech. The best method of keeping mental strain at a minimum is to concentrate upon the material at hand, the script, the message to be given, the service that you feel you are giving to your listeners.

The position at the microphone is important. The best "punch" announcers talk up to the mike. Such announcers hold their copy above and beyond the mike and talk up with considerable verve. If the announcer talks down, his throat muscles are inclined to cramp and tighten. The man who is of average height seems to be more acceptable than one who is either very short or extremely tall. I have never been able to do anything in my classes either to lengthen or to shrink an announcer.

The students who have successfully placed themselves as commercial announcers are those who have practiced tirelessly in the reading of commercial announcements over the public address system. It takes a lot of practice to gain naturalness and fluency. The average radio speaker has a very conversational style; the commercial announcer puts more punch into his delivery and, as a result, requires more voice volume and reserve breath.

The commercial announcer's sense of phraseology and immediate recognition of important words is essential. He must read his copy and determine what his punch words and phrases are to be. He must vary his tempo and his volume accordingly. As a general rule, tempo is slightly decreased for a punch line and slightly increased for supplementary material. Of course, in such change of tempo, there must never be a loss of clarity in enunciation. If a phrase is speeded up, the words that are in that phrase must still be clear and distinct. When an announcement is to be given rapidly, and most commercial announcements are given with considerable speed, success depends not only in skimming lightly over unimportant words, but in knowing what words require stress to make the advertising message vivid and clear. In actual practice, many simple words are skimmed over by a commercial announcer. In the following simple spot announcement, the italicized words are those which can be effectively run together.

Clapp's Strained Baby Foods *are made from* tender, select vegetables, *rushed fresh from factory garden* to spotless, sunlit kitchens where *every step in their preparation* is carefully supervised by *hospital-trained* dieticians.

The sponsor or his advertising agency infrequently gives instructions to the announcer about emphasis and style of delivery, depending upon his individual interpretation. Here, however, is one announcement with instructions that appeared recently in *The New Yorker*:

ANNOUNCER: CIGARETTE STAIN ON YOUR FINGERS IS NOT NICE!
PELL MELL Famous Cigarettes are smoked wherever particular people congregate—because independent research proves that with PELL MELL there is noticeable less finger stain, or no finger stain at all. (Pause) Try PELL MELL CRITICALLY!

Note to announcer:

The first sentence of the above commercial should be read with great emphasis, particularly on the words “not nice.”

In our previous instructions this was expressed by suggesting that “not nice” be said with a snarl. The *emphasis* gained by this instruction should be retained, but the tone of disgust should be dropped.

Keep the emphasis—but forget the snarl.

The effective linking together of words so as to bring out the meaning to best advantage is the secret of many an announcer’s success. It is the keystone to his most important task—driving the sponsor’s message home to the listeners—and often is the hardest feat to master.

The best means of mastering correct articulation for the punch announcement is simply to practice reading copy into a microphone for an unseen auditor, reading and rereading those passages which do not come through clearly until the articulation is satisfactory. Often it will be found a single, short word is the source of difficulty, and this one word will have to be separated from the rest of the phrase by a very short pause. Often, too, the trouble will be not that the words in themselves are not clear, but that a definite pause is needed between phrases to allow a rush of facts to sink home in the listener’s mind before continuing.

The importance of a winning radio personality to a commercial announcer can hardly be overemphasized. His responsibility as the personal representative of his sponsor requires that his speech introduce him as an individual rather than as a puppet. This individual must be affable. He must be attractive in one respect or another. He must project the picture of a person who would hold one’s attention if he were talking in one’s living room. Most important of all, he must be *different, individualized*. He must call to mind a definite image, not simply the idea of a man talking.

Proper breath control is more important to the commercial announcer than to the average radio speaker, because of the frequency in his scripts of punch lines, which require more voice volume than ordinary conversation. He must be constantly prepared to deliver full volume when the script demands it. He should always be sure of a reserve supply of lung power to fall back on.

A commercial announcer whose radio voice is not absolutely sincere never holds his job for long. The old, honey-voiced spieler who went into raptures over a new hair restorer has long since passed away. The com-

mercial announcers of today may be persistent to a criminal fault; they may be raucous and loudmouthed; but at least they are momentarily sincere. They have successfully argued themselves into acting as if they believe that what they say is the gospel truth. And that is exactly the secret of achieving sincerity. The commercial announcer must convince himself before he begins to read his copy that there is real merit in what he has to say. He himself may not use this product, but that does not interfere with his belief that the product is good, is valuable to the listener. When an applicant for an announcing job takes an audition, he is given commercial copy to read "cold." If he is not a good actor he will have difficulty in putting sincerity into his voice and delivery. He must be a convincing actor to sound sincere about each product when he advertises four different brands of cigarettes in an evening.

Commenting on the disappearance of declamatory style from the air today, Edgar Felix says:¹

The oratorical voice fails in broadcasting because the microphone does not pick up its great variations in volume very well, and because it is unnatural to listen to someone shouting, from the inanimate loudspeaker, in the quiet surroundings of the home. As a member of a mass audience, one expects to be addressed in a powerful, resounding voice, but the same voice quality before four or five people in a single room is quite out of place.

The spot announcement often calls for a punch line or word, as exemplified in "Remember, Carter's Little Liver Pills—only 25 cents!" This sales impulsion must, of course, always be "hit," read with intensity and conviction, usually with an impelling, higher-than-normal pitch, and with rising intensity—no drop at the end.

The regular, straight commercial, read at the beginning and end of a featured program by the commercial announcer, has a variety of forms calling for different approaches. However, the governing principle is always that the style of delivery—fast, slow, dignified, facetious, etc.—should be governed by the type of audience that is being addressed. Leroy Stahl of KGDY applies this principle to a specific situation in the following excerpt from the *Quarterly Journal of Speech*:²

Ordinarily, copy for an insurance company, or possibly a firm of investment bankers, is written to appeal to a man and his wife jointly. The announcer must be able to picture a typical man and his wife in their home with the evening dishes done. He must read his commercial announcement to appeal to these people. There must be stability rather than drive, in the way he handles the commercial side of the program. His voice, in quality and delivery, must express the solidity which is one of the virtues of the company for which he is speaking.

¹ Edgar H. Felix, *Using Radio in Sales Promotion*.

² Leroy Stahl, "This Business of Announcing," *Quarterly Journal of Speech*.

The application of this principle of suiting the style of delivery to the type of listening audience and the type of program to the type of product explains alike the staccato, vigorous style of the sports announcer who "plugs" Phillies (cigars) during a sports résumé at supper time; the easygoing banter interspersed with the Chase and Sanborn commercials on Charlie McCarthy's program; the weaving of plugs into the nonsensical plots of Jack Benny's Jello program; and the dignified statement of sponsorship which opens and closes the Ford Sunday Evening Hour.

Perhaps the newest and most interesting innovation in style in commercial announcing is the announcing technique used on one of the "soap operas"—a technique which already shows signs of spreading. It is one of glorified informality, in which the announcer virtually twiddles his thumb in the listener's ear to the following words: "Well, ladies, you admit there's a definite problem connected with washing hosiery and delicate fabrics, don't you? Un-huh, I thought so. Well, you know, I've just got an idea you've never thought about using. . . ." How far this new naïveté in commercial speech will go, and how successful the Little-Boy-Blue style of commercial announcing will prove, it is impossible to tell. However, it will be interesting to watch its progress.

CHAPTER III

Radio Pronunciation

The standard of pronunciation, enunciation, and articulation required of radio announcers, radio news commentators, and masters of ceremony of radio programs does not tolerate inaccurate, careless, or slovenly diction. Good radio speech must be clear, precise, and correct and must be devoid of provincial and even colloquial pronunciation. The student who aspires to a career in radio cannot begin too early to mend his pronunciation.

The first requirement in improving one's pronunciation is an ability to hear the slight variations in enunciation which distinguish the correct from the incorrect pronunciation. The ear must be trained to detect the difference between the correct pronunciation of "catch," which rhymes with "patch," and the incorrect pronunciation, which rhymes with "fetch."

The second requirement is an ability to make the same distinction in one's own speech. The organs of speech must be trained to enunciate the difference between the correct pronunciation of "any," which rhymes with "penny," and the incorrect pronunciation, which rhymes with "skinny."

Last, the student must acquire the habit of using discriminatingly correct pronunciations in his everyday conversation.

Drill.

In a drill to acquire the correct pronunciation of frequently used words whose pronunciations often disclose a careless and inelegant diction, use the word concerned in an expression or sentence which includes its correct rhyme word and repeat the expression or sentence over and over again until the correct pronunciation becomes automatic. The following sentences are illustrative:

1. He did not *seek* to join the *clique*.
(*Clique* rhymes with *seek*, not sick.)
2. Don't *rebuke* the *Duke*.
(*Duke* rhymes with *rebuke*, not spook.)
3. The car *looks de luxe*.
(*De luxe* rhymes with *looks*, not spooks.)
4. He *bade* the *bad* boy go.
(*Bade* rhymes with *mad*, not made.)

WORD	CORRECT	INCORRECT	WORD	CORRECT	INCORRECT
	RHYME	RHYME		RHYME	RHYME
WORD	WORD	WORD	WORD	WORD	WORD
<i>across*</i>	toss	tossed	<i>err.</i> ✓	burr	air
<i>again.</i> ✓	pen	pin	<i>feat.</i>	feet	fate
<i>am.</i>	jam	gem	<i>fete.</i> ✓	fate	feet
<i>and.</i>	sand	send	<i>fish.</i>	dish	mesh
<i>any.</i>	penny	skinny	<i>flew.</i> ✓	moo	mew
<i>asked†.</i> ✓	masked	past	<i>flute.</i>	boot	cute
<i>assume.</i> ✓	fume	doom	<i>for.</i> ✓	or	fur
<i>aye (yes).</i> ✓	pie	pay	<i>friend‡.</i> ✓	bend	hen
<i>bade.</i> ✓	mad	made	<i>from.</i> ✓	Tom	sum
<i>because.</i> ✓	pause	buzz	<i>gap.</i>	tap	tape
<i>been.</i> ✓	din	den	<i>gape.</i>	tape	tap
<i>begin.</i>	tin	ten	<i>get.</i> ✓	bet	bit
<i>beyond.</i>	fond	fund	<i>ghoul.</i> ✓	pool	pole
<i>blew.</i>	moo	mew	<i>goal.</i>	pole	pool
<i>blue.</i> ✓	moo	mew	<i>grew.</i>	moo	mew
<i>brick.</i>	slick	neck	<i>gross.</i>	dose	toss
<i>bruise.</i>	booze	fuse	<i>guess.</i>	less	kiss
<i>bury.</i>	berry	hurry	<i>gum.</i> ✓	glum	gloom
<i>can.</i> ✓	pan	pin	<i>grin.</i>	pin	pen
<i>catch.</i> ✓	patch	fetch	<i>hoax§.</i>	jokes	tax
<i>cent.</i>	dent	dint	<i>hundred.</i> ✓	Mildred	thundered
<i>chew.</i> ✓	moo	mew	<i>if.</i>	cliff	cleff
<i>choose.</i>	booze	fuse	<i>ink.</i> ✓	sink	"enk"
<i>clique.</i> ✓	seek	sick	<i>inquiry.</i> ✓	wiry	bleary
<i>clue.</i>	moo	mew	<i>instead.</i>	bed	bid
<i>college.</i>	edge	itch	<i>jowl.</i>	howl	hole
<i>corps.</i> ✓	store	corpse	<i>juice.</i>	goose	abuse
<i>creek.</i> ✓	week	wick	<i>June.</i>	spoon	hewn
<i>cruise.</i>	booze	abuse	<i>just.</i>	must	mist
<i>crux.</i> ✓	trucks	spooks	<i>last .</i>	past	lass
<i>de luxe.</i> ✓	looks	spooks	<i>loot.</i>	boot	cute
<i>dew.</i> ✓	mew	moo	<i>lure.</i> ✓	pure	your
<i>did.</i>	lid	led	<i>lute.</i> ✓	cute	boot
<i>do.</i>	moo	mew	<i>many.</i>	penny	skinny
<i>doughty.</i> ✓	gouty	throaty	<i>maybe.</i> ✓	baby	webby
<i>dour.</i> ✓	tour	sour	<i>men.</i>	ten	tin
<i>drew.</i> ✓	moo	mew	<i>merely.</i> ✓	dearly	barely
<i>droll.</i>	dole	doll	<i>mess.</i>	less	kiss
<i>drought.</i> ✓	out	mouth	<i>mien.</i> ✓	mean	main
<i>drouth.</i> ✓	mouth	out	<i>milk.</i> ✓	silk	elk
<i>due.</i> ✓	mew	moo	<i>miss.</i>	kiss	less
<i>duke.</i> ✓	rebuke	spook	<i>mix.</i>	sticks	necks
<i>dune.</i> ✓	hewn	soon	<i>most .</i>	ghost	dose
<i>duty.</i> ✓	beauty	booty	<i>nap.</i>	tap	tape
<i>egg.</i>	peg	vague	<i>nape.</i>	tape	tap

* Don't add a *t*.† Don't drop the *k*.‡ Don't drop the *d*.

§ Only one syllable.

|| Don't drop the *t*.

WORD	CORRECT RHYME		INCORRECT RHYME		WORD	CORRECT RHYME		INCORRECT RHYME	
	WORD	WORD	WORD	WORD		WORD	WORD	WORD	WORD
<i>new</i> ✓	<i>mew</i>	<i>moo</i>	<i>suite</i> ✓	<i>sweet</i>	<i>boot</i>				
<i>neat</i>	<i>vexed</i>	<i>necks</i>	<i>swell</i>	<i>bell</i>	<i>bill</i>				
<i>nude</i>	<i>feud</i>	<i>food</i>	<i>tell</i>	<i>bell</i>	<i>bill</i>				
<i>our</i>	<i>sour</i>	<i>are</i>	<i>them</i>	<i>hem</i>	<i>hum</i>				
<i>pen</i>	<i>ten</i>	<i>tin</i>	<i>thick</i>	<i>slick</i>	<i>deck</i>				
<i>plague</i>	<i>vague</i>	<i>beg</i>	<i>think</i>	<i>pink</i>	<i>"think"</i>				
<i>poor</i> ✓	<i>tour</i>	<i>sore</i>	<i>this</i>	<i>kiss</i>	<i>less</i>				
<i>pour</i>	<i>sore</i>	<i>poor</i>	<i>to</i>	<i>moo</i>	<i>mew</i>				
<i>pretty</i> ✓	<i>witty</i>	<i>Betty</i>	<i>too</i>	<i>moo</i>	<i>mew</i>				
<i>program</i> ✓	<i>telegram</i>	<i>glum</i>	<i>toot</i>	<i>boot</i>	<i>cute</i>				
<i>queerly</i> ✓	<i>dearly</i>	<i>barely</i>	<i>true</i>	<i>moo</i>	<i>mew</i>				
<i>rather</i> ✓	<i>lather</i>	<i>other</i>	<i>tune</i> ✓	<i>hewn</i>	<i>soon</i>				
<i>rid</i>	<i>bid</i>	<i>bed</i>	<i>two</i>	<i>moo</i>	<i>mew</i>				
<i>rinse</i>	<i>prince</i>	<i>sense</i>	<i>was</i> ✓	<i>rahs</i>	<i>buzz</i>				
<i>room</i>	<i>whom</i>	<i>fume</i>	<i>wash</i>	<i>josh</i>	<i>harsh</i>				
<i>root</i>	<i>boot</i>	<i>foot</i>	<i>went</i>	<i>dent</i>	<i>dint</i>				
<i>roul</i> ✓	<i>bout</i>	<i>boot</i>	<i>what</i> ✓	<i>dot</i>	<i>rut</i>				
<i>route</i> ✓	<i>boot</i>	<i>bout</i>	<i>when</i>	<i>pen</i>	<i>pin</i>				
<i>rude</i>	<i>food</i>	<i>feud</i>	<i>where</i>	<i>bear</i>	<i>whirr</i>				
<i>rule</i>	<i>food</i>	<i>mule</i>	<i>which</i>	<i>itch</i>	<i>etch</i>				
<i>sent</i>	<i>dent</i>	<i>dint</i>	<i>whole</i>	<i>pole</i>	<i>hull</i>				
<i>set</i>	<i>let</i>	<i>lit</i>	<i>will</i>	<i>mill</i>	<i>wool</i>				
<i>shoe</i>	<i>moo</i>	<i>mew</i>	<i>win</i>	<i>pin</i>	<i>pen</i>				
<i>sure</i> ✓	<i>your</i>	<i>fur</i>	<i>wish</i>	<i>fish</i>	<i>bush</i>				
<i>since</i>	<i>prince</i>	<i>fence</i>	<i>wish</i>	<i>fish</i>	<i>bush</i>				
<i>sink</i>	<i>pink</i>	<i>"senk"</i>	<i>very</i>	<i>berry</i>	<i>hurry</i>				
<i>sit</i>	<i>lit</i>	<i>let</i>	<i>worst</i> ✓	<i>first</i>	<i>nurse</i>				
<i>slew</i> ✓	<i>moo</i>	<i>mew</i>	<i>yes</i>	<i>less</i>	<i>kiss</i>				
<i>soot</i> ✓	<i>foot</i>	<i>boot</i>	<i>you</i>	<i>moo</i>	<i>mew</i>				
<i>stew</i> ✓	<i>mew</i>	<i>moo</i>	<i>your</i>	<i>tour</i>	<i>per</i>				
<i>such</i> ✓	<i>dutch</i>	<i>fetch</i>	<i>youth</i> ✓	<i>tooth</i>	<i>smooth</i>				
<i>suit</i> ✓	<i>cute</i>	<i>boot</i>							

|| Don't drop the *t*.

ADDITIONAL WORDS

1. *Bogey* (bogeyman) rhymes with *fogy* (an old fogy).
2. *Chic* (smart) is pronounced *sheik* (Arab) not *cheek* or *chick*.
3. *Chute* (laundry) is pronounced *shoot*.
4. *Elm* is pronounced as one syllable to rhyme with *helm*.
5. *February* is pronounced *Feb'-roo-ary* not *Feb'-u-ary*.
6. *Film* is pronounced as one syllable not *fill-um*.
7. *Folk* drops the *l* to rhyme with *joke*.
8. *Golf* has the *o* in *odd* and the *l* is pronounced; it is not *gulf* or *goff*.
9. *Height* drops the *g* and *h* to rhyme with *bite*.
10. *Honk* (a horn) has the *o* in *odd*, not the *u* in *hunk*.
11. *Hoof* rhymes with *proof* and does not have the *oo* in *foot*.
12. *Kowtow* (to toady to) drops the *w* in its first syllable to rhyme with *go*, not *cow*.
13. *Length* rhymes with *strength*, with the *g* pronounced.

14. *Logy* (dull, heavy, tired) rhymes with *fogy* (an old fogy).
15. *Often* is pronounced *Off'-en* without the *t*.
16. *Poem* is pronounced *Po'-em*, not *pome* to rhyme with *home*.
17. *Quote* is pronounced *kwote*, not *coat*, with the *w* sounded.
18. *Roof* rhymes with *proof* and does not have the "oo" in foot.
19. *Sophomore* is pronounced *Soph'-o-more*, not *Soph'-more*.
20. *Stodgy* (slow, dull) rhymes its first syllable with *Dodge* (automobile).
21. *Strength* rhymes with *length* with the *g* pronounced.
22. *Student* rhymes its first syllable with *mew* and its last with *dent*.
23. *Sword* drops the *w* and is pronounced *sord*, to rhyme with *ford*.
24. *Tuesday* rhymes its first syllable with *fuse*.
25. *Wednesday* rhymes its first syllable with *lens*.
26. *Who* drops the *w* to rhyme with *do*.
27. *Whom* drops the *w* to rhyme with *boom*.
28. *Whoop* drops the *w* and is pronounced *hoop* to rhyme with *stoop*.
29. *Whose* drops the *w* to rhyme with *snooze*.
30. *Yolk* (egg) drops the *l* to rhyme with *joke*, not *dk*.

The rhyming exercise is satisfactory for monosyllables, but cooperation by two students is more efficient and more enjoyable for practicing the correct pronunciation of more difficult words. Using a story such as is told in *You Don't Say! Or Do You?*¹, one student can read the following one-page chapter while his critic, facing him, can check on the correct pronunciation, which is given on the reverse side of the page.

"Coming to the musicale tonight, Jim?" asked Peary, as they strolled along the deck with Professor Bayard.

"Will they have any calliope or xylophone numbers?" grinned Jim. "I like plenty of action."

"It's not very probable," smiled the professor, "but if you want life and movement, the *Anvil Chorus*, from *Il Trovatore*, and the stirring *Soldiers' Chorus* from Gounod's *Faust*, should appeal to you."

Scanning the program, he continued, "A string quartet offers Tschaikowsky's *Andante Cantabile*, and the Chopin *Berceuse*. For the violin, we have Dvořák's *Humoresque* and the *Meditation* from *Thaïs*; and the cello offering is the *Song to the Evening Star*, from *Tannhäuser*.

"If you like tenor solos, you'll enjoy *Rudolph's Narrative*, with its glorious love motif, from Puccini's *La Bohème*. The soprano number is one of the most beautiful melodies in opera—*Knowest Thou the Land*, from *Mignon*. I was fortunate enough to hear it sung by Geraldine Farrar. There are excerpts, too, from the opera twins, *Pagliacci* and *Cavalleria Rusticana*."

"Didn't they include the *Sextette* from *Lucia*?" asked Jim, adding, with a grin, "I guess I know my opera."

"After an hour of classical music," Peary said, laughingly, "you'll probably be so homesick you'll want Verdi's duet, *Home to Our Mountains*."

¹ E. F. Tilden, Melrose, Mass.

(Accent the syllable printed in italics. When two pronunciations are allowable, they are given in order of preference.)

musicale	mew zih <i>cahl</i>	not mew zih cal
calliope	ca <i>lie</i> o pee	not cal le ope
zylophone	zi lo fone	not zill o fone
Il Trovatore	Eel Troh va <i>toh</i> reh	not Il tro va tore
Gounod	Goo <i>no</i>	not Goo no
Faust	Fowst	not Fawst
Tschaikowsky	Chi <i>kof</i> skee	not Chay kow ske
cantabile	cahn <i>tah</i> be lay	not can tab ih le
Chopin	Sho <i>pan</i>	not Sho pan
Berceuse	Ber <i>serz</i>	not Ber soose
Dvořák	Dvor zhahk	not De vor ak
Thais	Tah <i>ees</i>	not Tha is
Tannhäuser	Tahn hoy zer	not Tan haus er
cello	<i>chel</i> o	not cell o
motif	mo <i>teef</i>	not mo tif
Puccini	Poot <i>chee</i> nee	not Poo se ne
La Bohème	La Boh <i>em</i>	not La Bo heem
Mignon	Meen <i>yon</i>	not Min yon
Farrar	Far rar	not Far rar
Pagliacci	Pahl <i>yat</i> chee	not Pal e ah che
Cavalleria	Cah vahl lay <i>ree</i> a	not Cav al le re a
Rusticana	Roos tih <i>cah</i> na	not Rus tih can a
Sextette	Sex <i>tet</i>	not Sex tet
Lucia	Loo <i>chee</i> a	not Loo sha
Verdi	Vair <i>dee</i>	not Ver de

Any person broadcasting over a medium that penetrates to the four corners of the continent, however, cannot satisfy all his listeners in his use of the king's English. In this country there is no fixed standard of pronunciation that is nationally recognized. If large bodies of educated people are using a certain pronunciation of a word, that form is good American usage and has a chance of becoming accepted in our national speech. Correct pronunciation is like correct behavior, depending upon the custom of the educated and conforming to public taste. If this doctrine seems to open the door to degraded pronunciations, it must be remembered that the so-called correct pronunciations have been accepted upon the same basis. The dictionaries record the usage of large bodies of intelligent and cultured users of speech. A degraded pronunciation of the past decade may be the accepted form today. Dictionaries go out of date as rapidly as the public accepts new standards. Possibly the only criterion to which pronunciation should conform is set up by Whitman, "The subtle charm of beautiful pronunciation is not in dictionaries; it is in perfect flexible vocal organs and in a developed harmonious soul."

A speaker should ask himself, "How shall I pronounce the word?" and "How good are the reasons for pronouncing it some other way?" In answering the first question, the speaker will consider two elements:

the placing of the accent and the sound of the letters, which may be affected by their relations with other letters. Both the accent and the sound element are of equal importance if the pronunciation is to be understood by, and be pleasing to, the listener. Here the speaker will find his first difficulty because, if rules are obeyed, the word may prove to be an exception to the rule. Such rules found in dictionaries and handbooks are confusing. It is better to study the pronunciations as given by the phonetic key in the dictionary and then to follow the crowd. A good dictionary will tell us what the majority say, what the correct fashion is—except, of course, that the dictionary is always at least some years behind time. Pronunciation also varies from district to district, from class to class, from individual to individual, in proportion to the local, or social, differences that separate them. Announcers must remember that the intelligent listener's ear is always right. Yet the pronunciation must never be wholly wrong; it must be justified by authorities or by the usage of the majority of the listeners who are to be pleased.

Notice that the best announcers will not add letters to the word that are not in it—"idea" is not "idear"; they will pronounce the word as it is spelled—"nothing" is not "nothin"; and they will not slur words into one another—"don't you" must not be broadcast as "donchew." Possibly these are not so much faults in pronunciation as laziness in the use of lips, jaw, and tongue for articulation. Although on the stage "been" is like "seen," the *American Standard* and Webster's *New International* decree "bin." "Either" and "neither" give up that long *i* under popular pressure in favor of long *e* and are "ēther" and "nēther"; the public likes to hear words its way. While the announcer is advised to use the dictionary pronunciation that most closely conforms to immediate public usage, he must not compromise to the extent of deliberate mispronunciation. Probably a neutral pronunciation is best, for, while "cement" may be pronounced "sēm'ent" (as some authorities incline to prefer), such pronunciation will be considered by the average listener as evidence of ignorance or affectation.

When the radio writer finds that he has included in his script a word whose pronunciation is difficult or doubtful, he should refer to a thesaurus for a satisfactory synonym, because the announcer is rigidly bound by the script.

Classical Music.

Titles of musical compositions and names of composers should be pronounced with the correct foreign intonations. The larger network stations require of their announcers a knowledge of foreign languages. The announcers in smaller stations frequently have to rely upon the pronunciations given by the directors of their orchestras, who, it is presumed, have

a musical education or foreign training. The World Broadcasting Company sends out with its transcribed programs a pronunciation sheet to be followed by the local announcer. Those who listen to classical and operatic music are critical of the announcements and are familiar with the names and titles; hence, the foreign pronunciations will not be foreign to their ears. Regardless of the research done by the announcer and the care with which he pronounces the foreign names, he will be criticized by his listeners.

Foreign Names in the News.

Probably the news commentator faces more foreign names than does the announcer of operas. The news commentator is speaking to a more general audience, however, and it is permissible for him to Anglicize the names of places mentioned. Few listeners would recognize the names of cities in Europe if they were given their correct foreign pronunciation—in fact, the foreign spelling in many instances is different from that with which we are familiar. The announcer should be permitted to exercise his judgment as to whether his audience will better understand “Venice” or “Venezia,” “Florence” or “Firenze.” In most cases all will agree that the names should be spoken as they are spelled and pronounced by the majority of radio listeners.

Foreigners in the day’s news, on the other hand, are best introduced in their native pronunciation. It is only courteous to pronounce a man’s name so that he will understand it himself. “Pierre” should not become “Peer” when he is introduced to the radio audience. We are all inclined to be rather fond of our names, and incorrect pronunciation of them is decidedly distasteful.

Another problem that confronts the announcers is the matter of place names. It is not enough that these men know the correct foreign pronunciations of these names and phrases; they must know the Anglicized version of them.

Regional Dialects.

It would be well to preface any discussion of regional accents in announcing with the following excerpt from N. Denison’s article, “Why Isn’t Radio Better?”:¹

Whatever its duties and obligations to the public may be, broadcasting in America is a profit-making enterprise whose first necessity is to pay its way. The broadcasting industry has a definite commodity to sell. The most elementary law of merchandising requires that the seller remain on good terms with the customer.

¹ *Harper’s Magazine*, August, 1934.

The announcer is the salesman on the program. Thus he has to be very careful not to create a feeling of antagonism. An easy way of doing this would be for an announcer in a Jasper, Alabama, station to use an irritating New England accent or even a pronounced Midwestern twang. As far as some people are concerned, there is still a civil war on.

Emancipation of language is a throwing off of belittling localisms and a finding of a common denominator. There is a very considerable difference of opinion among speech experts as to the desirability of an absolute standard of so-called speech. Many of the foremost authorities feel that it is far better and far more practical to strive for a standard of accepted speech which will admit of slight differences but agree in essentials and be easily understood throughout the English-speaking world.¹

Avoid local terminology that would be lost upon distant listeners. That the top-line radio announcers do speak a common language greatly impresses Kenneth McKean.

Despite the fact that their homelands may be hundreds or thousands of miles apart, the radio announcers have no local speech. . . . The pronounced localist cannot get a job as radio announcer nowadays. It is speech which is a little of everything, a speech which is perhaps a little different from that of any one locality but which is strange to none. It is *the* American speech, and there won't be any other henceforth until the broadcasting systems decide to change it. You will find that the most highly cultured people of America, England, and the Continent speak very much the same, but that the speech of less cultured people is characterized by provincialism in pronunciation and rhythm. American speech is already the most geographically homogeneous in the world. Nowhere else in the world can the same speech be understood by all, over so large an area, as in this country. Our dialects are nowhere found in the extreme variations characteristic of other tongues. So the radio here is in a comparatively fortunate situation. While the mere demand for uniformity for its own sake should not be pushed, there seems to be no justification for catering to what sectional idiosyncrasies of speech do exist in this country. Strictly local stations are inclined to cater to the dialect of their regions. Well-educated men may be chosen as announcers but, as they have been educated in the district they serve, they speak its language. The audience must be sold and the best way to appease the radio customers is by naturalness in dialect. This is to be found in the form of educated speech as applied to the dialect of the region.

Time was when the pronunciation of New England was thought to be far superior to that of the rest of the country. This superstition, however, is virtually dead. The persons who use the New England pronunciation are relatively so few in number that they may almost be said to speak a special dialect. The aristocratic period has passed; we are now on a thoroughly democratic basis. Hoosier and Wolverine, Badger and Sucker

¹ F. Purell, "Radio and the Language," *Commonwealth*, Apr. 10, 1929.

may hold up their heads when they use their native vowels, and the Southerners, who have always been justly proud of their beautiful speech, need no longer take the trouble to defend it. Districts still guard their local tendencies to dialect, and listeners may resent any effort made by announcers to force them to standard usage.

The individual claims many birthrights, not the least of which is his right to speak his language as, subject to the good will of his friends, it pleases him to do; perhaps next in importance must be ranked his right to think whatever he pleases of any style of speech that is different from his own. Radio is bound to have some effect on the national speech. This does not mean that the effect will be a standardization of speech in the dialect pattern of one particular group, such as the stage. It means a colligation of all the finest points of the speech of all regions. This would seem inevitable. Speech is a matter of imitation; we speak as we hear it spoken. It is only natural that we should gradually and perhaps unconsciously evolve a speech containing some qualities of all the dialects heard over the radio.

Pronunciation References.

- BAKER, DR. T.: *A Pronouncing Pocket Manual of Musical Terms*, G. Schirmer, Inc., New York.
- British Broadcasting Corporation: *Broadcast English: Recommendations to Announcers*, British Broadcasting Company, London, 1932-1937, 6 vols. Includes pronunciation of doubtful words, English, Scottish, Welsh, and Irish, and foreign place names.
- CARHART, PAUL W.: *A Guide to Pronunciation from Webster's New International Dictionary*, 2d ed., unabridged, G. & C. Merriam Company, Springfield, Mass., 1934, pp. xvii-lxxxii.
- DEVLIN, JOSEPH: *A Dictionary of Synonyms and Antonyms and 5000 Words Most Often Mispronounced*, The World Syndicate Publishing Co., Cleveland, 1938.
- ELSON, L. C.: *Elson's Music Dictionary*, Oliver Ditson Company, Pronouncing aids.
- FARJEON, HARRY: *Musical Words Explained*, Oxford University Press, London, 1933.
- GILMARTIN, JOHN G.: *Everyday Errors in Pronunciation*, Walter J. Black, Inc., New York, 1936.
- HOLT, ALFRED H.: *American Place Names*, The Thomas Y. Crowell Company, New York, 1938. Bibliography, pp. 221-222.
- HUBBARD: *American History and Encyclopedia of Music*.
- HUGHES, RUPERT: *Pronouncing and Defining Dictionary*.
- HUTCHINSON, LOIS: *Standard Handbook for Secretaries*, McGraw-Hill Book Company, Inc., New York, 1936.
- JONES, DANIEL: *An English Pronouncing Dictionary* (showing the pronunciation of over 54,000 words in international phonetic transcription), 4th ed., rev. and enlarged, E. P. Dutton & Company, Inc., "Some Useful Books for the Study of English Pronunciation," pp. xxvii-xxviii. 1937.
- KERCHEVILLE, FRANCIS M.: *Practical Handbook of Pronunciation, English and Spanish*, The University Press, Albuquerque, N.M., 1936.
- KRAPP, GEORGE PHILIP: *The Pronunciation of Standard English in America*. Oxford University Press, New York, Bibliographical Note, pp. 149-150.
- LARSEN, THORLEIF, and FRANCIS COX WALKER: *Pronunciation, a Practical Guide to American Standards*, Oxford University Press, New York, 1930.

- LLOYD, JAMES ARTHUR: *The Broadcast Word*, Kegan Paul, Trench, Trubner & Co., London, 1935. "Some Books on Linguistic Phonetics," pp. 201-202.
- MACKEY, MARY S., and M. G. MACKEY: *Pronunciation of 10,000 Proper Names*, Dodd, Mead & Company, Inc., New York, 1922. Geographical and biographical names, names of books, works of art, characters in fiction, foreign titles, etc.
- MAWSON: *International Book of Names*, The Thomas Y. Crowell Company, New York, 1934. Gives the "official" pronunciation of names of present-day celebrities and postwar geographical designations, as well as the more difficult names in music, literature, art, and similar fields.
- OPDYCKE, JOHN B.: *Don't Say It: a Cyclopedic of English Use and Abuse*, Funk & Wagnalls Company, New York, 1939.
- PHYFE, WILLIAM H. P.: *Putnam's 20,000 Words Often Mis-pronounced*, new ed., compiled by Frederick A. Sweet and Maude D. Williams, G. P. Putnam's Sons, New York, 1937. A complete handbook of difficulties in English pronunciation, including an unusually large number of proper names, words and phrases from foreign languages.
- TILDEN, E. F. *You Don't Say! Or Do You?* L. M. Tilden, Melrose, Mass., 1934. Pronunciation in story form.
- VIZETELLY, FRANCIS H.: *Desk-book of 25,000 Words Frequently Mispronounced*, 4th ed., Funk & Wagnalls Company, New York, 1929.
- WORCESTER, J. E.: *Pronouncing Dictionary*, J. B. Lippincott Company, Philadelphia,

CHAPTER IV

Articulation, Intonation, Rhythm

Articulation.

Closely related to the subject of pronunciation is that of correct articulation. The prospective radio announcer does well to practice speech before a mirror, or to watch the lip, jaw, and tongue action of the experienced announcer or singer, and then obey the rules for a pure and distinct speech. If an individual has a definite speech defect, my advice to him is to prepare himself to go into the sales or writing staff of a station rather than to attempt to prepare for announcing or dramatic work. In many instances, however, the individual with a slight fault can by conscientious work not only overcome that fault, but build himself into a better speaker than one who is not forced to work for perfection.

The criticism frequently given in auditions is that a voice is thin and nasal, that it has no depth. Such speakers are not originating their speech at the diaphragm. A listener can almost "see" the generation of the speech as he listens to the loud-speaker. The flexible lips, jaw, and tongue are to be used to form the sound, but it must float up from the diaphragm.

When the sound arrives at the mouth, the speaker should use his articulating organs; otherwise the criticism will be that he is lip lazy, that he has a tight jaw, or that his articulation is blurred. If the throat feels tight, open the mouth as wide as possible without stretching and attempt to yawn. There is no better throat relaxation.

Lack of clarity through a guttural or mixed quality of speech is sometimes caused through overtenseness of the jaw muscles. Since every normal individual uses a clear strident tone when he is excited and shouting, evidently the essential element is mental. Create a mental picture of an exciting automobile wreck or of a football game. Get the vivid picture well in your mind. Then describe the incident as vividly as possible. Do not allow your excitement to decrease. Make it a short description at first and increase its length with repetition. If you feel that your excitement is decreasing, stop and start over.

Certain of the vowels, such as those in "way," "cat," "it," and "my," are formed at the front of the mouth. The same vowels in other words and additional sounds are created at the middle of the tongue, for example, "above," "but," and "bird." The location of the formation of the letters can best be determined by "feeling" the sounds in the mouth.

Pucker the lips for sounds that come from the back of the mouth like those in "go," "put," "rule," "hole," etc. Don't be afraid to make faces before the microphone—television is not yet here. Certain sounds require jaw action, such as those in "father." There is a tendency on the part of the neophyte before the mike to tighten his jaws, with the result that there is no richness in his articulation. Before going on the air loosen up your face. Waggle the jaw up and down repeatedly; do not try to control its movements more than is strictly necessary to insure motion.

The microphone gives the speaker greater opportunity to speak clearly, for it saves him from straining his voice into a twanging nasality or from effort in the throat. Stage actors and public speakers are apt to strain and at the same time reduce the volume of their speech by the use of the tongue, with the result that resonance is interfered with. On the other hand, the person who first addresses the microphone and is impressed by the necessity of modulating his volume will often be affected by constraint and tenseness, which cause jaw tightness. The best articulation results from freedom from all inhibitions and coordination of all vocal controls: throat, nose, jaw, lips, tongue, and breath. The correct use of these speech factors is best studied in a course in linguistics.

A low, well-rounded voice is one of the prime requisites of pleasing speech; hence pitch and quality have an integral relationship. A high-pitched voice is thought typical of a scolding woman; in a man it is considered effeminate. High pitch itself is not nearly so undesirable as the quality that goes with it. The public does not object to high pitch as such. It does object to the harshness of tone of a high voice and to the amplification of this harshness that present broadcasting and receiving facilities seem to produce. When we speak slowly we usually have a lower pitch than when speaking fast and we are better understood. The overtones may be removed and the quality improved by humming during practice.

I am very much in favor of social intercourse for radio announcers and speakers. Each must develop a personality and the ability to project this personality through the air. Those who are successful at this will find that they no longer merely read their copy. Be somebody; make yourself a personality. Your voice reveals the personality you are. The best radio announcers seem to be men who have seen something of life and show it in their speech.

Sincerity is vital to the announcer as well as to the speaker. Compose a speech of about 2 minutes on the subject in which you are most interested. If possible, make it a speech advocating a course of action. Try to persuade someone to do something in which you have a tremendous interest. It is best, at first, to have someone actually to talk to. Plead violently. When you have succeeded in this, transfer the same feeling to less and less interesting subjects. Bodily alertness is equally important.

Before beginning to speak always breathe deeply, and use your body to develop a sincere delivery. Mental alertness is the final step in this road to vitality. A few minutes of stimulating reading, before speaking, is good practice for gaining vitality, as is also an argument, mental or oral. If mind and body are thoroughly alert and eager, if the speaker can feel a burning sincerity (at least for the moment), and if he feels that he is talking to someone directly, there is every reason to suppose that his voice will be vital.

It is apparently no accident that so many singers have found permanent employment as radio announcers. Singing by its very nature helps to vary the pitch of the voice. Sing two or three songs a day, any tune at all so long as it takes you a little bit higher or a little bit lower than you go in ordinary speech. They try to speak the words of the song while remembering the tune, much as Ted Lewis or Al Jolson do in their vaudeville acts.

Your breath intake is very noticeable through the microphone, but it will be less so if you are calm. Take a few deep breaths before you start your radio speech. The radio speaker must know how to breathe and how to control that breath. The breath stream must directly and clearly contact the resonators of the mouth and at the same time form indirect, but true, contact with the resonators in the nose and in the face frame. Any tension or stiffness of the neck and head, any rigidity of the upper chest and shoulders, has a tendency to produce harshness, thinness, and rigidity of tone. Therefore breathing must be free and relaxed. At all times the speaker must strive for freedom of the head, neck, and upper chest. Any exercises designed for relaxing these parts will serve the speaker in good stead, for once he is relaxed he can begin the business of control—the business of learning to talk *on* the breath, rather than with the breath. Learn to space your speech and do not attempt to say too much on one inhalation. Breathe freely, breathe normally, and breathe frequently; do not exhaust your breath.

In certain words the articulation must be snapped out, while in others the sound is prolonged. It takes longer to utter “see” than to chop off “sit.” Practice the long vowels and consonants. Wriggling the nose will help in the pronunciation of “news,” which is apt to be pronounced “noose.” The yodler uses the correct method for pronouncing the diphthongs that require two shapes of the mouth. “Way” is pronounced “wā-i”; “my” is clearly heard when it is emphasized to “ma-i.”

In speech, as in many other social conventions, it is easier to explain what disqualifies than what qualifies. It is easier to choose a speaker by observing his bad spots than by noting his good ones. It is surprising what an effect a small detail can produce upon the whole. Has he poor voice quality? Is he too nasal? Is he monotonous (not giving a sufficient variety

of voice pitches)? Is he drawling (not giving a sufficient variety of sounds)? Is he slipshod (underarticulating *t*'s and *d*'s)? Is he pedantic (overarticulating sounds)? Is he clerical (using certain unusual details of intonation)? Does he speak from high up in the head, from back in the throat, or from the nose? The acceptable speaker launches his volume from the diaphragm and forms his sounds in a flexible mouth. Each vowel requires a distinct shape of the mouth. Tongue, lips, and jaws are all used. He is advised to practice vowels and consonants with spoken words and in song to improve the articulation. "Nasal," "thin," "shrill," "metallic," "twanging," "throaty," "muffled," "growling," "furry," "breathy," "full," "rich," "free," "resonant," "unobstructed," and "clear" are adjectives used to describe various voices.

Rhythm and Intonation.

There is rhythm in all well-constructed speech. The easiest way to be unintelligible in a language is to speak it in wrong rhythm. Rhythm, and rhythm alone, is often the determining factor in intelligibility. What the English call the "American drawl" and what Americans call the "British clipping of syllables" are in reality differences of rhythm.

Speech is an affair of rhythm and intonation, and these all have to do with sound. Our speech has a clear-cut system of long vowel sounds and short ones, and a very decided feature which we call the "accent," without knowing precisely what accent consists of. English speech is pre-eminently a speech of strong rhythm, long and short sounds, long and short pauses between sounds, clear-cut vowels, and obscure vowels. Just as there is a peculiar English rhythm, so there is, although we are not generally aware of it, a purely English speech melody. We are so used to it that we are usually oblivious of its existence and generally ignorant of its nature. But it is there, and we are wide awake indeed when we are suddenly presented with a speech melody that is unfamiliar. We sense it at once; there is probably no aspect of this speech business to which we are so sensitive as we are to this intonation factor. What we call "expression" in reading is really the finesse of putting intonations, accents, and rhythms onto the bare words so as to make them resemble speech.

Rhythm requires thought, and, if the speaker thinks about what he is saying, his rhythm will be smooth. If he is reading, that material must have been written with thought units varying in style and length. Do not break thought units. Seek the most effective groupings of words by means of gestures or tapping.

Criticism and Analysis.

The importance of a competent teacher to check on results and quality cannot be overestimated. No person is competent to correct his own

vocal faults. Even great singers take lessons occasionally. The student should be encouraged to work by himself but this should never be allowed to take the place of competent guidance.

The only way in which the radio speaker can get a convincing criticism of his voice is for him to have an experienced teacher of speech analyze a recording of his speech. The disc record permits him to make a short cutting, listen to it, pick out the faults, and attempt to correct them in the next short cutting. A student is inclined to be skeptical of criticisms by teachers of faults which are not obvious to him, but the recorded talk will accurately deliver to his ear matters of articulation, enunciation, pronunciation, and rhythm. The tone quality may not be perfect but variation in tone will also be obvious. Such recordings may be taken home and used for constant analysis.

Students of speech have found the magnetic tape recorder helpful, inspiring, and enjoyable. With such a device the student delivers to the microphone a 1-minute announcement or speech which is preserved as local variations in the magnetization of a steel tape. By turning a switch the recorded speech is immediately played back. At any word the voice may be silenced for analysis and then the speech resumed as many times as desired. Turning another switch erases the recording and prepares the tape for a new recording. This method is admirably suited to practice techniques, but the recording is not kept to evidence improvement.

A combination of recording equipment and motion pictures is used in many speech classes to show to the student the use of lips, jaw, and facial expression in perfecting enunciation and intonation. There is always a problem in timing, but the results, even if imperfect, are worth the experimental efforts of the teacher and student.

CHAPTER V

News Programs

There are many types of news broadcasts, each one presented in a different manner and prepared in a different style. Probably the most elementary type of news broadcast is the one presenting news of the Associated Press, the United Press, or the International News Service. These various services were originally organized to serve newspapers and the items that come over the teletype are written in newspaper style rather than radio style. Consequently, radio reporters find it necessary to "process" such items, making them hearable rather than readable. These reports are generally presented by the station announcer, who concerns himself merely with the narrative news lead of the newspaper article. Everyone experienced in the field of journalism knows that this news lead is an abstract of a whole news item, answering the questions what, why, where, and when, who, and how. In the same category are the news items transmitted by wire by the Trans-Radio News Service. These items, however, are prepared for radio presentation and do not require to be processed. In such programs news facts are given with no comments of an analytical character. Local news reporters frequently endeavor to create some connection or transition between items to make the broadcast more unified.

Other sources for news include items which are lifted from newspapers. This is a legal procedure, since stories have no property rights after publication unless they are copyrighted. Items appearing in newspapers under the various news-service headings and feature material are generally copyrighted. In many progressive stations there are facilities for gathering local news. Quite a number of my students at the University of Michigan have sent to their home towns, in which there were radio stations, news of the students from those towns who are attending the university. Such service upon the part of the students gave them a contact with the local station which was helpful after graduation.

Then there are the news commentators, who take the news of the day, relate it to happenings of the past and to those of the probable future, and analyze its significance. These broadcasts are given in a less formal manner by the speaker, who puts a great deal of his personality into such presentation. The news that is presented by a commentator may be

colored by his own attitude or by the policy of either his station or his sponsor, if he is sponsored. Because listeners are tuning in on a program, commentators usually save their most important item for second place unless their news is preceded by a lengthy announcement. An item of national or international aspect is considered most important. The commentator attempts to tie up today's story with the news of yesterday, forming a sort of "continued-story" effect which shows how the events of yesterday have led to those of today, and how these events may affect politics or history of the future.

During the course of his program the news commentator includes some human-interest stories. It is good practice to insert short, bright, and fast-moving items between long news features. As the editor of the invisible newspaper, the commentator must have a sense of what will appeal to the greatest number of his listeners; weather is a subject of universal interest, while financial statements will interest only a limited class. As the radio listener has been taught to visualize what he hears from his receiving set, it is difficult for him to jump from a New York item to Paris and then back to Washington. The news commentator writes his material so that the listener can visualize the scene, feel that he is an eye-witness. The conversational news of the commentator is not so immediate as that presented in press news reports. Some commentators speak extemporaneously from notes, cleverly changing their pace and pitch to conform to the content of the items and to mark a change of subject. There are news commentators who endeavor to tie their items together regardless of their relationship; to do this sometimes results in monotony.

Frequently the news commentator will bring in a few lines of commercial plug for his sponsor in the midst of his remarks. This, however, is a dangerous practice because the listener will feel that the important news has been completed and will tune off the commercial, losing the balance of the news. The better practice is for an announcer to give the commercial plug at the beginning and at the end. If a plug must be given during the news broadcast, it is better that the announcer's voice be heard so that the commentator may be freed of commercialism. The commentator must not allow his items to cause alarm or anxiety for the safety of friends or relatives of the listeners. The larger broadcasting stations maintain their own ticker service, which is used as the basis for the manuscript prepared by the local commentator. In many instances the commentator will endeavor to bring in a personal touch by commenting upon his own experiences in the country concerned in the news or his acquaintance with and observation of individuals.

Also, there are the programs that deal with topics and personalities of current interest, given by "columnists" who are not so much concerned with the news of the moment as with anecdotes, inventions, or gossip.

Some of them are merely answering inquiries that have been mailed to the commentator.

Another type of news commentator is the one who talks about industry and what is going on within it. His material is of the feature-story variety, and it does away with the requirement of a narrative news lead. He dramatizes what he sees; thus it is best that he first see what he discusses. Frequently he is sponsored by the industry he describes.

News is dramatized in some programs, such as "The March of Time," "Farm and Home Hour," and others.

Selection of News.

The great problem of the news broadcaster is that his program is a daily feature and in many instances may run as many as three times a day. To be able to find material and new methods of presenting material is a real problem. Most news commentators are former newspaper men who have developed a sense of news values. Many of the news commentators have traveled extensively or acted as war correspondents so that they have a background that is helpful in presenting news in an interesting manner.

The elements that enter into the selection of what is called in the newspaper "front-page news" are the same for the radio commentator as they are for the newspaper editor. Briefly these may be considered as the conflict between man and other men, or with animals, things, ideas, or the elements. There must be some sort of conflict. The second element is the fact that people are always interested in placing themselves in the role of the character who is making news. Consequently, an item about an individual or in which an individual plays a part in the conflict is better. News should be of interest to a widely separated audience, not merely local in its character.

Undoubtedly the most important prerequisite for the selection of any item to broadcast is that it be news, and that it be either significant or have a human appeal. The radio editor considers whether the item will have mass appeal or whether it is unusual. If the item is not of national, international, or state interest, the broadcaster is concerned whether it deals with the locale within the primary range of the station. If the persons who are involved or the property are of sufficient importance, the item has news value. Many stations and sponsors require that their broadcasts combine information with entertainment and consequently humorous and human-interest stories are interspersed between the more significant items or are used in the conclusion of the broadcast.

In selecting news for broadcast, the reporter avoids disheartening and frightening items which have not been authenticated. Items such as threatened riots or unconfirmed reports of disasters are generally avoided.

The United Press warns its radio affiliates to avoid "gruesome" stories; court trials with unpleasant angles, particularly of sex; birth control, unless handled with care; divorcees, except those of famous personalities, and with these the sex angle should be avoided; crime, only outstanding cases, and then minimized; capital punishment, except that which has resulted from trials that have been in the public eye. This does not mean that all unpleasant cases or unpleasant items are discarded. It does mean that as far as possible the radio reporter attempts to avoid being an alarmist. This undoubtedly is the result of the radio's whole-family audience. Furthermore, in the selection of news the radio editor must take into consideration that he may be held for libel, blasphemy, immoral publication, contempt of court, or sedition, and select items to avoid any such charges. The time of day when the news is to be broadcast influences the selection of items: cancer, reptiles, false teeth are not topics for a mealtime broadcast.

Of course, accuracy is essential in the report of the news commentator, for the newspaper seems to be a sworn enemy of radio news reports and delights in any opportunity to point out the untruthfulness of such news items. An inaccurate radio news item cannot be killed as it can be in a newspaper, and a correction sometimes does more harm than the original statement. The news selected should have a diversified appeal for both masculine and feminine listeners. If the news is based upon some previous report, it must be tied up with what has gone before. The commentator cannot assume that the listener has heard the previous news report and consequently must summarize very briefly.

Writing the News.

Like all other forms of continuity for broadcasting, news must be written for the listener. This requires that the reporter should always be concerned with how his material will sound. He will find if he reads from a newspaper that there are many words which are difficult to enunciate and sentences that are so complex that they would be lost in the ear of the audience. He must keep in mind that radio news is told by a storyteller and must be written in the form of an oral story. At the outset the radio news reporter tries to get friendly with his listener; consequently the "yellow" or "shocker" story should not be used as an opening. The news program is considered by all stations to be educational and informative, but even the educational program must be entertaining to hold the listener's attention. In the preparation of news copy consider the listener's interest angle and attitude, not your own.

As in other forms of radio writing, the selection of just the right word is all-important; because of the time limitation every word must have real value from an informative or picture-producing standpoint. Too

many adjectives are inadvisable, although simple adjectives frequently make the scene more vivid. For instance, it is better to say, "It is a bitterly cold morning," than merely, "It is a cold morning." Verbs are particularly helpful in portraying action and in creating a mental picture and should be chosen with that in mind. Words with double meanings should be avoided. The reader of copy can differentiate between two words that sound alike but are spelled differently and have a different meaning; however, this is not at all possible for the radio listener. If there is the slightest chance of a misunderstanding, change the word, because your audience is decidedly critical. Some words are hard to pronounce over the air, particularly those containing sibilant sounds like "remniscesences." If possible, a synonym should be found for this type of word. This means that many expressive and descriptive words are eliminated from the radio commentator's vocabulary.

Some of the instructions given by news agencies to their correspondents are equally applicable to the writer of radio news copy. For instance, the following hints from the United Press Service may well be considered:

- Send* something—don't always "transmit" or "dispatch" it.
- Call* a person, or persons, or a meeting—don't always "summon" them.
- Buy* something—don't always "purchase" it.
- Leave* some place—don't always "depart."
- Act*—don't always "take action."
- Will*—not always "is going to."
- Arrest* or *Seize*—not "take into custody."
- Show*—don't always "display" or "exhibit."
- Get*—don't always "obtain."
- Need*—don't always "require."
- See*—don't always "witness."
- Can*—not always "is able to."
- Help*—not always "aid" or "assist."
- Hurt*—not always "injured."
- Break*—not always "fracture."
- Build* and *Building*—not always "construct," "erect" and "construction."
- Meet*—not always "confer," "convene," or "hold a conference."
- Doctor*—not always "physician."

All regulations concerning offensive material, immorality, and sex should be observed, and anything that is offensive to any race, sex, or creed should be avoided. A word that has recently come into disrepute is "blood." In a recent broadcast of a prize fight, when one of the contestants was given a bloody nose, it was announced that his nose was red. Other words, like "bugs" and names of vermin, should be avoided. The newspaper reporter is very much inclined to use stock phrases; trite expressions should be avoided. An interesting story about this practice is

"Calloway's Code" by O. Henry. Certain words are overworked; for instance, "rush" is too frequently used in place of "hurry" or just plain "go." Reporters and radio men consider that all kinds of motor cars are "high-powered." We are guilty of failing to differentiate between the verbs "can" and "may." There is some redundancy in news reports; for instance, only a grand jury can indict and it is unnecessary to state that a certain man was indicted by the grand jury. Transitional words and connectives in writing are placed in the body of a sentence; however, for radio they are generally placed at the beginning of a sentence. If they are placed in the middle of the sentence, the thought is broken for the ear.

The broadcaster is particularly interested in making his program sound like fresh news. The result is that he avoids use of the word "yesterday" whenever possible. He attempts to give the impression that the action of the story is immediate. Various devices are used to accomplish this purpose; fresh angles should be sought which will make the use of the present tense possible. The radio listener is accustomed to bulletins taken from the wire and expects that all news is of the moment. On the other hand, use the word "today" sparingly, particularly in the opening sentence, and do not repeat it in various items. Expressions such as "this morning," "this afternoon," and "during the day," may be used, or the same expression may be created by using the present tense. If the verb in the present tense denotes action, this also gives the item more timeliness. Of course, if the event is decidedly over, the past tense may be used.

The newspaper report, with a narrative news lead answering the six questions (what, why, when, where, how, who) is too complicated for the opening of a radio news report. Do not try to give too much information in the opening sentence. The best policy is to permit the listener to get the setting before proceeding to the important part of the story. If you pile too many details into the first sentence, the listener gets lost. Don't start off with an unfamiliar name. It is wise to give the source of the information quite near the start in the body of the report, rather than as a date line for the story as it appears in the newspapers. Some stations attempt to make transitions between the different sources of material. Either an announcer will come in and state "News from the nation's capital," "The state in review," "Now to foreign shores," or the commentator will in some like way transport the listener from locale to locale.

Many newspapers resort to extreme caution in presenting items by using some such phrase as, "It was learned." There is no point in this because it implies that the reporter is not sure of his facts. He should be certain of his facts. However, during the European war news is being censored by the warring nations, and much of it is propaganda, with the result that the source or the authenticity of the item should be commented upon. Another style that is in bad repute is the use of the words

“quote” and “unquote” in reporting an interview or speech. The radio writer should compose the material in such a way that these expressions can be avoided. It can be done by introducing the quotation with such words as “what he termed,” “what he called,” or “he said.” The combination of the writing and of the delivery should make the listener understand that the announcer is really quoting. Using pauses just before the quotation and at the end of the quotation will to some extent take the place of quotation marks. If the quotation used is a long one, the source should be inserted again in a different form, sometimes in the middle of the sentence, sometimes introducing the sentence.

Make the various news items short. Not even the biggest news story is worth much more than 500 words. The radio listener likes variety and is disappointed if only a few items are given to him by the broadcaster. It is difficult to hold the attention of a listener on any single subject for a great length of time.

As a general rule short sentences are most desirable in the writing of copy; however, they can be overdone, resulting in jerky or choppy delivery. The writer should strive for smoothness and rhythm. The rhythm style enables the announcer to get a swing into his delivery. It is possible even to forget rules of grammar because some of radio's most expressive statements are descriptive phrases rather than complete sentences.

Be careful in using relative pronouns; there must be no doubt about their antecedents. For the later tuner-in it is better to repeat the person's name or the place. Clarity is important. Don't trust announcers to pronounce difficult words and phrases properly. News copy is not completed until a few minutes before it is put on the air, with the result that the speaker does not have the opportunity to study the copy and audition it. Make use of the apostrophe—use dashes freely; they are effective in radio writing for setting the pace and emphasis of the announcer. In handling figures do not write \$25,000,000, but write it out in full in the copy, 25 million dollars, for then the announcer cannot go wrong. It is best not to use exact figures; put them in round numbers, even if you are guilty of a slight exaggeration. Do not bother with ages in broadcasts unless they really play some part in the story; in death stories older listeners, however, like to know at what age some other person dies. Full names of well-known people are not necessary; use their common identification—Father Coughlin, Colonel Lindbergh. In the case of senators or representatives, name the state they represent. Don't put out stories about local accidents in which victims are unidentified. Of course a major catastrophe constitutes an exception to this rule. In processing a wire report for the air, do not deviate from the facts contained in the wire story. For the best and most complete exposition on the subject of radio newscasting read *Journalism on the Air* by Dowling Leatherwood.¹

¹ Burgess Publishing Company, Minneapolis, 1939.

Presentation.

Unless the news commentator is introduced by name, it is advisable for him to open his program with some sort of greeting—"Good evening" or "There is important news today" or some other such phrase. A person does not ordinarily walk into another's living room and immediately start to talk. Personally I do not care for the greeting, "Hello, folks," or the use of the word "folks" in a greeting. The greeting must not be too familiar. While subtle humor which results from a clever choice of phraseology enlivens the program and brings lightness into it, the commentator should never allow himself to be considered silly. Sarcasm and irony also are dangerous and are frequently misunderstood. The news commentator is presenting facts, and he should sound as though he considered these facts worthy of the attention of his audience.

The news broadcast is very brief, and, in order to create better relation between the broadcasting station and the newspaper, the broadcaster usually states that the listener should read his local newspaper for a complete report.

The news commentator should present his material in a clear manner without making any attempt to force his opinion upon the listener. It is wiser to lead the listener to the same point of view, and compliment him at the same time, by allowing him to reach his own decision. The "newscaster" is a real personality and consequently he should project that personality. News commentators usually develop the personal style that creates for them friends and listeners and makes their programs distinctive.

To announce a transition from one news item to another, the speaker should pause briefly, change his voice slightly, or announce the transition. Frequently it is good practice to present the news in the style that one person might use in telling it to someone he does not know very well. Crime stories are seldom broadcast unless the crime is one against the public. A crime of passion committed in the slums or underworld has little value as news to the radio listener. Certain stations have definite policies forbidding unnecessary injury to any person's feelings by the spreading of news. Stations are inclined to be unbiased in political attitudes but news commentators frequently imply their personal bias. Sponsored programs, however, may be influenced.

The speed with which some announcers speak is greater than most people would guess, anywhere between 150 and 240 words a minute. However, delivery is very deceptive inasmuch as some announcers dash along and then waste seconds upon unimportant transitions. Frequently, those whose delivery sounds slow will put more words into a minute than the speaker with the machine-gun type of presentation. Placing emphasis upon every final syllable, giving it a slight accent whether it truly should

have a final accent or not, will enable the deliberate speaker to cover ground. The average is about 2500 words on a 15-minute program. Too rapid delivery of news copy is unsatisfactory to the listener. While people hear at the average rate of 160 words a minute, they are accustomed to reading news a little less than 100 words a minute. If the news delivery is too speedy, the listener has little left at the end of the report but a mixed impression that somebody did something somewhere. The listener does not have an opportunity to absorb rapidly delivered news.

H. V. Kaltenborn recommends that the student read the novels of Defoe, *The Copeland Reader*, and the King James version of the Bible for style. The best advice to the would-be commentator is to develop a personal plan or credo that will conform to and establish his personality. Study the radio public and cater to it. The listener is always right.

Regulations Regarding News Broadcasts.

The provision about news broadcasts included in the Code of Self-regulation of the National Association of Broadcasters reads:

News shall be presented with fairness and accuracy and the broadcasting station or network shall satisfy itself that the arrangements made for obtaining news insure this result. Since the number of broadcasting channels is limited, news broadcasts shall not be editorial. This means that news shall not be selected for the purpose of furthering or hindering either side of any controversial public issue nor shall it be colored by the opinions or desires of the station or network management, the editor or others engaged in its preparation or the person actually delivering it over the air, or, in the case of sponsored news broadcasts, the advertiser.

The fundamental purpose of news dissemination in a democracy is to enable people to know what is happening and to understand the meaning of events so that they may form their own conclusions and, therefore, nothing in the foregoing shall be understood as preventing news broadcasters from analyzing and elucidating news so long as such analysis and elucidation are free of bias.

News commentators as well as all other newscasters shall be governed by these provisions.

The policies and standards of the National Broadcasting Company regarding the broadcasting of news have been set as follows:

All standards of the company apply to news programs. Specifically, the following standards must be followed:

1. All news shall be reported from an unbiased, non-partisan viewpoint.
2. News shall be treated factually and analytically, never sensationally.
3. News announcements involving crime or sex shall be avoided unless of national importance.
4. News shall not be broadcast in such a manner as might unduly create alarm or panic. No flash stories about accidents or disasters shall be broadcast until adequate details are available.

5. No suicide shall be reported, except in the case of a nationally known figure.
6. No lotteries, gambling odds or similar information shall be broadcast which might tend to cause listeners to gamble on the outcome of an event.
7. No libelous or slanderous news is permitted.
8. The news announcer shall not deliberately distort the news by any inflection of the voice.
9. Fictional events shall not be presented in the form of authentic news announcements.
10. No legal or medical advice is allowed in news broadcasts except when it is an essential part of legitimate news from official sources.

CHAPTER VI

Sports Programs

There are various kinds of sports programs. There are the on-the-spot broadcast of an event, the descriptive account based upon telegraphic reports, the after-the-event résumé, the dramatized sports program, and the straight recapitulation of wire news; there are also combinations of these. The type of broadcast which attracts the largest number of listeners is a running description of a sports event which is taking place at the very moment that the news comes over the air. Examples are broadcasts of football, baseball, hockey, and basketball games, tennis and golf matches, track meets, boxing bouts, boat races, and wrestling matches.

Of these, hockey is the most difficult to broadcast and rarely is done well. It is such an exceedingly fast affair that the man at the microphone is almost always behind the action. The other extreme is baseball. Taking advantage of the fact that he has all the time in the world between pitches, the commentator employs a slow delivery and uses a great amount of fill-in material. The baseball game is comparatively easy to broadcast because there are few line-up changes after the season starts. Fans are extremely critical if you err. Describing a basketball game requires a thorough knowledge of the game. The broadcaster must have a very fast speech rate and excellent eyesight. Aside from naming substitutions, the "spotter" does not help much. Obviously, the spotter is useless also in describing a boxing match. Knowledge of boxing is necessary for broadcasting, since motion pictures of big fights are exhibited widely and listeners can check up on any important radio error. A speedy delivery is also called for. Football is not difficult to broadcast because of the exceptional facilities in press boxes and the extensive pregame preparation. A spotter is necessary. The same man usually does color and play-by-play, so wide-range vocabulary is needed. A tennis match is difficult to broadcast, for the strokes are difficult to call and possess technical names. A combination of a thorough knowledge of the game and the ability to fill are essential qualities in the announcer. Golf reportage is also difficult. There is such a long time between strokes that a tremendous amount of ad-libbing is necessary. Furthermore, the voice has to be controlled so that it will not annoy the players.

The Sports Announcer.

There has been an idea that the sports announcer should be an athlete who has participated in the sport he is describing. One of the outstanding professional football players of the day has expressed a desire for a college-trained football man to announce programs; on the other hand a famous coach says that it is dangerous for the sports announcer to have too much knowledge about the game because he is inclined to get ahead of the play, and, instead of talking to the average fan, give a more technical explanation which might be understandable only to the football player. Undoubtedly a good background knowledge of sports is essential; but the knowledge of how to dramatize the voice, to pick vivid, descriptive words quickly, to keep on giving information in the midst of excitement, and to inject the thrill of the game without hesitation into the microphone are more essential than previous participation in the sport.

A would-be sports announcer would do well to learn all that he can of the different sports that are broadcast. The rules and requirements of the games must be thoroughly absorbed. He should study the phraseology that is distinctive of the game or sport, which he may use in his broadcasts if it is generally understood by sport fans and by the average listener. The sport pages of newspapers written by experts will form his textbook, for they will give him a diction that is picturesque and a style that is speedy. He should study the history of sport and of those who have participated and gained renown. He must know the signs or gestures used by the officials to signify penalties, etc. But most of all, he must never forget that he is not watching a game for his own amusement, but is reporting it to listeners who are hanging on his word description.

When the announcer has received his assignment, he should go to the scene of the contest well in advance of the event. There he will pick up all the gossip about the game that he can. He will absorb local color, stories about the participants, and the history of the competition. He should find out what selections the band will play in between halves, so that the network will not be caught with an uncleared tune, and he should otherwise anticipate any difficulties that might arise before or after the program. If he is to broadcast a football game, he will get acquainted with the players, watch their practice, learn their formations, discover what plays are used under given circumstances. The sports announcer is generally trusted by the coaches and is provided with the records that have been brought in by scouts who have watched the opposing team in action. If possible, the announcer will attempt to get the coach to tell him of any radical departures from the normal style of play, so that he will not be unprepared. Ted Husing arrives nearly a week before the game and has even practiced with the teams. All this preparation gives him confidence.

The announcer is supplied by the college publicity departments with material concerning each player, his age, weight, experience, class in college, where he played in preparatory school, home town, and position on the team. From this advance information he prepares his opening account to be used before the game, the filler material to be used between halves, and short fragments to be used when time out is taken. This is all the material that is written in advance of the program. When the whistle blows for the kickoff, the announcer is on his own. His tongue and mind must be as quick and as true as his eyes. Some colleges supply a tabulation of the game to the announcer immediately after the final whistle which he can use for his summary; other announcers have a man with them who tabulates the game as it progresses. This tabulator usually is capable of announcing his findings and in this way relieves the announcer.

When the day of the game arrives, the announcer, who alone is responsible for the broadcast, tests his mikes and his lines, instructs his technician, sees to it that he can observe the play upon all parts of the gridiron from his booth, selects locations for additional mikes to pick up the bands and crowd noises. He then mingles with the college crowds and blends into the college spirit. He generally is provided with two spotters who can identify players on both teams by their walk or mannerisms, as well as one to watch the officials. These assistants can immediately give the announcer the names of the player carrying the ball and of the one who makes the tackle, as well as the names of other players who have taken important parts in the play. The third spotter will have a series of cards upon which are printed the penalties and rules. These cards are handed to the announcer for his use when occasion demands.

As the broadcaster takes his seat to begin work, he makes a mental calculation as to the dramatic possibilities of the pregame description. He decides on how much time he will be able to devote to the various subjects. He roughly allots a certain amount of time to the weather, the spectators, distinguished guests, and perhaps music, cheering sections, and the like. He calculates a certain length of time for announcement of the personnel and sets aside the last 2 or 3 minutes for the commercial, the anticipated high light of the contest, and the opening play. It is customary to start a sports broadcast several minutes before a contest is scheduled to begin. This permits the observer to set the scene.

The whistle blows as the announcer has worked his audience up to a climax of suspense. He adopts the present tense in his account. He must place himself in the position of one viewing the game and describe it to his unseeing audience. He must assume that in his audience there are those who are interested in the technical details of the play as well as those to whom the dramatics of the contest hold the greatest interest. The announcer at a football game concerns himself with only four things

—who is carrying the ball, what sort of play it was, who made the tackle, and how far the ball was advanced. These four things must be answered. Other descriptive material may be included, but if these four questions are answered the listener can always locate the ball upon his imaginary field. The description should reach the ear of the listener as if the play were in progress as it is described. The play may be completed but still the present tense is used to denote action. Instead of saying "Harmon tried to go around right end," he says, "Harmon has the ball. He is going around right end." At times the announcer may use the progressive present tense; for instance, a quarterback fades back: "Evashevski is falling back. He is going to pass." But when the man is tackled the tense is changed to the past.

While the announcer is familiar with the plays to be used between teams, he should never get ahead of the play and forecast any type of play because he cannot be absolutely certain just what is going to happen upon the field. His forecast of a pass or a kick, however, will convey to the listener the impression of the eyewitness, and, even if the play is changed, the same suspense is created for the listening rooter as for the fan in the stadium. It is essential that the sports announcer be sure of his facts before he impresses them upon the listener. He may know that a certain formation is used for an end run, and as a result he may start off on a description of the halfback dashing around end, only to find that the ball carrier has discovered an opening and is plunging through center.

Telling what is going to happen has its dangers. Something is likely to go wrong, plans may be changed, or the observer may be deceived. In such cases he must admit that he was wrong in his prediction. Announcers have been severely criticized for frequent inaccuracy in their statements of what is about to happen. But the dramatic value of letting the radio audience share the same speculations as are held by those in actual attendance probably more than makes up for the apparent error. The commentator has introduced the element of suspense, and, in addition, the factor of surprise. It is contended that the play which follows is more thrilling to the radio listener by reason of the very fact that he had been misled in his expectations.

The announcer at times, however, will have opportunity for using the future tense. He may go to the point of predicting an action. The truth is that he is not guessing. He prophesies only when quite certain that such action will take place. For instance, he might say, "It looks as though Feller will walk Dahlgren to get at pitcher Gomez." From the standpoint of dramatic production the prediction possesses an unusual significance. It creates an element of suspense, one of the first essentials of showmanship. It gives the radio listener a feeling of being on the "inside," an intensified interest in what is to follow immediately thereafter. It arouses

his curiosity as to the outcome of the predicted play. This practice of preparing the listener for something about to take place, or something which appears likely to take place, is an accurate reflection of what is going on in the minds of the rest of the spectators.

It has been said that sports announcers should be entirely neutral, showing no bias for either team. The danger of this requirement is that it makes the broadcast neutral, with no life, no interest. It is wiser for the announcer to be decidedly biased for both teams. Always give credit where credit is due but never condemn. If a runner is on his way to the goal line and the safety man is easily side-stepped, emphasize the skill used by the runner rather than the failure of the tackler. Every boy on the team has friends or parents whose feelings would be hurt if his poor playing were broadcast. Furthermore, injuries should not be emphasized since this would worry parents and relatives who are listening.

The sports announcer should remember that his listeners are those who wish they might be in the stadium. They want to watch the game, enjoy the crowd, see the color of the event. No one keeps his eyes on the players steadily for 60 minutes. The fan is amused by the antics of cheerleaders, by the activity of the officials; but these interests, while important, are subordinated to the progress of the game. Weather is important only as it affects the play. Distant landscape must not be described with the ball on the 1-yard line.

Announcers believe that their voices must not reflect undue excitement or put in thrills when there are no thrills. The delivery is important but the announcer must remember not to be unfair to his audience—not to be calm and dispassionate in an exciting climax, or to shout about a 1-yard gain in the center of the field.

In the excitement of a play a listener may lose track of the advance of the ball; hence it is frequently good practice when time permits to repeat the essential details of the play. A résumé of the play may be given between halves.

In sports broadcasting, the observer usually works very close to the microphone, his mouth within 4 or 5 inches of the instrument and a little above it. This position enables him to see over the microphone and to shield the instrument with his head and body from the noise of the crowds. As his voice increases in volume, he turns his head, or backs away from the microphone. At a distance, or with his face turned aside, he may be able to put on all the lung power he possesses without danger of ruining the effect. What comes out of the loud-speaker in this case is the sound of a man actually shouting.

A second factor in the creation of an atmosphere of intense action is changing the pitch of the voice. It is quite a natural thing that the announcer should raise the pitch of his voice as well as the volume to

express excitement. The listener associates these changes in tone with the cause for them. When he hears a high-pitched voice, he immediately senses excitement. The atmosphere of stress can be supplemented in the use of staccato sentences. Long sentences indicate unhurried preparation and mature consideration; short sentences denote motion and speed, giving the impression that the speaker must hurry to keep pace with the proceedings.

It is desirable to sum up at frequent intervals just what has happened up to that time. This may be done by stating the score, or it may be enlarged to a detailed description. In most sports—baseball, football, boxing, and tennis—there are interludes in which changes are being made in line-ups or in positions on the playing space, time outs, or rest periods. There is opportunity for summing up the situation at such times.

CHAPTER VII

Impromptu and Extempore Speech Programs

I have a feeling that impromptu and extempore speaking is neglected by the student of broadcasting, as well as by the teacher. One of the outstanding news commentators visited my classes and pointed out that there are many programs being presented which require the ability to speak spontaneously. Such programs as the round table, forum, interview, man-on-the-street, early-morning variety program with recordings, on-the-spot broadcasts, and some of the news-commentary programs require the broadcaster to be a fluent and spontaneous speaker. The art of announcing has become so standardized that at present one small bit of impromptu radio speech can be detected and frequently is a welcome relief if well done.

For these types of program a good vocabulary of descriptive words, particularly action verbs, adverbs, and nouns is essential. The impromptu speaker must have a good cultural background, for he is not forgiven for mistakes in grammar, pronunciation, or diction. The speaker in every instance is required to have excellent powers of observation, to be able to see ahead while he is talking about something that he has previously observed. In too many instances the broadcaster is inclined to "hem and haw" while he is groping for a word that he feels will convey the correct impression to the listener. In such unprepared programs there must be no dead air, although brief pauses undoubtedly will make the material sound more conversational. These pauses will be shorter than they would be if the speaker were conversing with a visible audience. Quickness in thought and expression are equally vital. Perhaps one of the best practices to use in the preparation for this type of broadcasting is talking to oneself, particularly describing things that are being seen.

Another requirement for such extempore and impromptu programs is an ability to time the material to be presented. The program will run for a definite period, and the broadcaster must time himself so that he will have rounded out his material, summarized if necessary, and come to a satisfactory conclusion at the second that he goes off the air. I find it excellent practice when called upon to deliver a talk to inquire of the chairman or toastmaster how long I am supposed to talk and then to make every effort to stop on the minute. During the German campaign in Norway just following the Russian invasion of Finland, a historical

commentator was to give a half-hour program on these two campaigns. We desired to record his talk but could record only 15 minutes on each side of the disc. I asked him to make a break in the middle of his talk long enough for us to turn over the record and start the recording of the second 15-minute period. He agreed to complete the Finnish situation in 13½ minutes, take 1 minute for transitional comments, then start in on the Norwegian campaign. Despite the fact that he had no notes or manuscript, he came out practically on the second, an excellent example of timing of an extemporaneous program. I place my students before the microphone with one of those 3-minute glasses made for the timing of boiling eggs and tell them they are to talk until the sand has dropped to the last grain into the lower chamber and no longer.

One of the faults evident in the impromptu speech of the novice is the repetition of certain phrases and words that pierce the ear of the listener. Some speakers, masters of ceremonies, man-on-the street interviewers, are inclined to start their sentences with an ejaculation or connective, in most instances, "Ah," because they have not definitely formulated ideas about what they intend to say. It is much wiser to be silent for an instant while the sentence, expression, or thought is developed. Possibly good experience in smooth delivery can be obtained by the practice of dictating to a stenographer.

If the program is a commercial one, the announcer is constantly aware of the fact that he must smoothly lead into the commercial announcement from his impromptu speech. Many masters of ceremonies have before them a page or two from a scrapbook in which they have pasted short stories or sayings which they hope will fit into their program.

Public Events; Special Features.

Announcers are frequently sent out upon remote-control pickups when the station manager feels that public interest in the event is adequate. From the skies the announcer will give a running account of a trip in an airplane or dirigible; from the depths of the sea his voice will come from a submarine. He describes vividly a flood from the banks of a raging river which furnishes sound effects, or from the shore of the sea he may bring all the thrill of a rescue from a burning ocean liner. Listeners can hear the crackle of flames and imagine the smell of smoke as the announcer carries his mike close to a burning building; they hear the bands and tramp of feet as a parade passes by a microphone in the reviewing stand. These announcers must have eyes that see what the public will be interested in, vocabularies that contain the most vivid and concise descriptive words, and tongues that wag conversationally and constantly. Such announcers experience all the excitement that comes to the newspaper reporter, they face danger, they must be alert to act in emergencies. It is their job to

induce public characters to speak to the mike, to obtain the best placement for their equipment, and to satisfy the endless curiosity of the listener. These announcers work without manuscript, although they may have notes which will give them facts that are pertinent to their broadcast. They are the war correspondents of the radio and consequently must not only have all the qualities of a good announcer and of an excellent reporter, but must have a physique that will stand up under the strain and under the conditions in which they work.

Round Table.

Since it is the aim of the radio program containing information to come into the home in the form of conversation, it is a good idea to project more than one person into the living room of the listener to discuss problems of the day. The radio listener cannot talk back but he finds that the radio discussion is more natural if there is a give and take of opinion by a group of radio speakers. This type of broadcast is the round-table discussion. Probably the outstanding example of the round table is that conducted by the University of Chicago (see Fig. 16). In Cleveland the round table was used very satisfactorily and was an outgrowth of Stewart Sherman's "Conversations" in the *Atlantic Monthly*, which ran many years ago.

The purpose in these spontaneous discussions is to permit the exchange of ideas, to attempt to arrive at some solution of a problem, and to avoid the formality of a lecture by using conversation. For some topics it is wiser to start the listener thinking, without arriving at a conclusion for him on such programs, by merely fading out the speakers, leaving the idea dangling before the listener. In order that this conversation may be natural, those who are participating in the round table do not prepare their parts in written form but merely outline the course of the discussion and the attitude that each participant will adopt during the period of the round table. In order to avoid any hesitation or divergence from the topic being discussed, the program must be discussed and an outline constructed with various parts assigned. The introduction may be written by the leader of the round table and the outline showing the various subtopics, together with the individuals who will take up these subtopics, is in written form before the participants as they sit down at their round table. In order to observe the time limitation, it is advisable to show in this outline the time that is to be allotted to a discussion of each of the points. The leader also may have his summary written out, which is prepared after the rehearsal.

Usually three people will participate in a round-table discussion. Two of these will be experts holding different views or attacking the problem from different viewpoints. The third should be an intelligent layman

desirous of information and questioning the opinions of the two experts. It is advisable to identify the various speakers at the very beginning of the discussion. Their questions and comments should also give their attitudes toward the topic. In order that their voices may be impressed upon the listener, they should be addressed by name for the first few



FIG. 16.—University of Chicago round table. Notice that this is triangular and pyramid in form, thus bringing the speakers closer to the microphone, which is located at the apex of the table, and permits the placing of memorandums. (Plans and specifications may be obtained from the University of Chicago.) Professors Louis Wirth, Hugh M. Cole, and Quincy Wright, of the University of Chicago, discuss a problem of national defense with Nathaniel Peffer, Columbia University professor and expert on Far Eastern affairs.

minutes of the discussion. This requires a variety in the form of salutation in order that the discussion may sound conversational. The round table is designed to present clashes of opinion and to bring out different points of view, and yet it must arrive at some conclusion. It must not be merely talk but must be organized skillfully before the program starts. There cannot be too-detailed discussion of any subtopic, and, while an individual may be assigned a subtopic in the outline, there is no reason for him to monopolize the discussion. It is incumbent upon the person to whom the subtopic has been assigned to see that there are no pauses while that topic is being discussed. In order to keep up the spontaneity of the con-

versation, the leader should know the attitude of the various participants and point to one or to the other when he desires an opinion concerning a point raised. In order to make for the greatest realism, the expression of personal opinion should not be hampered. In order that the listener may gain the impression that he is to listen to a conversation, the program may be faded in. This requires the speakers to be discussing some unimportant topic as their voices gradually become audible.

Each round-table group may adopt its own signals to be used to indicate the procedure of its discussion. At the University of Chicago a raised arm is a sign that the person desires to speak on the topic, and courtesy demands that he be given an opportunity. The leader may indicate that he desires an opinion from a member by pointing his finger at that person. Pointing the palm of a hand at a speaker indicates that he should cut his discussion short. The announcer of the program should inform the group by means of some sign when the time is drawing short so that they can work to a conclusion. The conversation may, by its phraseology, indicate that one of the participants should come in and discuss a point. The great problem of this type of broadcast is the possibility of vague, aimless talk which serves only to confuse and bore listeners, and the solution of this problem is to have competent people who are sure of themselves and of their subject and who are willing to express forceful opinions.

It is well to develop certain personalities if the round table is to be a continuing program, to retain at least the leader for the entire series, and to bring back speakers frequently to the radio ears. The topics that may be discussed include problems of the day in politics, economics, literature, education, or religion.

Radio Interviews.

The radio public is interested in interviews because of the human instinct to eavesdrop upon the thoughts of others. In fact, it is not essential that the interviewee be a celebrity, for the radio listener finds interesting the comments that are given by the man-in-the-street who is stopped by an inquiring reporter. The interviewer must have an idea of what the average listener would himself like to ask the individual. He must have natural curiosity and visualize himself as the average listener.

Interviews are never rehearsed in advance of the broadcast. The interviewee is asked to suggest certain questions that he would be willing to discuss, but it makes for greater interest and spontaneity if the questioner does not know the inquiries in advance. The interrogator, however, must use good judgment and diplomacy in the selection. It is good practice to sit down with the person to be interviewed at a table upon which there is a microphone and talk with him in advance of the program

in order to get him into the conversational mood and to ascertain his attitudes. This puts him at ease and eliminates the probability of "mike fright." When the broadcast starts, the interviewer will introduce the victim and ask questions, which will also tend to introduce him. It is not a bad plan to ask some rather light, frivolous questions that may start the program with a spurt of humor, for this puts the interviewee at ease and pleases the listener. It is essential that there be no pauses of any length; consequently the person who is doing the interviewing must be alert to discover leads in the answers he receives. Probably the first few minutes of the interview will be devoted to less serious discussion in order to brighten the subject and to encourage the interviewee to articulate comfortably. There is a tendency to allow the interview to become argumentative, but this should be avoided because it makes the interviewer express his ideas, which are not of importance. The interviewer must remember that he is not interviewing himself. His job is to ask stimulating questions, not to supply the answers; to bring out the interviewee's personality, not his own. Do not try to influence the speaker by leading questions. The man who is important enough to be interviewed has something interesting enough to appeal to the listener. Try to dig down and disclose the person off guard; by that it is meant that there should be revelation but not exposure. To be good at the radio interview, the announcer must have a rather general knowledge so that he may ask intelligent questions in the field of the speaker's interest. Most of the questions should be of such nature as to require more than "yes" or "no" answers. However, the interviewee should not be forced to give too lengthy a reply because the radio listener will be inclined to think that it is a prepared speech and not an interview. It is permissible for the announcer to raise his hand and interrupt the speaker if he gets started on an oration. If some definite topic is to be discussed, the questioner must strive to keep the speaker talking about the topic and lead him back to the subject if necessary. This type of broadcast must be natural and conversational. Mild laughter may be heard but it is inadvisable for the announcer to laugh too heartily at his own comments. Repetition in the style of questions should be avoided, such as starting questions with the word "Well" or using "I see" after each answer.

People who are well informed on special topics and who are close to their subjects are inclined to overlook the interest of the public. This form of broadcast gives an opportunity to the interviewer to bring out points of general interest which might be overlooked by the specialist himself. Long-winded generalization makes the interview a monologue; the skillful interviewer avoids this by deftly breaking in to demand particulars, concrete details, and answers to questions which will require decisive comments, or he may start the discussion on a new or more pertinent tack.

Other types of impromptu or extempore programs which are decidedly popular at the present time are the "Forum," the "Town Meeting of the Air," the "Peoples' Platform," and the "Bull Session." Two factors contribute to the popularity of these programs: (1) the radio audience enjoys a dramatic verbal combat between personages or individuals; and (2) the majority of such programs are concerned with highly controversial topics. In many instances, the audience is permitted to inject questions; thus a cross section of the American public is introduced as interviewers.

Much of the success depends upon the ability of the chairman, who steers the discussion and must set the pace. He must be alert, well versed in the topic that is slated for discussion, witty, and diplomatic. Equally important are the participants, for if they do not enter into the spirit of the program their answers can be flat and uninteresting, regardless of their knowledge. Care should be taken that there is no overlapping of voices. Radio is a great teacher of manners, for it insists that no person shall start to talk until the other person has completed his speech. The only times that a chairman is permitted to interrupt the speaker are when he sees that the time limit is being reached, when the interviewee or speaker has ventured upon a topic which is dangerous, or when the participant shows evidence of giving a monologue.

The following instructions, sent out by the Columbia Broadcasting System to various colleges where students were to participate in a broadcast called "The Bull Session," give excellent directions for this impromptu type of program.

BULL SESSION

- I. *Objective:* To reveal to listeners directly and honestly what American college students think about subjects that seem significant to them.
- II. *Form:* Informal, spontaneous discussion, without script—to approximate the traditional and familiar student "get-togethers" in university life.
- III. *Subjects:*
 - a. To be chosen by participants themselves or, if suggested to them, to be accepted by them as a subject they wish to discuss.
 - b. Area of discussion to be defined as narrowly as possible.
 - c. To be considered in terms of backgrounds and personal experiences of students.
- IV. *Preparation:*
 - a. Preliminary discussion by participants to define limits of treatment of the subject.
 - b. References to be selected at above first meeting for individual study.
 - c. Further meetings to avoid too detailed preparation so that spontaneity will not be lost.
- V. *Selection of Participants:*
 1. Students:
 - a. Students to be selected for ability to think and talk in group discussion, rather than for ability to orate or lecture.

- b. Different points of view to be represented, but only in so far as such differences do not make discussion impossible. A common interest in the subject, and a willingness to consider the other person's position are required. One irreconcilable student can be used if others in the group are sufficiently strong to counterbalance.
 - c. Difference in backgrounds, including geographic, social, major interests, etc., to be considered.
 - d. Additional participants or substitution of participants from original group to be made if proper balance of point of view not obtainable, *i.e.*, it may be found that a physical science major may be needed on a subject, although one may not have been included in original group.
 - e. Six students found most satisfactory generally, either mixed or unmixed as to sex. If mixed, careful selection is necessary to guard against possibility of men overshadowing women.
2. Referee:
- a. An older person who can sit down to "talk things over" with the students and whom they accept as one of them in the discussion—may or may not be faculty member.
 - b. Should be motivator of discussion—without entering frequently or making control of broadcast obvious. Must not make students dependent on him for their continuing discussion.

VI. *Broadcast Procedure:*

1. Physical Details:
- a. Participants *arrive* at studio one hour before broadcast.
 - b. Students sit around in circle (lounge chairs desirable); discussion picked up on eight-ball mike. . . .
 - c. Twenty minutes before air time referee gets group into serious discussion (engineer makes tests, etc.).
 - d. Studio is closed. Avoid any outside interruption by nonparticipants after prebroadcast discussion is underway, to avoid dampening spontaneity, interfering with development of conversation.
 - e. *All clocks are covered.*
 - f. Referee alone knows air time.
 - g. Program is announced from adjoining studio with procedure as follows:
 - (1) Fade in Bull Session discussion approximately 45–60 seconds for statement of subject.
 - (2) Announcer makes opening from another studio.
 - (3) Program runs to close.
 - (4) Program is faded for close from another studio.
2. Procedure for Participants: Students should feel free to say what they think in the way they want to say it in line with requirements of good taste in polite conversation—the Bull Session should be a thoroughly pleasurable experience in which straight thinking and interesting exchange of ideas are primary to the quantity of material covered or the precise direction of the argument.

The student should listen, think, then talk. All the normal enjoyment of discussion—including laughter, etc.—should characterize the student's participation.

- a. Raise hands, or a finger, to signal desire to speak, although this technique should not be emphasized, but rather suggested as a safeguard against jamming.
- b. Avoid side conversations, or half-whispered remarks while others are speaking.
 - (1) Separate speakers, if necessary, to avoid side conversations during broadcast. Those most likely to interrupt main discussion can be spotted in preliminary discussion.
- c. Refer to other students by name frequently for identification.
 - (1) Use either last names or first names, but try to do the same through entire broadcast. Last names identify more effectively. First names give informality and seem more natural for students.
 - (2) Prepare cards with full names in large letters—major subject, school, and home town, etc., may be added—to be pinned on lapsels of students if they are not well acquainted.
- d. Refer to particular interests and backgrounds of students occasionally, not excessively.
- e. Avoid direct questions, such as: "What do you think about that, Maloney?" Use such device only in extreme necessity, such as bogging down of conversation.
- f. Avoid reference to "discussion," "this bull session," "what we're here to decide," or anything which makes students seem conscious of "being on the air."
- g. Clarify points which are stated too abstrusely or technically by restatement in simpler language.
- h. Document core ideas by reference to books, authorities, or direct experience.
- i. Avoid references to specific personalities or organizations in critical negative statements when possible.
- j. At points where discussion lends itself to brief summary, some student should undertake this responsibility and move on to logical development of discussion from that point. Person responsible for this summary may be selected in advance if particularly skilled, otherwise preferably left to inherent organization of the discussion, or the referee.

CHAPTER VIII

Poetry Programs

Although poetry programs on the air are comparatively few, they seem to have a constant, if small, listening clique. Poetry, up to the present writing, is fortunate in being a radio feature that has not been worked to death. Music and prose dominate the radio menu, and poetry is served only in small portions. Radio is a stimulant for verse, which, being too ethereal to be bound to a printed page, is in danger of extinction. Radio allows poetry to get back to its own medium—the air—to be heard, not to be studied in black and white. Lovers of poetry who read it feel the rhythm and hear the sounds even though they read it silently; but for those who cannot get the feeling of poetry from seeing it in type, radio opens a new field. In fact, poetry itself may undergo a change through the influence of broadcasting. New fields within the art may be opened, new methods of presentation undoubtedly will arise, and a new attitude toward poetry will gradually evolve.

Perhaps the best way in which to discuss material for poetry programs is to review the programs that have recently been on the air. For years Ted Malone has been reading poetry to his radio listeners. He starts out with something like, "Hello there, everybody, may I come in? I'll take this chair here by the radio and just sit and chat awhile." This is an effort to achieve an atmosphere of informality and friendliness. This friendly intimacy can be overdone. Then he intersperses poems with just plain chatter and bits of philosophy over music or with musical interludes. He reads poetry that is written by his listeners and sent in to him. Little of it is worthy, but the idea is good. It gives opportunity for expression to many who aspire to be poets. No doubt there is a need for this sort of thing; but since there is such a wealth of living poetry that listeners have never heard, and since good poetry becomes better with repetition, the need for a better type of program is more urgent.

More recently Ted Malone has been conducting a "Pilgrimage of Poetry." It is novel, educational, and arouses a feeling of nearness to various poets. Malone actually goes into the homes of American poets and dramatizes the settings in which in many instances the poems he is reading were written. He brings in bits of biography and vivid descriptions of the places visited. The 32 American poets covered in his pilgrimage were selected by vote of the members of English departments of

700 American colleges and universities. Here we have good poetry presented in an interesting and novel way. It is, however, irritatingly over-sentimental. Few wish to listen to soft-voiced pleasantness reading all types of poetry. Poetry is universal; it can be used to express any human emotion, not only sentimental sweetness. Malone, nevertheless has made radio listeners poetry-conscious and has broadcast a wealth of good poetry.

Edgar Guest uses the same approach as Ted Malone—the best approach for a program of this sort—the friendly, informal, personal approach. He reads his own poetry, which, of course, is of a popular quality. This “homey,” “folksy” poetry pleases the millions of listeners who compose the radio audience and possibly is a step in the development of a poetic taste. Edgar Guest comes on with “a bit of music, a bit of verse” for 15 minutes. He projects a pleasing personality but is a better student of human emotions than a broadcaster. Variety is given to this program by a soloist who sings sentimental songs. Edgar Guest is in on the commercial with the announcer and talks in a chatty style. The program sounds disjointed; first there is a commercial, then a song, then a poem. Fading is not used, and there is no transitional music or continuity; the result is rather an abrupt pause between each part of the program. Yet the program is popular and sponsored, proving that the audience is the judge. Broadcasters and sponsors put on the air what they find through research the people want to hear. There is enthusiasm for poetry; perhaps by gradual steps the public will become educated to the better poetry. Radio has developed the public taste for excellent music, the same may be accomplished for poetry.

The most notable poetry-reading programs yet to reach the microphone were those which Margaret Anglin offered a few years ago. Broadcasters are on an increasing hunt for originality. Louis Reid in an article, “Drama, Fiction, and Poetry on the Air,” says that the reading of poetry on the air—even dramatic poetry—has attained to date only meager representation. “Only sporadically have the broadcasters taken advantage of the many eloquent and experienced voices at their command to bring to interested listeners first-class representations of the world’s great poetry.”

In the oral interpretation of poetry the need for a thorough understanding of a selection before it is to be read aloud cannot be overemphasized. Before a poem can be read feelingly to others, it must be fully understood by the person who is to do the reading. These requirements are enlarged upon by any good textbook on oral interpretation. Certain specific suggestions for the broadcaster should also be borne in mind:

By all means, read the poem many times quietly to yourself, and also aloud, so that you become thoroughly familiar with the manuscript. Mark

it, as you would a song, for places where you will get your breath. (*Never allow yourself to run out of breath.*)

Relegate the less important phrases to minor emphasis and determine the main ideas to be brought out. (It is sometimes helpful to underline the main thought of the sentence so that proper emphasis may be assured.)

Know your manuscript so well that you may voice it as though it were your own (as by now it should be).

Forget the rhyming of lines, forget the marks of punctuation, and concern yourself only with the thought. One can lay down the general principle that there are more pauses needed in reading aloud (in rare cases, fewer pauses) than are indicated by the marks. While rhythm or tempo is an outstanding factor, it is never emphasized at the expense of thought.

The temptation to speed or "race" must be overcome; the listener has not had the opportunity to study the article that you have had and needs time to grasp it. Furthermore, a clear, distinct (not precise) enunciation is necessary.

Naturalness and simplicity should be the constant goal, and these characteristics will be there if inwardly you have the sincere desire to share the thought with the listener. Simplicity and naturalness are needed in the reader, who must become the poet when he reads on the air, or his failure is obvious. Any detail of speech that interferes with understanding may be justly described as bad.

When you can lose consciousness of the printed page, the microphone, and the studio and enter into and understand another person's hopes and fears, joys and sorrows, ideas and ideals, then you may rightly feel yourself ready to interpret. The reader must not only understand but must rethink the idea as he speaks.

Listen to other programs; can't you feel when the reader is smiling? Then do not forget that the radio has eyes as well as ears and will broadcast your smiles and frowns so long as they are real, and that it will also intensify any unreal attitude.

Have variety of poetic forms and thought in the program. Avoid programs that are entirely sentimental, or tragic, or humorous. The less subtle things are best. Whole programs of varied selections should be organized around a central theme for best results. More dramatic effort is required to present poetry over the air than is required to present it from the platform. Just as you like variety in food, and entertainment, so does the listener like variety in voice. Practice this, if you would hold your listeners. Music interludes are useful here, as would be a different voice; however, the general mood or theme of the readings should remain the same. A "one-man show" is seldom successful in the reading program; listeners prefer a variety of voices reading different stanzas or lines successively.

A number of really good verse experiments have been made by Archibald MacLeish ("Fall of the City," "Air Raid"), Alfred Kreymborg ("Planets," "Fables in Verse"), and Norman Corwin. In recent years Mr. Corwin inaugurated a new series of programs called "Words without Music," which has revolutionized the presentation of poetry on the air. "He has given to poets a new flexibility of format so vigorous and so sensible that it is bound to attract many new writers to the field of broadcasting." His original verse drama (in reality not in the same category as the poetry program), "They Fly through the Air with the Greatest of Ease," was chosen as the finest single broadcast of the year by the Tenth Institute in Radio for Education. Another superior contribution was his skillful adaptation of Benét's "John Brown's Body." Norman Corwin has probably gained greatest fame recently from his unique dramatic skit in verse form called "Seems Radio Is Here to Stay." It is powerful, human, entertaining, educational, humorous, dramatic, and unique—all in one. He employs all sorts of sound effects, many different voices and combinations of voices, music written especially for the program, and perfect timing and interrelation of the various units. He uses montage, unusually long pauses, and many other ear-attracting special effects. This type of program is definitely not to be undertaken by the inexperienced director, for it requires absolute precision in every detail.

Choral Reading.

The speech textbook considers choral reading as a teaching aid for participants. The radio studio, however, is not a classroom for performers but is a workshop in which to originate programs that will interest the listener. The broadcaster does not talk in terms of unison, cumulative, antiphonal, or sequential reading but there are multiple-voice techniques that create desired effects for him. The montage for fast-moving narrative transitions is used frequently as a background to evidence a lapse of time. In motion pictures, as photomontage, it consists of scattered and overlapping flashes. In radio it includes distinctive voices in short, disconnected sentences and fragments, with sound effects and music. It is particularly useful in historical sketches in which much introductory and chronological material must be rapidly summarized. As choral reading is a musical speech pattern with harmonizing voices, it may be used as "mood words" in place of mood music to supply oral and tonal background atmosphere or feeling for a play. Another use of these multiple-voice and unison techniques in prose drama is for scene changing or transitions, for "the chorus is the living curtain which separates one scene from another." The verse dramas have demonstrated the use of multivoiced techniques in poetic drama. But probably the greatest opportunity for true choral reading lies in the interpretation program.

A wide variety of forms may be used by the radio verse choir, including chants, ballads, nonsense verse, epic poetry, lyric poetry, and any poetry with a refrain. There are many compilations of material for choral reading. As popular poems for the beginner I suggest "The Kitchen Clock," "The King's Breakfast," "Spin, Lassie, Spin," "Negro Sermons in Verse," "The Pied Piper," "In Come de Animals." Choral reading, however, is not limited to story poems, for sound poems are equally effective. In choosing selections for the radio program choose those that have a universal appeal rather than those which appeal to the technique of the choral reading teacher. Audiences like the familiar, the romantic or adventuresome, and the obvious rather than selections requiring thought, and above all else prefer those that have a catchy rhythm. Prose passages with some suggestion of rhythm can be worked in effectively.

Limited rehearsal time is the greatest deterrent to the development of a radio verse choir. Practice for a single program is not worth while. Unless the chorus is to be kept together and trained for a series of programs its effort will be unfinished. The longer the verse choir and its director work together the easier it becomes to experiment with new and difficult selections. The director must have the foresight of a showman, combined with the knowledge of a dramatic-interpretation instructor and choral director, who thinks of voices in musical terms and dramatic effects. He or she, for in many instances a woman makes a better director, should gather suggestions for the interpretation of the poems from other members of the group; otherwise the chorus is apt to imitate the leader or give a singsong type of utterance. It is not easy for a group of readers to get the same rhythm or to express the subtle meaning and beauty of a poem. The difficulty arises when the group in struggling for perfect synchronization lapses into stereotyped speaking. The leader must watch for this artificial speaking and try to correct it by stressing the meaning and the structure of the poem. Each selection to be used should be studied carefully by the director, considering tones and tempos, solos and choral backgrounds. Much variety is possible in the interpretation of group-read poetry. Light and dark voices can speak in sequence at times with effective results, but such a pattern must not be maintained. In other numbers solo voices can be used with the choir as background. The light and dark voices are blended or opposed in harmonious melody as suggested by the mood of the poem. Experimentation will result in the best combination of parts and individual voices for interpreting a selection. There should be no set pattern for verse interpretation. Attention should be given to the reading of each poem to make it a distinct selection portraying the spirit intended by its writer. If singing voices can be blended under the guidance of a director it is only logical that speaking voices can be blended as well.

Since volume can be controlled over the air, the soloist can come up on the mike and the chorus can be kept off mike; a small number of well-chosen voices is preferred. A large group in unison speech does not result in clear enunciation; the words are not distinctly heard by the listener. Just as a quartet is more understandable on the radio than a glee club, 10 to 15 voices in the verse choir will be understood far better than a class indulging in unison reading. Usually there are more feminine voices than male because the listener, not educated to high fidelity, is inclined to set his tone control to emphasize low frequencies. In selecting the choir, seek only voice perfection and variety. In general, avoid voices that are monotonous. However, in one broadcast a group of Negro children muttered in monotones a skit on *Uncle Tom's Cabin*. Somewhere in the group was a weird voice carrying the narrative. The soloist could not be identified, and the monotones of the background gave a rendition that could not have been obtained through color. Nasal tones should usually be avoided, although there are, occasionally, selections that require just that nasal effect. In fact, the type of the poem, the effect desired, may result in the discarding of any set rule. Tonal qualities are fitted to the content of various speeches. Participants in speaking choirs must have the ability to interpret and to control tones. Volume should be adequate for understanding, but is not used to bring out the subtle shades of imaginative speech. Every person participating should have a sense of phrasing and pitch, a feeling for rhythm as distinguished from meter. Sincerity of thought and dramatic feeling are also essential. In drama the characters may be addressed by name and frequently identified; in the verse drama the individual voices must be definite enough to carry the characterization and identification. For certain poems an entirely male choir will work out best. The choice of the cast depends upon the selections. You must have voices that blend, not merely a group of soloists; balance of tone is what the director seeks.

The choir should not be spread out before the microphone, because closeness allows the readers to hear one another. A wedge-shaped formation is effective to use. The lighter voices should be close to the mike, while the heavier and warmer voiced people stand back. Women's voices are lighter than men's and as they generally outnumber the men they are divided into two groups, tenors and contraltos. Soloists step forth to the mike when reading and back into the group for the choral effect. The voice that stands out distinctly from the others is reserved for solo lines or the narrative parts and must not stand out in the chorus parts. Only experimentation before the mike will determine the desired positions.

To decree that a single voice is ample for reading a poem over the radio is as illogical as to contend that a solo voice is as good as a choir. Variety is desired; new effects are sought by radio. Choral reading has

not been adequately developed by the broadcaster despite the fact that some years ago an N.B.C. bulletin announced "The latest development—the verse-speaking choir." Unison reading has been tried to a slight extent in commercial announcements (remember the *Interwoven Pair*?) but it is still new; it has not been worn out by the constant use that radio demands of its features.

Musical Background or Introduction.

There is one other thing that is essential in dramatic reading on the radio. That is the use of the musical background. It is unrivaled in its ability to create the desired mood or atmosphere. The main thing to be remembered in connection with this part of the program is that there should always be a logical reason for any music used. The selection should be adapted so that it can be lengthened or curtailed if necessary. Musical background unquestionably aids the spoken word when definite color is wanted as a background to words of sheer beauty. It helps much in conveying the intended mood and creates the atmosphere that is wanted. Whenever it is used, however, it should be with the utmost discretion and after serious consideration as to the right music. If it is too loud, it will drown out the speaking; if it is too soft, the listener is apt to think he has two stations instead of one. Background music seldom fully synchronizes with both mood and tempo; consequently some authorities maintain that, unless the music is written especially for the program, it should be used only to introduce or connect material. Be careful not to allow the speech rhythm to fall in with that of the music.

Music is the listener's favorite radio entertainment. Poetry approaches music in that it combines its meaning with much melody and rhythm.

Voice.

The most important thing to the dramatic speaker is his voice and the training of it. Vocal training has been found to be very beneficial to the radio speaker, no matter what type of thing he does. It is of prime importance to the dramatic speaker. Vocalists have much healthier and more cultured voices. Their voices are richer, better modulated, more pleasant, and less likely to rise to the sudden peaks that are so injurious to the sensitive ear of the mike. Of vital importance to anyone doing dramatic reading on the radio is his use of tone, volume, and pitch. The tone production must be perfect, the volume properly varied and controlled, and the pitch flexible. He must know how to use correct pause (for breathing, of course), accent, rhythm, inflection, and emphasis. The speed must be watched carefully too. He must read slowly enough to be understood and yet fast enough to hold interest without seeming hurried.

Enunciation must be clear and distinct and the pronunciation exact, with correct accent and sound of letters.

The technique in dramatic reading is merely a matter of keeping the voice at the proper level and timing the speaking to a background of music. Reading must utilize special techniques, such as the technique of the sigh, the genuine whisper, the catch in the breath, and other sounds that would not be clearly audible if done on the platform. The speaker must be alert about diction, enunciation, inflection of syllables, and voice humor. He must never let bad humor show. He must be as careful of his voice as a prima donna; a cold, too much tobacco, or overindulgence in alcohol will roughen his voice badly. And he must always remember that singing is fine for his speaking voice. The tone produced in the same manner as in singing is the best for the radio because a melodious quality is secured which is very pleasant and particularly desirable in a reading of dramatic literature or oral interpretation.

Do not fix your voice tone to fit the mood. Allow your mood to determine the voice tone. In other words, work from the inside out rather than from the outside in.

Tone is greatly dependent upon the mental attitude and emotional response. Contempt, love, sorrow, anger, pity—these moods demand corresponding tonal qualities in the voice. The actor has a right to use any quality of voice that correctly characterizes the role he is playing. But the speaker on the radio can only portray himself, his reaction. The quality of the voice is self-revealing.

CHAPTER IX

Preparing the Radio Address

Doctor, lawyer, merchant, chief (of police or fire department), preacher, teacher, politician—everyone, in brief, is likely to be called upon to speak to the radio audience today. Milton J. Cross, the noted announcer, describes radio speaking as “one-way conversation with everyone [in the radio audience] as an individual.” The radio conversationalist must not be a bore, he must have interesting material to discuss, he must present it in an attractive way, and his personality must be pleasantly projected to the distant listener. An examination of the best radio speakers shows that they have observed the interesting things in life and have developed what has been described by one writer as the “daily-theme eye.” The majority have “done things,” have lived lives teeming with interest or excitement, and consequently have become engaging conversationalists. They have discovered human interests and are wise in their judgment of proprieties and public appeal. A drab personality is wearying to the dial.

As the radio speaker has been introduced into the home by the announcer, it is unnecessary for him to open with any salutation; his task is to prove himself to be immediately an interesting, bright, and courteous guest. A pertinent anecdote that will lead quickly into the subject, which has been wisely chosen to interest the majority of average listeners, forms an excellent introduction. The speaker who uses homely expressions and introduces into his broadcast illustrations drawn from everyday life is much more apt to reach the intelligence of his listeners.

The “great speaker,” the classroom lecturer, and the spellbinder politician have no place in the living room of the home. The radio talk must interweave information and human interest. Classroom methods are taboo on the air. Education must be adapted to radio, not radio to education. It is essential that the writer of a radio address forget textbooks, auditorium audiences, and congregations and think more in terms of human interest. Relate the subject to the listener, his life, his pocket-book, his everyday realities. The choice of a subject is of primary importance in order to compete with the entertainment on a neighboring kilocycle.

Make it easy for the listener to follow your trend of thought by carefully organizing the talk. Consider first the limited time on the air allotted

to you and select a topic that can be adequately treated in that period. You will speak about 140 words a minute. How many minutes have you in the clear? Do not try to crowd too much into the ears and minds of your listeners. Do not depend upon your listener to fill in any gaps. Idea should follow idea with a naturalness that makes for clear understanding.

A good formula for the organization of the radio talk has been set forth by Morse Salisbury, chief of the Radio Service of the United States, Department of Agriculture:

1. An interest-getting opening paragraph (a quip, wisecrack, or an anecdote; he may start with a reference to something that is certain to be in the foreground of the thinking of most of his listeners and work from that into the theme of his talk).
2. A summary of the points the talk is going to cover.
3. A swift, interesting development of the summary outline.
4. A final summary to clinch the points in the minds of the listeners.
5. A direction to the listeners interested in adopting the practice the talk has urged, telling them where to acquire further information.

The most difficult part of the radio address is the opening sentence. I have often read over radio lectures and picked out a sentence containing an important statement, a surprising fact, or a charming rhythm and transferred this sentence to the opening.

Although writing for the radio uses the same general forms and is governed by the same general rules of grammar and construction that govern writing for print, language—to be thoroughly successful when broadcast by radio—has certain specific requirements not necessarily met by the printed word. It is true that good stories, articles, and poetry written for print may prove to be good broadcasting material. Their success is not necessarily due to the fact that they read well from print, but to the fact that they happen also to fulfill the requirements of radio.

The first major problem of the writer for radio is the same as that of any writer—communication. Thus the first requirement is to make the ideas understandable to the audience. Whether the purpose is to instruct, to persuade, or to entertain, the writer must use language within the comprehension of his audience; he must explain new things in terms of old. But there is a fundamental difference between the relation of the radio writer to his audience and the relation between the writer of material for print and his readers. The words of the author who writes for print are a permanent record before the reader; the words of the radio writer fall on the ears of his listener and, unless they make an impression immediately, they are lost. Because he must make his entire impression on the audience through the sense of hearing, the radio writer must be more careful than any other to write in terms understandable to the audience

and to make his sentences as clear as possible. A reader in doubt as to the meaning of a word usually can find the meaning in a dictionary without too much inconvenience. If he misses the point of a sentence, he can reread it as many times as are necessary. If he forgets a statement having some bearing on a later part of the paper, he can refer back to it as often as he wishes. The person listening to a speech cannot stop to look up unfamiliar words without danger of losing part of the speech. And if he does not understand every sentence as the speaker utters it, he immediately loses the continuity of the talk, and the purpose of the speech is defeated.

Vocabulary.

Edgar Dale, in an article entitled "Vocabulary Level of Radio Addresses," reports the results of an investigation conducted with speeches that were presented over the Ohio School of the Air and The American School of the Air, especially for school children. The investigation involved a study of the words used by the speakers to determine how many of them the listening students did not know. After the speeches were finished, Mr. Dale selected the words that might possibly give some difficulty and asked the children to indicate which ones they could not define. In one instance he found that 12 per cent of the words were unknown to 29 per cent of the pupils. Many of the words unknown were the verbs and keywords of the sentences; among them were words like *aspire*, *attain*, *concentrate*, and *abstain*. Others which should have been easily recognized by the speakers themselves as outside the scope of grammar-school pupils were *feasibility*, *ramifications*, *amenable*, and *forecasting*. Needless to say, much of a speech employing words of this type passed over the heads of the audience. Mr. Dale found, on the other hand, that the speaker who was voted by teachers as the most successful to broadcast in the Ohio School of the Air used in a speech of 1950 words only 10 words not known to 25 per cent of the children. It is interesting to note also that every one of these 10 words was a geographical term, the acquisition of which was in part the purpose of the speech. When asked how he went about writing his speech, the speaker accounted for his success by explaining that he took particular care in selecting words that would be within the scope of the listeners. Whenever he was in doubt as to the wisdom of using a particular word, he referred to Thorndike's *Teachers' Word Book*, which lists some 20,000 words and classifies them according to the ability of children of different ages to understand them.

This experiment, it is true, was carried on in a specialized field of radio broadcasting in which simplicity was absolutely necessary. However, the principle behind it is applicable to the general field of radio. For, although the audience may not be composed of children, the problem

of the vocabulary level still remains. Indeed, there is the added problem of adjusting the vocabulary to a heterogeneous audience. There may be educated and uneducated people, old and young people, sophisticates from metropolitan districts and innocents from the backwoods in the audience; the writer of radio speeches must write for all of them. On special occasions, when a speech is directed toward a specific audience, the writer can have some definite idea of its educational and cultural background and adjust his vocabulary accordingly. But the majority of speeches are made under the assumption that anyone within range of a radio-receiving set can listen and understand; consequently the best answer to the question of vocabulary level for radio speeches is, aim them at the average radio listener. Thorndike places the average American intelligence at fourteen years. The radio writer will do well to use in his speeches for a general audience only those words familiar to the average high-school pupil. Thorndike's book is probably the most reliable source for determining what words can be included in the list.

Fully as disconcerting to the audience as the use of unfamiliar words is the use of allusions to persons and events about which listeners have no knowledge. If the speaker is sure his audience is made up of college graduates, he can reasonably assume a knowledge of history and literature, but, if his speech is directed toward a general audience, he must explain most of the allusions he makes to things not immediately in the experience of the audience.

Sentences.

The problem of making the radio speech understandable to the audience is not entirely a matter of vocabulary. The structure of sentences plays an even greater part in the clearness of the material presented. The meaning of a word may sometimes be guessed from the context in which it is found, but, if the thought is obscured by complicated and involved sentence structure, the audience will make no effort to solve the maze of words in order to find out what it is all about.

The first requirement of sentence structure is that there be absolute clarity. The best way to be sure of this clarity is to write in simple and compound sentences, and, when complex sentences are injected to avoid monotony, to make them free from all difficult clauses that might be ambiguous or obscure. It is easy for the writer who knows precisely what he means by the sentences he writes, and who can easily follow his own trend of thought, to forget how short the memory span of his listener is, and to go on attaching prefatory and attributive phrases to sentences which would precisely have been clear and effective standing alone but which are made difficult and pointless to the audience by the compilation. The material that is written into the added phrases can easily be put into

other sentences, thus gaining much in the way of understandability and not losing heavily in emphasis.

A dangerous pitfall for the radio writer is the habit, of which he is sometimes quite unconscious, of adding idea after idea to sentences with the connecting word "which," trusting that the listener will trail along with him and make all the necessary connections. The solution is in breaking up the sentences into shorter ones, making complete simple sentences of the phrases.

Another practice equally as offensive to the radio listener, but nevertheless common among speakers, especially those whose subject is of a somewhat scientific nature, is the use of the relative pronouns "this" or "that" to refer to a whole complex idea which may have taken several sentences or even paragraphs to develop. The listener is unable to carry in his mind all the details of the idea and may have entirely forgotten the point to which the speaker wishes to refer. The relative pronoun calls up no answering response in his consciousness, and consequently he misses the point completely. If the writer would insert in a new sentence a short summarizing statement of the idea referred to by the pronoun, the familiar words would serve to stimulate the recollection, on the part of the listener, of the essentials of the idea, and he would make the correct connections, grasping the full significance of the sentence.

The use of other expressions to designate something that has gone before, such as, "the above," "the former," "the latter," are also out of place in the radio speech. They serve only to confuse the listener, for the chances are he cannot remember the statement or idea to which the writer refers, if there has been any considerable amount of material presented in the interval.

The trouble with a great many writers is that they are afraid to write for the intellectual middle class because they think it may give the impression that they are not capable of writing for the learned. They throw into their writing big words just to give an impression of knowledge. Of course, there is the danger that, in attempting to keep the language on a level to fit the average of the American public, the writer will acquire the attitude of writing down to his audience, giving them the feeling that he knows they are intellectually inferior to him and that he is doing his best to explain things in words of one syllable. This result is just as undesirable as the confusion that is the result of too difficult language, for it produces an antagonism toward the speaker. To avoid an attitude of this kind in writing, the radio writer need only remember that there may be people in the audience who know just as much about his subject as he does, or a great deal more.

The person who reads the material over the microphone, whether he is the same one who wrote it or another, can do much toward the success

or failure of the speech. A good reading may improve any material, just as poor reading may ruin the best. Likewise, the quality of the written material can influence tremendously the success of the reader. These possibilities must be considered seriously when the material is written.

The limitations of vocal expression must be recognized. All the sounds in the English language can be made singly without effort, but there are some sounds which, appearing in combination, are almost certain to cause the best of speakers to stumble. Many a man has tripped up on a phrase like "especially susceptible." No matter how carefully the speech is rehearsed before broadcasting, the tension before the microphone is likely to bring about an unforeseen difficulty in the pronunciation of some sound. Therefore, it is essential that the speeches be carefully checked for any possible tongue twisters before going on the air.

The diction should be vivid and colorful, presenting word pictures to the listeners. Most writers fail to search for verbs and adverbs to carry the burden of action description. There is a tendency to rely too much on adjectives. Sibilants, while not emphasized as they were by the carbon microphones, still do not broadcast well; when it is practicable to do so, other words with similar meanings should be used for words containing awkward sibilant repetition ("crime" in place of "lawlessness," "gratitude" in place of "thanks"). Slang and colloquialisms may be used, but they have a tendency to be local in character and may not be understood by the distant listener.

Modifying phrases should be placed so that no misunderstanding can exist as to what word or group of words they modify. Do not separate the subject and verb by long distances. If modifying clauses or phrases necessarily intervene, repeat the subject. Be very certain that the relation of relative pronouns is clear and correct. Conjunctions are inclined to drag sentences to great lengths; consequently they should be used sparingly.

Naturalness in speech will suggest the use of contractions. By all means use them. However, there are times when emphasis will require the avoidance of a contraction.

The style of the radio talk is conversational, with ideas so expressed that the listener not only may but must understand. Written style lacks the informality needed in radio. Every effort should be made in the written copy to make it sound like an extemporaneous talk when heard. The effective radio speaker writes and speaks in the first and second person, the active voice, and the indicative or imperative mood. So important is the use of the second person that one can almost judge the radio suitability of a manuscript by counting the number of times "you" appears on a page. If one does not find it used at least three or four times, the material may be suitable for print, but not often appropriate for the loud-speaker. An example that illustrates both the personal and the

action-picture features needed in radio is the following opening from a printed article on "Spring Hiking":

This is the season when the lure of forest and field is felt by all. The fragrance of new-grown things is in the air. . . .

And here is the same, revised as it should be for radio:

When this season rolls around, you feel the lure to go out into field and forest. You want to fill your nostrils with the fragrance of new-grown things. . . .

Transitional words will serve to hold the plan of the address together for the listener. The speaker uses "fillers," such as "now," for these expressions give spontaneity and conversational atmosphere. When the rules and regulations of grammar interfere with the transfer of an idea by words, such rules should be amended. Grammatical murder cannot be defended but an occasional misdemeanor is inoffensively human.

Do not try to be funny, but allow a little humor to creep in, although never the slapstick, burlesque type. Humor should never be injected into a speech simply for the sake of being funny, unless, of course, the entertainer is listed as a comedian. Humor may be used in a radio speech to relieve the seriousness and heaviness of the speech and to create a pleasant feeling between speaker and audience. Avoid irony, which may not be understood by those who cannot see your expression. Sarcasm and bitterness are not pleasant to the listener. On the other hand, do not be a sweet Pollyanna.

The length of the address should be somewhat flexible with paragraphs toward the end that can be omitted or added as the time requires. Some speakers slow up under the emotional tension of the microphone; others accelerate. The talks should be rehearsed and timed. Speakers frequently place time notations in the margins of their manuscripts with which they attempt to conform.

The manuscript should be typed double space, on rough paper that will not rattle. Only one side of the paper should be used. The pages must be clearly numbered and arranged in order. They should be neither clipped together nor folded. Never continue a sentence from one page to another. While the speaker shifts his gaze from the bottom line of one page to the top line of the following page, there is bound to be a pause that will sound unnatural. Almost every broadcasting station requires a copy of the manuscript for its files.

It is wise for the radio speaker to furnish the announcer, well in advance, brief introductory material to be used in presenting him to the radio audience and in defining his subject matter. This procedure assures the announcer of accurate and up-to-date information about the qualifications of the speaker to discuss the chosen topic and increases the attractiveness of the program.

CHAPTER X

Radio in the Public Service

Local Community Service.

The local or regional station has an opportunity, which is crowded out of the profitable life of the outlet station, of becoming a vital part of the community existence. While there is no immediate profit in assisting every worth-while local project of the community, the good will and interest of the public are assets that will ultimately bring a return. Listeners are attracted to their local dial numbers by reports of local activities in churches and schools, in civic and health problems, in community-chest and Christmas drives. The wide-awake local station will participate in every project to build up its listening audience so as to attract advertisers. The local committees will plan and present sustaining programs for the Red Cross or fire prevention, for the local library or little theater, and all the friends of the actors or committees will be enthusiastic listeners. These programs serve both the listener directly and the organizations that indirectly serve the listener.

The radio station in applying for its license to operate, states that it will serve the public interest, convenience, and necessity. The entertainment features are usually combined with the sponsored programs, upon which there are humor, music, and drama. In the category of programs that are of necessity to the listener are the farm-market reports and the stock- and bond-market quotations. Broadcasts of weather conditions and temperature predictions from the Weather Bureau are a necessity to certain businesses and individuals, particularly in times of extremes of temperature or of threatening storm conditions. Many local stations announce the time frequently during the day, and this service is of value to the housewife as well as to the laborer. A knowledge of what is happening in the world or the community is a necessity to some, a convenience to others. Local stations broadcast the news not less than three times a day and frequently augment news reports with spot news broadcasts, such as ball games, parades, and concerts. Shut-ins and those whose labors prevent their attending a parade or concert enjoy the description and the music. Outstanding choirs and school musical organizations of the city furnish programs of genuine service to the organization and entertainment to the listener. An inquiring reporter who visits the city officials and interviews them about their duties is instructive to the

listener and stimulates civic interest. A microphone in the council chamber, the police court, or even in the chamber of commerce will give the citizen an insight into his local government. Distinguished guests and speakers would only be heard by a small minority of the citizens if it were not for the radio interview.

Such community programs also serve the organizations of the city, such as churches, schools, clubs, and lodges. Social and business meetings may be announced, and the radio may serve as a clearinghouse of information. A definite daily program will be helpful to listeners, although special bulletins may also be broadcast. The Better Business Bureau may give warning to the citizens of some house-to-house swindler who is obtaining money under false pretenses. Frequently the radio-warned listener can and does aid the police in apprehending such canvassers. Broadcasts from the police department and the traffic court have been very successful in reducing the number of accidents and they are interesting; in some instances they have reduced graft and favoritism upon the part of judges. Committees that have charge of raising funds for the needy in Christmas drives, for the local Boy Scout troop, for the Red Cross, or for the Policemen's Ball, which raises funds for pensions, will do well to enlist the services of the community-minded broadcasting station.

From a purely selfish standpoint, the local and regional station must be interested in serving the local community. It is one of the most valuable things that it can do to build listener interest. The station that does not do this is missing one of the easiest ways to become a real factor and influence in the community. Most stations do not appreciate in full the opportunity in this field and the stations themselves are the greatest losers because they do not do these things to the complete extent of possibilities. The local groups do not know what to do with radio time until a program is outlined for them. The same applies to schools, the amateur musical club, women's clubs, and so forth. The opportunity for service is here at the radio station, but certain principles of showmanship must be used. All of these organizations need not only the facilities of the radio station, but the advice and leadership of the station as well.¹

Programs may be arranged to inform the people of the community and the surrounding territory concerning the industries, business houses, banks, and outstanding public citizens of the city. While the station should assume no political influence it may present, by unbiased announcements to the local voters, different candidates for public office in election years. Local history and folklore may be presented in dramatic form. In the spring, summer, and autumn the beauties of neighboring drives may be pictured to the local automobilist. The search for missing

¹ From a speech delivered by Edgar L. Bill, president of the Peoria Broadcasting Company, before the initial meeting of the Federal Radio Education Committee (1936).

persons, stray pets, and lost articles may be conducted by radio. Local religious congregations, especially the invalids who are unable to attend church, appreciate the broadcasting of services. The studio may arrange a series of religious discussions by various religious leaders, avoiding denominational controversies. Cooperation with the local chamber of commerce in promoting local celebrations, and "bargain days" will advertise the city, obtain commercial announcements for the station, and increase public interest in all the programs of the station.

Medical and Health Programs.

Medicine is as old a subject as radio is new; it is therefore significant that the two should combine mutual advantages, at times, for the benefit and relief of modern society.

Many firms, using the radio to advertise their products, carry on a campaign by stressing the appeal of the audience's health as a keynote. Naturally, these are often farfetched, making it difficult for the hearer to distinguish between the crystal gazer and the reliable physician. Hence, it is entirely justifiable for the medical profession to maintain a comprehensive popular health program on the radio to offset the broadcasting of unreliable information. Such a program must necessarily reach the greatest possible number of people. The programs must vary and should be presented so as to give the maximum benefit for the health of the individuals. Similarly, the frequency with which health talks may be given probably will vary in different communities, but once a week seems to be the common practice and is probably sufficient. Epidemics may also be combated by radio.

The purposes of medical and public-health programs are to attract the attention of those who are not already interested in health and hygiene and who are in need of information, to disseminate up-to-the-minute information by authorities, and to inspire listeners to health examinations and personal care and hygiene. It is important that the individual who wishes to present a worth-while public-health program acquaint himself with what is being done in public-health education in other media.

The subject matter of health broadcasts should embrace all phases of health, written in language which the laity understands and which is not unpleasant to the hearer. Most talks in this type of radio broadcasting should be fairly short, so as to hold the attention of the audience. The speaker must answer in his talk any questions that may arise in the mind of the listener. While the doctor is delivering such a medical talk, he must take into consideration the fact that he might be developing a group of neurasthenics, or people who feel that they have the disease symptoms that are being discussed. Careful attention is necessary to avoid such a condition.

The program director must also consider the hour at which the listener is to hear the medical talk and should not offer talks on cancer or stomach disorders during the meal hour or alarming prophecies at bedtime. The radio-program committee must refuse all talks dealing with controversial medical or health topics. In all medical broadcasts the ethics of presentation must be watched carefully. Hence, radio programs must be sponsored by local or state medical societies and not by individual physicians. In some quarters the speaker remains unidentified; however, radio stations object to unnamed speakers because they recognize the fact that listeners, as a rule, desire to know the identity of the person to whom they are listening. Big names do not always help the radio program. Chances are that the lesser ones have more time to work upon the program, are more willing to take suggestions, and are apt to turn out a better dramatic radio script. Editing of talks by committees to eliminate uncontrolled expression of individual opinion is held to be desirable. The radio health program secures best results when supplemented by press releases and some amount of newspaper advertising, which can best be obtained by local medical groups.

The most popular method from the listener's viewpoint is the dramatic playlet. If the dramatic sketch is carefully constructed from the standpoint of both play writing and the scientific facts presented, it will hold more listeners and will reach them more effectively than either the monologue or the interview. These dramas, based upon facts supplied by the physician or group, should be written by a playwright and acted by a professional group. The characters must represent the average radio listener, and the subjects must be those health problems common in everyday experience. The general tone may be light, but the serious education purpose must ever be present. "Medicine in the News" is an example of the dramatic type of health program. It combines sparkling entertainment with factual material. It is more or less of a variety show, including drama and good music, humorous relief, and comment upon medical news of the day. It is an example of good showmanship which does not overshadow the scientific material presented.

Probably the easiest kind of radio program from the standpoint of the doctor and the station director is the straight talk or monologue, in which facts are presented in a conversational manner. Needless to say, such a talk must not be a scientific dissertation such as one hears in a medical-society meeting. It should be popular in form and manner of presentation, but not sensational, and it should maintain an air of dignity suitable to its professional character and educational motive. This does not mean that it has to be dull. It can be sprightly in tone and need not be devoid of humor. It should deal with topics of public interest and should be timely with respect to season and local conditions. In many instances it

is difficult to find a voice which will fit the listener's visualization of the doctor at the bedside. Public-health dramatic programs should not start out by frightening the listener.

Combining the simple directness of the straight talk with the dramatic quality of informal conversation is the interview type of program. A patient may interview the doctor in his office; two doctors may discuss a local health problem and how to combat an epidemic; or the doctor may, at the bedside of a patient, answer the questions of his interns. This type of broadcast has more interest and voice appeal than the monologue program. The doctor, however, must avoid allowing his answers to become lectures. A rather fast-moving exchange of pertinent questions and informative answers, given in an unstilted conversational style, is best. Use illustrations with human interest. The radio audience does not want to hear case histories; as such they mean nothing; it's what the doctors and scientists have been able to glean from the observation of these patients which the listeners want to hear.

The fourth method of presenting medical subjects over the radio is largely used by quacks and medical fakers; consequently it is inadvisable for the reputable doctor to adopt it. This consists of the question-and-answer type of broadcast. Questions relating to medical subjects cannot be answered by mail or radio except in very general terms, with instructions to the writer to consult his local physician. In every type of medical broadcast this advice should be given. A public-health program is not to take the place of the advice of the family doctor. If the question-and-answer method is used, it is advisable for the medical speaker to phrase both the question and the answer. Such a method allows the speaker to cover more ground and makes his monologue more human.

The radio station may build up listener interest in medical programs by encouraging the writing of essays on topics of local health and sanitary conditions. Furthermore, the offer of printed copies of the talks will bring evidence of listener interest. The medical speaker has a topic of interest for every listener inasmuch as all are concerned with their own physical ailments. However, this existing interest must be held by a program that is distinctive, attractive, and authentic. As pointed out by Dr. W. W. Bauer, "Ether, when used for the transmission of health education, is not intended as an anesthetic. Nevertheless, if not tuned out first, certain health talks have precisely that effect."

Serving the Farmer.

Among the more important public services of the radio is that rendered to the farmer. Programs addressed to the agriculturalist are broadcast over the networks from the Department of Agriculture in Washington and from local or regional stations using material supplied by the govern-

ment. Agricultural colleges present programs over their own stations, and newspaper-owned stations often have farm editors who arrange programs taking the form of "farm shows," upon which old-time songs and music are mingled with weather and market reports. County farm agents are frequent radio speakers, broadcasting agricultural bulletins, feed quotations, and livestock reports.

The radio program addressed to the farmer should not contain too many facts, and these facts must be presented in an interesting manner to catch the attention of a busy listener. Points must be explained in simple and direct language and must conform to the other fundamental requirements previously set forth for writing the radio address. The speaker should avoid percentages and statistics. He should speak in round numbers and use concrete illustrations. Figures of speech and similes should be picturesque. The solid facts presented should be enlivened by humor, anecdotes, or music. As in all broadcasting, the speaker should converse and chat with his listeners, using the personal pronouns "I," "we," and "you." The personality of the speaker must stand forth in the home where the receiving set is located; only the engaging personality holds attention. The speaker, while preparing his copy, should put himself in the place of his listener, formulating the questions that the listener might ask. In outlining the talk he should attempt to find some common point of farm interest as an introduction. Choosing a limited number of facts relating to the subject to be discussed, he should develop these thoroughly, using personal experiences, quotations from authorities, and some entertaining material. In conclusion it is well to announce any free publications that are available on the subject.

The farm-program manuscript should be carefully edited with the potential audience in mind. The editor must see that the topic and development are interesting and informative, that points are clearly made and emphasized, that it is not wordy, that it is human and friendly, and that the listener is left with some definite project and increased knowledge. Probably the old formula of first telling what you are going to tell, then telling it, and then telling what you have told is the best outline to follow.

Religious Broadcasts.

A recent survey disclosed that an average of 1 hour daily is devoted to religious programs by the average American station. The average was 22 quarter-hour periods weekly, with the peak load between ten and twelve o'clock on Sundays. Nearly all denominations are sending forth sermons, services, and hymns to bring to the shut-ins as well as to the unchurched the message of the gospel. Religious programs include services, sermons, secular talks, music, charity appeals, inspirational

addresses, prayers, Bible reading, religious news, and announcements. However, I am concerned in this handbook only with the preparation and delivery of the religious sermon or talk. The secular speaker who talks on a religious subject should conform to the various requirements set forth for radio speaking in general and for preparing the radio address.

In the first place, the announcements of radio sermons have been too long, indeed in many instances have overshadowed the prayers. Such announcements should be brief and in good taste. Full information concerning the speaker and service may follow the talk but should not precede it.

There are two types of religious programs: those conducted from the pulpit for a church congregation and picked up by the microphone and those prepared primarily for the radio congregation. In the former the radio audience is secondary and the minister prepares to talk for his visual audience, with a possible reference to his unseen congregation.

For a specially prepared radio sermon, the preacher may write his sermon for the pulpit in the language of the clergy and then rewrite it for the radio listener. The phraseology of the church will be toned down to the language of the armchair listener. Figures of speech, colloquialisms, and metaphors will enliven the sermon of the ecclesiastic showman. The speaker cannot be too intellectual, but must deal with things vital to the life of the average listener in a human and direct manner. The oratorical, ministerial style used in the pulpit will not have the appeal that is found in a spiritually conversational style. The airway sermon is not of the ritualistic type but is nondenominational and nonsectarian, condemning no faith.

The radio can be of great value to the churches if religious broadcasts are kept on a high level. Dr. William Stidger, a Boston Methodist and a well-known radio preacher, has outlined his "Ten Radio Commandments" for the effective broadcasting of religious programs:

1. Speak in a conversational tone.
2. Take your sermons not from the Bible, but from life.
3. Leave out the word "I."
4. Neglect the needless.
5. No bunk.
6. No sob stuff.
7. Make the web of your sermon optimistic, cheerful.
8. Check and recheck your script before delivering . . . for absolute factual accuracy.
9. Keep the word "not" out of your sermon script.
10. Use no introduction. Plunge right into the middle of the sermon.

The radio preacher will use all the appeal of his personality. He will use the rising and falling inflection and observe the value of the pause.

His enunciation must be sharp, clear, and decisive. He will be emphatic, soothing, or inviting through his flow of words, but at all times he must remember that he is speaking in a private home to an individual listener.

The responsibility of selecting those who spread the gospel through the air has been placed under the control of such bodies as the Federal Council of Churches in America, the National Council of Catholic Men, and the United Jewish Laymen's Committee. Programs arranged by such organizations are usually sustaining programs constituting a part of the public service of the broadcasting station. In some instances contributions from the radio audience support the programs.

Parent-teacher Programs.

Parent-teacher councils have organized listening groups in many states for the reception of radio programs dealing with youth, health, guidance, and educational programs from recognized experts in these fields. Such programs may be arranged in the various forms suggested in previous chapters of this handbook: radio addresses, round-table or panel discussions, interviews, dramatizations, or dialogues. Whatever type of program is presented, the facts must be given in such a manner that they have a human appeal. The speakers should present incidents, examples, and stories of things that have happened. Through these narrative forms, important truths can be stated without boring the listener with cold analyses. While it is unjust to give actual names or identifying data, the programs must be real. The usual instructions for short, concise words and sentences, for picturesque and effective phraseology, and for conceivable and truthful statements are important in educational broadcasts of this type. The program director and speaker must be careful to choose a limited phase of a subject capable of being treated adequately in the stipulated radio period. In these programs, which usually have a prearranged audience in whom there is an existing interest for the program, the choice of voice quality and speaking ability in the speaker is not of vital importance. If the speaker is fully qualified and has a sincere interest in his topic and a penetrating insight into public interests, he can be an uninspiring speaker and still hold his audience. Listening groups may be organized by the state officials of the parent-teacher associations among child-study groups, parent-education leaders, and others who are encouraged to send in questions and topics to be treated upon future broadcasts.

Politics and Government.

The first notable use of the radio in the political field was the broadcasting of the Republican and Democratic national conventions in 1924. Today both political parties arrange their conventions in such a way

that the speeches that are given from the rostrum may be heard by the radio audience. The keynote speech and the nominations are given in the evening, during the best listening hours, in order that the vast radio audience of all the networks may hear proceedings of the convention.

The use of the radio in national politics has changed campaigns and campaign orators. No longer is the spellbinder able to sway the voters of the nation as he sways himself with gestures upon the platform. If he attempts to shout at the microphone, to pound the rostrum, he will lose his audience and they will turn to the strictly local station not connected with an outlet presenting the political program. The flowery political speaker of the past has had his career ended by radio; his audience demands concrete facts rather than verbosity. Another tradition of the political campaign that will soon be discarded as the results of broadcasting is the lengthy demonstration of cheers and noise. These demonstrations are a waste of valuable time, which might better be used in the presentation of statements that will convince the listening voter. The roar of a demonstration is a bore and soon becomes tiresome; the listener turns off his radio and does not hear following proceedings. The radio station or network that has canceled valuable commercial programs in order to broadcast gratuitously a political rally will undoubtedly be a factor in convincing the political broadcasters that such demonstrations are neither a necessity nor an entertainment to the listening audience. Such demonstrations also make impossible the timing of a program.

The radio politician must realize that any statement that he makes over the radio is made to the nation and cannot be recalled. Therefore he must be much more careful in the selection of figures of speech, statements of facts, grammar, and pronunciation than when he is addressing a small local audience. The unfortunate statement of one candidate for the presidency that grass would grow in the streets of every village and town if the opposition were elected resulted in ridicule, which is the most potent form of assailing a public speaker. A mispronunciation of the word "radio" (ră'-di-ō) by another candidate did much to convince the electorate that a man evidencing a limited education should not be placed at the head of the nation. In early political campaigns it was possible for a candidate to voice a policy for one district and an entirely different policy for another group of electors. This is no longer possible, since the radio carries his platform to the nation as a whole.

The entrance of broadcasting into the field of politics has resulted in the making of convention speeches of a more general type, presenting the ideals of the party and its platform. The modern political speaker must develop a quiet, personal style of delivery. He must convince the listener that he is talking to individuals and is interested primarily in each listener as a part of the democracy. He cannot expect to garner votes by con-

cealing vague statements under a flow of words but must present a well-rounded speech that contains facts for the listener to consider. This recitation of facts must not be unanimated and uninteresting, however, for he must hold his audience. As it is impossible personally to get into all the homes in which listeners are hearing his talk, he must project his personality, his attitude, his sincerity to the radio listener. He cannot depend upon mob persuasion because it is nonexistent in the radio audience. He must so time his speech that he can receive full value out of the period that is allotted to him on the air, neither exceeding his time nor allowing his record of achievement to run down before he is cut off the air. The microphone is an accurate detector of any sort of insincerity, and from the voice and delivery of the speaker the listener is often able to evaluate the ability and the fidelity of the candidate. Radio places a greater emphasis upon what a man has to say and less emphasis upon his manner of saying it. Logic in arguments and the worth of proposals must be examined closely by the speaker before they are broadcast. While freedom of speech is assured, the speaker whose voice may be heard throughout the nation must of necessity be temperate and careful in the use of this constitutional privilege. Accuracy, justice, and freedom from malice are requirements of the radio political talk.

The radio listener imposes the common-sense test upon the oratory of the politician, for, sitting in the comfort of his home, he is not carried away from facts by the enthusiasm of his neighbors. The speaker cannot rely upon his fluency to ad-lib but must learn to talk man to man, from a carefully prepared manuscript, to his enemies and to his friends. In many instances not having a present audience, the speaker must realize the value of the pause to allow his points to sink into the understanding of his listener. Nasal delivery condemned one presidential candidate from the radio standpoint; a cold and mechanical delivery contributed to the defeat of another. Nevertheless, the individual quality of the voice of a speaker must not be lost. While the delivery is worthless if it is dehumanized, it must not be a bombardment lasting for a 15- or 30-minute period. Considering the national audience, the language of the people in simple, lucid diction and sentences must be used. The speaker should warmly greet his listeners and winningly converse with them in a manner of complete frankness. His style should be that of an average American without any affectation or offensive regional peculiarity. Preciseness, resonance, clear enunciation, and calmness are excellent qualities to possess, yet the overemphasis of any one of them is bad. Restrained humor, familiar images, and picturesque analogies are excellent. The speaker must sound convinced of his own sincerity and speak in unhesitating and unfaltering tones. It is wise to adopt the "you and I" attitude, which was foreign to the stump speaker.

In the campaign of 1936 one political party desired to dramatize its political broadcasts. This was frowned upon by the network officials upon the theory that appeals to the electorate should be intellectual and not based upon appeals to the emotions, passions, or prejudices. It was maintained that such dramatizations would base the political campaign almost entirely upon an emotional appeal. Furthermore, it was maintained that such a dramatic method would tend to overemphasize instances of minor importance simply because of their dramatic value. Undoubtedly political speeches have these flaws; still the voters have been trained to weigh the words of the speaker, whereas dramatizations would present an entirely new and confusing problem.

Broadcasting stations and networks offer their time to the political parties, endeavoring to be equitable in the apportionment of time among political candidates and parties. Radio is a powerful political factor, and it is up to the listening public, to the broadcasting officials, to the governmental agency controlling radio, and to the users of radio time to see that this medium is used justly. The listener should make a conscious effort to hear all sides of the political campaign and by careful and intelligent listening weigh the viewpoint of the various candidates and parties. Listening groups are particularly advantageous during political campaigns in order that there may be free discussion of platforms and political policies.

The radio has been used a great deal in this country to educate the people in governmental procedure and accomplishment. There are broadcasts from both the House of Representatives and the Senate. The President of the United States has presented his reports to the people through the medium of radio, and specialists in the fields of government procedure have discussed proposed legislation for the listening citizenry. As a result the people of the nation understand better the problems of government. Such broadcasts should be nonpolitical and informative to the listener.

Law-enforcement Programs.

An interesting variation of the usual type of crime program is the interview with the chief of police of a city of smaller than metropolitan size. Such a program might be broadcast for a 15-minute period during the morning hours and for a like period during the evening in order to reach different audiences. A veteran police reporter or a skilled radio interviewer would discuss with the chief of police the daily events in the activities of the local police department. Such an interview should take place in the office of the chief of police, where the sounds that are associated with the police department might be heard by the listener. If the local department has a short-wave station, the log of this short-wave station might be used as an outline for the interview. The chief should

give the facts of various matters that have been brought to his attention during the period immediately preceding the interview. Evidences of crime, reports of lost and stolen articles, descriptions of missing persons, information concerning rackets that are being perpetrated upon the citizens, and other happenings of local interest are but a few of the topics that would interest and inform the public. These facts and the evidence should be interpreted by the chief of police in statements that are drawn out by the interviewer. Such a program would be a strong force in the maintenance of law and order in a community; because actual facts, true names, and places would be given in a broadcast with the same impartiality that they are given in the newspapers, the program would create a wide public interest. Stolen cars might be recovered if the general public were thus made aware of the theft. Rackets being conducted by solicitors and others could be stopped and the racketeers apprehended if advance notice were thus sent into the homes of the city. Lost bicycles and other articles might be recovered as a result of such broadcasts. Frequently, important witnesses of a crime or of an accident would report their evidence to the police department if they were appealed to through the local station. The police and sheriffs of surrounding cities and villages should be informed of the hours for these programs and should be invited to send their bulletins to be used upon this local program.

The types of program which I have described are but a few of those that are broadcast in the public service. An excellent series of programs has been presented to inform the taxpayers of one state about their schools. Many stations have carried series of programs informing the public concerning the industries, natural resources, educational facilities, and recreational opportunities of the state in which the station is located. Town-hall programs and forums have been built upon the idea of the old town hall and broadcast both nationally and locally. The community-minded station must originate new ideas and assume leadership in conceiving methods, writing continuity, training the broadcasters, and presenting the finished programs. Its reward will be a large and loyal audience that will attract commercial accounts.

CHAPTER XI

Writing the Radio Play

The radio play is the life of the radio today. The author of radio plays should have a knowledge of play writing, but creating the radio play presents some problems that are not treated in books on dramatic writing.

Unfortunately, few noted writers for the stage have been attracted to the radio, and announcers and advertising men cannot be expected to create outstanding drama for the air. Because of the high pressure that has been placed upon its writers, the radio drama has not yet been considered a serious literary form. Conditions must be changed before great writers will undertake the work. In the first place they must be speedy producers, for they must write a new play each week. There are no long runs in the theater of the air. Edgar Wallace might have been able to satisfy the production demand of a play a week. Despite the fact that a Radio Guild play contains only 16 minutes of script material, this production demand does not appeal to the artistic temperament nor is it conducive to literary form. In the second place, the radio play must be written right the first time for there is no opportunity for a tryout and revision on the road before the first-night opening. The radio play has only a first night. The play cannot be changed after its presentation. Furthermore, there are no months of rehearsal during which the play can be perfected. Seldom is the name of the radio author announced; he acquires little fame or recognition by dramatic critics. There are no royalties to enrich the author of the radio play. He is paid only for his manuscript, and up to the present time the remuneration is decidedly small. While the play is presented in a single night to a greater audience than attends a long run in the theater, the author does not enjoy the applause of a single stage presentation. When writers are willing to put aside their desire for leisurely writing, for wealth, for fame, for appreciation, then they will study the peculiar script requirement of the radio play.

While it is generally said that the radio playwright is writing for an audience that is blind, in reality he is writing for an audience that has mental images built upon remembrances of scenes and experiences which help it to visualize and to create scenery. The writer must appeal to the "eye of the mind" and create sound pictures that may be even more vivid than the visual ones of the stage. He must write for an armchair

audience instead of for a theater filled with people who are keyed up to the right mood to receive his play. He must create an attitude, an atmosphere, which the theater has created for its audience. Allowing the audience greater freedom in the mental pictures of characters and of setting possibly will make the play more vivid for the listener, for he can pick out his ideal heroine and place the scene in a location with which he is familiar.

Plot.

People go to the theater because it is a land of make-believe. It contains the relief of romance, the familiarity of realism, the thrill of adventure. The radio audience does not, however, want stark reality, does not care for dull, brutal, and tragic things. The radio drama is truly a form of relaxation; yet the characters must be intensely human and recognizable in order to appeal to the recollection and visual image created by the listener. The plot of the etherized play should deal with human interests and mental conflict and yet have adequate action. It should be simple, not metaphysical. Melodrama is decidedly popular because it appeals to intense emotion and presents thrills, but these qualities must not be impossible for the radio listener to conceive. While melodrama is a popular radio form, it must be somewhat Victorian in character, for the unseen audience will not permit the air to be polluted by profanity or suggestiveness. The most modest of Broadway plays would have to be expurgated before it could be sent into the pure country air.

The theater has certain requirements for its plays. The unity of action has been discarded by the radio; the sound effect of a train carries the action from coast to coast; a boat whistle or an airplane motor transports the scene to foreign ports. The unity of time has no place in radio, where "Time Marches On" or fades back. Unities of character and plot are observed because the radio audience is interested in people represented by their voices. Gossip proves that we are interested in people who do things. Front-page news of the newspapers deals with the conflicts of individuals with other persons, the elements, or natural obstacles. We are more interested in a sergeant who captures a squad of enemy than in the regiment that invades enemy territory because we can put ourselves in the place of the sergeant. It is hard to feel like an army. Of course, the character must live an eventful life, have adventures that we listeners envy or are thrilled by. These conflicts or adventures in radio are better created by persons than by things. A man with his dog team might fight the elements to deliver serum to a snowbound village in the northland and create a conflict with adequate suspense, but in radio this would result in pure monologue description, not dramatics.

Radio drama is inclined to be suggestive; that is, it suggests a play which is in reality acted in the mind of the listener. The author gives adequate hints and situations; the plot-conscious listener builds his own play. He is led to the desired climax by the author but is pleased by his own mind creation. Of course, the plot must not be too obvious; there must be conflict, a struggle between characters or between characters and a situation. The climax may be unexpected—indeed, the listener is pleased by the surprise ending of the O. Henry type.

While no dogmatic instructions can be laid down for the selection of a plot for the radio play, certain factors should be kept in mind by the author. While the audience is not attracted by the drama designed to teach, it does prefer a plot that develops an idea. The more universal the theme, the greater the audience. The plot with the greatest appeal is the one that touches the interests, the experiences, of the greatest number of listeners. The first thing to do, then, in writing a radio play is to study the lives of those who will constitute your audience. Find what there is in their lives that may form the basis for a conflict. Develop your ability to write dialogue by listening to the conversation of those about you. Where you find a human being you find material for drama. The fact that most lives seem rather commonplace is no deterrent. Simplicity and catholicity of appeal have never been known to constitute a condemnation of a plot. Into the simplicity of the average life your imagination can insert a logical, a possible, conflict. The radio audience assists you by preferring stories with American characters, heroes and heroines in the middle class socially. A good script has purpose and familiarity—purpose to justify listening, familiarity to make it ring true. The radio requires simplicity, which has nothing to do with the intellectual level of the audience but rather is the result of the limitations of the single-sense appeal. The play must be directly communicable and easily assimilated.

On examination of the plot types that are popular for radio plays, however, one finds that the tendency is toward the thriller play, such as detective stories, spy dramas, ghost stories, and tales of the Wild West. Even the historical plays that are popular are filled with excitement and thrills. Many programs are devoted to adaptation of stage plays and novels such as those of Dumas. If it were not for the limitation of copyrights, the short stories of O. Henry and Bret Harte would make excellent radio plays. Sex plots are dangerous, and the major networks have refused to present political sketches to be used as a part of a political campaign.

The majority of radio plays are sponsored by advertisers, and the commercial sponsor is inclined to select those that will please the buying public, with the result that the plots are often spineless and hampered by commercial considerations—plays that will offend no purchaser.

According to Arthur Pryor, dramatic director of the "March of Time," the formula for the play is as follows:

Setting of the problem—explanation of factors involved; conflict, and solution. The ideal radio drama would be one in which the action is purely psychological and where the actors would have to do little or no moving about. The drama itself would run on the pure current of emotion and sentiment and passion. These feelings would be registered in the tone color of the voices speaking the lines.

Because of its brevity, the radio play should not contain too many scenes that cause confusing transitions, or have too many acts. There are, however, no positive rules for the writing of a successful radio play. If there were, how could one explain the success of two such dissimilar radio plays as *Cartwheel* by Vic Knight and *Man with a Gun* by Charles Vanda and Russ Johnston, both produced by the Columbia Workshop in recent years? In 14 minutes of playing time the former introduces 22 scenes using 34 characters. *Man with a Gun* is equally unorthodox, being a monologue in five or six scenes. And yet the dramatic effects of both plays are identical. Each scene should be concisely set so that the audience will have a clear understanding of the action that is to transpire. Each scene should carry the plot forward and be essential to its development; otherwise the time requirement would demand its elimination. No scene should run longer than 3 minutes without the entrance of a new character or a new element in the plot. With a series of scene shifts it is essential that you do not allow the characters to increase in number and complicate the play even more. The problem may be brought out in the first scene. Each of the developing scenes should create or remove obstacles, and the final scene should solve the problem. There should be no change of scene that is not clearly accounted for in the action of the play or in the lines.

There are six methods for changing scenes in a dramatic program—silence, fade, narration, sound effects, musical interlude, and a single musical tone that is amplified and perhaps distorted through echo chambers and filter microphones, and then allowed to die away as the next scene begins. Each method has its drawbacks. The average scene transition requires from 10 to 15 seconds, and listeners lose interest if that much dead air intervenes frequently between scenes. The voice fade sounds forced; it takes away from the naturalness, from the reality of the play. Sound effects are apt to become monotonous; in any case, they must be always easily recognizable. Narration breaks the spell of the drama. Music is often complicated and may spoil a simple play, and suitable music is difficult to find.

Naturally there must be obstacles in the radio play, but subplots are dangerous for they create too complicated a plot for the radio audience

to follow. The radio audience requires logical development with an explanation of just how things happen. It must not be left in the dark. Minor details, if of value, must be made clear.

Probably the radio drama has a greater opportunity to create suspense in its unseeing audience than the legitimate stage play. A shot followed by a scream gains suspense because the audience is not aware of what has happened until it is told. The element of suspense is as vital to the play as is characterization or climax. Of course, everything must lead up to this climax, which must not come until the very end of the program. There is no opportunity for anticlimax in the play itself.

A tragic or unhappy ending may be satisfactory if a moral can be deduced. The ending of the play must satisfactorily bring the play to a close, all problems solved, all characters accounted for. The adult audience is not critical unless something that is expected is omitted. Make the ending definite. The curtain line at the end of the play is just as important in radio as it is in the theater.

The Announcer or Narrator.

The narrator's introduction is decidedly important, for he must set the stage for the listener. He creates in the mind of the listener a setting in which the play is to be performed. He must not be too positive in his details, but should allow the listener an opportunity to visualize the scene as it appears to him. The narrator will tell something of the costumes if they are essential to the plot development (particularly if it is a period play). He creates the entire atmosphere by his introduction and by the music that accompanies his description. He should be chary in his delineation of character traits that will be brought out by the speech of the characters themselves.

The narrator will act as a verbal scene shifter as the play progresses, but must not dominate the play. Whenever possible, the lines spoken by characters should take the place of the interrupting narrator.

The Beginning.

The beginning of the play, whether it is in the words of the narrator or of a character or in some other form of introduction, is of vital importance. During the first moments the listener decides whether he wishes to remain tuned to the station, and he should be put in the right mood to cooperate in the reception of the plot that is to follow. There are different means of attracting and holding the listener and of creating the desired atmosphere. The radio play, like that of the stage, may depend upon its overture to put the listener into the right frame of mind, to get tuned in or settled in his seat, or to attract an attention that is wandering over the dial. The author should consider his opening of vital importance and

should write the beginning announcement or dialogue to attract and hold attention. The style, diction, and content should really introduce the play and create the necessary attitude or mood reaction in the listener. Some plays may be effectively introduced by expressive sounds in conjunction with speech, and, if the sounds are such as to bring pictures to the listener's mind, suspense may be created through them. The use of local color in the opening dialogue—the language of the circus, of the campus, or of the sea creates an atmosphere that attracts the listener's attention. In this case speech may be enforced by sound effects. When the play is written, go back and work over the opening until you are certain that it will attract an audience and will create without fail the mood required for the appreciation of the play that is to follow. One last word of caution—the introduction must move swiftly so as not to take time that is necessary for plot development. While the immediate establishment of an atmosphere is advisable, it must not be offensive to the listener.

The beginning of the play has a definite job to fulfill. It sets forth the purpose of the play. It creates a picture. Characters, setting, and situation should be established immediately.

The successful play begins with extraordinary swiftness and with economy of words. Immediate attention can be obtained by a rapid development of the situation, promise of further development, powerful atmosphere, striking characterization, an intriguing unusual setting, or an extremely familiar setting. In general, listeners prefer introduction through dialogue.

Characters.

The author should write a play requiring a limited cast, for more than six voices of major characters are confusing to the listener since he cannot identify the characters by sight. Seldom should more than four individuals enter into a conversation, and they should have voice contrast or a vocabulary contrast to make them individualistic. If a character is given a personal speech style, it must be maintained throughout the entire script. While exaggeration is permitted in certain character types, the characterization must not be burlesqued. If the character is given a "sound" personality, the listener will create his own picture of the type, for he can visualize the character by what he says and how he says it, whether he is a minister or a West Side "tough." Characters in all radio dramas should be made real to the listener. People like to listen to and follow the adventures of their own kind, or of those whom they can recognize on the radio. Not only does a character's manner of speech portray him to the unseeing listener; the writer of the script must also make each actor act in the way that the character is supposed to act in real life. Whenever possible it is advisable to give to a character some characteristic expres-

sion of words that identifies him. Have one character repeat certain phrases, but be careful not to overwork these phrases. One of the most common criticisms of the amateur radio script is that the characters' lines are interchangeable. The listener should be able to tune in on the middle of a broadcast and tell from the words of a character whether Clara, Lou, or Em is speaking.

Of course, it is impossible, as in real life, to keep the principal characters talking with one another all the time; consequently minor characters may be introduced when they are necessary to forward development. Characters should not talk to themselves. Someone must intervene to make the action lifelike. However, do not allow the minor character to become important; it is best not to name him; merely identify his position. Various methods may be used to cut down the number of characters; among these is the use of the telephone, letter, or telegram. The last two should be short and important if read. Messages which help in explaining but which are not exciting in themselves may be summarized by the reader. Telephone conversations frequently save scene shifting, create atmosphere, and make situations clear. They are generally shorter than face-to-face conversation and thus speed up the play. Sometimes it is essential that the radio listener hear the speech at both ends of the telephone line, but since this is unnatural it should be avoided if possible.

Dialogue.

Since the radio audience cannot see the actors, making the characters speak in character is vital. Emotions must be brought out to the listener, not by the shrugging of shoulders or by the lifting of eyebrows, but by words, sentence structure, and delivery. All emotions have to be conveyed through the air by speech; people under terrific emotional stress are likely to say little, to use short sentences or fragments.

The theater audience can see the actor enter the scene, but when a radio character comes into the play he must be introduced by dialogue, "Well, here comes Harry now; let's ask him." This identification must be carried on throughout the play as characters enter and leave the scene. It is a wise policy for characters to be addressed by name in the dialogue. However, this must not be overdone. Not only does the dialogue introduce the character but it may describe some essential manner or condition of the person. For instance, "Who is that long-bearded old man coming down the road, the one with the tattered clothes who leans so heavily upon a cane?" In this way the dialogue appeals to the visual sense of the listeners and obviates the necessity of a description of the characters by the narrator. In some instances the dialogue may be used to set the stage as in "Goodness, Ruth, don't you delight in this modern kitchen with all its chromium and porcelain? It is so bright and cheerful."

The author, like the director and like the audience, must forget his stage and listen to his words as if he were blind. The characters are never seen but the words they utter are vital. They should speak with a clearness and directness that leave no uncertainty in the mind of the listener either as to their purpose in the play or as to which character is speaking. Speeches must be much shorter in the radio play than they are upon the stage because of the time limitation. There is no place for the soliloquy. However, jerkiness must also be avoided. Every speech must carry forward the action. It is not an easy task to write conversation, but it must be very real, very human, in the radio play. Practice writing the dialogue of all types of people at every opportunity. The speeches must be in harmony with the characters who speak them. They should be written so that they can be understood in the dark. When questions, exclamations, or whisperings are used, they must be natural and realistic in their phraseology. On the stage the facial expression will help in the understanding of certain lines, but radio dialogue must be more explicit. The microphone emphasizes affectations; consequently diction must be so natural that it sounds extemporaneous and casual, and yet it must not be slipshod.

The speech of the characters should portray the scene and the action as well as the thought. All action must be talked about. It is better to say, "Why did you come in the window when you could see that the door was open?" than to inquire, "Why did you come in that way?" because the audience cannot see the entrance. Stage business and sounds are explained by dialogue. It is wise for the writer to allow the control operator to tell him how to instruct his actors in the matter of entrances and exits in order that he may get the proper impressions of distance and motion to appeal to his audience. As the same sound effects frequently may be used to illustrate different sounds, the dialogue must bring out what the sound means; otherwise the roar of Niagara might sound to the listener like the escaping steam of a locomotive.

The sentence structure used in the radio dialogue should conform to the rules that have been laid down for all radio speech. Sentences should be short, simple, clear. The radio script must be actor-proof—written in such a way that it cannot be misinterpreted. Do not allow the entire plot to hinge upon a single line, because the listener's attention may be diverted during its delivery, with the result that he will lose the entire plot of the story. Of course, profanity, immodesty, the belittling of any race, and the use of poor grammar, except in cases where it is necessary to bring out character, are bad. Humor must not offend anybody who may be a patron of the sponsor of the program. The use of such descriptive nouns as "wop," "Chink," or "nigger" is absolutely forbidden. Even the sports announcer describing a prize fight refrains from using the word "blood." Here is a final caution under the heading of dialogue: do not

allow the script to become too "talky." Radio characters should not be loquacious.

The speed of the radio play is constant. There can be no pauses of any length while actors ponder, none of the lighting of cigarettes so loved by the amateur, no quiet and thoughtful moving from one side of the stage to the other. The tempo of the radio play is fast. No episode can be padded with description. There must be a planned forward action. Any lag in a play is very quickly apprehended by a listener and must be tightened up in those loose spots. On the other hand, it may become staccato and hurried where leisure is desirable.

Effects.

The dramatic writer for radio uses various devices to create moods and effects and to economize in time. While writing it is helpful to keep in mind the part music can have in creating the mood and increasing the pace. Some pattern of music may strike the writer as being just the effect he desires to create; if so, he should jot it down in the script so that the director may sense the feeling he intends to bring out. Sound effects and music used artistically and effectively make the difference between a first-class production and a commonplace drama. Music can provide an emotional cyclorama. Good effects may be obtained by the use of whispers, exclamations, and questions, but they should be used only if they would come naturally in an ordinary conversation. A trick frequently used for speed and economy is the montage. This is a series of flashes or bits of conversation which almost overlap each other or are separated by brief passages of music or sound effects. The montage type of writing is extremely interesting and effective, if it is overdone the effectiveness will be lost.

As the radio drama is intended for the ear, the author should depend upon various sound effects and insert them in his script in order to create a more vivid picture for his listener. Through these sounds he may appeal to various emotions and may obtain even greater suspense reaction than can the author of the stage play. The persons who are most familiar with the use of sound effects are the sound-effects man and the control operator; consequently the author should confer with them as to what effects may be obtained and how these effects can be synchronized with dialogue. Such sounds may be used to create mood, to maintain tempo, to create color and atmosphere. However, they should never be introduced for their own sake. They have value only in carrying forward the plot.

Length.

The radio play must be timed exactly so that the tempo can be maintained and the actors will not have to speed up or slow down at the end.

Radio plays are heard most frequently upon 15- and 30-minute programs; approximately two-thirds of the program period is the most that can be devoted to the script. The balance of the time is taken up by commercials, the announcement of the narrator, musical transitions, etc. Probably the script will be cut during the rehearsal to its correct time limit. Much will depend upon the rate of speech of the actors. A too-long script is preferred. It is easier to cut than to pad a script.

Taboos.

Always in writing for radio it is necessary to keep in mind the standard taboos.

1. The Deity's name must never be used irreverently. It is not so much what you say on the air as how you say it. There was the Mae West Christmas burlesque of Adam and Eve that caused national investigation. The script was found to be innocuous, but the way Mae West spoke her lines was a startling sacrilege.

2. Offensive statements about or references to religious views, political groups, and racial characteristics should not be used. We presented a radio version of "Green Pastures," in which the Negro preacher exhorts his congregation as "You niggahs." The program was condemned by Negro listeners, and the students who composed the Ethiopian Club protested to their president.

3. Physical deformities should not be made humorous or emphasized. The "soap opera" serials have recently had an epidemic of blindness, an emotional appeal for characters who have to live in darkness. Parents and relatives have protested to the sponsors, pointing out that radio is the outstanding source of entertainment for the blind and the shut-in. Emotional scenes concerning blindness are debilitating; they have lost listeners for the sponsors and made enemies. No guest coming into the home would laugh at a blind or a crippled host.

4. Murder and suicide are discouraged. Neither the criminal nor crime may be glorified. Crime-enforcement agencies maintain that plays about criminals increase crime and have a psychological effect upon youth, yet many sponsors, recognizing the interest and the intense action of such dramas, specialize in this field but require that the criminal must be caught, punished, and the play end with the moral "Crime does not pay."

5. Overemphasis on insobriety is not permitted. Of course drunks are not welcome in the average home.

6. The use of the word "Flash" is reserved for special news bulletins. This is the rule Orson Welles caused to be laid down after his "Invasion from Mars" scare flashes.

7. Sex dramas are forbidden, and one sponsor refuses scripts in which women smoke. In many instances a subject which would be banned upon a comedy program may be used in a domestic story. For instance, childbirth and the attitude of youth in relation to the facts of life are permissible subjects in a family show, whereas they would be in bad taste if presented by a comedian. Comedians recently have been taking slight liberties with risqué stories.

8. Unintentional interpretations and words and phrases with double meanings and those which through mispronunciation or careless listening may result in embarrassment should be avoided. In preparation for a nation-wide broadcast celebrating the centennial of the University of Michigan, a script was prepared about the first woman desiring to enroll as a coed. In the skit the President of the University advised her to try attending a class. She was hissed and booed by the men. The President asked her if she weren't going to cry. She replied, "I am going to study for my education, not cry for it." The continuity editor of the network wired instructions to omit the words "cry for it" because they were too intimately associated with the advertisement of a children's laxative. In the same skit the young woman said she had tried to get into the boardinghouses in the college town but they had all refused her admission. In rehearsals the word "boardinghouses" sounded too much like "bawdy houses."

The Manuscript.

The radio script should be double spaced. It is best to place the name of the character delivering a speech in the center of the line above the speech he delivers. If the character's name is placed in front of the line, there is a possibility that it may be read by him. Copies of the script must be provided for each character, the director, the sound-effects man, the musical director, and the control operator. In case the script is one of a series to be presented, the number of the script in the series and the date upon which it is to be given should be included in the manuscript. If possible, it is also wise to list the rehearsal dates and hours.

The author should list the cast, giving some descriptive material about each characterization—types, ages, voices, and personality.

ACT I, SCENE I

Phineas (Union guard, around 40, given to airs; fancies himself as an actor and shrewd fellow).

Old Jesse (groom, Yankee, garrulous, given to religious philosophizing).

James Winter (Confederate spy, young, bitter humor, courageous).

Colonel (Yankee, elderly, formal manner).

Chaplain (Yankee, prayer-book murmur).

It is also good practice at the beginning of the script to list all the sound effects that will be required according to the scenes and acts. Do not use adjectives or adverbs to qualify the sound cue unless such adjectives give instruction as to volume or pace.

SOUND EFFECTS

Jingle of harness.

Slow steps on wooden platform.

Marching effects.

Squeak of pulley.

Whinny and pawing of horse.

Slow drum beat.

The titles of music to be used in the introduction, close, and scene transitions should also be given, or a space left in which the musical director can fill in this information. Such listing will be helpful to the casting director, the sound-effects man, and the musical director.

EDDIE: Well, you've got the idea, then. All right. The first sound we hear is an automobile. The camera swings around, and catches this car—a big, powerful looking roadster—as it swings into the driveway. (*Start fading in music as background—something "mysterioso," preferably.*) We see the headlights cut across the house. Then the car stops in front of the doorway; a young man climbs out and knocks on the door. He waits a few moments, and then— (*Music fades up and out rapidly.*)

Whenever necessary the writer should give in the body of the script the intonation to be used by the character in the presentation of his part, the inflection, voice changes, and attitude.

EDDIE: (*with an air of finality*) Well, that's that. It's terrible, then. (*There is a slight pause.*)

MARIAN: What's the matter? Don't you feel like talking?

EDDIE: (*mock indignation*) Why, Marian! How can you say such a thing? Me? Not talk?

Also in the body of the script it is necessary to show where sound effects are to be used and which sound effects are to be used.

JUDGE JAY: This court stands adjourned until high noon tomorrow. (*Gavel—crowd noises.*)

If, in the opinion of the author, it is necessary for characters to emphasize certain words, these words may be underlined. The use of dashes as punctuation helps the actor, giving him an opportunity to characterize his part and make full use of the pauses. When there is a scene transition, the musical selection to be used in that transition should be listed by name.

Adaptations.

It is generally felt that adapting a stage play or bit of literature is the easiest way of obtaining radio material. This belief is based upon the fact that so much of the better radio-show material is adapted from plays, novels, short stories, or pictures. The broadcasts of the Lux Radio Theater, Campbell Playhouse, Columbia Workshop, and Great Plays often feature adaptations. Furthermore, the unimaginative writer feels that such a procedure eliminates the difficulties of creating plot and characterization. Adapting eliminates the difficulties of creation; however, the technical difficulties are by no means decreased, for making a good adaptation in reality requires more technical skill than writing an original skit.

The problems of adapting plays and pictures are probably the least difficult, since the original material is already in the form of drama. Two things are necessary: conformity to the usual time limitations of radio, and the removal of the dependence on the visual. These visual aids and stage business, if they are essential, must be translated into dialogue for the benefit of the radio audience. A good test of this requirement may be made by closing the eyes during a motion picture and trying to create in the imagination the scene on the screen, using as a basis only the sound. Conforming to time is another problem. One-act plays lend themselves more readily to adaptation because playing time already approximates radio time units. Condensation of the longer plays requires more than the cutting of speeches and scenes. In many cases it requires a rearrangement in order to strengthen narrative structure, it requires the combination of characters in order to eliminate confusion, and it requires the simplification of plot and the speeding up of the tempo.

The adapting of stories is a problem somewhat more difficult than that of adapting plays. Here more creative ability is needed because stories often contain very little dialogue and much description. The adaptor deserves almost as much credit as the author because he has so much work to do in translating the story into radio requirements. He will probably need to simplify the plot and eliminate or unravel subplots. This is more likely to be true of the novel than of the short story. New dialogue may have to be invented to take care of essential description, or sound effects may need to be employed to give descriptive effect. Conformation in the matter of time is again more easily accomplished in the shorter story; in fact, the novel is often best presented as a serial. And, finally, as is the case with plays, stories will need to be consolidated and compressed. Almost all forms of writing lend themselves to adaptation but it must be remembered that only one sense is appealed to by radio; there is no aid from the visual, and neither is there any opportunity to check back and clear up any misunderstanding.

It should also be noted that the adaptation of comparatively recent material requires a copyright release from the original author or his agent. Seldom does a magazine or publisher grant such rights. In many cases the author has retained his radio rights and he must be contacted—and usually he is difficult to locate.

Submitting Manuscripts.

While it is inadvisable to submit ideas to radio stations about plays and programs, some stations can be trusted not to steal the idea. These stations require the originator to submit the idea in the form somewhat like the following:

Date: _____

To Station _____:

I am submitting my idea, summarized or characterized below, about a radio program to you today with the understanding that you are wholly free to determine questions of priority and originality in connection with any identical or substantially similar ideas or suggestions, and that for payment, in the event of use, I will rely upon your own sense of fairness and honesty.

 Brief summary or characterization of idea:

Note: Station _____ is not responsible for manuscripts or other materials submitted. It is understood that the author is retaining duplicate copies.

As many stations and advertising agencies will not even open an envelope which obviously contains a manuscript, fearing that any future similarity between the submitted manuscript and a produced play may result in a copyright suit, it is advisable to put the release in a separate stamped envelope attached to the manuscript package.

Television.

Television will bring a new technique in writing for radio. I fear, however, that visual broadcasting of plays will rely for its appeal solely upon the technical achievements of modern science. In the radio play of today the listener participates in the drama. His imagination, his memories, build the scene and create the characters. He is in reality a character participating in the action. He selects his favorite blonde or brunette for his heroine. He sets the scene in locations where he has been. Today there is no limitation upon the radio setting, no small stage with painted drops or background, no limitation imposed by the focus of the television camera. While television trucks may be rushed from locale to locale, no truck can shift the scene so quickly as can the listener's imagination. "The Invasion from Mars," with news flashes from various parts of New Jersey, was very real because such bulletins would be broadcast in case of an actual invasion just as they were in that vivid drama. With television the scenes would have to be faked, and while the listener can effectively fool himself he isn't easily fooled by artificial scenery. The scenes and action today, created by sound effects, mood music, and words, are not circumscribed. The television drama if produced in the studio will have scene shifts, curtains, the shifting of the camera from set to set; it will revert to the stage play. When solid flesh-and-blood characters are seen upon the screen it will be hard suddenly, with the sound of an air-

plane, automobile, train, or boat whistle, to transport them to a distant scene. All these problems and others must be considered by the present-day writer of radio dramas when television comes to our receivers. When the radio drama was suggested as a successor to the theater its limitations were pointed out to be many. As radio techniques were developed, the limitations were overcome or disavowed by the superior opportunities. Now television is over the horizon waiting for engineers to send it to our homes and dramatic writers to develop new principles of writing and presentation. Unfortunately television drama will not have the assistance of commercial writers, expensive casts, and well-paid producers during the experimental period. It is up to workshops in colleges and stations to carry the burden of creating television drama.

The recently developed color television has all the superiority in radio that color has in motion pictures. Color brings out depth and distinction that was not evident upon the grey television screen. The inconceivable technical achievement and the beauty of the pictures will hold the attention of the radio ears and eyes. The color televised drama will probably combine interludes of unseen drama with visible scenes. Color television offers unlimited opportunity in educational programs in such courses as botany, geography, dressmaking, and interior decoration. The use of the new fluorescent lighting methods does away with artificial make-up and permits the broadcast of natural colors, as well as eliminates the excessive heat of the originally used klieg lights.

CHAPTER XII

Writing the Radio Play

(A Program)

The adaptation which follows is based on *Hush Money*, a play in one act by Percival Wilde, found in his collected volume *Three-minute Plays*. The adaptation is printed here with Mr. Wilde's special permission. The play is copyright, 1927, by Mr. Wilde, and no performance or broadcast either of the play or of this or any other adaptation may be given without the written permission, in advance, of one of Mr. Wilde's agents.¹

The version printed here is a very free adaptation; many of Mr. Wilde's lines being omitted and many for which he is not responsible being inserted. Among the latter, for instance, are more than a dozen lines inserted at the beginning to demonstrate the sound effects used to create atmosphere at the beginning of a radio play and to set the scene or locale of the play, which would have been accomplished by scenery on the stage; and the two at the end, none of which are to be found in Mr. Wilde's play.

The stage play commences at the moment that the manicurist begins on the man's second hand and thus avoids presenting an action in less time than it would take in real life. A radio broadcast often takes greater liberties with time; hence we commence with the telephone call for the manicurist, thus introducing desirable movement, and if the girl finishes the man's second hand in eight speeches, which she does not do in the play, it is not contrary to the canons of radio. As the purpose of this program is to present instruction, the illustrative play had to be cut to a minimum in order that adequate instructive material might be given in an allotted time.

ANNOUNCER: This is the Michigan University of the Air broadcast direct from the campus studio in Ann Arbor. This afternoon we present another program in the Radio Guild Series, today's subject being the writing of the radio play
Sound: Telephone bell.

CLERK: Room service.

MAN: (*Through filter*) This is Mr. Smith in Room 310.

CLERK: Yes, Mr. Smith.

MAN: (*Through filter*) Will you please send me up a manicurist?

CLERK: Yes, sir, right away.

¹ Walter H. Baker Company, 178 Tremont Street, Boston, or Samuel French, Inc., 25 West 45th Street, New York.

Sound: Hand bell.

CLERK: Hey, Mabel. The guy in 310 wants a manicure—name's Smith.

GIRL: I'm on my way. It's cash in my pocket.

NARRATOR: I will interrupt this black-out skit occasionally so that we can analyze the play as it goes along. And this is the opening of a radio black-out. A black-out is a very short, fast-moving skit, with an unexpected ending. It has many of the same characteristics that are found in a short radio play. In reality a radio play for a fifteen-minute commercial program only runs about eight minutes in length, the balance of the time being taken up with music and commercial announcements. Writers of radio plays usually employ one of three media, or a combination, to introduce their plays—music, speech, or sound effects. Music is used when a certain mood is an essential characteristic of the program. When you want to have your audience feel sentimental, sad, joyous, or excited, music of the right type will set the mood for the listener, just as it did in the old days of the silent motion picture. Speech is used to give necessary information; however, the better practice is to avoid a long, scene-setting narration by the announcer. It is much better to let music, sound, or the speech of characters give the setting, introduce the characters, and place the time or period than to have an announcer do this. In our skit, the opening of which you have just heard, we have used a combination of sound and speech. The telephone bell and the speech of the clerk who said, "Room service," give us clearly the picture of a man in a hotel room calling the office requesting the manicurist. It would have been difficult to set our scene by using music and we don't wish to establish a mood in this particular skit. We have not used a long speech by the announcer because it is important to get quickly into the play. That is a characteristic of radio plays that must be observed. Action is an essential quality and must come quite near the beginning. In the first few lines of the radio play, it is advisable to introduce the characters. Here we have introduced a man in a hotel and a manicurist who is on her way to his room at the present time. While I have been giving these few comments, she has gathered her tools and taken the elevator to the third floor, is coming down the hall and—

Sound: Knock on the door.

MAN: Come in.

Sound: Door opens.

GIRL: You sent for a manicurist, sir?

MAN: Yeah; come in.

Sound: Door shuts.

GIRL: Are you alone, sir? It's against the hotel regulations for me to give a manicure in a room unless there is someone else present.

MAN: Oh, bosh! I wouldn't have anyone see me getting a manicure in a barber-shop. They would think I was a sissy.

GIRL: Very well, sir, if you *insist*.

NARRATOR: In these few lines the introduction of the characters and setting is continued with a suggestion of a possible plot development. The usual content of such introductory material is the what, where, and who of the story to follow. For our introductory passage we have used straight dialogue telling us that the manicurist has reached the man's room and is now ready to begin her work. The actual skit has taken about fifteen seconds, so far, and it's time we got into the development of the plot. We have also used

sound effects—the opening and closing of the door—to show that there has been a transition from the office of the room clerk who received the request to the hotel room where the man is waiting. We have to put in these sound effects in order to create scenes for the listener, to stimulate his imagination. As there are only two characters in this dialogue up to the present, it has not been necessary for them to call each other by name in order that they may be distinguished by the listener. The man's voice will always identify the man. The feminine voice will be that of the manicurist. If, however, we had a number of characters in our scene, it would be necessary for them to call each other by name for a little while, until the sound of their voices had made an impression upon the listener so that he could identify the different characters by their voices. It is advisable in radio skits to use as few actors as possible, so as not to confuse the listener. Now, let's get along with the dialogue.

Sound: Filling bowl with water, placing of metal instruments in china bowl.

MAN: Will it annoy you if I smoke?

GIRL: Not at all, sir.

MAN: Good. I have an exceptionally fine cigar here I have been wanting to smoke all day. I couldn't afford cigars like this in the past. This is the height of luxury—a fine cigar, a young woman to manicure my nails.

GIRL: (*After short pause*) Are you new in the city?

MAN: Yes; is it so very obvious to you?

GIRL: Oh, no, sir. I didn't mean to be offensive.

MAN: Of course you didn't. I'm in the city for the first time. Never could afford to step out, but I've struck oil on my ranch and I've money enough to really enjoy myself. Those nails show you that I spent most of my life at hard work. Now I'm going to have comfort. Easy come, easy go, I suppose.

GIRL: Yes, sir. May I have the other hand, please?

MAN: Certainly. Here, let me change this cigar to the other hand. I don't want to spill the ash. They show it's a fine cigar.

GIRL: I'll get you an ash tray.

MAN: No, don't bother—it will be all right. They won't fall. Tell me, Miss—?

GIRL: Madden—Mabel Madden.

MAN: Miss Madden, do you make a pretty good living at this manicuring job?

GIRL: (*Dejectedly*) Oh, I get along. But it's not easy come for me.

MAN: Hard work, eh? This sure is a fine cigar.

GIRL: (*After short pause*) There you are, Mr. Smith, they're finished.

MAN: Well, that was a quick job. Take that five-dollar bill on the dresser and keep the change.

NARRATOR: The dialogue that we have just heard continues to develop the plot. Nothing should be put in which doesn't carry the plot on toward its denouement. There is no opportunity for wordiness in a radio skit; practically every speech should have some purpose in plot development. It is quite essential in the development of this very slight plot that the man has suddenly acquired wealth, that he is not familiar with the ways of the city, that the manicurist is rather down on her luck, that the man is watching the ash upon his cigar, and that he is inclined to be rather easy with his money in offering to pay five dollars for the manicure.

GIRL: (*Getting tough*) Five dollars! Mr. Oil Man, that manicure will cost you five thousand dollars!

MAN: (*Laughing*) What's that? You've certainly got a sense of humor.

GIRL: (*Tough*) You said your money came easy and it's going to come to me easy, too. I told you I had no business in this room alone with you and you insisted that I stay. That's just going to cost you five thousand dollars or I'll scream for help.

MAN:¹ (*Laughing*) Oh, you're crazy! I've treated you in a perfectly gentlemanly manner while you were in here and I've treated you generously by offering you five dollars for fifteen minutes of work. You can't blackmail me that way.

GIRL: Oh, can't I? Do I get that five thousand dollars?

MAN: No! Here's fifty cents; that's your regular fee. Now get out!

GIRL: Okay, you asked for it—you'll pay.

Sound: Key turning in lock on door.

MAN: What are you doin' with that key?

GIRL: The door's locked. I'll tear my dress and muss up my hair.

Sound: Girl screams. Sound of ripping dress. Girl calls for help.

MAN: Too bad you had to tear your dress that way. You're certainly putting on a good act.

NARRATOR: Now we've reached the climax. Not the denouement, but the climax between the two conflicting forces. The action in a radio play must be very fast, indeed, and there must be plenty of action. We have built up the man in this case so that the listener rather likes him—generous, and yet a strong character, not easily fooled despite his inexperience. If we had a longer time for the body of this skit, we would have developed the characters more completely. In the climax the speeches must be short and real. Again sound effects are brought in—the ripping of the dress and the key in the door to denote action upon the stage that cannot be seen. Now, before our final analysis, let us consider the skit as a unit from the beginning to the suggested but not yet presented solution of Mr. Smith's dilemma.

Sound: Telephone bell.

CLERK: Room service.

MAN: (*Through filter*) This is Mr. Smith in Room 310.

CLERK: Yes, Mr. Smith.

MAN: (*Through filter*) Will you please send me up a manicurist?

CLERK: Yes, sir, right away.

Sound: Hand bell.

CLERK: Hey, Mabel. The guy in 310 wants a manicure—name's Smith.

GIRL: I'm on my way. It's cash in my pocket.

Sound: Footsteps in hall. Knock on door.

MAN: Come in.

Sound: Door opens.

GIRL: You sent for a manicurist, sir?

MAN: Yeah; come in.

Sound: Door shuts.

¹ Percival Wilde points out in a letter how the suspense in the play *Hush Money*, which is used for the basis of this radio program, should be improved. "There are a few lines in the adaptation which I should wish to change. For example, one thought on technique which I have tried to pass on is that a new situation, in real life, is never accepted without question and incredulity. For example, if *A* says to *B*, 'You don't know it, but I'm the father of your child,' *B* will not answer, 'You cur!' but will absolutely refuse to believe it. It is only after he has come to believe, that full reaction comes. In the present adaptation, when the girl springs blackmail, the man believes too quickly, thus injuring suspense."

GIRL: Are you alone, sir? It's against the hotel regulations for me to give a manicure in a room unless there is someone else present.

MAN: Oh, bosh! I wouldn't have anyone see me getting a manicure in a barber-shop. They would think I was a sissy.

GIRL: Very well, sir, if you *insist*.

Sound: Filling bowl with water, placing of metal instruments in china bowl.

MAN: Will it annoy you if I smoke?

GIRL: Not at all, sir.

MAN: Good. I have an exceptionally fine cigar here I have been wanting to smoke all day. I couldn't afford cigars like this in the past. This is the height of luxury—a fine cigar, a young woman to manicure my nails.

GIRL: (*After short pause*) Are you new in the city?

MAN: Yes; is it so very obvious to you?

GIRL: Oh, no, sir. I didn't mean to be offensive.

MAN: Of course you didn't. I'm in the city for the first time. Never could afford to step out, but I've struck oil on my ranch and I've money enough at last to really enjoy myself. Those nails show you that I spent most of my life at hard work. Now I'm going to have comfort. Easy come, easy go, I suppose.

GIRL: Yes, sir. May I have the other hand, please?

MAN: Certainly. Here, let me change this cigar to the other hand. I don't want to spill the ash. They show it's a fine cigar.

GIRL: I'll get you an ash tray.

MAN: No, don't bother—it will be all right. They won't fall. Tell me, Miss—

GIRL: Madden—Mabel Madden.

MAN: Miss Madden, do you make a pretty good living at this manicuring job?

GIRL: (*Dejectedly*) Oh, I get along. But it's not easy come for me.

MAN: Hard work, eh? This sure is a fine cigar.

GIRL: (*After short pause*) There you are, Mr. Smith, they're finished.

MAN: Well, that was a quick job. Take that five-dollar bill on the dresser and keep the change.

GIRL: (*Getting tough*) Five dollars! Mr. Oil Man, that manicure will cost you five thousand dollars.

MAN: (*Laughing*) What's that? You've certainly got a sense of humor.

GIRL: (*Tough*) You said your money came easy and it's going to come to me easy, too. I told you I had no business in this room alone with you and you insisted that I stay. That's just going to cost you five thousand or I'll scream for help.

MAN: (*Laughing*) Oh, you're crazy! I've treated you in a perfectly gentlemanly manner while you were in here, and I've treated you generously by offering you five dollars for fifteen minutes of work. You can't blackmail me that way.

GIRL: Oh, can't I? Do I get that five thousand?

MAN: No! Here's fifty cents, that's your regular fee. Now get out!

GIRL: Okay, you asked for it—you'll pay.

Sound: Key turning in lock on door.

MAN: What are you doin' with that key?

GIRL: The door's locked. I'll tear my dress and muss up my hair.

Sound: Girl screams. Sound of ripping dress. Girl calls for help.

MAN: Too bad you had to tear your dress that way. You're certainly putting on a good act.

Sound: Muffled footsteps running down the hall. Men's voices outside the door pounding on the door.

HOUSE DICK: What's wrong in there? Open that door!

GIRL: Help! Help!

HOUSE DICK: Open this door!

MAN: (*Calmly*) Afraid you'll have to break it down, officer. The young lady has removed the key.

GIRL: Help! Help!

Sound: Door breaks.

HOUSE DICK: Huh, what's up in here? One of 'em guys, huh?

GIRL: Oh, officer—he tried to—

MAN: Officer, I haven't moved from this chair in ten minutes. This is a nice little blackmailer here.

HOUSE DICK: Oh, yeah? I suppose she tore her own dress?

MAN: (*Calmly*) That's exactly what she did.

GIRL: I'm telling you he tried to—

HOUSE DICK: Don't worry, girlie, we'll take care of this guy. Come on, you, get going.

MAN: One moment, officer, I can prove to you that I haven't moved from this chair; that it would have been impossible for me to have torn this young lady's dress or made a pass at her.

HOUSE DICK: Oh, yeah?

MAN: Officer, look at my cigar here. You'll notice that there's at least an inch and a half of ash at the end. Now how could I have been struggling with this young woman without having knocked that ash from this cigar or having it fall off? I sat here quietly at this desk watching her put on the act.

HOUSE DICK: Say—that's so—

MAN: What's that saying, "A woman's only a woman—but a good cigar's an alibi."

NARRATOR: And thus ends our little play. A few words may be said about the closing, however. We used an all-dialogue closing, that is, the characters in the play spoke up to the very end. We must be very careful that there is no anticlimax. It is possible that in this black-out skit we have presented for analysis it would have been better to omit that last line about a good cigar's being more appreciated than a woman.

This plot was selected for analysis because it is fast-moving. But it presents some dangers for radio presentation. The implied plot might possibly be offensive to some listeners. A radio play goes into the home, where it is heard by all ages and by all types of people as well, and it must be clean. A second objection to this plot would be that concluding line which is put in in order to make a point, and that point is this: At this time of the day, afternoon, a large proportion of the radio audience consists of women, and to make a statement that a good cigar is better than a woman is going to offend those listening. An advertiser would not allow a line of that sort in his skit, because it would lose him customers.

Now a word about the material for the radio play. Any material—if it is real and has dramatic value—can be adapted to radio presentation. But the writer must ever be conscious that he is creating a picture in the mind of his audience—a picture that must be made vivid through sound alone. Therefore, the radio writer must think of his play in terms of sound and give his script all the details necessary to create an identical impression in the mind of his hearer.

Mr. Wilde in commenting upon this radio adaptation or abbreviation of his play *Hush Money* gives some excellent advice to the dramatic writer:

I have already referred to my treatment of the time interval, which in the play corresponds to life and does not in the radio version. But our methods of character depiction are also at variance. You allow the man to volunteer information about himself. In effect, "I am such and such kind of man. I'm a rough diamond. I prospected for years and then struck it rich. I've got lots of money. I smoke expensive cigars. Even if the hotel rules forbid you to enter my room when I'm alone, what the deuce," and so on. My method (*cf.* the chapters on "Exposition" in *The Craftsmanship of the One-act Play*) is to let the girl pump the man—the facts about his original poverty, his struggles, and his final success being well known—and the man, instead of glorifying himself, answers without conceit and speaks in terms of unlimited praise of the wife who stuck to him through thick and thin. I bring up the curtain with the girl in the man's room, which she entered knowing it was against the rules, and which knowledge she imparts to him as a step toward the crisis. I rather feel that had she entered with the remark you give her, he, despite the technically very clever line you give him, would have replied, "Then let it go. I guess I can get along without a manicure." In short, I take pains throughout to enlist audience sympathy for the man by letting him be pumped, while you have run the risk of making him less likable. (In the abbreviated radio version we tried to make him likable through his speech, his voice.)

I try to establish character so firmly that the subsequent action flows naturally from the premises without the hand of the dramatist being in evidence. I believe in delineating character in such a manner that whatever is to come arises naturally and almost inevitably; if I succeed, technique has covered up technique, and the play acquires desirable objectivity.

CHAPTER XIII

Writing the Radio Serial

Between nine in the morning and six in the evening, Monday through Friday, 60 radio serials are presented each day by the various networks. Some of the serials are good, but there are too many, they are built upon a false psychology, and they are too much alike. If a serial would end now and then and a new one start the broadcasting day would be somewhat improved. The "do-listen-tomorrow" suspense ending to every program grows tiresome, but it gives the sponsor an opportunity to call attention to his product tomorrow and tomorrow until sales resistance has been broken down. These dramatic pieces are not planned as literature or drama or entertainment or education. They are strictly advertising—nothing else. The 15-minute period allotted to the daily presentation contains an average of $2\frac{3}{4}$ minutes of commercial copy—not excessive in itself but when repeated hour after hour, day after day, it gives a bad taste to radio entertainment. Approximately $3\frac{1}{2}$ minutes of each program are devoted to theme, tie-up with the preceding episode, and a "come-on" for tomorrow. The average dramatic time is $8\frac{1}{2}$ minutes to a 15-minute program. The plots are not objectionable, only monotonous in their sameness. One motif does stand out throughout the day, one against which listeners cry out most insistently, domestic unfaithfulness. Heard as the theme of one serial it would go unchallenged. Splattered through two dozen it becomes an unhealthy overdose. The beginning student in radio writing, however, must not ignore this specific and specialized kind of writing so popular as an advertising medium.

It is the object of any advertising scheme to arouse in the public an awareness of a product which the sponsor wishes to sell. The radio serial, more than any other advertising means, makes this possible, because the story's running over a period of months or years has the cumulative effect of renewing or refreshing the appeal of the sponsored commodity. A successful serial will increase its circle of listeners, thus widening the potential consumer market. Because the increase of the market is in direct proportion to the increase of the popularity of the radio program, sponsors and agents are on the lookout for scripts which indicate that they will appeal to the radio audience.

Radio serials are designed for three separate audiences. The morning and early-afternoon programs are written for women who are busy about

their solitary household tasks or who are lonesome shut-ins. The sponsors are manufacturers of products which housewives buy in large quantities—food, clothing, and domestic supplies, particularly soap, which has given the name “soap opera” to this type of entertainment. Each program is built around some one lovable character (usually an older woman with whom the listener can identify herself), who is in a position close to Trouble. The troubles may be her own or those afflicting her loved ones and neighbors, but she must be kept in continuous difficulties.

From the time the children are out of school until their bedtime, the airways pulse with serials designed to snare the juvenile listener and make him coax his mother to buy so that a box top and 10 cents may be sent in for the current premium offer. These tales center about some hero or heroine with whom the young listener can identify himself, or else they are written around a superior, adventurous adult who fills the role of an idol to be worshiped and emulated.

As twilight falls and the family gathers at home, the serials for children slide over into dramas written with an eye on the whole family. “Amos 'n' Andy” must have an enormous audience of tired businessmen, because so many of their adventures poke affectionate fun at their ineptitude in financial matters. “One Man's Family” has a range of character which takes in the whole household, from grandma down to the youngest child who is likely to be awake at that time of night. And as the hands of the clock swing around, these homey adventures are replaced with the more harrowing scripts aimed entirely at adult audiences—the “episodic serials” built around several familiar characters who have a different, complete adventure in each installment.

Listen to the programs on the air and select the type of program you think you are best fitted to write. If you are a woman, the chances are that you are more familiar with the experiences and daydreams which appeal chiefly to the feminine audience. As a rule men write more convincingly the scripts of exciting adventure. When you have decided on the audience you wish to entertain, choose your chief character and put him or her in a setting which is familiar to you, one which allows for the introduction of a variety of minor characters and an infinite succession of troubles.

Let us assume that you have already learned that a radio drama is a story told in dialogue with appropriate music and sound effects to aid the listener in imagining the action. It should have a beginning designed to catch immediate attention, a build-up of suspense leading to a climax, a denouement, and a close. The principle ingredients are characters, setting, and plot, carefully sifted and creamed together, with a liberal proportion of emotion worked in to keep it from being flat and a nice flavoring of humor if you are good at that sort of thing.

In a single drama written for radio, the emphasis is on plot. There is not time in half an hour to work out more than a sketchy characterization of the actors, and the play must be kept moving every minute with action or laughter if it is to hold the attention of the listener. In a serial, however, the important thing is characterization. No radio-wise sponsor expects to get a heavy response from the first 13 weeks of a new serial, and calculations have been made that it takes two years to work up to maximum pulling power. One of the most successful radio programs is an episodic serial in which the plots are so slight that they can hardly be outlined; the setting is invariably the cottage across the street but the characters are sufficiently appealing to be held in affection by most of the radio families in the country.

Take time in choosing leading characters and become thoroughly familiar with them before writing a word of dialogue. Some writers find it useful to make a dossier of each one—name, age, physical description, likes, dislikes, traits of character, favorite expressions, and attitude toward other actors in the story. Once you begin working with your personnel you can add to this outline as the characterizations grow.

Naturally a personality from the middle classes has the heaviest appeal because the bulk of the radio audience is most readily identified with such people. Experience has proved that if the hero is to be a benevolent Mr. Fix-it, he had better be elderly or at least middle-aged. A homemaker will take advice from Ma Perkins that she would not take from her own mother. If you prefer a younger leading actor, then plan to make him strive against odds, fail, pick himself up with courage and determination until he has achieved success in a venture which only draws him on to another striving against odds and failures.

The listener cannot keep track of many invisible actors; consequently the number in any given scene is limited to five or six important people—two or three is even better. In the course of time, however, radio serials can introduce a great variety of people who have some connection with the central characters, and these can be picked up or dropped at will.

The balance of character in the standard legitimate drama is perfectly good for radio—a juvenile lead and an ingénue, a “heavy,” and a couple of character parts. This provides a scattering of appeal to different ages in the audience and also takes care of voice contrast, which is very important over the air. A fan who follows any given program expects to know who is talking almost the instant the sound begins to register, and a newcomer can tell a motherly, middle-aged voice from a young girl’s, even without the name tags which must be thickly sprinkled through all radio dialogue. One popular serial which features the adventures of three young men differentiates the characters by making one a drawing Texan, the second a crisp-speaking Englishman, and the third an average

American voice without localized accent. Dialect, however, should be handled with discretion lest it become burlesque or be quite unintelligible when produced over the air.

The setting is best when it is familiar to the author; however, a different, unique, or unshopworn one would attract attention. Cottages and palaces, hospitals and orphanages, boardinghouses and theaters, newspaper offices and airplane cockpits—these are ordinary. It costs no money to build a new set for a radio drama. However, if you cannot produce a novelty along that line, pick the one you know best. Familiar material can be handled more efficiently and plenty of material will be required.

If you can write clever, realistic dialogue, preferably of a whimsical nature, or if you have a neat hand with good clean humor, start on an episodic serial in which each installment is complete by itself. These have the advantage of entertaining the occasional listener as well as the regular dialer-in, but they are tricky to handle. Radio men have made a long and exhaustive search for script writers who can do another "Vic and Sade" (only different). The episodic serial is not very different from the single radio drama, except that it concerns itself with one or more main characters who appear in a series of shows, and a large part of its appeal lies in the creation of people so distinctively human that the fans want to hear more about them. If the fan misses one show, the next episode will be a complete story in itself.

It is easier, however, to write a serial which carries its suspense over from day to day. For the first installment it is better not to get deeply involved in plot, because it is going to take a while to pick up an audience and you will only have to repeat later. Arouse curiosity about your characters and the situation in which they find themselves, so that at the sign-off listeners will be eager to know more about them and what is going to happen to them. It is best to start each program, after the series is well started, on a relatively high note, relax the tension somewhat, and then climb up to a high point before the program goes off the air for the day. It is not at all necessary that episodes follow a day-by-day relationship. Thus two or three scripts appearing on three successive days may deal with action that takes place in the space of a few hours. Do not allow the story to become so complex that a great deal of exposition is essential.

The second and subsequent installments will start with what is known as a "leadin"—a brief reference to the previous broadcasts. Authorities agree that no attempt should be made to summarize the story to date, since this would grow increasingly difficult in the allotted time. Most scripts have a few sentences to reveal what is going on during the current sequence or to tell where the protagonists were left yesterday. If you have any doubt as to how this is done, turn on your radio and listen.

One of radio's most serious limitations is the time element. Most of the daily serials are 15-minute spots, with nearly a third of the time allotment taken by station breaks and commercial announcements. Nearly all serials are sponsored programs and those that are sustaining are only being nursed along until they have sufficient pull to interest a sponsor. The average 15-minute serial should have from two to twelve lines of lead-in, be about 2,000 words long, and end with a "closing tag" which poses the what-will-happen-next formula in from one to six lines. It is wise to write 1 minute more of continuity than the time allotment permits. It is always easier to cut than to fill.

Most authorities suggest that in submitting a proposed serial to an advertising agency or script department, two or three installments should be written, with a synopsis of additional material sufficient to make up a 13-week series. It might be wise to write the whole first sequence before you venture to submit anything, even though the extra installments are laid away until they are needed. It takes more time, ingenuity, and energy to write five scripts a week than you realize until you have tried it. Furthermore, do not submit a synopsis, for not even a common-law copyright protects an idea.

In the serials written for children it is customary to leave the actors in some perilous situation at the close of each installment so as to be sure of holding interest over till tomorrow, but the usual five-a-week or three-a-week serial for adults can take more time to work up to a climax, although the tempo should be quickened for the Friday installment, keeping the listener in sufficient suspense to come back for more on Monday.

The experienced serial writer is usually working with two threads of suspense in his story—a major suspense, which will build up to the nearest climax, and a minor suspense, which will become the major as soon as the current pressing problem is solved. This is valuable because radio serials differ from every other form of writing in one important respect. If they are good they may go on for years and years without an ending. Since this is true, a radio serial is built on sequences, rather than on individual, distinct plots, and it is a good idea to let the sequences overlap.

It may be true that there is no substitute for good writing, but in the concoction of radio serials good writing does not mean fine writing. Reluctant though you may be to face it, a beautiful, poetic flow of language is not appreciated by the average soap-opera fan. Commercial radio does not seem to concern itself with minorities; mass appeal is its creed. The masses are drawn to the program by the commonplace in style, diction, story, and characterization.

Radio serials are the etheric counterpart of the pulp literature which burdens the newsstands, and the devotees want to know in advance that

everything is going to come out all right for their favorite characters. They like to identify promptly the hero, the heroine, and the villain; they want the proper people to triumph and the wrong ones to get their comeuppance. Further, it gives them pleasure to be so familiar with the language of these people that they can almost say the words themselves.

Interest is aroused in the serial through the suspense that develops in how the problem is solved, and the interest is held by a flow of perpetual emotion. If you have listened carefully to many programs, you have come to the conclusion that the chief qualification of an actress for soap opera is to be able to sob frequently and effectively into the microphone. Probably the reason Mrs. Housewife would rather weep into her dishpan over the imaginary troubles of "Pretty Kitty Kelley" than over the real troubles of Polish refugees is that she knows, from long and comfortable experience, that Kitty's difficulties will come out all right at the end of the sequence.

Remember, too, that the radio audience is more interested in people than in ideas. If you have any pet propaganda about social uplift or intellectual development, couch these ideas in homely language and let some sweet character already admired by your listeners receive the credit for having said something.

The theme, then, should have a tremendous appeal to the emotions of the multitude, but should be written in a way to hold the solitary listener. While millions of people may be tuned in, they are listening in small units of not more than five individuals, usually less. You may be as cozy as you please with them.

There is no use trying to be subtle, because the average fan will not get it. You should be careful that the whole point of your installment does not hang on one sentence, because perhaps the telephone rang at the moment that sentence was uttered and when the listener returned from answering the phone she was baffled about the story, which she doesn't like being. Be as sentimental as you can without gagging, and you may ladle out tragedy with a trowel, provided it is clean dirt and will all come out in the wash.

Juvenile Serials.

In serials for children there has been a campaign directed toward more wholesome broadcasts. Cheap melodrama playing upon fear is frowned upon, but continuous action is necessary to hold the attention of children and it must be used in larger proportions than are encountered in real life. The story of the experiences of a pioneering family has received the approbation of parents and educators because it teaches many facts of history, nature study, and character development, while main-

taining a thread of steady adventure. Care must be used not to talk down to the child, and the use of bad grammar to characterize juveniles is rarely successful. If you know what children like, there is a great demand today for good scripts aimed at the juvenile audience. The broadcasting companies are eager to keep the parents pacified, provided the script actually interests the young people enough to give the sponsor the reaction he demands.

Children are able to transport themselves without any embarrassment to any setting to which the radio may direct them. Imagination knows no limits. This very fact has given rise to problems in writing the children's radio story. It has become necessary to exercise the greatest amount of control and caution. In the early days of radio for children, writers literally ran away with themselves and failed to realize the power of the medium with which they were working. Children's programs took on the color of the macabre, and nightmares instead of peaceful sleep resulted for many too impressionable but normal children. Finally protests began to flood the studios. Mothers all over the country demanded less violent and disturbing stories. The networks established a list of policies that were to govern any future writing. "The exalting, as modern heroes, of gangsters, criminals, and racketeers will not be allowed . . . cruelty, greed and selfishness must not be presented as worthy motivations."

Actually, the establishment of the list of policies had little effect on the writing, because script writers had seldom been guilty of the violations that the policies warned against. Gradually writers did become aware of at least one thing; scenes of cruelty which might be acceptable in print became too vivid over the radio. Efforts were made to subdue scenes that might offend or disturb. The youngster's love of adventure had to be catered to, but it was not necessary to inject horror to meet the demands of action.

As far as the structure of the children's serial is concerned, there is little difference between it and the regular daytime serial for women. Daily, end-of-the-week, and sequence climaxes are all part and parcel of children's radio writing, but there is this exception. Long sequences are best avoided. Especially is this true where young children constitute the major portion of the audience. As the audience age increases, the sequence length may grow.

Dilemmas in children's serials are without exception less mental than those designed for women. A children's serial must provide the young listener with hazard-studded adventures. A writer very easily can work problems into his story that in being solved teach a lesson in any one of several educational fields. Natural history, geography, first aid, and many others may at some time in the story become the pivot around which an entire sequence revolves. It has been found that information is best re-

tained when learned against an emotional background. In this way radio serials can be educational as well as entertaining.

The protagonist in a child's serial is usually one of two types. He is either a youngster of the same age as the oldest of the child listeners, or else he is an older man with the reputation for infallibility. Because the age of the listeners seems to be related to the age of the child hero, it is wise not to make the hero too young. Fourteen would seem to be a reasonably safe age. The sponsors of a children's program discovered that they were losing the patronage of thousands of potential listeners and purchasers because the hero was too childish.

Care should also be taken to avoid excessive realism. For example, in a western serial the ranch went broke and the place was converted into a dude ranch in order to recoup some of the losses. Letters started coming in asking how much it would cost to go to the ranch. This was proof of the effectiveness of the story. It was real to thousands of children and apparently to many parents. But when the answers to these inquiries were sent out and it was learned that the ranch was a fake, many loyal fans were alienated.

The writer of the radio serial for children should cater to boys' interests, for girls will listen to stories for boys but boys refuse to listen to stories about girls. If there are any girl characters they should be tomboys, and adults should retain their youthful interests and attitudes as much as possible. The real solving of any problems or difficulties should always be done by a youthful character. The characters should never be given a definite age as children prefer to believe that their heroes are but slightly older than they are themselves. The characters' action should be consistent throughout the series. Plenty of action and a good plot are demanded by children, as they revel in experiences and adventures of all kinds, but the young mind insists that truth be accurate and that fiction be consistent.

One of the faults of radio serials for children is oversimplification. Surveys show that children listen to and prefer serials prepared for adults to those expressly written for the child listener. The elements of the adult serial should be modified only slightly for youth. Children have to look to the adult program for humor, for amusing family experiences, for the realism of childhood problems, for character interest rather than a continued series of thrills. Allow the child listener to visualize himself in place of the radio character; make him a part of "The Aldrich Family" or of "One Man's Family." The secret of writing for the radio child is to put the child listener into the play rather than in the audience.

Boys from eight to fourteen years prefer plots that are exciting, filled with adventure, action, and travel. Comedy also has its appeal but wild-west and cowboy tales fit into their games. Girls like excitement but they

will listen to sentimental plays; the slightest mention of love scares off the boys. Mystery, crime, and detective stories maintain their appeal but gangster and horror dramas no longer hold high favor with children or their parents. Highly rated juvenile serials by both the children and their parents include "Robinson Crusoe, Jr.," in which there were no battles, no criminals, no bloodshed, and humor predominated over melodrama. In "Wilderness Road" there was plenty of action but the conflict was with nature, storms, floods, etc. Actual historical characters were introduced and geography, natural history, and zoology were skillfully worked into an exciting series of events. "The Lone Ranger" has a mysterious masked rider whose life is one of adventures in which virtue triumphs. Older children have expressed interest in travelogues; a serial could be written about a boy who accompanies Commander Byrd or Roy Chapman Andrews. However, it is not vital that adventures be about pearl diving, jungle exploration, or sea voyages, for there is plenty of adventure upon our rivers, lakes, railroads, and mountains. The N.A.B. code states that writers need not remove the "vigor and vitality common to a child's imagination but rather base programs on sound social concepts, presented with a superior degree of craftsmanship." Possibly there is the real problem in improving programs for children—stop considering from the viewpoint of childless psychologists and enjoy yourself as you live and play with the kids.

When you have finished your first draft of the script, it is a good rule, as in all writing, to lay it away for a time to "jell." You will see it in a clearer perspective after a brief absence from it. In the meantime, read more scripts or listen to another round of serial broadcasts and you will probably get fresh ideas which will improve your own copy.

Do not try to write a sample commercial to go with your script. The advertising agency can do that better than you can. Besides, you do not know who the sponsor may be. Of course some serials are written with a tie-up to the sponsor's product, but they are written on order, under contract. Next to writing gag continuity for radio's big comedians, the pay in radio writing goes to those who turn out serial scripts; serial dramas are remunerative because they go on the air from three to five times weekly and because they go on forever.

From the writer's viewpoint, this perpetuity demands the constitution of an ox and the fertility of a guinea pig. The chief qualification is endurance, rather than artistry. It is true that Archibald MacLiesh and Maxwell Anderson have written some fine dramas for radio, but they do not write them every day, nor even every week. A creative worker, be he painter, composer, or writer, has a limited amount of original material stored up within himself which he pours out into his creations, and when he has emptied himself he must rest until his reservoirs fill up again. If he

doesn't rest he has a nervous breakdown, which ends his output temporarily at least, or else he drifts into producing machine-made drivel.

Furthermore, as has been already pointed out, the radio audience prefers factory-made fiction, and that is something else you have to take into consideration if you have cast your eye on the commercial profits to be made in this sort of writing, rather than on the artistic side of it. Excepting a few top-flight writers, most of the acclaimed scripts don't earn much money for the man who grinds them out.

Very few listeners give undivided attention to these serial programs, so pace your script slowly enough and make it simple enough to be readily understood by such divided minds. However, you must also take into consideration that someone somewhere is probably paying attention at any given moment, and, if his pet prejudices are offended, he is more apt to voice his condemnation than he ever would be to write his appreciation. For this reason there are many strict taboos in radio. Profanity is carefully censored, even when it might realistically belong in a story. Guard against political, racial, moral, or religious controversies, since the vast audience is touchy about these things and unfavorable reactions are promptly registered with the sponsor.

In spite of the many restrictions which have been stressed, there are compensations in the writing of serial scripts. A writer who has only average ability and who is equipped chiefly with determination and good health can make a very decent living by writing for radio. While his name will rarely be published abroad, there are other rewards. It is sweet to know that 10 million people may become interested in the welfare of the characters he created, and if they do become so interested, his material rewards are not inconsiderable. When Dr. and Mrs. John Wayne, leads of "Big Sister," were married, the Columbia Broadcasting Studios received three truckloads of wedding gifts for the fictitious bride and groom. Irna Phillips (who turns out four serial scripts daily and has learned to dictate at a speed of 1000 words an hour) earns about \$4000 a week.

The broadcasting companies and the sponsors invest an enormous amount in these programs, and they will be happy to grab what you write if you can do a better show with an appeal to the masses. Styles change constantly, giving opportunities to newcomers.

CHAPTER XIV

The Preparation of Children's Programs

It is not my purpose to enter into the controversy between child psychologists and commercial advertisers as to the validity of the contention that the majority of the children's programs now on the air are emotionally overstimulating and have undesirable effects upon the characters of the young listeners. The kind of program to be broadcast will be determined by the children themselves. If they want blood and thunder, they will probably get it, for the advertisers do know their business even though they are a little weak on the child psychology. What I wish to do is to point out certain principles and techniques for the preparation and presentation of all kinds of programs directed toward an audience of children.

A good program for children must serve the best interests of the child. The choice of subject matter, the emphasis, and the play of good and evil should be such that the boy or girl who listens will like the qualities which we think make for happy living. We want children to develop dislike for that which is unfair and untrue, disgust for that which is cheap and tawdry, indifference for that which is trivial, and enthusiasm for that which is fine, true, and important. We want the boys and girls to be attracted by all those things which build up mind, body, and spirit. We also want them to recognize the danger of opposite tendencies so that they will not fall into bad habits. In short, we want them to adopt and develop habits of self-control, self-respect, self-reliance, and self-culture.

Parents have every reason for resenting the inclusion of too much abnormality, especially if the characters that represent it are made very likable, glamorous, or attractive. Programs are criticized which depict children of tender years doing all sorts of impossible things and indulging in pert remarks and coarse slang. Horror stories for older children over-emphasize evil.

While it may be true that a play is not interesting unless it has evil characters as well as good ones, these evil characters must not have greater appeal than those that are good. However, plays can be written without evil human forces. Struggles can be against time, the elements, and space, as well as against men and women.

Children's scripts should make character building attractive. The program should make a better citizen out of the youthful listener. In this

way, the program becomes educational as well as interesting. The boy scout laws of "trustworthiness, loyalty, helpfulness, bravery, cleanliness, friendliness, thrift, courtesy, and reverence" are a good standard for any writer to follow.

Desirable activities should be stimulated, such as helping with the home duties, helping Dad, reading better books and magazines, and developing good hobbies. All these things may be inserted subtly into the radio script.

Entertainment is of course essential, but the programs must not be a trashy or cheap story. Most stories should have a point, should teach a lesson, and should make attractive those qualities that will build mind, body, and spirit for the child, but this point must not be crammed into small ears.

In radio, unlike the stage or movies, one cannot see the characters. Therefore it is desirable to build up the characters so they can be identified by their lines. The roles of the actors must be natural and true to life. They should not be too perfect. In fact, they should be endowed with both human weaknesses and human virtues. If they are too perfect, they might disillusion the child. He will think that anybody who isn't perfect is evil and this would be a bad impression for him to get. The play of good and evil must be portrayed in such a way that the child will recognize each. A dislike for everything evil, unfair, or untrue, must be instilled in the listener. That is the way he can be helped to become a good citizen.

The first requisite for material to be used in a program for juvenile listeners is clarity—absolute clarity. No child will be interested in what he does not comprehend. Clarity can be achieved only through simplicity of language and construction and through simplicity of ideas. The first step is to decide the age group to which the program should appeal and then calculate as nearly as possible the ability of children of that age. Observation of a graded course of study for almost any grammar school will be helpful in determining what kind of material can be used for the different age groups. By knowing what they are studying in school, one can judge their ability to understand additional material.

Simplicity of language does not, under any consideration, imply baby talk. There is nothing quite so insulting to a child's intelligence as to be talked down to from the lofty heights of adulthood. Of course, a distinction should be made between talking to children and impersonating children. In selections like "The Raggedy Man," "At Auntie's House," and "Little Orphant Annie" by James Whitcomb Riley, the method is impersonation and the childish language is justified. Simplicity of language means the use of words understood by children of the age to which the material is directed, or, if any new words are used, the explanation of

them in terms of words already known. It means, likewise, the use of simple sentence construction. Short sentences that leave out any words not necessary to the meaning are always best.

Quite obviously, clarity alone cannot insure a successful children's program. Equally important and much more difficult to achieve is interest. Children are even more impatient with the uninteresting than are adults. They cannot be induced to wait and see if something better will come later. They demand a story that holds them intent from the very first word to the last. They want fast action and plenty of it. Long explanations bore them regardless of how beautiful the language may be. Therefore, anything that is not simple enough to be understood without explanation should be left out of children's stories. This does not mean that new and strange material cannot be used, but it should be introduced with simplicity, omitting all complicated details. In addition to action, children demand something to see. The facts should be accurate in historical dramatizations. So vivid and uninhibited are the imaginations of most of the young listeners that by concrete picture words they can be lifted out of the realm of the present and from their homes to any place or era to which one may wish to take them. Once an audience of children has been won, it is more satisfying than an adult audience because it is so willing to believe; when children give their attention, they give it completely. Sound effects are more vital to a children's program than in a drama for adults. In addition to fast-moving action and image-arousing words, a further device for gaining interest is the use of direct address. By making the relationship one between the storyteller and each individual child rather than the group of children, the story becomes more important to each of them.

Children's interests are aroused easiest by either the very familiar or the very strange. They like to hear the same stories over and over again, and they like to hear about boys and girls exactly like themselves. Or they like to hear about beautiful fairy princesses and giant killers, which are entirely out of the realm of actual experience, yet which are part of their world of imagination. The instinct for hero worship can also be utilized to good advantage in the preparation of material to interest them. If they can identify themselves with an Abraham Lincoln or a Babe Ruth and hear the praises of those heroes, their interest is assured.

Of course, the whole problem of clarity and interest is not solved when the material has been written. The same ideals must be carried over into the presentation of it. The requisite of clarity is satisfied by correct enunciation, careful grouping, and significant emphasis. But the question of interest involves the matter of personality.

The writer must be well informed. He must know. If the script deals with current or historical events it has to be true to underlying facts.

If it is frankly fantastic and imaginary it has to be conceivably genuine, and not just fantasy used as an excuse for blood and thunder. Authenticity does not mean that the script contains all plodding details of everyday life. The writer must have a story, and it must move. He has a right to telescope events and to select high points that keep interest in the program. Even though the material is fantastic in detail and timing, it can still remain true in substance and deal with sound dramatic forces and characters.

During the past few years, there has been a decided tendency to neglect the fun-and-foolishness programs and turn more to dramatic programs for children. This does not mean, however, that there should be no comedy in children's programs. Children love to laugh and be entertained the same as adults. They are ardent followers of comedians upon adult programs. For their own afternoon programs, however, they like drama. These dramas should have some characters in them that are comical or at least suggest comedy. Funny incidents should appear now and then in the drama; all the continuity should not be serious action. Comedy relief is needed in children's programs as well as in any other kind of program. Even comedy on the verge of burlesque would not be amiss. The field of comedy has been sadly neglected by dramatic writers for children, and young writers should realize this and govern their actions accordingly.

The surveys which are constantly being made indicate the preferences children have in dramatic programs going on at the present time. For the girls, a variety program ranks first, with "Gangbusters" and an adult dramatic program ranking second and third, respectively. Two dramatic programs, "Gangbusters" and "The Lone Ranger," rank first and second, respectively, for the boys. There is a decided sex difference indicated in the preference and dislike of programs. Biographical drama ranks second with boys, while with girls musical programs are the second choice. The desire for adventure programs is highest in grades two to seven. The music and drama type of program ranks highest in grades eight to ten. Humor ranks high in all grades.

Some of the types of programs listed as making children afraid are also worthy of notice. They include programs which have for their theme shooting, killing, screaming, murders of all sorts, and other such types of blood and thunder which might harm the child.

The survey indicated that children are listening to a very great variety of programs, many not of age level, yet all having a definite effect upon their thinking, their emotions, and their outlook upon life.

Much has been written and said about the value of more educational programs for children; programs which emphasize geography, history, mathematics, or other school subjects, programs which place the story

as secondary with the education foremost. Education is very fine, but after a long day at school is the child not entitled to a little relaxation—listening to the programs he enjoys instead of having adults trying to force some more book learning into his already overburdened head? As Niles Mack, who is children's director for the Columbia Broadcasting System says, "Don't forget that there is such a theory as a tired businessman of nine, and if history, geography, and botany have to creep into his listening hours, don't forget to let them creep."

Before attempting to write for children study them, their games, their reading habits, their comic-strip and movie preferences. Francis Pearson of Pennsylvania State College has prepared a very helpful outline of the interests of children, based on age groups:

Children up to six years old like realism. They like to hear about the cat, the chicken, and the dog. Give such an audience stories of repetition, rhymes, and jingles. The stories must have quick action, rhythm, and familiar objects tinged with a bit of mystery. From six to nine, the child is always someone other than himself. It is the Fairy-tale Period, and the child has passed from the realistic to the symbolical stage. This is a danger zone, for naturally if the symbols become real to him, sleep will be haunted with ogres and monsters. Yet such stories must be told, for to scorn the fairy tale is to scorn the source of our literature. It is well to be considerate of children in this age group by not offering them stories in which cruelty, revenge and bloodshed have a large part. If, however, in your approach to these topics you should encourage this group to listen, remember your moral-painting device and emphasize it.

Children from nine to twelve bring the barbaric, fighting instinct to the fore. Boys of this age, especially, are destructive out of curiosity. They demand action, danger and daring and are thrilled by physical bravery. Even with these children, you must be wary and use only stories that arouse ideals and fine aspirations. Robin Hood, so fearless and so kindly, is an excellent choice. Go to King Arthur, too, and you'll find a wealth of material. Keep to the realm of heroism whenever possible. And, until the boy begins to slick his hair and the girl to be interested in shades of lipstick, it will not be necessary to turn to the Romantic.

Don't attempt to emulate or imitate a program that is on the air. Test your stories on the neighborhood children; they will be sincere and severe critics. Put some fun in your scripts, characters that your listeners can worship, and things that they can do. Don't leave the listener worked up to an emotional pitch; solve things, end the worry. Children frequently enjoy adult shows more than they do those prepared for them so adapt the adult to childhood. Avoid tragedy, psychological studies, wordy character plays, social drama, and sex. Above all, do not undertake to write for children if you don't like children and if you don't love to tell them stories.

Stage Plays Adaptable for Radio Use (for Children, Grades I-VI).

It is the tendency of the writer of children's plays to indulge in whimsy, to introduce the supernatural and unreal. There is also a very strong tendency to introduce into such plays a number of short acts with multiple settings and large casts. The director who broadcasts these plays encounters these difficulties and others. For example, the type of characters that populate the majority of plays for children are March hares and gasoline pumps, buttercups and maple trees, the North Wind, and spiders. There is no form of speech to enable the listener to distinguish between the speech of butterflies and of fish. To be sure, the speech of a dog may occasionally be punctuated with a bark and that of a cat with a "miaow," but this repetition would prove tiresome and not particularly interesting to the listener. For these reasons, then, be chary of those plays whose only characters are naturally speechless.

In regard to the setting of these plays, we are confronted by still another problem. While transition of scenes is easily accomplished over the air, it is necessary to remember that children's minds do not follow too many shifts with a great deal of ease. Therefore, it is wise to limit the number of scenes. A single plot, simply developed, is most easily understood and enjoyed. Then there are the time element; the lack of visual aid to arouse interest and understanding on the part of the audience; the necessarily limited cast required for radio production—these and many other problems directors meet only too often.

Despite these numerous disadvantages, however, there still remain many plays that are admirably suited for radio production. It would be necessary, in the majority of instances, for the director to do some adapting to meet the principles of broadcasting as well as his or her own individual problems. For those directors who may experience difficulty in finding material suitable for adaptation, the following list of plays has been compiled. All plays listed herewith may be satisfactorily adapted for radio use. It will be noted that the number of characters in these plays has been omitted because with the necessary shifting and rearranging of parts the size and type of cast used for radio production would differ materially in individual cases. Asterisks designate plays especially recommended for radio use.

Auditorium Series, by Harriet, Alice Louise, and Florence March, The Auditorium Press, 2524 LaSalle Gardens North, Detroit, Mich. All rights reserved. (1) *The Bishop's Candlesticks*; (2) *Capt. Smith and Pocahontas*; (3) *Rumpelstiltskin*; (4) *Rip Van Winkle*; (5) *The Boston Tea Party*; (6) *Robin Hood*.*

Cross Your Heart, by Ann Clark, Dramatic Publishing Company. Broadcasting rights on application.

11 Plays for Children, by Edith Lombard Squires, Fitzgerald Publishing Corporation, New York. All rights reserved. (1) *Donner and Blitzen*;* (2) *Picnic Luck*.

- Easy Plays for Children*, Fitzgerald Publishing Company. All rights reserved. (1) *Please! Mr. Weatherman*; (2) *The Chocolate Bunny and the Sweetmeat Chick*;* (3) *The Conceited Weathercock*;* (4) *The Magic Word*; (5) *The Way the Noise Began*.
- The Emperor's New Clothes*,* by Charlotte Charpenning, Samuel French, Inc., New York. Broadcasting rights by special arrangement.
- Footlights Up!*, by Louise Housman and Edward T. Koehler, Harper & Brothers, New York. Broadcasting rights by permission. (1) *Cap O' Rushes*;* (2) *Dick Whittington*;* (3) *The Three Citrons*;* (4) *Man without a Country*;* (5) *The Birdcage Maker**.
- Jack and the Beanstalk*,* a puppet play, by Beatrice T. Lee, Samuel French, Inc., New York. May be broadcast with permission.
- Little Black Sambo*,* by Hazel Sharrard Kaufman, Samuel French, Inc., New York. Special arrangements may be made for broadcasting.
- Little Plays Told to the Children*, by Lena Dalkeith, E. P. Dutton & Company, Inc., New York. (1) *Sir Gareth of Orkney*;* (2) *The Princess and the Swineherd*; (3) *King Alfred and the Cakes*; (4) *Scene from Robin Hood*.
- Nine Short Plays*, collected by M. Jagendorf, The Macmillan Company, New York. Radio rights with permission. (1) *The Bean Boy* by Towle Adair; (2) *Three of a Different Kind* by Eric Wolf;* (3) *The Dowry of Columbine* by Bertha Goes; (4) *A Tale from India* by Florence Bradley Moore.
- The Pirate of Pooh and Other Plays*, by Marjorie Barrows, Rand McNally & Company, Chicago. Broadcasting rights on application. (1) *The Pirate of Pooh*; (2) *The Clown of Doodle Doo*;* (3) *The Enchanted Door*; (4) *Santa and Son*;* (5) *The Brownie Bush*; (6) *Jack O'Lantern Inn*; (7) *The Prickly Prince*;* (8) *The Surprise Christmas*; (9) *The Wistful Witch*;* (10) *The Valentine Tree*;* (11) *The Pink Parrot*.

Poetry Programs for Children.

Radio is perhaps the ideal way to present the wealth of good poetry to children, not only because they can actually hear it read rather than reading it themselves, but because other ways of bringing poetry to them are either ill-suited or "too much trouble." The school is not the ideal place in which to acquaint the child with poetry. The child should think of poetry as something connected with leisure, fun, and entertainment, not as a subject in school. The home is also at fault because the child seldom hears poetry read aloud after he outgrows the Mother Goose jingles. Few parents know the world's great treasury of poetry and so cannot lead and direct the child in his enjoyment. Children truly love poetry, and any attempt to make them appreciate it will be well repaid.

Tom, Tom, the Piper's son,
 Stole a pig and away he run;
 The pig was eat, and Tom was beat,
 And Tom went roaring down the street.

This is the first type of poetry the child hears. Children are fond of Mother Goose rhymes, but few retain an interest in poetry as they grow older. Perhaps this is the fault of our educational system, which too often places the emphasis upon scansion and subtle interpretation, instead of teaching poetry as an art which finds its expression in the beauty of word and sound.

Poetry for children up to six or eight years should stress rhythm and musical swing rather than meaning. The Mother Goose rhymes are ideal; their irresistible rhythm, their quaint verse form, and their whimsical nonsense delight children everywhere. They are a perfect basis on which to build an appreciation of poetry. They are too familiar to need repetition. (The musical arrangement of *Nursery Rhymes* by Pearl Curran is particularly interesting.)

The contact of many children with poetry stops when they have outgrown Mother Goose; however, there is a vast library of poetry for children of every age. The jingles and short verses pave the way for the poems of childhood, and these in turn should lead to the enjoyment of lyrics, epics, sonnets, and ballads. Radio appeals to the childish imagination, inspires him to create mental pictures, and teaches him to observe the things about him.

A birdie with a yellow bill
Hopped upon my window sill.

Such short verses are remembered and are repeated by the small listener when a live bird is in sight. Vachel Lindsay's "The Little Turtle" is excellent for a children's program. Lessons on manners and health can very easily be taught in radio plays through a poem. The child who fails to shut the door may have the poem:

Godfrey Gordon Gustavus Gore,
Can't you remember to shut the door?

read with unusual results. Good habits of diet may be represented in an interesting manner by members of a primary class broadcasting "Mary Anne's Luncheon" by Dorothy Aldis. Some of the more recent poets for children are Vachel Lindsay, A. A. Milne, Rose Fyleman, Walter de la Mare, and Sara Teasdale, and there are many older ones like Robert Louis Stevenson, Eugene Field, and, of course, Lewis Carroll. Children like different types of poetry at different ages. The young child likes nonsense verse, short narrative poems, and jingles. Only poems easily grasped, situations easily visualized, and words easily understood should be used upon the radio. The "Jap Tragedy," with the small boy who got into trouble because his name was

Teki-teki-noo
Teki-suriombo
So-teki-nudo
Hair-e-ma-no-bet-to
Cha-wans-chans-noo
Fu-slii-mi-no-suke.

is not good for broadcasting. Situations met in childhood such as portrayed in "The Mortifying Mistake" by Anna Pratt are very acceptable.

As the child develops into the adolescent stage he begins to enjoy serious as well as the lighter poetry. Inspirational poetry fulfills a growing need in the life of the adolescent. It is not necessary that he understand everything in the poem, for the charm of the poetry will grow as his own experiences widen. Poems of this inspirational sort also abound—"Abou Ben Adhem," "For Those Who Fail," "Lifting and Leaning." Another type of poetry popular with children, especially boys, is the adventurous type, "The Ancient Mariner," "Gunga Din," "Lochinvar," "The Explorer," etc. It is up to radio to bring to youth the vast and fascinating world of poetry in its own medium—the air. Strictly speaking there is no such thing as children's poetry, for adults also enjoy it thoroughly.

Performers for Children's Programs.

In a consideration of the type of personality best adapted to the presentation of children's programs, the most important characteristic is imagination. Not only must the performer have imagination, but he must be willing to forget his adult dignity and thoroughly enjoy the thrilling tales he unfolds for his youthful listeners. He must have infinite patience; otherwise he will become bored with his material and with his audience. In short, he must be able to speak their language and to enjoy speaking it. In addition to possessing this desirable personality, he must have the ability to project that personality through the single medium of voice. His interest in his audience will not be apparent unless his voice possesses vitality; while he may have sufficient patience, he may fail to make it felt by his audience unless his voice is smooth and his speech even and unhurried. A single harsh note creeping into the voice, because it suggests a lack of patience, may destroy confidence.

The matter of personality is of less importance in a program that is strictly a dramatic presentation. Acting ability is the important thing here, although it is a type of acting that requires an unusual amount of imagination.

There are certain specific techniques that may be used to advantage in material presented for a juvenile audience. The first of these is a wider use of variety both in rate and in pitch. Changes in scene can be more obvious when the audience is made up of children, and indeed they may be missed unless they are quite plainly evident. Inflections can be more pronounced without danger of artificiality.

A second and very important technique is the free use of impersonation. Children love to have the giants in their stories talk like giants and the fairy princesses speak with the perfection all fairy princesses must have. The person who tells children's stories must be ready to change his voice to meet the requirements of half a dozen or more characters and keep the differentiation clear throughout the entire story. He must have

a *tiny sweet falsetto* for fairies and a **BIG GRUFF BASS** for giants and bad wolves. Unlike ordinary interpretative reading, children's stories also permit the use of impersonation or near-impersonation in straight narrative. Such impersonation is accomplished in the main by variety in pitch and rate, and occasionally by a change in quality of the voice. Only a voice that has great flexibility can manage the sudden changes and wide ranges that make a story or poem interesting to children.

Much that is considered to be poor taste in oral interpretation for adults can be used and should be used in reading for children. The slight subtle changes in voice are missed by children. Things can be exaggerated and made obvious for them. Because they do not see the reader in a radio presentation, stories can be made more vivid and real than through any other medium, provided the reader can adapt his voice to fit every situation that arises.

CHAPTER XV

Directing the Radio Play and the Actor

First among the essential qualities of the radio dramatic director is knowledge of the legitimate theater, a knowledge based upon experience. Experience on the stage gives the director an ability to sense character and a power to carry that perception to the audience. His own experiences teach him to visualize the scene and, since he often must teach the actors to visualize, an ability to do so himself is imperative. A dramatic script, as it comes to the director, is nothing more than a cold black-and-white story, a drama set down in symbols, symbols which mean nothing until translated in terms of sound. The director infuses into the script a certain liveliness and lifelike quality through the means of voice. He is the final judge in matters of conflict, characterization, motivation, and technique. He is both the critic and the listener. Although radio is essentially different from the stage, the theater director brings with him a quality which permits him to eradicate all impressions except those that can be produced and suggested by the voice of the actor to the imagination of the listening audience, aided and abetted, of course, by proper sound effects and music. The director of the stage soon learns to "feel" the play, to live and think in terms of the play, and he brings to the microphone this ability to cut a script and still retain the dramatic effect.

One of the greatest directors of stage drama in the country today has stated that it is always his purpose in the final production to create for his audience the same emotional feeling he had when reading the script. All good directors should strive to do this. Every play has a mood and an emotional experience to present. A clever and wise director will strive to give his entire production the benefit of these qualities. Actors should feel this idea of the play-as-a-whole. It is the duty of the director to inspire them. An uninspiring director is forced to rely upon mechanical devices for every effect. The radio actor cannot count on the glamour of the stage to fill him with emotion just before he walks upon the scene. Consequently, an inspiring director in radio is perhaps more important than one for the stage.

A quality second only to theatrical experience is the ability to teach. If a man knows all the tricks of voice, all the attributes and artistry of characterization, all the subtleties of emotion, but cannot succeed in training his actors to produce these effects, he can never succeed in ar-

tistically producing a show. The dramatic director in radio must be able to teach his casts radio technique. He will often have to teach the stage actor to be an acceptable radio character. The excessive preciseness of stage diction, the voice throwing of the theater, the magnified or elaborate naturalness of the actor are not suited to the comfortable listener in his home. His work is with voices, and voice work requires voice training and a knowledge of voice science. He must realize that the spoken word is an inflammatory thing, that the human voice is the most potent conveyor of emotion, an instrument that appeals to the imagination of man. He must coach his cast and train himself to listen for flexibility of voice, variety of inflection, lack of affectation, and good, clearly understandable diction. He must be ever cognizant of the fact that diction includes more than mere pronunciation and articulation. He must remember that it also involves phrasing, stress, the placing of groups of words into spoken italics, and, above all, a command of pitch.

The mere fact that the director has produced plays and knows dramatic technique does not mean that he can effectively direct a radio program. The fact that he has been a teacher of speech does not mean that he will be able to produce his radio show in an interesting fashion. He must have something else. He must be one who has come to the realization that there is a very definite technique peculiar to radio directing, and he must have availed himself of every opportunity to study that technique in the various ways that are at his disposal. Actual experience in a commercial radio station would probably be the best training. There he would have the chance to learn all the phases and to saturate himself with the atmosphere of the broadcasting business. The most effective radio directors are probably those who have gained their experience in this way.

Cooperation between the director and his many assistants is of utmost importance. The actors can give better performances if they feel respect for the director's ability. His treatment of them determines to a great extent the value of the actors' performance. Those directors who are most outstanding are accessible, open to suggestion, and tolerant. They know that they know their job; yet they are seeking constantly to increase the effectiveness of their work, for they know that there is much to be learned in the radio profession.

A knowledge of music is another valuable asset for the director. Music has become an almost essential part of the radio dramatic performance. It has various and sundry uses. It may be employed as a framework or theme to mark the general outline of the show; it may supply an identification factor for the play or for a particular character; it may serve as a device to carry action from one sequence to another, or as a bridge from locale to locale, time to time, or mood to mood; it may be used to back a scene, that is, to play softly behind that scene and thereby

enhance it by creating and intensifying a particular mood; it may subtly appear, or be realistically used, as a part of the dramatic scene or story; it may become an arbitrary studio device to lengthen or shorten the broadcast in the event that the running time of the drama does not fill the period or that overcutting of the script has created a need for filler. Finally, the music may be used as a sound effect which serves to interpret the particular action of the moment. In any case, the dramatic director must know his music sufficiently to be able to blend his atmospheric bridges into the thought of the play. But in his blending he must bear in mind that the ear of the radio audience is keen—much keener and more critical than the eye and ear of the theater audience, which has the added factor of scenery to help create the effect of illusion.

A proper and adequate knowledge of the use of sound effects is a further aid to the dramatic director. Most scripts are written with many superfluous sounds, and the careful director will eliminate these as his first step in production. Again, he must be certain that the sounds to be produced really achieve the effect that they are intended to achieve. Many studios have a sound-effect library—mostly in recorded form—but these often are not so successful as sound effects that the director and his staff may concoct.

Studying the Script.

Too frequently young directors go into rehearsals without sufficient knowledge of the script with which they are supposed to work. It is not sufficient merely to read the script; it must be *studied* and then thoroughly digested. The man who is the power behind the microphone must know each and every character and that character's value to the plot. He must first get the mood, the feeling, of the show. He must understand the locale, sense the rhythm of the drama. This he should get in the first reading.

Before any rehearsals, he must see to it that the script is approximately the right length—at any rate, not too short. If some part of the script is not clear to the director he should discuss it with the author, if he is available. The director might even suggest small changes in the script if he is certain that such changes will benefit the performance. If the writer is not available, these changes are made by the director himself, although it is much better to have it done by the original writer.

One reading is never sufficient, however. A good director is never quite satisfied until he is able to *hear* the script while he reads it silently. In his second reading he makes his notes, writing ideas into the margins, checking positions of actors in relation to microphones and arrangement of studio equipment to fit the play. The director decides on the best arrangement of the microphone to pick up the words of the actors and the sound

effects. If he has six characters in conversation, he may place them on both sides of a bidirectional microphone, although the eight-ball or salt-shaker, which are nondirectional, will permit the entire cast to surround the mike. It is best to use a single microphone for the cast, although there may be additional pickups for the orchestra and for the sound effects. Using more than one microphone for the cast is liable to produce distortion, and the microphones may interfere with each other rather than assist. He checks on speeches to be filtered; he jots down ideas for the sound effects man and the control operator; he decides on the incidental music which will be needed. It is wise to have at this time a separate sound rehearsal, since unsatisfactory or badly timed sound will ruin an otherwise good scene. The director decides whether recorded or manual sound effects give the better impression.

With these details, the director is now ready for the third reading. He now has an idea of his characters, of the sounds, and of the music. In his third reading he reads with his mind focused on actors who are to portray the parts, deciding on types of voices and vocal traits which will most properly create the aural picture he requires. He is now ready for his next step, the casting of the play.

Selecting the Cast.

The dramatic director must ever be aware of the fact that the microphone permits no letting down in interpretation. There is no bodily movement to help emphasize and interpret the spoken word. The voice alone conveys ideas, and the voice must be such as to remove from the mind of the audience any sense of remoteness and must cause that audience to perceive living personalities enacting a portion of life. Since the actor's voice must give the character meaning, that voice must be accurately chosen. A poor cast can ruin a good script, and a poor script may sometimes be made into a fairly decent show with carefully chosen voices artistically blended.

If the dramatic director is fortunate, he will know his potential cast. Low-pitched voices should predominate. High-pitched or harsh, rasping voices are seldom welcomed on the air. The casting committee is concerned with two things—what comes out of the loud-speaker and what happens in the mind of the listener. In the commercial studio, there is generally a small staff of actors and a larger group of voices "on call." The director knows the limitations and capabilities of each of his co-workers. He knows each person's voice qualities and each person's depth of emotion, and he knows which character portrayal each person is best capable of producing.

If the dramatic director does not know his potential cast, it is wise for him to hold auditions or tryouts for the various parts. Here he may

carefully select each voice, in order to avoid any confusion of voices over the air. He will be certain to see that voices with similar characteristics over the microphone will not be brought together. Though auditions may play their part in casting a play, they are never wholly satisfactory, because the actor never feels that he has done his best and the director never knows what an actor can do until he has heard him work in a play. In any event, it is best to cast by hearing the voices over the loud-speaker. The director listens for the flexibility of the voice in displaying an understanding of the lines, in varying speed according to the material, in expressing emotion without shouting, in giving emphasis, and in throwing cue lines. He tries to find the voice to fit each character, whether youthfully exuberant, mentally sluggish, hard, worn, plaintive, or happy. There is a great danger of casting two voices which have the same qualities over the microphone; select voices which will be different in quality to the extent that the listener may be able to discriminate between his characters simply by the tones of their voices.

It is a good idea to hear the possible cast of each scene read the same material in teams of two, in order to find the voices which are most easily distinguishable. When casting, it is best not to watch the actors through the control-room window. Casting hastily can give the director a tremendous amount of trouble; unless he knows his actors very well, he should try many voices before deciding on the final cast. Sometimes the dramatic director wonders about the effect of a voice on other people; in this case he can ask other members of the station staff to comment.

Casting for radio must be done by voice alone, taking into consideration, of course, that the ability to read with smoothness and meaning is one of the attributes of a good voice so far as radio is concerned. There is no excuse for read-yness on a radio program. By the term "read-yness" we mean that quality of unnaturalness in the actor or speaker which gives the listener the feeling that he is reading rather than talking.

Having decided upon his selection of players for the show, the dramatic director next must set the time for the first rehearsal. It is rather politic to allow the members of the cast to retain the copies of the script, for thus they can thoroughly familiarize themselves with the characters they are to portray and also gain an idea of the whole drama. Knowing the show well, the actor will be able to give a more intelligent reading of his lines and thus time will be saved in rehearsal. Since the ordinary dramatic director must work against time, each bit of time saved is valuable to him and to the station for which he works. Each actor underlines the name of the character whose part he takes each time it appears, and, if a speech is carried over to the next page, "More" is written at the bottom of the first page. Every effort, however, should be made by the typist to

avoid carrying a speech from one page to another. The director goes over unusual words and gives character descriptions to the actors. Having completed the cast, the director is ready for the next step—rehearsal.

Rehearsing the Play.

Before going into the actual rehearsal for the play, the director's task first is to consult with the sound-effects man and to make all arrangement for proper musical transitions. He will have decided on the various means of achieving the effects he desires and will also have arranged for the proper routining of sound effects as planned. As yet he will have only a superficial knowledge of how much music will be needed. The exact amount cannot be decided until he has had an opportunity to time rather accurately the spoken portions of the production.

The first rehearsal is generally quite informal, merely a reading of the script without the use of microphones. The director explains *his* idea of the script and tells his cast the effect he wishes to create. The director will encourage the actor to interpret the part that has been assigned to him. Naturally the director will endeavor to guide the actor's interpretation but he should avoid dictating the characterization. He must make the character feel his part rather than tell him how to speak his lines. He gives the cast the picture as he desires it and places upon them the responsibility of the achievement.

During the second rehearsal the director usually listens in the control room, from where he interrupts the rehearsal to give suggestions either by means of signals or through the talk-back microphone. He makes further suggestions concerning characterizations, interpretations, pronunciation, enunciation, and so forth. The actors are encouraged to use natural body movements, as they promote ease of interpretation.

The third rehearsal is held with the microphone and the entire personnel of the show is present. All the instruments and apparatus are in place and the members of the staff know their parts and their duties. There may be a certain amount of rearrangement, but never a great deal if the preparations are made carefully. Each time the director interrupts the rehearsal, he stops his stop watch or stop clock and starts it again when the rehearsal is resumed. The director and the engineer must cooperate; besides interpreting his script in terms of drama, the director must also interpret it in terms of sound level and volume. The engineer is the equivalent of the chief electrician in a stage production (a man who is capable of making or breaking the show); the dramatic director therefore listens to the suggestions he may make in regard to placement of actors, sound effects, and music.

Before the last rehearsal, the director has a fairly accurate timing of the program and he will know which parts can be eliminated without loss

to the performance. Most directors time every page of the script, writing down the exact time at the bottom of each page. Additional notations are made at the conclusion of every scene and of the time used by fades, bridges, or pauses between scenes. This detailed timing is necessary for the perfect control of the time element while the program is on the air. Most dramatic presentations stretch slightly when they go on the air; therefore, it is a good idea to cut a script before the broadcast to allow for stretching. If cuts are made, the director will have to correct the timing notations on his script, following the place where each cut was made. By looking at these notations, the director can tell whether the program is running short or long. In larger studios, timing is done by the production man, or assistant director, but in smaller studios there is seldom both a dramatic director and an assistant director.

No exact rule can be laid down for a required number of rehearsals, for many factors enter into the determination of the answer: the script itself, the ability of the actors, the amount and degree of difficulty in musical transitions, and, above all, the efficiency of the director himself. Comedies require less rehearsal time than drama for rehashing of lines, dwelling on them, is apt to kill spontaneity. No *good* director will stop rehearsing until he is certain that his show has reached the highest degree of perfection which he and his crew are capable of attaining. The dress rehearsal constitutes a complete performance of the script, precisely as though the program were being presented for an audience; in fact, it frequently has its most important audience—the sponsor. Before dress rehearsal is started, the director should time the musical portions of the program—the curtains and bridges for scenes. Every music cue should be numbered in rotation straight through the script, and these numbers should be entered on the director's script and the engineer's script. Thus, if a musical number is to be cut out, it is necessary only to indicate a number to the orchestra rather than a complete title. It is vital to time the commercials because these must be given regardless of time limitations. Dress rehearsal must be exactly as the actual broadcast; there can be no lackadaisical, perfunctory reading of lines, no lax routine delivery. The director must be a good disciplinarian as well as director. He must demand, and *obtain*, strict attention for the business at hand. During dress rehearsal, the dramatic director should accurately time the whole performance, making notations on his script. This rehearsal should show the director exactly what is wrong with the show. He should take notes, and wherever corrections are necessary they should be given to the persons concerned. But no actor should be disturbed just before he goes on the air. It is best to hold the dress rehearsal sometime before the broadcast and to record it so that dramatic deficiencies may be pointed out to the cast.

Timing and cutting the show is an integral part of every dress rehearsal and results in having every part of the show get off "on the nose." In order to accomplish a split-second finish, the director must cultivate a sense of time, a power to know how long it takes to say or do a given thing. He knows from experience and the studio logs the actual time allotted for the various periods on the air: the quarter-hour show allows 14 minutes and 30 to 40 seconds, the half-hour show, 29 minutes and 30 to 40 seconds. A like allotment is made for the shorter periods. The remaining 20 or 30 seconds of each period is allowed for telephonic and engineering operations. It then becomes the effort of the director so to time and arrange his show (by cutting the script, by shortening or lengthening musical cues, by stretching or diminishing time for sound effects, by coaching casts to gauge their reading rate more accurately) that his show finishes on the second of the period. There should be some part of the show—music, sound, narration, transition, or speech—which can be stretched and used as a cushion. Music may be faded or repeated, as the case demands, without damage to the action, thought, or idea of the program. An audience is less likely to be offended (and, incidentally, less aware) when a show is being stretched than when one is rushing the show to get in under a dead line. If the director is to have any definite idea of how long his show is to run, proper addition and subtraction of timings is essential. Slovenly timing will result in a haphazard show. The use of a stop watch is recommended, and a fairly high-priced, progressive type of stop watch has proved to be the best. Further, it has been proved that jotting the time on the script at 30-second intervals is the most effective practice. Timings should be placed over words on which they fall or in the right-hand margin of the script at the end of the line in which they occur. They should be written clearly and legibly.

The dramatic director may, on the other hand, time each page of the script and note the exact elapsed time at the bottom of each page, or he may mark the elapsing of each succeeding unit or scene on the script. However, it is essential that the director know the time consumed by musical curtains, bridges, fades, and pauses.

The question of pauses is another matter to which the director must give some attention. He must bear in mind that pauses make ideas stand out prominently. A pause may take place before or after any utterance in order to gain a desired effect. An idea can be made to stand out with special significance if it is both preceded and followed by a pause. Yet even these pauses must be carefully timed, for only in this way can the director be certain of the over-all time consumed by the broadcast.

Scene and act transitions are made in different ways by different directors. The gong has been used to denote a change of scene or lapse of time. Frequently a strain of music or a few measures will create the

desired mood between scenes or acts. Sound effects, such as the automobile, a train, or an airplane, may convey the listener from one setting to another. More frequently the dialogue following a brief pause will show that the scene has been transferred in the play. The radio director takes a great many liberties with the time element, not delaying the play to allow exact time to elapse for various actions.

The final presentation of a program is the director's busiest and most nerve-racking moment, for this is the test of his ability. During the performance, the director must be constantly on the alert, cueing actors, music, and sound effects, making sure that each line registers at the proper sound level. He must listen for extraneous sound, as of rustling scripts and squeaking shoes, and, at the same time, he must watch his stop watch or clock and be prepared to signal the performers to speed up or slow down to conform to the perfect timing of the program. In reality, everything that he can do for the performance should have been done before the time of its final presentation—everything except one thing: his ability to remain the calm master of the situation. Radio has devised a set of signals which enables the actor, sound man, announcer, and musician to know exactly what the director in the control booth desires. Wild gesticulations, glaring, hair pulling—and sometimes pantomimic mouthings of directions—will only serve to upset further an actor who has made a mistake.

Studio Audiences.

A studio audience has been found useful in improving the quality of the performance of a comedian who desires the necessary timing for his jokes. The preview idea is one that is somewhat new to broadcasting, but it affords the producer and the actors a magnificent chance to see what will be appreciated by the audience and what will not. It is usually held two or three days before the show is actually scheduled to go on the air and is a kind of testing ground for the material which has been written.

However, a closed broadcast is preferred when the program is in dramatic form, for the distraction offered by a visual audience often prevents a smooth performance. Another advantage of the closed program lies in the mystery surrounding presentations that never admit guests. It is a well-known fact that some people, after witnessing one of their favorite broadcasts, listen with less interest to future programs. Their illusions are smashed by the nondramatic manner in which some plays are broadcast from the studio. From the advertiser's standpoint, both methods have their advantages. A large studio audience is usually gathered by inviting distributors and dealers of a client to the program. This builds good will for the advertiser, and, if the program is very interesting to witness, it is an excellent low-cost form of advertising.

The Radio Actor.

The success or failure of a stage play is primarily in the hands of the playwright. The eyes of the director are responsible for the outstanding motion picture. The vocal interpretation of the actor makes the radio drama. Early in radio history advertising experts, educators, journalists, politicians, and preachers seized the opportunity to use their natural element—the air; but until recently the dramatic stars have been contemptuous of the opportunity to shine in the night air.

In the early days announcers and station help doubled as dramatic artists; the station help still sounded like the station help, the announcer like the announcer. Only the radio-trained actor can lift the etherized play from its mechanical setting. The stage actor, however, is overcoming his mike fright and braving the indifference and cynicism of the commercially minded broadcasters. Perfection has not been a requirement of radio performance, but the sincerity, intelligence, and imagination of the artist will create the impression of reality. The stage actor must accept the challenge of justifying his art by his voice alone and must master this simple vehicle of his emotions and thoughts. He must put aside his temperament and submit to the sponsor's demands in the interpretation of hurriedly produced dramatic skits.

Yearly, a great proportion of radio actors are enlisted from the stage and motion pictures. In spite of the lack of applause and color, there is a fascination in playing to millions on a single evening. Great actors are selling their names to advertisers. There is no better training for the broadcasting actor than a few years in a dramatic stock company. From the lecture circuits come recitationists, humorists, and monologuists. In the smaller broadcasting stations amateurs are trained for the big league; however, their dramatic directors must be efficient trainers, for poor training makes a poor actor. The "broadcast actor" who is not a stage actor, when he is successful, is often the most successful of all. Departments of radio dramatics in colleges and universities are providing graduates with excellent foundations for success. Commercial radio, like the theater, had an antipathy for schools, but today a high percentage of radio actors are college trained because such teaching usually results in good speech.

Ability to Read Lines.

Experienced stage actors have to be trained for radio appearances, where the first essential is the ability to read lines so that no listener will suspect that they are being read. Few radio dramatic directors require their casts to memorize their parts, because of the time limitation placed upon production. One wonders what effect television will have upon reading from a script. If the actors have been drafted from stock or stage, they might

memorize their parts and gain an effectiveness not resulting ordinarily from reading. Reading also tends to destroy the actor's own illusion. Then there is the difficulty of concentrating upon one's own part in the script so that cues are not missed while the eyes are following the speech of another character. Frequently the dialogue lacks spontaneity because of this failure to pick up cues—an artificiality that is particularly noticeable to the radio listener.

In radio acting, cues must be picked up with greater speed than in stage acting, as there is no visual stimulus for the audience to fall back on. The speed of picking up cues, however, will vary, even in radio. Variation in speed of picking up cues, along with variation in the speed of talking, is a matter of pace. Pace is one of the most important elements of radio dramatics.

Radio has suffered from a mechanical reading of lines. The greatest asset of the broadcasting actor is the ability to read understandingly and, while reading, to express emotion. When one appears for a dramatic audition, one is usually given a reading test; there must be no stumbling over lines, no mind wandering. The reader must feel the part he is reading, must articulate clearly, must, through his voice, project himself as the character he represents through the microphone to the receiving set. While the time is too short for the lighting and smoking of a cigarette, as is frequently done on the stage, the radio actor should nevertheless recognize the value of short pauses in his media.

The Voice.

The sole medium of conveying the actor's mood, his characterization, and his surroundings is his voice. It alone can create the desired effect upon his listener; hence he must project and color it to capture the listener's interest or otherwise his artistry will fall flat. The radio actor cannot depend upon gestures, stage business, or facial expression to aid in expressing thoughts and attitudes. Emotional crises and dramatic tensions are orally portrayed by one who cannot be seen. There is no give-and-take contact with the audience, no supporting scenery—just a finely tuned vocal instrument.

The radio actor must be a living personality who has experimented with emotional changes of the voice. Most radio voices sound insincere, and histrionism is greatly exaggerated by the microphone. The actor must control the volume of his voice before the mike, yet he must not fail to retain the emotion necessary for motivation. Another requirement is that the radio actor must not permit himself to adopt another player's emotional mood instead of observing his own.

If he puts sincerity into his part and individualizes his delivery, he becomes a living personality entering the living room through the loud-

speaker. All impression of remoteness must be removed. Above all, words must be spoken clearly, without leaving uncertainty in the mind of a listener as to what the character really means.

Stage Diction; Radio Speech.

The merciless microphone, by focusing attention on the audible to the exclusion of all else, records affectations so faithfully that the stage diction of an actor of the old school sounds artificial when heard in home surroundings. Underplaying a part, however, does not get across to the radio audience. The radio actor must punch certain words in his part. This seems somewhat inconsistent with the fact that radio is an intimate presentation, but unless there is some overemphasis the scene does not become alive. On the loud-speaker stage, an actor who strives to be precise or dramatic often appears to be mincing or ranting. The "sweet young thing" sours the listener. Unleashed joviality makes the character into a boisterous clown. Radio enunciation must sound natural to common folk in the home; yet it must be precise, with a colorful quality that marks the artist. The radio actor must not be slipshod in his delivery, his pronunciation, or his diction. The quality of naturalness is not easy to attain; in fact, it is difficult to convince an "artist" that he is not being natural. The best teacher is a phonograph recording of the voice of the speaker or actor before the mike, provided the recording is accurate.

One of the outstanding dramatic directors in radio has summed up the matter thus. "What we most strive for in radio diction is the fine line between diction so precise that it will sound affected and diction so natural that it will sound too casual. Naturalness is at a premium on the air as nowhere else. . . . A child who is being just naturally 'natural' . . . is better on the air than is many an old school actor who is studiously trying to be natural."

In a theater play, the actor is trained to throw his voice to the back rows of the balcony, but when he appears in a radio play he must learn to control the volume of his delivery. Otherwise the control operator will be forced to modulate artificially the actor's voice, which may spoil his tone quality. The radio actor or speaker is trained with a volume-level meter in front of him, on the dial of which the strength of his voice is indicated by a fluctuating needle. The trained radio speaker will keep his level of volume upon the dial below the peak of 20; the best actor is the one who has trained his delivery so that modulating is not necessary by the control operator. An excessive throwing of the voice frequently results from the actor's being too conscious of the vastness of his audience. He feels that he must put on a particularly high pressure, which makes his speech sound, in the home where the receiving set is located, like a person shouting. It is not necessary for the radio actor to raise his voice

where there are background noises, sound effects, or music, because he is always located closer to the mike and his voice will come through clearly over the sound effects. He may train himself to modulate the voice by turning on his radio to some musical program and speaking his part at the regular level, frequently increasing the volume of the music but keeping his voice at the same level.

Acting.

The physical exertion of acting for the radio is just as great as that expended by the stage actor. Added to the tension incited by the time element, by the awful zero-hour silence, and by the vastness of the radio audience is the physical participation in the dramatization of the part. While the area of the stage is limited by the sensitiveness of the microphone, the actor should actually throw himself into his part. I have seen radio actors portraying a man and his wife fleeing from wolves. During their entire skit they faced opposite sides of a ribbon mike and went through the motions of running as they read their parts from the manuscripts they held. Meanwhile in the background a dignified imitator howled and bayed. The two actors really became breathless and every fine emotional shading was clearly picked up by the microphone. The use of nondirectional microphones, or of the eight-ball or the salt shaker, permits action by the characters.

The dramatic reader who is presenting a reading from "The Deacon's Masterpiece or the Wonderful One-hoss Shay" will sit in a squeaky chair which he will work back and forth as hard as possible. He will chew on an imaginary "chaw" of tobacco. He will crack an imaginary whip, acting the part that he is endeavoring to portray as he recites the lines, while in the background sound operators will turn wheels in a gravel track and produce the sounds of the horses' hoofs. Greater realism is produced when actors really act their parts.

Microphone Position.

In general, the radio speaker stands about 1 foot from the mike. If he is farther away, he is not, in theatrical parlance, "center stage." When distance is necessary to create the desired effect for the listener, the actor will back away from the microphone. If the performer needs to exceed conversational loudness, he must step back from the microphone for such passages. In exceptional instances he may need to turn completely away from it in order to avoid blasting. All entrances are made from about 8 feet away. The actor speaks low at first and raises his voice as he approaches the mike until the volume is natural and casual. If the listener is to "see" this movement through his ears, the actor must speak all the time that he is moving. If he pauses in his speech, but keeps on moving,

when his voice is next heard from a greater distance it may sound like that of another person. Another difference between the regular theater and the radio theater of the air is that in the former an actor must use strength to be head above the mob. Over the air the mob is put into the background and the speaker who is close to the microphone should not raise his voice. While the radio speaker acts his part, he cannot be weaving to and fro from the microphone, for this will cause distortion. His move-



FIG. 17.—Correct position for two actors using a ribbon mike.

ments must be determined by the control engineer rather than by his emotions. By changing the position or varying the delivery, different attitudes may be projected. When the actor is excited, he will stand at some distance from the mike, raise the pitch of his voice, and speak more rapidly. Sympathy brings the actor in closer contact with the sensitive diaphragm, where he will raise his voice only slightly above a murmur. Ghostly laughter, so frequently heard over the radio, starts some feet below the microphone and comes up to it. It has been said that the impression of loyalty is best created by speaking in a quiet kindly voice close to the microphone.

The distance at which radio actors work from the microphone varies with the type of scene being played. If it is a scene with many characters the mike is wide open in order to get in the entire group; under these circumstances actors may read their lines 3 feet from the pickup. On inti-

mate scenes the speakers may come as close as 3 inches; thus the scene not only sounds but is intimate. When a filter mike is used for a telephone conversation the off-stage speaker talks within 1 inch of the microphone. The engineer will raise the volume according to the wishes of the director.

When acting before the microphone the actor must be paying attention to a number of things at once. Aside from a strong concentration on the characterization he must read the script, take care to be the right distance from the mike, watch the director for signals concerning sound cues, speed of delivery, and distance, and pay attention to sound effects incidental to the action of the play.

CHAPTER XVI

Sound Effects

Sound effects are to the radio play what scenery is to stage production. Of course, there may be radio plays that are produced without the aid of sound effects, just as there are plays in which scenery is not essential. Sound effects are largely dependent upon the listener's imagination and are presented in order to make him create a visual picture of the scene in which the play is being produced. Much of their value depends upon the psychological suggestion of mentioning what the sound represents to stimulate the listener's imagination. In the majority of instances it is quite essential that the actors in their lines allude to the sound so that the listener will form the correct visual image. In this way the rustling of a piece of paper may carry the listener's imagination to the crest of Niagara Falls, where he will hear the roar of the falling water, or into the woods at autumn, with the rustle of falling leaves.

By far the largest proportion of sounds used in radio dramas are produced by recordings, which are made from the actual sounds. These records, which ordinarily cost from \$1.50 to \$2 each, are manufactured by the Masque, Starr (Genett records), Victor, Standard Radio, Columbia, and other companies. Over 12,000 sounds are available and the list includes such unusual items as closing a barn door, sounds in a bowling alley, cats fighting, chopping through river ice, corn popping, drilling an oil well, horse and wagon in the snow, snores, man walking and running, and milking a cow. The company that manufactures these transcription effects takes its sound-recording equipment to the football game to record the crowd noises and to the lighthouse to record the fog horn. As an illustration of this, a manufacturer recently came to me and stated that the recorded sounds of screams and groans had been made by dramatic stars and were not realistic. He wanted to know whether it would not be possible to place the sound-recording equipment in a local hospital in order to record the shrieks of a person injured in an automobile accident. It is interesting to note that the recording of applause most frequently used was made at an address given by former President Herbert Hoover. In addition to the recording of noises and sounds, special background music is supplied by these companies to be used in creating the right atmosphere for scenes of sorrow, approaching danger, underhanded procedure, quarrels, and love-making. A number of variations of a sound

may be recorded upon one side of the record; for instance, on one side may be the sounds of an automobile starting, door slam, speeding up, and stopping, while on the other the automobile will run continuously. As an economic measure, when we buy a sound-effect record we make a copy of it, using our recording equipment. The original record costs us \$1.50; the copy costs only the price of the disc, about 30 cents. We use the copy for

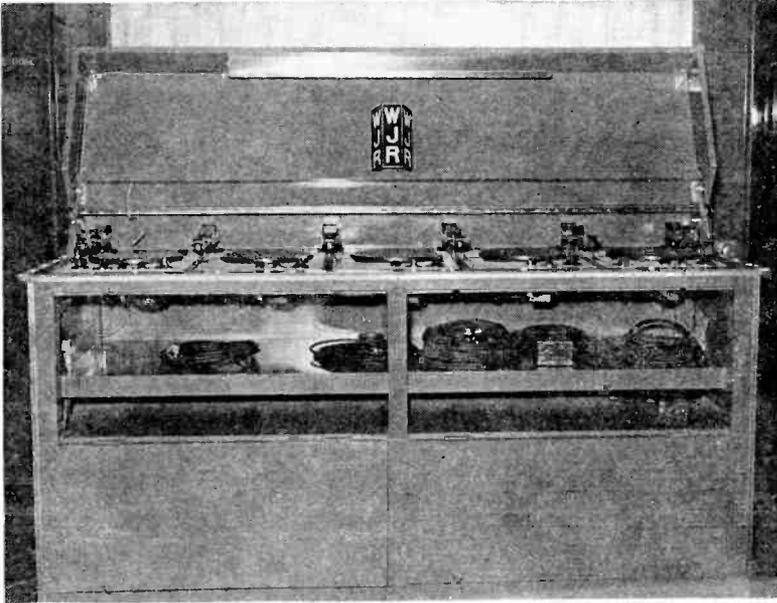


FIG. 18.—Sound-effects table. Notice that two pickup arms serve each turntable, thus permitting the constant playing of any sound regardless of its recorded length. The loud-speaker is located in the end of the table. The rack at the back is illuminated for scripts.

our broadcasts and retain the original for a master record for future copies.

In some studios the sound recordings are played in the control studio and are wired into the mixing panel without the actor's hearing them. The better practice seems to be to use the recorded sound effects in such a way that they will be heard by the actors and be picked up by the same microphone that picks up their voices. The larger studios have a multiple-turntable equipment which may be rolled into the studio in which the drama is to be presented. The multiple turntable is used in order to blend sounds. For instance, a play may be taking place in the interior of a freight car. One of the records being played will be the noises heard in the freight car while the other will be the noises of the engine and the train itself. In a ghost-story recording, one record may bring in the shrieking of wind while another record conveys to the listener the sound of howling

wolves. One manufacturer of sound recordings has suggested, as an experiment, the combining of records in order to create new sounds and the playing of existing recordings at different speeds in order to create desired effects. The sound of frying bacon and popping corn has been combined to create the effect of the breaking up of a glacier. The playing of a recording of artillery fire at a slow speed has been used for thunder.



FIG. 19.—Sound recordings upon the turntables. Notice how the recordings are held with the needle set upon the record, the turntable revolving, until the cue is picked up by the operator. The circular mat in the foreground is a stroboscope disc used to test the revolving speed of the turntable. When seen by the light of a neon lamp from a 60-cycle current, the outer circle of teeth will seem to remain stationary when the disc is revolving at $33\frac{1}{3}$ r.p.m. The inner circle will appear stationary when the disc is revolving at 78.26 r.p.m.

The noises on records must be rehearsed, since it is often their volume which is most important. For instance, the sound of a car skidding into a crash is recorded as one unit. The sound engineer must take into consideration whether that car is right in front of the actor, whether it is 20 feet away, or whether it is down a block or two. Also, he has to notice if the car skids as it is going by the actor and crashes away from him, or whether the whole thing takes place away from him.

Not all sounds are created by such recordings. The expense of building up a library of sound records is too great for the smaller station; consequently experimentation must be conducted by the dramatic director or

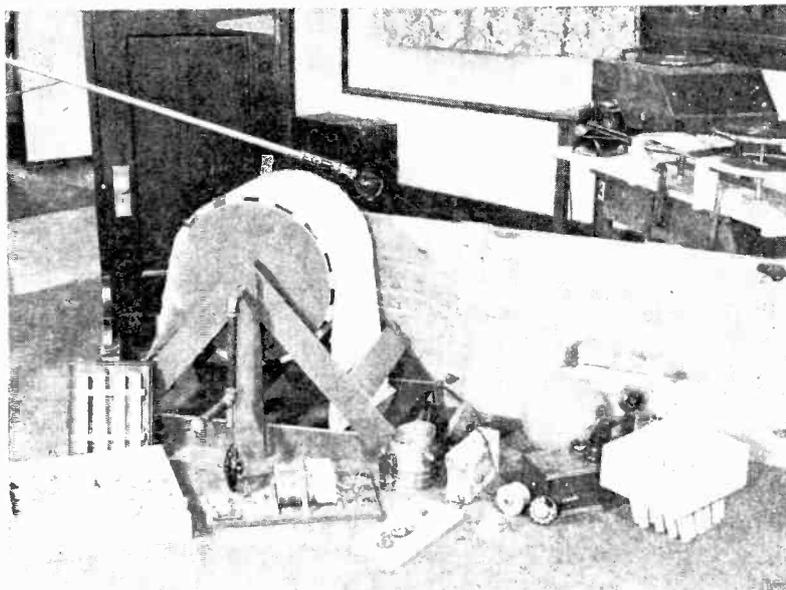


FIG. 20.—Small door, wind machine, basketball bladder, marching men, electric horn and bell board, muffle box, and telephone equipment.



FIG. 21.—Dramatic cast and sound men. Notice the use of the eight-ball mike to pick up the sound of the chains, while the revolver is held to one side of a ribbon mike. Also notice the physical acting of those who are participating in the play. The girl screaming is at the dead side of the microphone.

sound-effects man in the local studio. As he experiments in order to create desired sounds for his radio dramas, he adds to the equipment to be used for sounds in the studio. All manner of junk such as tin cans, bottles, and broken china, as well as good cups, saucers, and plates, silverware, rocks, a bag of gravel, whisk-broom, soda-fountain straws, and other things are gathered by the experimenting sound-effects man (see Fig. 20). In the studio there will be planks which may be laid upon the floor in order that the actors may walk upon them to create the sound of walking upon a stage. There will be creaky rocking chairs and squeaky hinges which are treasured by the sound-effects operator. A good reliable squeaky door is a treasure. Very simple things may be used to create sounds. The radio warrior selects his swords by ear; and every 6-foot length of chain carries a different sound picture to the listener (see Fig. 21).

Manual Sound Effects.

There are some manual sounds which are as important today as they ever were. These have been retained because they synchronize with speech or suggested action.

The opening and closing of doors and windows, movement of furniture, and so on may partake of the character and mood of the persons in the drama at the moment they occur. For example, when a person is angry he opens and shuts a door in quite a different manner from that which he uses when he is being stealthy or feeling calm.

As a basis for the card catalogue of manual sound effects the following may be used. For the card catalogue, items should be cross-indexed and listed under all conceivable headings.

Airplane. A recording is preferred; however, if one is not available, hold a folded piece of blotting paper against the blades of an electric fan. Try out different weights of paper. Run the fan at low speed.

Another method of creating the same effect is to take an old motor and attach to it a disc from which are suspended a number of light straps of leather. As the disc revolves, these light straps hit against the blotting paper and create the correct sound.

Airplane Crash. Smash a wooden matchbox and tear heavy paper near the microphone.

Arrow. Whip a reed or long, thin stick through the air.

Automobile. Again the best effects are produced from recordings; however, the same experiment may be tried for the automobile as was suggested for the airplane.

Automobile Being Cranked. The effect of cranking an old Ford of the jalopy category may be created by using one of the flour sifters in which, when the handle is turned, sifters rub against the wire sieve at the bottom.

Automobile Brakes. Drive two or three nails slightly through a piece of wood and scrape the points on a sheet of glass.

Sliding a drinking glass with the top placed against a pane of glass may produce the required sound.

Automobile Crash. Knock over a pile of pots, pans, and tin cans. Drop some piece of metal into an old pan which is tilted slightly so that the metal bounces to the low side. Also use broken glass in connection with this sound.

Old Automobile Running. Take an old-fashioned oval wash boiler and partially fill it with junk. On top place two boards upon which is mounted a small electric motor (an old one out of an electric appliance). When the motor runs, it is not heard, but it will cause the wash boiler to vibrate, shake, and rattle.

Automobile Tires. Push erasers across a piece of glass.

Automobile Door. The only way to get the sound of an automobile door closing is to buy a section of an old automobile door from a junk yard and mount it in the studio. It should contain the glass in the frame. Mount it on castors so that it can be slid out of the way into a corner.

Bells and Chimes. Glasses with varying amounts of water in them are tapped gently. For heavier bells, a variety of old brake drums come in very handy. They must be hung free so that they can vibrate. The school band sometimes has chime effects. The studio should be equipped with doorbells, bicycle bells, school bells, dinner bell, etc.

Boat Whistles.

a. It is best to buy whistles from a musical supply house. In some cases whistles may be borrowed from the physics department, where they are used for demonstration purposes.

b. Blow across the mouth of a bottle. By filling the bottle with different amounts of water different tones may be created.

Body Blows.

a. Body falling from a great height. Drop a melon from the top of a ladder upon a piece of concrete.

b. Drop a gunny sack filled with sawdust or sand on the floor.

c. A hit on the head may be made by hitting a head of cabbage with a club or hammer.

d. A sock in the jaw. Drive the fist into a rubber sponge or a loaf of bread.

e. To simulate a fight, actors may hit themselves upon the chest.

Bones, Skeleton. Very much like the marching-men equipment is that used for producing the sound of a skeleton. A number of pegs of hard wood of various lengths are hung by different length strings from a handle. As these pegs are rattled, the skeleton effect is produced (see Fig. 22).

Bottle. To open:

a. Press two plungers together and pull suddenly apart.

b. Open mouth; snap cheek with finger. (See also Champagne Bottle Opening.)

Breeze. Fold a newspaper into quarter size, then cut slices up from the bottom nearly to the top. Holding at the top, sway the paper near the microphone, but under no circumstances touch it.

Brush Crackling. Use broom straw; it is handy to have in the sound-effects storeroom. Work it between the hands, close to the microphone. An old broom may be cut apart and used, but it is inclined to be rather stiff. Sometimes it is possible to use heavy cellophane.

Bubbling Brook. Gently blow through a straw immersed in a glass of water. Test for volume. If you have a studio drinking fountain put some pebbles in the basin, turn on the water, and put the mike close to it.

Carriage. A roller skate run over whatever soil material is suggested by the locale. A studio should have a supply of flats such as are used in greenhouses, each filled with a different material—sand, gravel, dirt—as well as a slab of concrete.

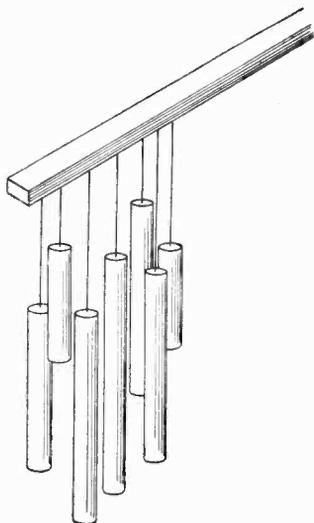


FIG. 22.—A radio skeleton.

Champagne Bottle Opening, Pulling Cork from Bottle.

- a. Place two plungers (plumbers' aids) together, create a suction, and pull apart.
- b. Stick a pin into an inflated balloon.
- c. Flick finger against cheek when mouth is open.

Chimes. It is advisable to have in the sound-effects storeroom dinner chimes. Chinese gong sets, etc., and other bells that may be bought in the 10-cent store or picked up. (See also Bells.)

Chopping Wood.

- a. An ice pick driven into a piece of soft wood.
- b. Use a large jackknife against a branch of a tree, quite close to the microphone.

Cocktail. To shake: put small amount of water and a small piece of glass in coffee can. Shake.

Construction Noises. Nothing is better than sawing, filing, and hammering right in the studio.

Cow Being Milked. Squeeze two ear syringes alternately into a bucket. It is advisable to have an additional supply of syringes if the effect must last for a length of time.

Crash. Build a crash box, which consists of a wooden box filled with broken glass and light pieces of metal and tin cans. Nail on the cover, and simply by turning it over near the microphone you get a crash.

Crash, Glass. Place some cotton or soft material in the bottom of a box and fill the box with glass. Then drop some heavy article on the glass.

Crash, Wood. Splinter a berry box; crush it by pushing thumbs through the bottom. A supply of berry boxes is essential to the studio equipment.

Dead Leaves. The effect of walking in dead leaves can be created by stirring corn flakes in the top of a cardboard box.

Dishes. Use real dishes, china dishes being preferred.

Door.

- a. The door that is used in broadcasting should be made solidly. It is advisable to use a standard door from a lumberyard and set it into a frame constructed

of 2-by-6 kiln-dried oak. Have the construction dovetailed to avoid warping. Use heavy hardware—hinges, lock, doorknob, and catches, and put a knocker on the door. It is foolish to build a cheap door because it will always sound like a summer-cottage door on the air. It is advisable to attach an acoustical baffle of celotex, also hung by hinges, on the other side. This may be used by opening or closing the baffle to liven or deaden the sound (see Figs. 23 and 24).

b. For the hollow clang of iron doors opening, draw a roller skate over an iron plate. Rattling a heavy chain and a key in a lock add to the effect.

Door, Elevator. See Elevator.

Door Knocker. Attach one side of hinge to board; rap with loose wing.

Earthquake. Roll rocks down a sanded board into a drumhead. Use the bladder with the shot in it also.

Echo.

a. Large studios usually have echo chambers to produce this effect. They are usually in some part of the building where a loud-speaker can be placed at one end of a long hall or cellar room and a microphone at the other end. The voice is fed into the room through a loud-speaker and its echo is picked up by the microphone. However, if it is not possible to have an echo chamber, the same effect may be obtained by facing a directional microphone into a long-fiber wastebasket. Throw the voice from behind the microphone into the wastebasket so that it comes back to the microphone.

b. In case you do not have a directional microphone, drop the wastebasket over the microphone so that the voice must go up into the basket and resound into the microphone.

c. It is also possible to create an echo by placing a microphone over one of the holes in the sounding board of a grand piano. Hold the damper pedal down, allowing the strings to be free. With the top of the piano half open, direct the voice or effect into the piano. Frequently a cardboard mailing tube, 5 or 6 inches in diameter, may be used to direct the sound over the strings. The strings vibrate the sound and continue for a period afterward.

d. Another method of creating an echo is to talk through or rather around an inflated basketball bladder, holding the bladder between the mouth and the microphone.

e. To give the voice a hollow ghostlike sound, place one end of a 10-foot length of 2-inch pipe about 2 feet from the microphone. The actor will then speak into his hands, which he cups over the other end of the pipe.

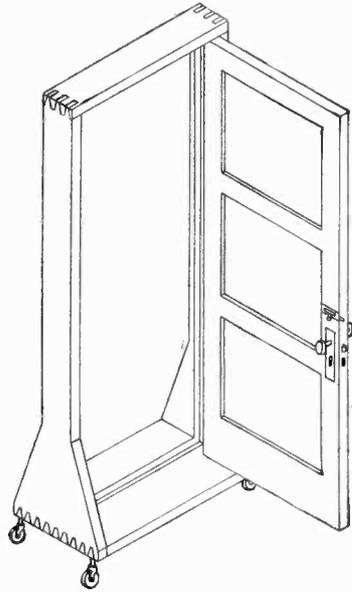


FIG. 23.—Sound-effect door.

Elevator. To create the sound of an elevator door opening or closing, a small slab may be made with a metal track in it. This can be made out of sheet iron. The sides should be just far enough apart for a roller skate to fit between



FIG. 24.—The sound operator is picking up the sound of the closing of a door with the microphone held close to the door. He is following his script as he listens through the ear-phones for the cue.

them. The track should be $2\frac{1}{2}$ feet long and at one end should be a wooden bumper and at the other end several nails. Rolling the roller skate down the track to hit against the nails will give the sound of the opening of an elevator

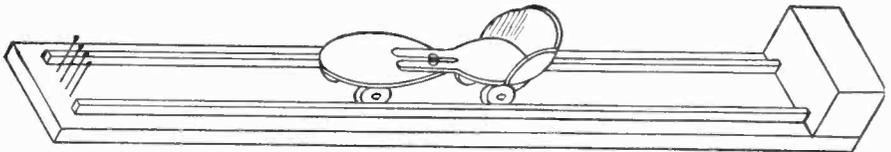


FIG. 25.—Elevator door.

door; rolling the skate the other way to hit against the wooden bumper will give the effect of closing an elevator door. A vacuum-cleaner motor can be used for the sound of the elevator if the skit is laid within it to any length (see Fig. 25).

Explosion. Use an inflated basketball bladder with 15 to 20 BB shot in it. Get an old type of bladder that does not have a valve. Holding the bladder about 3 inches from the mike, suddenly give it an upward jerk, or hit the bladder soundly upon something near the microphone and hold it up to the microphone so that the reverberations will be heard for some time.

Fire. Lightly crackle cellophane between the hands, or crunch the heavy end of a bundle of broom straw. In case it is a forest fire, combine with the breaking of berry boxes.

Flood. Using compressed air, release the air from a nozzle submerged in a tub of water.

Footsteps. A small section of sidewalk made of wood should be available in the studio. This can be walked upon with hard soles and rubber heels to give the effect for footsteps.

Footsteps on Stairs. If actual stairs are not available for walking upstairs, walking backward upon the planks will give the effect of walking upstairs. Most studios have short portable flights of steps.

Footsteps in the Snow.

a. Grind thumbs into a cigar box filled with cornstarch.

b. Fill two small sacks, not too full, with cornstarch. Tape them with electrician's tape to keep them from breaking and squeeze them with the correct rhythm near the microphone.

Ghostly Speech. Use the filter microphone, which removes the low-frequency vibrations. The effect thus produced is a hard and chilly tone. This may also be done into an echo chamber.

Glass Crash. Break small panes of glass; pieces 8 by 12 inches are generally inexpensive when bought in boxes of 50 or 100.

Gunshot.

a. Hit leather pillow a sharp blow with a whipstock or wooden rod.

b. Hit a large corrugated box with a curtain rod.

c. For a good gunshot device, use two boards, 8 inches wide and 18 inches long. Hinge these end to end with a single wide hinge or two hinges countersunk flush with the wood. This makes a long, narrow case. On the outer side of the boards attach window handles so that the two boards may be held and slammed together. Wrap a wide pad of imitation leather around the surfaces of the free ends of the boards. When the boards are sharply slammed together the sound is quite satisfactory.

Hail. The sound of falling hail may be simulated fairly well by dropping rice onto glass, tin, or wood.

Hammock Creak. Scrape a toothpick on a nail file.

Handcuffs. Turn a key in a cheap padlock.

Horses.

a. Use coconut shells with a little finger strap on the top so that the first finger may be slipped through the strap. These are used with the correct rhythm in flats filled with the proper type of soil.

b. Another method to reproduce the sound of horses' hoofs is to use rubber plungers. They are held by their handles and rubbed across each other in the correct rhythm. This also gives a good effect (see Fig. 26).

- c. If the effect of a number of horses is desired, the actors may use their cupped hands upon their chests.

Ice.

- a. Ice jam breaking up may be produced by twisting an inflated toy balloon close to the microphone.
b. Crumple an electric-light carton.



FIG. 26.—The plungers are covered with cloth to give the sound of horse's hoofs on soft ground.

Kiss. There is not the fun in radio that there is on the stage. Kiss your wrist.

Liquids. Pour water into whatever kind of container your script calls for.

Machine Gun. Hallowe'en ticktack. Some electric vibrators when passed over a drum will give the staccato sound of a machine gun.

Machinery. Gears are very handy to have and special equipment can be built for machinery sounds. No instructions can be set forth for all types.

Marching Men. The accompanying illustration (Fig. 27) shows the marching-men equipment. This consists of a wooden frame about 18 by 24 inches. Nine strong cords are strung about 2 inches apart from end to end and 12 cords

are strung from side to side. The ends of these cords are attached to a device which will tighten them, a bolt which can be screwed out. From each intersection of cords is hung a wooden peg, perpendicular to the frame. A screw eye is inserted in the end of each peg and is tied to the cords; this allows the pegs to hang loose. For the pegs we use round dowel rods. As these pegs are lifted and pushed back and forth upon a large sheet of paper or upon a wooden table top, the sound of marching feet is produced. It is advisable to sand-

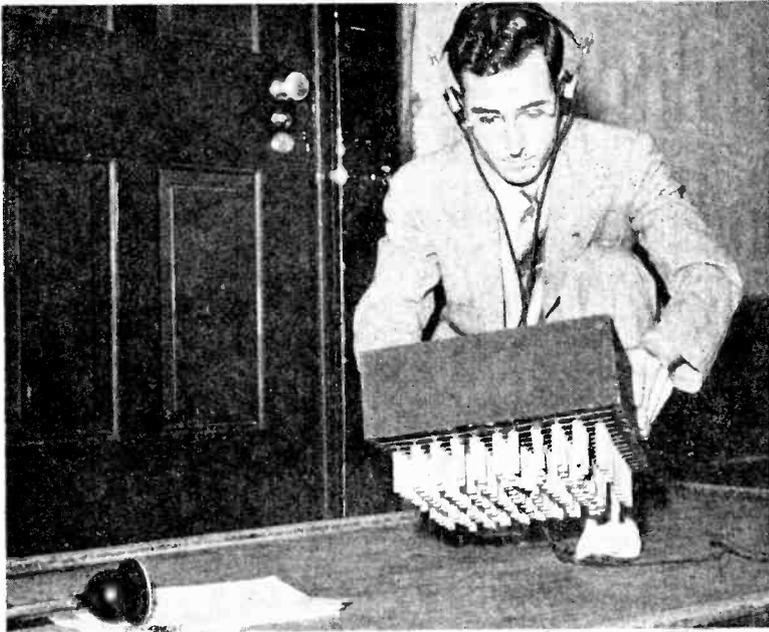


FIG. 27.—The sound of men marching is being made with equipment made for that purpose. Notice the microphone on the floor board. It is generally advisable to have a special separate mike for sound. Very frequently it is placed in this manner, very close to the sound source.

paper the bottoms of the pegs a little to take off their rough edges before using.

Metal Money. Large coins may be used, such as quarters, half dollars, and even nickels. Lead washers give an equally good effect if you don't trust your coactors.

Motorboat. See Airplane.

Motorcycles. Use method suggested for airplanes.

Picks and Shovels. Use a small trowel or children's toy spade in a box of dirt and gravel. Give a scraping and shoving effect. Hit the stones with a tack hammer to give the effect of the pickax.

Porch swing. Rock an old swivel chair rhythmically.

Rain.

a. The accompanying sketch (Fig. 28) shows a rain machine which, despite the fact that it looks like a Rube Goldberg cartoon, is the most effective one that I have attempted to use. Into a large funnel is poured birdseed. When the birdseed comes out of the spout of the funnel, the stream of seed hits against a ping-pong ball; this disperses the seeds so we don't get a steady stream. Below the ping-pong ball is a paper bag which is blown up. Some of the birdseed hits upon this, bounces off it, and falls into a basket which is filled with crumpled paper.

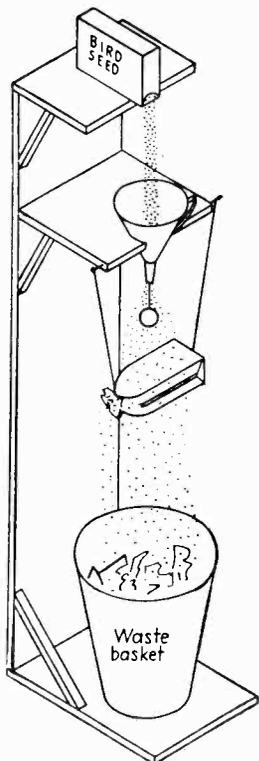


FIG. 28.—A variety of the rain machine. A rapidly revolving disc may be used to distribute the birdseed, replacing the funnel, ping-pong ball, and paper bag used above.

b. A ball of cellophane loosely wrapped in tissue paper, rolled slightly between the hands.

c. Drop salt on different materials; in case it is a tin roof, on tin, etc.

Riveting Machine. Use the alarm of an alarm clock, with the bell deadened.

Shots. See Gunshot.

Slap. In getting the effect of a slap, don't get too close to the microphone or it will sound like an explosion.

Speech, Off-stage. When it is desired to give a muffled tone of a person speaking from inside a door, take a cigar box and cut a semicircle out of one end, retaining the top, of course. This, held up to the mouth, allows the person to speak into the closed cigar box, giving a muffled tone (see Fig. 29).

Splash. Simply drop a flat block of wood into a tub of water well off mike. Be careful not to hit the sides of the tub. Line tub with canvas to avoid metal sound.

Squeaks. Rusty hinges or pulleys. A wooden peg twisted in a hole in a board may help, or turn a moistened cork in the mouth of a bottle.

Steam. Steam is done by the sound man, who expels his breath abruptly through a half-closed mouth.

Surf. Saw an old bass drum into two sections so that there would be two heads. Then take off one head and replace it with netting. By rotating dried peas upon this netting, the sound of waves may be created. In some studios the drumhead or the large top of a butter tub is hung by three cords from a tripod.

Telegraph Keys. It is best to use a regular telegraph key. It must be attached to a battery. It is important to use an unintelligible message because the Communications Code prohibits the sending of intelligible messages. However, the Morse code should be used.

Telephone. It is best to use a real telephone for the click of the receiver and one of the old-fashioned bell boxes that were used in rural homes for the bell. It is sometimes possible to obtain an old dial for the sound of dialing.

Telephone Conversation.

- a. Use filter mike.
- b. If there is a telephone in the studio which can be called from the control room, call the studio before the program starts and keep the line open until the telephone message comes in the skit. Then talk from the control room



FIG. 29.—Actor using a muffle box, which is a cigar box with a half-moon cut out of the end, to create the effect of a person speaking from behind a closed door or of an off-stage voice.

and hold the earpiece in the studio very close to the mike. This will save the expense of the filter mike.

Thunder. The best device for creating the effect of thunder or the booming of cannon in the studio is to mount a copper window screen and to attach to it an 8-inch spiral wire which acts as a phonograph needle in conveying the vibrations of the screen to an electrical pickup head which may be taken from an old electric phonograph. An electric cable transmits from the pickup head the sound of artillery fire or thunder directly to the line, when the screen is hit with a soft-headed drumstick (see Fig. 30).

Train.

- a. Probably the best method of creating the sound of a railroad train is to use a recording. If, however, you are without a recording, a four-sided grater may be used, and, by rubbing across it with one of those wire brushes that seem to be a favorite of the trap players in an orchestra, you can get the effect of a railroad train.
- b. Bladder filled with BB shot rotated to the correct rhythm.

Underbrush. Twist the bundle of broom straw near the microphone.
Wagon.

- a. One of my greatest problems has always been to get the sound of a wagon wheel. We needed this one time when we were broadcasting the "Ransom of Red Chief." A wagon wheel may be mounted upon rollers, barely touching different tops containing different types of soils. Use these different tops of flats when different types of road conditions are to be evidenced. An old wagon wheel can generally be obtained (see Fig. 31).

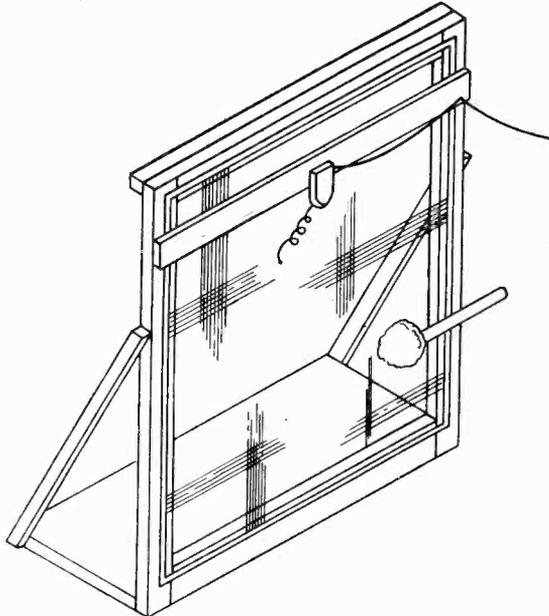


FIG. 30.—The thunder screen.

- b. This effect can also be created by a roller skate on a box with some sand in the bottom of it.
- c. Use a small toy wagon with wheels and pull it along a model road of dirt or sand or gravel, close to the microphone.

Water.

- a. If you want the sound of a paddle wheel in the water or a boat being rowed, or any other splashing of water, use a tub full of water. However, a metal tub filled with water will produce a metallic sound over radio; consequently if a metal tub is used, it must be lined with canvas, hung around the sides, to eliminate the metallic sound. By placing a board from side to side and attaching a paddle wheel to an axle dropped from this crosspiece, a paddle-wheel effect may be created in the tub. Of course, a good many different effects may be created with this equipment (see Fig. 32).
- b. A garden-variety spray tank with several gallon capacity, equipped with a hand pump and a hose, may be utilized for water faucet, shower-bath, water

hose, and other effects. If compressed air is available, the tank may be fitted with an air valve and pumped up to 25 pounds of pressure.

Wind. The wind machine used in radio is very much like a wind machine used on the stage. It consists of a drum with its crosspieces made out of $\frac{7}{8}$ - or

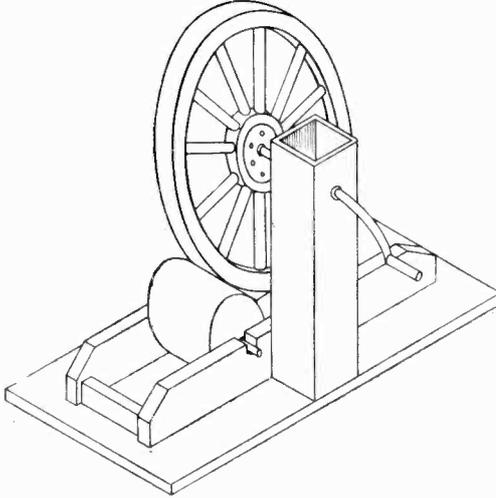


FIG. 31.—Wagon-wheel device.

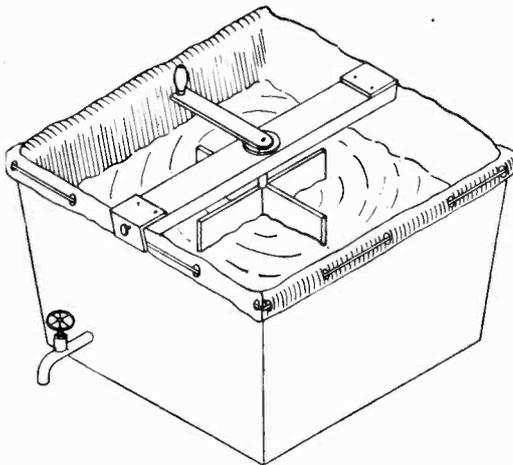


FIG. 32.—Splash tank for water effects.

1-inch strips. The drum is turned by a handle. A piece of canvas is draped over the drum so that when the drum is turned the strips rub against the canvas, creating the wind sound. We have made this drum to serve two purposes. Before the wooden strips are put on, we have covered the edges of the drum with netting and left a small opening that can be corked up, into

which we pour dried peas. Then by turning the drum at correct rhythm, we can get the effect of surf, or waves upon the beach.

Window. The requirement for good window sounds in radio is the same as for good door sounds. Good solid frames and real sliding windows should be used. A shade can be attached to one side, and possibly a Venetian blind on the other side, in case you need either of these for an effect in a play. Both the door and the window should be mounted upon castors so that they can be rolled in corners of the studio when not in use.

Wood.

- a. Splintering: Use wooden matchboxes or berry boxes, or peach crates, according to the sound required.
- b. Chopping down a tree: Use a knife on a branch for the chopping sound. For the cracking sound, pull off a section of veneer from a piece of three- or four-ply wood. This shows that the tree is cracking and starting to fall. Jump into a berry crate to give the effect of the crash to the ground.

Every time a new effect is created and proved satisfactory it should be filed in this catalogue no matter how unimportant it seems to be at the time.

We have found it advisable, when a special effect has been desired and finally created manually, to record that effect and add it to our library of recordings. Then when the same effect is needed at a later time, we do not have to experiment a second time.

The operator must be careful that the equipment he uses will not break and cause a sound not desired. Furthermore, the control operator should be informed of the sound effect to be used and when it is to be used. I recall the early days of broadcasting when Jesse Lynch Williams, Pulitzer Prize playwright, was presenting a radio drama over WOR. He used a couple of pennies in a cocktail shaker to create the sound of ice. The control operator some distance away did not recognize the sound and faded it out.

The sound-effects man should not neglect to experiment with the actual source of the required sound. Dishwashing is a sound that is difficult to imitate, so it is best to wash dishes before a microphone. Nothing sounds more like pouring water from a glass than pouring water from a glass. Try out the sound itself first if it is convenient. If it is not reproduced satisfactorily, then seek to create it by other methods. One station, desiring to get the sound of the starting of an old Model T Ford, its cranking, explosions, and sputtering, found that the best way was to bring an engine into the studio.

The sound-effects man should possess a good sense of rhythm and timing. His position requires finesse, artistry, and good judgment. He works closely with the director, keeping one eye on the script and the other on the director. He may ring his cues in the script with red pencil and indicate where the sound is to be peaked and where it is to be faded

out. He must be willing to experiment for hours creating new effects and getting the presentation of other sounds just exactly right. An active imagination and ingenuity are also essential. He should also be what is called in the theater a "quick study." It is helpful if he can memorize cues so that no time will be lost. When he has 50 or 60 cues, this is not too easy! The sound man must be absolutely dependable, for the sound effect must come on time, at just the right level, and for just the proper duration. Before the broadcast he should arrange everything in the order that it is to be used, and everything must be close at hand so that he will not waste time getting it into the microphone. While the show is in progress, the sound man is given his cues by the producer. He, after all, can hear how the show sounds, since he is in the control room. So the sound man must watch constantly in order that he may tell by signals if the volume and the quality of sound are correct. He should be resourceful, eager to experiment, know radio engineering and studio technique, appreciate dramatic values, and have a workable knowledge of music and rhythm. Added to all this he must have a pleasant personality to withstand the rigors of long rehearsals and tired radio directors. I have used the masculine pronoun, but many sound engineers are women.

It is far better to have no sound at all than a sound that is a poor representation of the desired effect. Sound effects should never be injected into a radio drama for their own sake. They must be a valuable aid to the visual imagination of the listener or else they must not be included. It is true that the youthful audience desires more sound effects than the adult audience. In order to get the proper reaction, the sound effects must be timed perfectly. Consequently it is better, according to the American system, to present them in the same studio with the actors. In some instances sound effects are produced for the benefit of the actors and are hardly heard by the listener; they tend to get the actor into the right mood.

Sound may be used as a background for short scenes. In longer scenes this effect may become irksome and in this case the sound is not continued throughout the whole scenes but is "sneaked in." This means in the case of a play laid upon a train, that the sound is brought up strong at the beginning of the scene and then gradually faded out, perhaps all the way. Then at the close of the scene or during short intervals, the sound may be brought up again to remind the listener that the scene is laid on a train. If the listener is too aware of the background sound, something is wrong—it should be almost completely unnoticed except at short intervals. Sound effects may also be used to great advantage as transitions from one scene to another in the radio drama. In writing the radio play, sound is not imperative unless it clarifies a piece of stage business or intensifies the atmosphere.

Sound effects have other uses than those which are already stated. In many cases deliberately unreal sounds are used to aid in creating a certain effect. For instance, the opening and shutting of a door so rapidly that no one could possibly get through it is a favorite with radio comics. Sound effects may be used in an expressionistic fashion; for example, the use of a clock or a metronome to help emphasize the slipping away of precious time.

WHODUNIT

A SOUND DRAMA

THEME: "Three O'clock in the Morning." (*Fade out.*)

Sound: *Thunder coming through the theme as it fades out.* (Use thunder machine, see page 173.)

Sound: *Rain.* (Use rain machine, see page 172.)

Sound: *Footsteps on gravel, slow and irregular.* (Man wearing rubbers walking on flat filled with wet gravel.)

Sound: *Footsteps crossing porch.* (Use board walk.)

Sound: *Key in door.*

Sound: *Door opens.*

Sound: *Door closes and latches; sound of rain outside—muffled thunder throughout skit.*

Sound: *Rubbers being dropped, one, two, falling to floor.*

Sound: *Snore in distance.*

Sound: *Footsteps tiptoeing across creaking floor.*

Sound: *Liquid being poured into glass.*

Sound: *Gurgling sound of drinking.*

Sound: *Footsteps.*

Sound: *Squeal of cat.*

Sound: *Man's voice, "Sh—sh."*

Sound: *Quiet . . . pause.*

Sound: *Snore from distance.*

Sound: *Footsteps.*

Sound: *Squeak of door hinges.*

Sound: *Sound of body settling upon bedsprings*

Sound: *Shoe drops.*

Sound: *Snore.*

Sound: *Second shoe drops.*

Sound: *Yawn.*

Sound: *Pants come off and fall to floor with belt buckle sounding.*

Sound: *Sound of chair knocked over.*

Sound: *Feminine scream.*

Sound: *Feminine voice: "It's time you came home!"*

Sound: *Shot.*

Sound: *Body falls to floor.*

Sound: *Town clock tolls three.*

Sound: *Bedsprings.*

Sound: *Snoring.*

THEME: "Three O'clock in the Morning."

CHAPTER XVII

Writing Commercial Continuity

In the American system of broadcasting the commercial sponsor is the angel for the broadcasting station. Without the money he pays for the presentation of his advertising continuity, the commercial broadcasting station could not exist. The sponsor is interested only in the entertainment value and the appeal of his programs to the extent that they will attract and hold a large enough audience to make the delivery of his commercial copy profitable. Consequently it must be written to comply with the general requirements of the psychology of advertising and the rules of grammar. By the term "commercial continuity" I refer to all types of advertising plugs: the 20-word station break; the 100-word commercial announcement, which is frequently sold as a 1-minute announcement; the 5-minute commercial program; and the advertising portion of longer entertainment features.

In writing the commercial it is wise to keep in mind that people do not buy things, they buy uses. They buy the skin you love to touch, not soap. They buy kissable lips, not lipstick. The Simmons Mattress Company doesn't try to sell mattresses; it tries to sell sleep and comfort. Thus it is the result of the purchase that should be spoken of rather than the product itself. Here are some emotional motives that can be played upon in the commercial:

1. Self-preservation from harm or danger, which includes care of health.
2. Satisfaction of appetite; pleasing taste.
3. Romantic instinct.
4. Care of children and family.
5. Ambition and advancement, economic or social; intellectual desire for advancement.
6. Desire for securing comfort, personal comfort or comfort in the home.
7. Desire for entertainment, pleasure, leisure.
8. Cleanliness. This is a deep-seated instinct.
9. Pride—in appearance, in one's home, in one's family, etc.
10. The expression of artistic taste, which takes the form sometimes of the selection of gifts.

On the other hand, the rational motives for buying are handiness, efficiency in operation or use, dependability in use, dependability in

quality, durability, economy in use, economy in purchase. By comparison, it may easily be seen that the emotional motives far outweigh and outnumber the rational motives.

The continuity writer is concerned primarily with writing copy expressly for the purpose of advertising a product. In order that he may write such advertisements well, he should be thoroughly familiar with the product that he is to advertise. It is wise for him to visit the plant where it is made, see the conditions under which it is made, talk with people who have used the product, and sell himself thoroughly before attempting to sell the radio audience. Only when he has had such a thorough working knowledge can he enthusiastically portray the product's worth in words. However, such an investigation should not result in the writer's viewing the product from the manufacturing point of view instead of from the point of appeal to the buyer. An interview with the sales manager or someone who will recommend the product is usually of value.

The continuity writer must have all the originality, new ideas, and new methods that are to be found in the capable advertising man. Because of the innumerable commercial programs that are on the air, methods of presenting commercial plugs soon become hackneyed and trite, and the man who conceives new styles becomes a leader in this field.

An example of good advertising was that in which the announcer spent at least 1 minute advertising Jello without mentioning the product or any of its slogans. He pretended to have a telephone conversation with his wife and, although they didn't say what they were talking about, every listener knew what was going on. It was amusing. It did not mention the name of the product in an irritating way. The advertising became actually enjoyable for the audience because they had so much fun guessing what was going on and the right answer helped their ego a bit. This is a dangerous practice, for it demands a steady audience, one which listens every week without fail, so that the listeners become familiar enough with the product, its claims, and its slogans that these need not be mentioned, yet everyone will know what is being talked about.

The reading of advertisements is fine training for writing them. The writer must have a sense of both dramatic value and newspaper-writing principles. When the writer lacks these qualities, his commercials will strike the radio public as deficient in grace, tactless, or uninteresting—hence unproductive.

It must be remembered that only a small proportion of the commercial continuity that is heard from a broadcasting station is written by the staff of that station. Most of the programs that advertise national products are bought directly from the writers by advertising agencies, who also cast the shows and turn to the broadcasting network only for the purchase of time on the air. Furthermore, many of the advertising agencies prepare

the short commercial plugs for their clients. The larger advertising agencies have their own radio departments with continuity writers who are experienced in the writing of advertising copy. In every instance the broadcasting station endeavors to work in harmony with the advertising agency and to suggest changes in style and content in the continuity that is to go out over its facilities. The station advertising department, however, must use great tact in suggesting changes, because the copy may have been written by the sponsor, or the advertising agency may have submitted the copy to the sponsor and would feel that its services were being belittled if the copy were criticized and changed by the station's experienced continuity writer. Ordinarily the work of the continuity writer of the broadcasting station is offered free to the advertiser who purchases radio time. He works directly for the studio, writing copy that is used to bring in revenue to the organization.

Great care should be exercised in the placing of commercial credits in the longer type of commercial programs. The best times are shortly after the opening and, if the program is to be a full-hour program, at the half-hour break; if the closing announcement is employed at all, the commercial plug should be brief and to the point and should precede the actual closing of the program. The style and form of these three commercials should be varied, for nothing so annoys the radio audience as unnecessary repetition, especially if it is of a descriptive character.

Subject Matter.

Considering the need of originality in advertising copy, it is not advisable to lay down any hidebound rules for writing it. In general, however, there are three types of commercial copy: reminder copy, educational copy, and action copy.

Reminder copy is that type which endeavors to keep before the purchaser the trade name and slogan of a well-known and widely advertised product, and generally consists merely in giving this slogan, the trade name, or a description of the distinctive wrappings or appearance of the product. This type of copy contains a minimum number of words phrased with skill and subtlety to convey the desired suggestion. Any attempt to make a direct sale with a mention of price is detrimental to this type of copy. It is purely good-will advertising used in connection with national advertising programs.

Educational copy is used primarily in the introduction of a new product and gives information about it, stimulates the purchaser's curiosity, and arouses in him a desire to purchase it. This type of continuity should point out the results of the product rather than the ingredients that are used in making the article. Of course, in every instance the name of the product must be emphasized. However, the name of the manufacturer is

not always necessary or advisable. One of the more subtle uses of radio is the elimination of a sales resistance that results from the purchaser's fear of appearing foolish by asking for a product whose name he is unable to pronounce. The announcer may make the pronunciation of the name clear.

Action copy is the salesman of the air, for it announces price cuts and new models and assumes that the listener is familiar with the product. This type of copy is written to induce immediate action and contains what is known in rhetoric as "the interest of stimulation," which impels the listener to clap on his hat and go out and buy. While the masculine pronoun is used here, surveys seem to show that the housewife is the one to whom radio advertising should be directed, for she is the one who has the most influence upon family purchases and spends the greatest amount of time in the home.

Commercial continuity should always attempt to create good will and friends for the product. The copy must have a style that will attract attention and through this attention make its sales appeal.

There is a favorable reaction to the type of continuity in which the sponsor makes himself known indirectly, possibly by naming the orchestra after his product. Such names connected with artists create a lasting impression, which is the main objective of the advertiser.

While advertising continuity must not be too sweetly appealing, it should be persuasive. There are various methods of making an idea persuasive, which include appeals to patriotism, to the property-owning motive in human nature, to the desire for power and superiority, to health as a means of achieving power, and to the affection instinct. The sex motive looms large in advertising, and an indirect sex motivation can often be found in products. Frequently, if the program is a local one, the injection of a bit of local news or interest will make the appeal more personal. Nearly every subject permits an appeal to some kind of human fear, which is always effective, or an appeal to human desires, which are equally or more important. Primary motives are food, shelter, and ornamentation or luxuries. Over 60 per cent of our national income is expended for things or services under the classification of ornamentation or luxury. Ordinarily, therefore, any advertising appeal should be addressed more to desire than to fear or necessity.

False or questionable statements and all other forms of misrepresentation must be eliminated. The Federal Trade Commission acts as the watchdog for accuracy in radio as well as in other forms of advertising. It is interesting to note that the percentage of criticism for radio is less than that for other advertising media. It is ill-advised to belittle the product of a competitor. All stories and pictures of an unpleasant or disgusting nature should be avoided. Make the copy pleasant because it

may be received during a social event or a dinner party and would create a bad impression for the product if it were not in good taste. Human nature does not like to hear or to discuss disagreeable things. Questionable and risqué stories, songs, or jokes should be forbidden; and, of course, general broadcasting principles eliminate profanity, sacrilegious expressions, and all other language of doubtful propriety. Statements or suggestions that are offensive to religious views, racial consciousness, and the like are to be avoided. If testimonials are given, they must reflect the genuine experience or opinion of a competent witness who speaks in an honest, convincing manner. When dramatized commercials are used that involve statements by doctors, dentists, druggists, nurses, or other professional persons, the lines must be read by a member of these professions reciting actual experiences, or explanations must be made by the announcer that the scenes enacted are fictitious. There must be no misleading statements concerning price or claims of the product; and comparison with other products is not diplomatic.

The radio public objects frequently to the amount of advertising included in a radio program. The continuity writer should therefore use discretion in determining how much continuity to include in his period. High-powered salesmanship, undue repetition of price, and the excessive use of superlatives are not in good taste. Ordinarily not more than two "price mentions" should be given in a 15-minute program; good broadcasting principles limit the length of the sales talk to about 2 minutes in a program of this kind. Broadcasting stations recently announced that they advised not more than three "price mentions" in a 30-minute program, which should include only 3 minutes of commercial copy; and that the full-hour program should not mention the price more than five times or devote more than 6 minutes to straight sales talk. Until recently radio has been an advertising medium available only to big business. However, local stations are today featuring programs called the "Want Ads of the Air," which follow the style and sales practice of the newspaper want ad.

It must be recorded that these cautions against the use of questionable claims, superlatives, unpleasant ideas, the imperative tense, and disparagement of competitors—while undoubtedly for the good of commercial radio and its advertisers as a whole—are being conspicuously violated, principally by local stations, for the immediate advantage of individuals. The networks seem to have higher commercial ideals.

The continuity writer should see that there is no conflict between the broadcast announcement and the sponsor's advertisements for the same product in other media. All types should coordinate. It is good policy to mention the names of local dealers of a product in order that they may appreciate the value of the radio advertising.

Style.

The two main faults of advertising writers in preparing copy for radio announcements are (1) that the copy is written to be read, not heard; and (2) that interest-seeking advertisers use unjustified methods of attracting attention. Commercial writers are inclined to use a newspaper headline style instead of the conversational form. Sentences are inverted; words are left out; the advertisement is prepared to be seen, not heard. When a reader sees the same copy in a newspaper or magazine, he unconsciously fills in the missing words, but when this copy is heard over the air the incomplete statements are meaningless. Possibly this style results from the limitation imposed by broadcasting stations on the number of words in certain types of commercial plugs. Conciseness and simplicity are major requisites, but nevertheless clearness is essential. The continuity writer should explain his points in simple, direct language. He should be concrete, not abstract. Large figures are not easily followed and may be misunderstood. Percentages are confusing. The use of similes and vivid figures of speech is desirable.

The style of the radio announcement should be simple and personal, for the announcer is talking to an individual, not to thousands. He should never be "high-hat," no matter how expensive the product he is advertising. In writing copy never visualize the radio audience as a tremendous number of people seated together, but rather as a family group or an individual. Material that is presented in a personal way is given more attention than material that is presented objectively. The listener should be made to feel that he is buying a product from a friend, from one who has taken the trouble to entertain and to help him. Talk with the listener in the second person; be chatty, intimate, and persuasive.

While the listener may be addressed in the second person, the announcement should never make the announcer a member of the firm that is advertising. He should not say, "Come down to our store," because his voice is known as that of an announcer connected with the broadcasting station. Such a style would be misleading and, moreover, would constitute an endorsement of the sale or article by the station.

Facts and products are most easily popularized through an engaging personality, and the words of the continuity must create this character. The radio listener reacts better to a modest and unobtrusive approach. If the words are shouted at him, there is no opportunity for the speaker to emphasize certain vital words and facts. The writer should examine his copy to see if it is in the same form and has the same content that he would use if he were calling upon and talking to the listener personally. It is very good practice for the continuity writer to test out his copy by putting it onto the office dictaphone and then playing it back to see whether it sounds friendly and convincing. Probably a better practice

would be to have someone read the announcement back to the writer, who may be surprised how one who is unfamiliar with the sense intended by the writer may interpret the copy. Write so that only one interpretation can possibly be given to the message. Make the continuity for your sales talks as attractive as you would endeavor to make your application when seeking a position.

The tendency of certain advertisers to introduce their commercial announcements with interest-catching devices such as "Important news flash" or "Calling all cars" is bad, because such an introduction is misleading and is inclined to offend the listener rather than appeal to him. Announcements can be interesting without being heralded as "news," so that such introductions are a waste of words. To "soft-soap" the listener is bad, to plead is worse, and to bully is the worst of all. The program should be appealing, but not commanding. Mechanical methods of approach do not make for vital, attractive, or inoffensive continuity.

A short announcement, to be effective, should contain not more than one idea. If you wish to make a lasting impression, do not have more than one request for action in a single short announcement and do not arouse conflicting appeals; to describe vividly the gnawing on a chicken leg overshadows the appeal of a tooth paste. Place the name of the product advertised and the point to be impressed early in the announcement; then, if the listener turns off his radio, you have at least introduced your product to him. If the continuity includes an offer, it should be stated simply and clearly without any involved or prolonged explanation. A well-centered climactic sales script is better than one that has many cheap and obvious climaxes. While repetition is used to drive home a point, the same phraseology should not be reiterated to the point of annoyance. Trade names and addresses should be given a number of times, but the form of delivery should be changed. The most productive way to obtain direct-mail response is to have replies sent directly to the broadcasting station, for the call letters of this station will be heard a number of times whereas the address of the sponsor can be heard only upon that immediate announcement.

Dramatized Commercials.

The inclusion of the commercials in the continuity of the variety show is desirable, for programs should be knit closely together. The director must bind the program into a unified production instead of shoveling it out to the audience in unrelated parts. There is no excuse for a break of movement or a shift in the tone of the broadcast. The most successful programs on the air today build the announcers into the structure of the show and make them human and appealing characters who carry weight in their own right. This simplifies the task of putting human interest into

the selling, and often the commercial hardly seems to be a selling announcement. If the show has been properly constructed, it will hold the listeners' interest throughout and they will listen right through the commercial without knowing that they have invited a salesman into their homes. The best announcement is that which becomes part of the entertainment and follows the spirit and the tempo of the show.

The straight commercial announcement no longer is so effective as the dramatized commercial. More and more advertisers are realizing the wisdom of dramatizing their announcements as part of the entire show. A radio show cannot be allowed to lag or it will lose the listener. Careful attention is paid to this requirement during the entertainment part of the show, and there is no reason why all this effort should be nullified by permitting the commercial to change the tempo. After all, this is the most important part of the show to the sponsor, and he should take care not to lose the listener to some other program because of dull announcements.

When the announcement is given, it should be right in step with the rest of the show. The product, however, should not be dramatized. A dramatic situation should be created, and the solution achieved through the agency of the product. The more natural the solution, the more believable the dramatic situation.

A great variety of forms are used today in radio advertising, which may be traced back to an early phase in the history of broadcasting. The commercial theme song came first for promoting the sales message. In 1920 it was used as the main selling factor in many advertising campaigns, and no sponsor in those days was too dignified to make use of the theme song. It did have a valuable purpose, too—that of associating a product with a hummable tune, creating a melodious slogan.

The Ford Motor Company recently put on a used-car campaign using only a series of 3-minute discs, which started with a catchy theme, went into a rhyming conversation and a short dramatic skit, and then ended with the theme:

See your Ford Dealer,
The price is low.
Baby, can those used cars go!
The word is getting all around
Ford used cars are the best in town.

During the twenties the continuity writer wrote his product into the introduction of the musical numbers. This practice has developed into the incorporation of advertising with the regular script of the show and now is used in most comedy shows. The product is usually worked into a gag and draws a laugh and oftentimes applause. The listener does not object to such advertising and yet the sales talk is being put across.

The star of the show is sometimes used as a selling factor in a conversation with the announcer. In the following, Fred Allen and Harry Von Zell are planning to visit the circus:

ALLEN: Now *me*—I go for the high-wire walkers, even if they *do* worry me.

VON ZELL: How, Fred?

ALLEN: I can't help but think, every time I see them way up there, what in the world would they do if they ever *sneezed!* I wouldn't know.

VON ZELL: I don't think I would either, Fred. But I *do* know what any man, with both feet on the *ground*, should do when he sneezes. He should put two teaspoonsful of Sal Hepatica . . . (etc., etc.).

This kind of commercial associates the star with the product, and yet permits the announcer to do the heavier part of the selling.

In the dramatized commercials, the writer has a wide variety of devices from which to choose. He can use lyrics, dialogue, or straight selling. His dramatization may be one, two, or three episodes, all linked, if necessary, by swift narration. But whatever devices he chooses to use, his commercial must have three basic divisions, (1) the teaser, (2) the message, and (3) the compulsion.

The teaser must create an appetite for the message. It decides whether the listener will listen. Its job is much like the illustration, color, or catch line in the printed ad. The teaser can employ many techniques to seize the immediate interest. The play can be on (a) timeliness, season, holiday, special events, etc:

ANNOUNCER: Now that warm weather has come, no doubt many of you are planning many delightful outings for the beautiful week ends to come, just like the Smiths are in this little scene . . . (*Fades into:* skit in which the Smith family agrees that the sponsors product is necessary for a perfect time.)

The public is always eager to use the latest gadgets and devices on the market, and the idea of (b) newness will catch the ear:

ANNOUNCER: Are you burdening yourself with the old-fashioned ways of working around the house? Mrs. Darwin isn't; she's enjoying an afternoon at the club with her friends . . . (*Fades into:* women chattering at club, talk of scores, shots, and putts.)

MRS. A: You played a wonderful game today, Jane.

JANE: Yes, my game has steadily been improving, but that's because I've been able to get more afternoons off to play golf.

MRS. A: However do you manage it? Why, I had so much ironing yesterday I was almost too tired to come out today.

JANE: Oh, that hasn't bothered me since I got a new Whizzo Ironer. Why they're just too (etc.).

Appeal directly to the listener is often made in order to give the commercial (c) personal touch. This suggests the heart-to-heart talk between announcer and listener:

ANNOUNCER: (*Sneezes loudly; talks through nose as if he had a bad cold*) Ladies and gentlemen (*Sneezes*) . . . Ads I was saying (*Sneezes again*) . . .

ANNOUNCER B: (*Interrupting*) Say, Jim, you can't make an announcement in that condition. Ladies and gentlemen, you will please excuse my fellow announcer, but as you can see he is in no shape to go on the air. Evidently he hasn't heard about Dr. Zileh's famous cold remedy. *You've* heard of it no doubt—of course you have—that's the remedy with zenoxytol, the latest discovery of science for fighting off colds. Well, I'm sure you'd want me to tell my friend Jim about it so that he can be back on the job tomorrow, and then he can tell you what was on his mind.

Flattery (*d*) is often an effective appeal to catch the listeners' attention, although it should be used with discretion. The announcer says: "Every intelligent person knows," etc., etc., or "No really wise buyer will spend more than," etc., etc.

The best means of attracting attention is that which will immediately bring some sort of emotional reaction. An emotional receptivity for the coming message is more desirable than the mere creation of mental curiosity. This is the specialty of the dramatized commercial, for drama more quickly than any other approach can mold our emotions. The idea is to create a situation in which the listener imagines himself to be and from which the only escape lies in the purchase of the advertised product. But care must be taken to picture the outcome of the use of the product not as shiny white teeth, a clean body, or sweet breath, but a successful romance, a happy life, or a good job.

The actual message is merely a description of the product often laid down by the advertiser in his own phraseology. The script writer has little opportunity for ingenuity here; his task is merely to link together, in the smoothest way possible, the sponsor's favorite phrases.

The compulsion line is usually as terse and as compelling as possible. These lines run: "Don't wait, it may be too late! Buy yours today," or "Go to your nearest dealer and have him show you the latest model cleaner." In this final and important phase of the commercial is included: "Save the coupon on the back, it may be used to obtain valuable premiums." One of the most popular methods today is the contest; compulsion lines in such campaigns run: "Visit your nearest Gaso dealer and get your free entry blank for the big \$10,000 contest!"

A further modification of the use of dramatics in advertising is the personification of products, with all the emotions of humans. Such stunts as a vacuum cleaner humming and singing as it cleans and the almighty dollar shouting that it is being stretched too far are of this type. It is a vulgarization of dramatics, a burlesque, but it nevertheless is an example of radio advertising in forms other than straight announcing.

In the limited dramatic skit used in dramatized commercials, sound saves time without depriving the ad of any of its desired effects. The

sound of a car saves the wordage a straight commercial would use in setting the scene. The same sound can give the impression of speed, progress, or other similar effects without using a word. Sound effects will catch the listener's ear more quickly than an announcement. A shrieking siren or clanging bell will take the listener's mind off whatever he is doing more quickly than will a human voice. Wherever possible, sound effects should be used in the dramatized commercial in order to obtain the most effectiveness in the least time.

Length.

The advertising man appreciates the value of white space in the layout of a magazine or a newspaper advertisement, but inconsistently he endeavors to fill every second of a radio announcement with copy. This is a mistake. White space in entertainment—in the form of brief pauses—has just as much value in radio copy. Nearly all advertising continuity is too long, and the principal reason for this is that the writer does not seek vivid words to take the place of groups of words. Verbs and adverbs are neglected for adjectives. The advertising story should be told quickly. Condense and intensify. Give the salient qualities of a product, its trade name and slogan, its price, and where it can be purchased.

The apparent length of a commercial depends a great deal upon the interest it can arouse. Many an interesting announcement has taken up twice as much time and seemed only half as long as most uninteresting ads. When the advertising message has been completed, stop before you become an obnoxious salesman.

Diction.

Words used in radio commercial copy should be simple, dignified, and in good taste. The announcer does not make friends if he attempts to use high-flown words or to display an extensive vocabulary. If it is necessary to use a technical phrase, define it. It is a well-recognized fact that words of Anglo-Saxon origin are stronger than those with foreign base. Do not use any words that may have a double meaning. Because his entire impression on the audience is made through the sense of hearing, the radio writer must be even more careful than others to write in words understandable to the audience. The person listening to a speech cannot stop to look up unfamiliar words without losing a part of the message. Furthermore, a startling or unusual word will attract attention to itself, rather than to the commercial message. Choose language that expresses big ideas rather than that which displays big words.

Advertising copy should be addressed to the level of those people to whom the sponsor expects to sell his product and to the audience ex-

pected to listen at the particular time—juvenile, adult, feminine, masculine. The writer of copy addressed to adults must adjust his vocabulary so that all his listeners, who, of course, have varying degrees of education, may be reached. His speech must be understandable to the least learned as well as to the most learned. The successful writer always selects words that will be within the scope of his prospective listeners.

While good usage is considered essential, certain programs allow some liberty. Slang and sport phraseology have a place only on certain types of programs. Trite and hackneyed expressions are offensive; foreign derivatives should never be used; figures of speech should be carefully chosen. In the preparation of copy a thesaurus (Roget), a book differentiating between synonyms (Crabb), and a good dictionary are most useful.

Do not use words that don't add color or motion. Don't even write "the" unless you mean "the." Edit all words that gray (the) color or clog (the) motion. Don't use (the word) "and" unless you (actually) need to emphasize the impression of adding (something).

Sentence Structure.

The structure of the sentence plays a great part in the clearness of the material presented. If the thought is obscured by complicated and involved sentence structure, the audience can do nothing to rescue itself from wandering. The best way to be sure of sentence clarity is to use simple and compound sentences and to avoid complex forms. If the listener does not understand every sentence as the speaker utters it, he immediately loses interest. Avoid the use of adversative and coordinate conjunctions. Break your sentences in two, but, on the other hand, do not let them be of the same length, for in that case the delivery will have a monotonous melody. It is not always easy to make short sentences beautiful, but they will have force and drive home the idea. Do not fail to read aloud each sentence to see whether it clearly states the idea, and be sure that it cannot give any other than the desired idea; you cannot rely upon your announcer's delivery.

While short, glowing sentences are most successful, certain statements demand longer sentence structure; but where this is the case, the sentence should not be involved. Each successive phrase and clause must clearly unfold the thought. Sentences should be built up to an important word or idea. They must not flow downward. Of course, in general, grammatical rules must be obeyed; nevertheless speech permits some liberties. The chief concern is, Does the copy read well? Is it easily understood when heard?

Rhetoric.

Correct grammatical rules are not always followed in this type of writing. Occasionally it becomes suitable to change and deviate from

rules in order to give the copy a unique and forceful style. However, strict attention should be given to accurate grammatical relationships, such as the agreement of verbs with their subjects, pronouns with their antecedents, and pronominal adjectives with substantives, and the agreement of tenses. A grammatical error in any of these catches and holds the attention of the listener whom you wish to impress by your sales talk. The use of the imperative is rather irritating to the listener, who would prefer to be permitted to arrive at his own decision rather than to be dictated to by the announcer. The use of questions is an old device for demanding attention, but the writer must be very positive that no humorous answer or no antagonistic answer can possibly be given. He must be certain that the only answer possible is the one that he desires. One of the oldest axioms of successful advertising is to pursue a positive lead of the listener's or reader's thought; this is immediately defeated when the writer asks a question. Therefore it is obvious that the safer course to pursue is to omit the question element entirely. Tongue twisters should be avoided, for the most experienced radio announcer may become nervous and make a slip, regardless of how well he knows the material. Certain methods of arrangement and phrasing of material help to secure effectiveness in a radio message. Suspense may be created by allowing the listener to be conscious that you are working toward an objective, an interesting objective. The placing of emphasis upon certain words by the announcer may be assured by placing these words following pauses indicated by marks of punctuation.

In many instances the copywriter is so intent upon making a point that he fails to see that what he has written will make a different impression than that which is in his mind. This is often caused by misplaced modifying clauses, stringiness, or poor construction. A few illustrations of careless writing heard over the networks and stations in 1940 are: "See Harry Applebaum for that new pair of Sunday pants, open evenings and Sundays for your convenience"; "Don't wait until you have a headache; ask for it today"; "Thank you for feeding your dogs and cats Thrivo and we want you to recommend it to all your friends and relatives"; "Thousands of people who have listened to this program have headaches right now"; and "When I see a lady who does her own housework and dishwashing and who has soft, pretty hands I know she has been using her head." How would you retain the intended ideas and correct these announcements so that the announcer could not go wrong? You must not rely upon an announcer to say what you want him to say unless you write the announcement so that he cannot possibly give a misinterpretation.

CHAPTER XVIII

Serving the Sponsor

I have no intention in this handbook of tracing the history and development of sound advertising from the town crier, who rang his bell in the city streets, to the network whose gong announces that this is the National Broadcasting Company, or from the advertisements of the United States Gramophone Company in 1894, offering to record any musical selection with a sponsor's advertising announcements, to the modern electrical transcription. Suffice it to say, the contention of the Gramophone Company that "nobody will refuse to listen to a fine song, or concert piece, or an oration—even if it is interrupted by a modest remark: 'Tartar's Baking Powder is the best' " has proved to be true. In 1923 Station WEAJ announced that 10 minutes of its time on the air could be purchased by an advertiser for \$100. Today the same period will cost the sponsor \$334. It was estimated that sponsors in the United States paid broadcasting stations \$207,956,000 in 1940 to advertise their products over the radio. This amount does not include what was spent for talent, for writing the continuity, and for advertising the programs but is merely what was spent for the use of facilities and the air.

The student of broadcasting is interested in the opportunities offered to him by radio advertising and how best to take advantage of these opportunities. The student may enter the radio advertising field as a free lance or as a member of the staff either of the advertising agency or of the sales department of the station. Incidentally sex is no barrier in the advertising side of radio, but experience is a prerequisite for employment in an agency.

There are those who have the knack of writing conversation or the ingenuity to create attractive characters and plots. In many instances a housewife in a rural community has a sense of humor, a nose for human interest, and the ability to recreate local incidents, characters, and talk into a series of short dramatic sketches. From these free-lance writers come the domestic bits of real life that appeal to the radio listener and sponsor. The free-lance writer must have an original idea capable of being developed into a long series of daily 15-minute programs. In order that dialogue may sound like the conversation of two distinct persons and in order that situations may be developed, free-lance writers frequently hunt in pairs for ideas. The author must keep six weeks ahead of the

program but be capable of revising any sketch to make the conversation of his characters timely. The writer must by all means study the radio and its successful presentations, bearing in mind, however, that mere imitations have little sales appeal to the sponsor. A sketch must emulate the most popular series on the air and at the same time evidence a new appeal.

The sketches written by the free-lance writer contain no commercial angle; thus they can be sponsored by soap or cereal, dentifrice or gasoline. When they are completed, the author will submit them to an advertising agency. It is unwise for the author to attempt to sell his idea or his skits directly to the sponsor. The advertising agency is jealous of its relation to the advertiser and will frown on any suggestions that come from outside its office. Consequently such free-lance efforts must go to the agency. As these agencies receive bales of skits and sketches, the free-lance writer must have some "in" or contact with the agency to get his efforts read. There are agents for radio authors just as there are agents for the writer of short stories and novels. The chances for success of the writer without a "friend at court" are decidedly slight. The writer should select a certain account in an agency, build up specific reasons why his idea might be applicable to that account, and then endeavor to see the account executive. If the account executive cannot be reached, he should see the head of the radio department. It is futile merely to deliver manuscripts in person to the agency because many important papers are lost in the shuffle when they are dropped on the desk. If the writer himself is enthusiastic about his material, he will get an audience.

The demand for such sketches is decidedly seasonal inasmuch as new advertising contracts are made with radio stations during the late summer. The best time to submit a series of skits is in May, June, and July. If the free lance's efforts are submitted earlier, they are filed away and not sought for unless the "friend at court" is active. If the programs come in after the new contracts are made, they will have no market until the following summer, and by that time they will be buried deep in the pile. Most radio contracts come in cycles of 13 weeks. If a "going" program goes sour, the agency and the advertiser endeavor to pick up a substitute. Also, good program ideas are frequently used to obtain new business.

The free-lance writer will do well to listen to radio programs, to study the style preferred by different agencies and by sponsors in their radio advertising and in other media, and to endeavor to improve upon the commercial plugs of a chosen program. If the free-lance writer can evolve slogans, catch phrases, and vivid announcements that are an improvement upon those being used, he should submit them to the agency. If he shows decided ability and originality, he will probably be in line for a position as a continuity writer. It is unwise, however, for him to condemn the continuity being used.

There are other opportunities in radio advertising for the individual who is not connected with an advertising agency or with a broadcasting station. Foremost among these is the opportunity offered in the advertising department of the department store or other large retail establishment.

Department-store Advertising.

Most department stores agree that, regardless of the type of advertising program, "good will" is the keynote. The programs must aspire to some degree of culture and education as a measure for good production. The keen advertising producer blends the humorous with the serious to present a colorful real-life broadcast. A program has to be sold to the public just as much as the commercial product and the merchant presenting it must be sold. If the program producer is successful in this, he is successful in the publicity of the product presented. There are six vital steps in cultivating the listener's good will or acceptance:¹ (1) to educate, (2) to assert, (3) to iterate, (4) to inform, (5) to stimulate, and (6) to persuade.

Good merchandising in conjunction with a well-planned program will translate good will into action. It is such merchandising that often stimulates the actual purchase. For this reason successful radio advertising should be backed up by window displays, counter displays, novelties, booklets, showcards, direct-mail leaflets, and newspaper advertisements. Most department stores use the newspaper advertisements as a supplement to their radio advertising. Large stores, however, rarely use the window display to substantiate the radio announcement. Occasionally counter displays are shown. Other methods of merchandising a program should be seriously considered in planning the advertising by radio.

There are three types of programs that a department-store management might consider: general merchandise-information program, department or department-group advertising, and institutional or good-will advertising program.

The first type of presentation is the most economical, since it needs only one person to conduct it. It may consist of musical transcriptions interspersed with special sales tips for the day, or brief descriptions of store services available to the customer.

The second advertising scheme should make a very interesting, fast-moving program with plenty of opportunity for punch. A store could be divided into department groups. One group might include the accessory departments, such as gloves, jewelry, purses, and neckwear, with an interesting fashion story prepared to attract and hold the attention of

¹ Orrin E. Dunlap, Jr., *Radio in Advertising*, Harper & Brothers, 1931.

milady. The fashion expert could be interviewed, and she in turn could show how to make varied costumes by accessory changes.

Another group of departments might include the children's divisions. Children themselves make wonderful talent for such programs. A talk on suggested play direction for children could be given, linked with specific activities found through browsing in the toy department. Such a program, properly merchandised, would be certain to create parental interest.

Hobby day would be fun and would be greatly anticipated by all ages of listeners. This might take place in the book department with a snappy short review of a current book or an interview with an author, or in the photography division with someone narrating the thrills in using a popular-selling movie camera or some points to be remembered in good film developing.

Sport day offers an appeal to the men, with an oral golf lesson linked with a special brand of golf clubs. It may also include tennis rackets and an interview with some famous star of the game.

Most department stores have services that they offer their customers. Such a service program might be built around a "Day with the Bride-to-be," planning the style of the bride's veil and describing its history, telling her how to order her invitations, planning the color scheme for the bridal party, and even designing the dresses. Actually do something for the radio listener when possible or have her do it for you.

These are a few of the numerous examples of divisional store advertising that could be broadcast. The programs should be seasonal and planned far enough in advance so that a circular listing the following month's program subjects and their dates can be mailed along with the customer's monthly statement. It is essential that programs of this second group be well merchandised.

The third type of radio publicity to be considered by a store management, the institutional advertising program, is one of the best methods of creating and holding good will. It is the most expensive plan because it inevitably demands more outstanding talent. Such a program is more profitably presented in the evening since, because of its make-up, it appeals to all classes of listeners.

A number of large department stores located in outlet cities of one of the networks could band together with a program originating in New York. A popular dance orchestra, possibly a fashion talk by an authority, and a society sketch could be broadcast from the New York studio, and the commercial plugs for the local stores could be given at the quarter-hour breaks by the announcer in each outlet city in which the stores are located. It is necessary in making such a contract to sign up an entire basic network, but only those affiliated stations need be purchased which would serve the stores in the joint advertising campaign. An excellent

program presented during the morning hours would attract wide attention, and the expense to each store would not be excessive.

Where only the local station is used, the tendency has been toward 1-minute plugs, but these do not create good will. Those stores which are more interested in seeing the dollar walk directly into the store than in building good will by institutional advertising tend toward the plugs. One store features radio days, with plugs for different floors each hour. Early in the morning, sales on the top floor are broadcast with an invitation to meet the performers on that floor during the hour. The radio listener descends from floor to floor as the day progresses. On each floor the items plugged over the radio are marked as radio bargains.

There remains one more type of spot broadcast valuable for direct advertising. The local store can, at the break for station announcements in a network program, insert an announcement to the effect that the product being advertised upon the program can be purchased at a local store. From such announcements the local retailer can derive benefit from a high-priced national program.

The radio program is another display window for the department store or retailer. It should be built with that aim. The radio window must have color, unity, a definite theme, climactic development, and a sales drive. Change the procedure, bring in the unexpected, but always appeal to human interests. The public does not like to be forced to buy. Therefore the merchandise story must be embellished and then flavored with advertising. It is unwise to talk only about merchandise. A program that is well designed for a department store will sell more than the specific goods mentioned in the commercial copy. Radio is an excellent selling medium because it presents life and action not present in newsprint.

As the majority of department-store programs are written and presented by the advertising department of the store with the active cooperation of the station staff, those who wish to break into radio should consider this entrance.

The Service of the Agency.

The listener tuned to a star program being broadcast over the network is thrilled by the glamour and romance of broadcasting and desires to gain a position in the key station. The listener does not realize that the staff of the broadcasting station has about as much to do with the nationwide sponsored program as the owner of a theater has to do with a play presented upon his stage. The key station merely leases its air rights, its facilities, to the sponsor. The advertising agency is the sponsor's agent in making the lease, the sponsor's booking agent in signing up the star performers, the dramatic director for the cast, the author of the commercial plugs, and the agent through whom the script is purchased. If one

desires to observe the origin, development, and evaluation of a big program, one should seek a position in the radio department of the large advertising agency.

The client must give the agency all the information concerning the distribution of his advertising budget so that all media can be coordinated. In most instances a single agency will be in charge of the whole campaign: outdoor, newspaper and magazine, mail, window displays, and radio. All these must be unified in their purpose. Certain media may be used for direct selling, others for education, and another to create good will.

In order to select the most efficient broadcasting stations, the agency should know the location of distributors and of wholesale and retail outlets and where purchasers are most likely to be reached. The client's methods of merchandising are considered, even the distinctive package, its size, its shape, and its color. If there is a special offer, a bargain package, or a product to be pushed, this information is essential to the agency in planning the campaign. Such items as the counter, display cards, and window streamers, also usually designed by the agency, are considered in the composition of the radio continuity.

A superficial knowledge of the product is not sufficient. While the agency should know how it is manufactured and what its ingredients are, the really important thing is what the product does for the purchaser. The listener is not interested in anything except how the product will aid or affect him.

In order to build a program designed to appeal to the potential purchaser, the agency must know whether the product appeals to the rich or the poor, the man or the woman, the child or the adult, the rural or the urban. The agency is also interested in the seasonal appeal of the product, in order to include it in the radio programs planned for certain seasons.

These are but a few of the facts that must be gathered before anything is done about the radio program. From these facts the agency will determine whether to recommend radio as an advertising medium, what stations to use in the campaign, whether a network or spot program is to be used, whether to have live talent or to use transcriptions, and for what type of program and commercial continuity to plan.

When the use of radio is decided upon, the agency contracts for time, either with the network or with various local stations. In the selection of stations the agency is indispensable. The agency, to perform efficient service for the advertiser, must possess information as to actual station coverage, type and schedule of programs being carried, the approximate number of receivers in the locality, as well as the percentage likely to be tuned to the station at a certain time, and the purchasing power of the listeners within the area. All such information is based upon surveys made

by special agencies. The agency books time with each station for a period it considers best for that particular locality. A big advantage of the transcribed program is that the agency can select times without regard to a nation-wide hookup, thus obtaining the best time in different parts of the nation.

The agency should consider the type of customer that presents the greatest potential market and should build a program to appeal to that purchaser. A program should be arranged which is expressive as a unit of the sales message and of the character of the sponsor.

Generally speaking, recognized stars are handled by individual agents or bookers, and the advertising agent and client deal with these representatives in endeavoring to build a program. There is an exchange arrangement between agents which permits the employment of stars by competing companies. The advantages of prestige, proved acceptability, and free newspaper publicity which big-name talent will bring to a program are obvious. On the other hand, the incorporation of the name of the product in a pseudonym for the artist is another opportunity to introduce advertising.

The agency usually goes to a client with a general idea of the radio program. After the client has approved of the general idea, which includes the type of show, type of music, name of the star, master of ceremonies, etc., the agency begins working with the network production department or an independent producer or does all the work in its own production department—building and rehearsing of the production. This finished program is then auditioned by the client, usually the president, sales manager, and other interested persons. It is at this time that they accept or discard the plan. After the client has approved of the show, the proposition goes to the dealers and distributors, with the purpose of “selling” them on the sales value of this new operation.

The commercial announcements are a matter of pure advertising, the first purely advertising copy, in fact, for the radio department of the agency to write.¹ When the artists are employed, the script for the entire program accepted, the musical numbers chosen, and the entire program rehearsed and timed, then the sponsor is invited to a dress rehearsal.

Before the program is broadcast, there is conducted a tie-in campaign, consisting of the distribution of window streamers, show cards, publicity to newspapers, and in some instances a direct-mail tie-in to customers. The merchandising campaign is conducted by the agency alone, the agency in cooperation with the client's field force, the agency in cooperation with the radio chain's sales department, or by any combination of these three. Dealers are notified of the coming broadcast. A big factor in the success of the radio-advertising program is the advertising

¹ Refer to Chap. XVII, Writing Commercial Continuity.

of the broadcast program through other media. Spot announcements are sometimes used in advance of the program to announce a forthcoming series. In the merchandising campaign the retailer is contacted to learn if his stock is adequate to take care of the anticipated demand, to give advice concerning the display of his stock, to furnish him with samples if a sample offer is to be made over the radio.

Sooner or later the sponsor will wish to check up on results. There is the telephone method, the questionnaire method, the free-offer method; none of them have proved absolutely successful. One thing toward which the agency must begin to plan is the advent of television.

The Advertiser's Service of the Local Station.

The sales department of the broadcasting station in the medium-sized town becomes the advertising agency for the local merchant and endeavors to coordinate radio and other media of advertising. The sales department conducts local surveys for merchandising, assists in distribution, and conducts the tie-in campaign. In many instances the station will put on merchandise displays. Its sales department will design window posters and display cards. The student who enters the local station will serve a diversified apprenticeship.

Local advertising has been growing throughout the country. The reasons for the growth have been summarized as follows: (1) the local retailer, having seen the success of the national advertiser, has decided to follow his example and at least try the new medium; (2) the satisfactory result attained by the early pioneers in the field has caused the others to follow them; (3) stations have started to offer intelligent service to the broadcaster, both in the preparation of the campaign and in the actual presentation over the air; (4) broadcast advertising has attracted the better type of retailer.

Types of programs for the local retailer are varied, ranging from spot announcements to live-talent broadcasts. The spot announcement has become a very important part of the revenue of local stations. Electrically transcribed programs have been very widely used. The live-talent program is becoming more and more a favorite with advertisers where sufficient talent is available. This type of program assists the sponsor in building up a distinctive personality. Moreover, its personal touch assists in attracting good will, on which store patronage is to a large extent predicated. A new type of live-talent program is the "group" program, sponsored by several advertisers who have spot announcements during the period.

An important factor in the sale of local advertising is the proper servicing of accounts by the station. A knowledge of merchandising methods is necessary on the part of the broadcaster so that he may inform

the advertiser as to the best method of coordinating his radio publicity with the rest of his sales program. To this end, the station must analyze the important factors of the customer's location, organization, inventory, and general methods so as to adapt the entire broadcasting policy to suit his particular needs. Moreover, programs should be checked every few weeks to evaluate the sales appeal of the presentation.

The sales policy of the local station is equally broad. The first approach is to sell advertising in general; the next is to sell radio; the final aim is to sell the station. Attention is focused on a long-term program, beginning with a 13-week contract. The customer is told that results depend on steady radio use and will not come to him overnight. He is told that the radio is not a panacea for all the ills of a concern. His entire layout is looked over, and any worth-while suggestions that can be made concerning his methods are forthcoming from the salesman.

National advertisers are turning to local stations to supplement their network campaigns. The two campaigns are distinctly different: the national campaign is purely advertising; the local combines merchandising and the creation of good will among retailers. The merchandising staff of the local station is personally acquainted with all merchants in the area, knows their problems and their sales possibilities. The staff of the sales department of the station can notify all merchants of a forthcoming campaign, outline the plan, demonstrate the product, suggest window and counter displays, and act as a distributor for the national jobber. In conducting such a campaign for the national sponsor, the local station accomplishes four things; it creates a closer working alliance between the manufacturer and the retailer, vindicates the station's worth as an advertising medium, creates a satisfied client, and establishes local contracts that may result in other local contacts.

The Sales Appeal of Radio Advertising.

Radio advertising is important to business because it reaches the ear of the public while every other form of advertising addresses itself to the eye. Thus it acts on the prospective purchaser in a subconscious manner and supplements all other advertising addressed to him. Its chief value lies in the fact that it familiarizes the audience with the name of the sponsor and his product so that the sight of the name in written advertising produces a friendly reaction. Radio advertising is important because it can send forth a message addressed to the listener during hours of relaxation and receptivity. It is of vital importance that this impression by ear appeal be in complete harmony with various other printed advertising of the sponsor. It is important because it enables the advertiser to reach a great mass of listening audience with an even more powerful, direct, and specific selling message than he can use through any other

medium. Generally speaking, the sponsor receives the greatest benefit from the use of direct-selling commercials because they move the goods.

Another reason for the great value of radio advertising lies in the fact that it can address an audience either locally or over a national hookup. Also, radio advertising benefits the national advertiser by securing good will; by promoting the cooperation of the dealer, since he is affected, interested, and entertained just as any other individual; by insuring a cordial reception of salesmen; by increasing the value of space advertising; and by improving the morale of the manufacturer's personnel. It also is well adapted to the advertising of concerns and products having names difficult to pronounce and spell. The essence of consumer acceptance, as created by radio advertising, is that members of the audience are made to feel that they are buying a product of a friend—of one who has taken the trouble to please and entertain them.

The control of the advertising message until the time and the conditions are best suited to its success is a great advantage offered by the radio to the sponsor. Thus a manufacturer advertises flour or soap in the morning when the housewife is in the kitchen; appeals to children when they are home from play just before the evening meal; and reaches the entire family group in the evening. The radio advertisement is flexible, permitting the control of program content. In the morning household aids are of more interest to the listening housewife than grand opera. The commercial program can be adjusted to appeal to the tastes of the potential purchasers; refined programs are arranged for banks and insurance companies, popular music and quartets for brewers. Flexibility is further demonstrated by the fact that changes, additions, or announcements may be made in a radio advertisement on very short notice, while to convey the same information to the nation by other media would require several weeks. Sponsors now recognize the year-round appeal of radio, for the summer hours are just as much in demand as winter programs. Finally the radio advertisement does not require concentration or idleness, for the listener may be impressed by the advertising message while engaged in some activity or while driving an automobile.

The major networks have definite basic and supplementary groups which are available to the radio advertiser. However, in recent years, the "tailor-made" network has been developed. The tailor-made network consists of joining groups of stations in particular territories which are desired by a sponsor, regardless of whether they are connected with the national networks. These first came into existence during the presidential campaigns of 1936, when different candidates desired to reach the electors in particular states. Similar tailor-made networks are used in broadcasting football games to particular sections of the country. The advertiser sometimes is faced with the problem when he considers enter-

ing into a contract with a national network of being unable to get time in a city which he desires. These tailor-made networks enable him to pick out a C.B.S. outlet in one city, an N.B.C. outlet in another, and an independent station where no network outlet is available, etc. This is an evidence of the growing trend toward greater flexibility in the use of radio as an advertising medium.

CHAPTER XIX

Broadcasts to Schools

An overwhelming amount of material has been written on the subject of educational broadcasting—the presentation and reception of school programs. Most of this has been in the form of pamphlets and magazine articles; it is surprising how few books have been printed in this field. The U. S. Office of Education issues a great many pamphlets of instruction and syllabuses which are mailed free to any teacher. Carroll Atkinson has made an analysis of the development of radio education in American school systems which was published by the Edinboro Educational Press in 1939.

This chapter is limited to an outline of methods that are successfully used in direct radio teaching. However, direct teaching is not the major purpose of educational radio, for the majority of programs are designed to supplement or enrich the work of the local teacher, to stimulate the interest of the student, to demonstrate methods of teaching, or to provide a useful tool of instruction for school talent.

Despite the fact that teachers or those interested in education were the first to recognize the great opportunity offered to them by radio, they have not yet agreed upon a lucid definition of education by radio. Educational broadcasting should obviously include more than the presentation of such subject matter as is regularly taught in the various grades of school. In fact, adult education possibly has a greater value. It cannot be stated that every program emanating from an educational institution is educational, for there are many sports programs and dance-orchestra programs so broadcast. It is equally true that not all commercial programs can be condemned, for many of them possess educational merit. C. F. Klinefelter, Educational Consultant of the Federal Radio Education Committee, suggests that the following tests be applied to commercial programs before they are accepted as educational:

1. Does the program convey to the listeners socially desirable information which they did not possess before hearing the program? If so, the program is educational. But the significance of the term "socially desirable information" must not be overlooked. It means information which society at large would regard as being generally desirable for the average person to know, especially such types of information as tend to improve the individual himself and enable

him to keep pace with the gradually rising level of social knowledge and culture. This would classify programs dealing with merely curious bits of information as being entertaining rather than educational.

2. Does the program discuss items of knowledge and give clear-cut directions for their practical application so that the listeners not only have a clear understanding of the items of knowledge but can make practical application of them as need or occasion arises? If so, the program is educational.

3. Does the program give a step-by-step explanation of how to do or make a certain thing with clear-cut directions as each step is covered so that the listeners can do or make the thing as need or occasion may arise? If so, the program is educational.

4. Does the program present a problem involving the exercise of judgment or constructive thinking in such a way as to bring out, in an impartial and dispassionate manner, all of the various factors involved in the problem so that the listeners are stimulated to make an intelligent evaluation and arrive at a logical conclusion? If so, the program is educational.

Program Types.

Roughly classified, radio broadcasts can be grouped under the general headings: talk, directed activities, actuality broadcasts, conversations, debates, and plays. The different subjects demand different types of programs, which have been discussed in previous chapters. One of the most important factors of the successful program is the personality and attitude of the speaker. He must be friendly and courteous. His personality must be magnetic to such a degree that he can hold his unseen audience and make it receptive to his ideas. He must appear to be on the pupil's level, yet retain his own personality. His attitude must be one of cooperation. If the speaker feels his talk is somewhat serious for the juvenile audience, he should use stories from life to illustrate it.

It is through directed activity that nearly all radio teaching is done. Courses that are easy to teach in this manner are music, science, art, and arithmetic. Usually the students take notes or follow instructions during the broadcasts. Some teachers give short daily tests covering the material that has been presented. Other teachers encourage direct discussion, and still others use both oral and written compositions as a means of discovering just how much of the radio lesson the students have retained.

Actuality broadcasts describe important events of public interest with the proper sound effects and commentaries. Broadcasts such as these aid the student in his study of current events. Actuality programs broadcast from a museum or art gallery, from the Senate Chamber, or from a courtroom are vivid dramas to teach the school boy or girl. Actuality broadcasts are sometimes exciting for the announcer as well as interesting to the listener. I recall that in one zoology broadcast a member of the faculty brought a 4-foot rattlesnake into the announcer's booth so that he

might broadcast the rattle of the snake. In order to get the snake to rattle, the speaker had to annoy the snake. Another radio teacher brought a bear cub into the studio. I can assure you that in these cases there was plenty of interest upon the program, and the feelings of the interviewer were very obvious.

Conversation or dialogue on the air is interesting to the high-school student. This procedure introduces new and different trends of thought and permits the student to tie his own ideas to those presented. The pupils hear the viewpoints of people who are well versed in the subject in hand. Thus the student's knowledge is increased and broadened.

The presentation of debates over the air is difficult. In the first place, the listener may feel that the station is biased. Then, too, the subject must be controversial, yet must not offend any of the listeners. The subject must also be interesting to a widespread audience. It is difficult to select a subject, do a great deal of research work on it, and then present it in such a way that the audience may grasp, in a limited period of time, the ideas that have been produced after weeks of work.

Plays for pupils should be short and the sound effects, while more numerous than in plays planned for the general audience, must be simple. Characters should be limited, and the contrast in voices should be marked. Special lines should be used to introduce each voice. Study the requirements set forth in the chapters on *Writing the Radio Play* and on *Preparation of Children's Programs*.

Radio addresses can be used for all subjects but they must be short and attractive. Round tables for topics dealing with literature, civics, or current events give a varied viewpoint. In fact, every type of radio program should be examined, and the one best suited to the subject matter to be presented should be chosen.

Preparing the Program.

It is wise to have a teacher gather the material, for accurate facts are essential, and then turn these facts over to the radio showman for development into an interesting presentation. However, the teacher and the broadcaster must cooperate in building the program because the former is better able to visualize the school audience while the latter is more familiar with the medium. The vocabulary level and the mental understanding of the young listeners should be determined by the educator. The subject matter, in conformation with the radio requirements, should be organized by the program director.

A limited phase of the topic should be chosen for each broadcast, for the listener demands a satisfying completeness despite the limited period allotted to the program. It is wise to create in each period an interest in the radio lesson to follow. A few points, illustrated clearly, make it

possible for the pupil to retain what he hears. Start out with some interest-catching statement and work to an effective close. The requirements of radio style previously set forth should be followed—a friendly conversational style using strong simple diction. George M. Cohan wrote a song whose title contained good advice, “Always Leave Them Laughing When You Say Goodbye.”

While interest is essential in the radio-school program, it must not crowd out educational value. Frequently the drama type of school program has little left that is instructive after the music, sound effects, and plot have been discarded in the classroom discussion following the program. The school program, furthermore, should be planned to fit into the curricula of as many schools as possible. For this reason it is well to discuss such topics and presentations with education boards while planning them; do not broadcast programs on Shakespeare when the school children are studying O. Henry. Another general requirement is to arrange the program for pupils of a definite level and then inform teachers what grades are to listen. Be certain that the pupil in those grades will understand every word, follow every sentence, and be familiar with every allusion. While school programs must contain facts and information, no one will listen to learn those facts unless the programs are interesting. Try the continuity out on a group of youngsters before you send it into the air; otherwise it may just float away, bringing neither credit to the teacher nor knowledge to the listener. In order that teachers may call their classes to order and correctly tune their radios, the first 5 minutes should be either music or relatively unimportant material.

Listener Participation.

A good program should conform to an outline that is easy for the listener to follow in note taking. Use all available means to create interest and cooperation by the student listeners, such as appointing secretaries, discussion leaders, class property men, and others with definite duties to perform in preparation for the broadcast or in following up the program. In selling his instruction, the wise educational broadcaster will adopt all the worth-while ideas of the advertiser on sponsored programs. Contests, essays, the reading of “testimonials” from students—all these and other methods will enlist the interest of the audience. Some principals and teachers have only a limited number of their students listen to a radio program; these students take notes and report to the class, an excellent practice in listening and note taking. The broadcaster must learn when to pause so that the listener can take his notes or participate in other ways. The best idea is for the broadcaster to have a group of pupils in the studio with him where he can watch their participation and thus time his delivery. Listeners are frequently asked to repeat pronunciations of words,

to answer questions, or to draw pictures; consequently the radio teacher must learn to give adequate opportunity for this participation. It is also wise to repeat essential material, but this should be done in such a way as not to bore the listener.

Music Instruction.

Since Dr. Joseph E. Maddy has been very successful in teaching the playing of wind and stringed instruments over the air from the University of Michigan, the procedure that he uses is given in his own phraseology:

The procedure is simple. I use two adjoining studios, separated by double windows. In one studio I have a studio band, orchestra, or choir of professional musicians, university students, or high-school students. This group demonstrates for the pupils by sounding tones and chords and by singing or playing phrases to be repeated by the pupils at the receiving end of the lesson. In an adjoining studio I have a class of beginning students who sit facing a radio-receiving set, from which they receive their instructions. By watching these pupils I am enabled to synchronize the speed of the lesson with the average ability of the pupils taking the lesson.

Whenever I have a few spare hours I visit some of my radio classes for the purpose of ascertaining wherein I have failed to accomplish the objectives of the preceding lessons. I learn something from every class I visit, and in this way I believe I am improving my teaching technic week by week.

The old familiar maxim "Teach less so the pupils can learn more" applies with particular emphasis to radio teaching. My radio pupils are teaching me to keep my mouth shut and let them play throughout the entire lesson period, even if they are left with several unsolved problems at the end of the lesson. The purpose of every lesson, radio or otherwise, should be to increase the students' power to solve their own problems.

Radio classes in schools are in charge of a teacher, school janitor, town minister, or other adult whose duty it is to see that the pupils are ready to receive the lessons and that they pay attention to the directions.

The first part of the first lesson consists in matching tones. The first exercise in the Radio Music Course uses three tones, do, re, and mi. The studio band sustains each of these tones while the pupils strive to match them. We take time to demonstrate to the pupils by tones which octave to play and give them some idea of how to read the fingering charts in their books.

We learn to play the first exercise by rote. The studio band plays the melody, then the pupils try to imitate the phrases as sounded by the studio band.

The first lesson is never complete until we have tried to play "America." It isn't necessary to completely teach the playing of "America," for they will learn it by themselves, even if they succeed in playing only the starting tone during the lesson.

Do I expect the pupils to practice the exercises? Of course not. You wouldn't practice exercises if you could play tunes would you? Neither will any other

normal person. The first exercises are for classwork during the first lesson, for the purpose of developing tonal range—then to be forgotten.

If I can send every radio pupil home with the ability to play one tone and confidence that he will be able to learn to play "America" within a few hours' practice, my first lesson will have been a success.

Succeeding lessons follow a similar plan. The pupils learn to play two or three new songs each lesson, by rote, but they watch the notes for fingering marks and eventually acquire some ability in sight-reading. Two, three, and four-part songs are introduced as the lessons progress. Most of the songs are in the singing key, so that the instrumentalists may join with the singing class for school assemblies and for school and community festivals.

Vocational Guidance.

As vocational guidance is becoming more and more important in our educational system, we see that the radio plays an equally important role in presenting adequate information about this subject to the schools.

The principal purpose of these programs is to provide high-school boys and girls with information that will be helpful in choosing their vocations. Experience has shown that radio talks of this type have been received most favorably when the type of audience was kept clearly in mind in preparing and presenting the talk. A simple, straightforward, fairly informal style is the best.

What these young people want to know about an occupation is well indicated by the following outline, which has been prepared by specialists in this field. The main headings may be of assistance to you in preparing your paper.

1. *Importance of the Occupation.* A few sentences concerning its origin and development; society's dependence upon it; the number of people employed in it (men and women); supply of workers as compared with demand; distribution (in every community or in certain communities).

2. *Nature of the Work.* General character; divisions of the occupation (fields of specialization); what the worker does in the largest division or group (a typical day's work may be described). Is work routine in character or mentally stimulating?

3. *General Working Conditions.* Hours of work; slack and peak seasons; physical environment; social environment; health and safety conditions.

4. *Remuneration.* Average earnings at the beginning, after ten years, after twenty years; exceptional earnings; how paid—by hour, weekly, annually, by fees, etc.; pensions and annuities; vacation periods and sick leave; social recognition; satisfaction from community service.

5. *Opportunities for Advancement.* Possible lines of promotion; factors influencing promotion; opportunities to transfer to related occupations.

6. *Important Personal Qualifications.* Age requirements; physical requirements; mental requirements; temperamental requirements; personal traits needed; social aptitudes important.

7. *Preparation.* General education desirable; special education needed and where obtainable; cost of preparation; continued preparation after work begins and how secured; how occupation is entered.

8. Teaching facilities available to one intending to enter this vocation.

Subject matter is the most important factor in the vocational program. The students are not to be entertained, primarily, but are in need of authoritative information about different vocations. A sheet of suggestions for utilizing each broadcast can be prepared to accompany each lesson, as well as a manual for teachers, containing supplemental questions and answers, based on the program, and a list of suggested readings.

Short plays are especially helpful in presenting the material to the student in an interesting way. These plays should take the child through the various experiences of choosing a vocation and show how the vocational adviser reaches his decisions in helping young people choose their work.

Interviews by students with men and women in some of these representative vocations make very successful programs. This type of program enables the students to get some firsthand information about various vocations, and as a result they are enthusiastic about learning all they can about the work in which they are especially interested. The problem is to avoid overstimulating susceptible listeners.

Elementary Science.

The teaching of elementary science has been successfully conducted through the medium of the radio. It is vital for the teacher to humanize the subject, showing how its applications affect the individual. The programs, while being a form of direct teaching, are largely considered to be an incentive to further study and experimentation by the student. It is wise to choose class discussions in which there may be some sound effects to make for greater realism. The speech itself may be direct lecture, a dialogue between a student and his teacher, or a classroom demonstration. It is wise to tie in the experiment being performed in a period with what has been broadcast on a previous lesson, and at the close of the program to announce the equipment that the receiving student should have available to be used in the next broadcast. There are many devices that may be used upon these science programs to create interest, such as questions that have been sent in by students. The radio teacher must insert adequate pauses to enable the student in his home workshop to carry on the experiment that is being demonstrated in the broadcasting studio. In presenting this type of course, the teacher must realize the limitations of the home laboratory and select as equipment those things that the student can easily obtain. Radio lessons in science are being conducted in many school systems. The following is the script used in Cleveland.

ELEMENTARY-SCIENCE RADIO LESSONS¹**Specific Directions for Each Lesson****RADIO LESSON No. 7—STEAM****Material Required:**

1. Electric hot plate or canned heat with rack.
(Matches, if canned heat is used.)
2. A teakettle or pan of boiling water—with cover to fit. Have this boiling on the hot plate or canned heat.
3. A test tube.
4. A cork that fits the mouth of the test tube.
5. A test-tube clamp. If you do not have a clamp, wrap a wire firmly around the test tube, leaving the ends of sufficient length that will permit you to hold the test tube over the flame.
6. Warm water in a small pitcher or pan. (Also a cup if pan is used.)
7. A bicycle pump or automobile tire pump which has been taken apart.
8. Drawing on board to show a cloud of partially condensed water vapor a few inches from the spout of a teakettle.

RADIO LESSON—STEAM

Good morning, boys and girls. You remember the rhyme, "Polly put the kettle on and we'll all have tea." Well, you see, the kettle is on, but I must tell you that we are going to have something better than tea, today. See if you don't agree with me when the lesson is ended.

You have heard the story of James Watt, a Scottish boy, just about your age, who sat in his mother's kitchen watching a kettle of boiling water. He noticed the same things that you must have noticed many times and can see now. The story goes on to tell that for the rest of his life Mr. Watt was influenced by the thoughts that came to him as he watched water boil. As a result of his interest, he did many things of value in the development of engines that work for us today.

The water in the kettle in your room is boiling. We have already learned that when the water reaches the boiling point it changes to vapor under different conditions. Today we shall talk about water vapor that is made by boiling water. It is called steam. Will the teacher please write the word "steam" on the blackboard: s-t-e-a-m.

Shall we, like the Scottish boy, look at this kettle of water to see what we can learn about steam? If you are using a pan instead of a teakettle, push the lid slightly to one side so the steam will have a small outlet. Notice the spout of the kettle. Do you see a cloud of partially condensed water vapor near it? (5 sec.) When the hot steam came in contact with the colder air, what happened? (5 sec.) Yes, it partially condensed. So it really is a cloud, isn't it?

Now, will you look carefully to see if this cloud of partially condensed water vapor is at the very tip of the spout. (5 sec.) No, there is a space between the cloud and the spout. Yet, if this cloud has been formed from steam the steam

¹ Cleveland Public Schools, Apr. 2, 1934.

must have passed through the space before it became visible as partially condensed water vapor. Then what must be in the space between the partially condensed vapor and the spout? (10 sec.) Steam must be there, but we cannot see it.

Even though we cannot see it, we know steam must be there.

The drawing on the blackboard will help make this clear. Let us look at it. The partially condensed vapor is shown a short distance from the spout of the kettle. The steam formed within the kettle by the boiling water escaped through the spout and partly condensed when it reached the colder air. We see this small cloud of partly condensed vapor but steam itself cannot be seen.

Now you have discovered an important fact about steam. The teacher will write it on the board.

No. 1. "Steam is invisible." (15 sec.)

We have another experiment to perform. First, will the teacher remove the kettle or pan of boiling water from the heat. (10 sec.) Will a girl and a boy please come to the table. (7 sec.) As I name these articles, show them to the class: A test tube fastened in a clamp (3 sec.); a cork that fits the mouth of the test tube (3 sec.); water (3 sec.). Follow these directions carefully. Put about one-half inch of water in the test tube. Be sure there is only a little water. Just about one-half inch. (10 sec.) Now fit the cork into the mouth of the tube, but not too tightly. (10 sec.) Hand the corked test tube to your teacher so that she can see whether or not it is satisfactory. The teacher will then hold the test tube over the heat, tilting it so that the cork is pointed away from everyone, including herself. The pupils may be seated. (5 sec.) I have been preparing a test tube with just a little water in it, and now I am holding it over the flame. The water in the test tube is a liquid. How will it change when it reaches the boiling point? (5 sec.) It will become a gas, or water vapor called steam. Will we see it? (3 sec.) Why not? (5 sec.) Has the water in your test tube started to boil? (10 sec.) (*Sound effect, cork popping.*) (5 sec.) What happened? (5 sec.) Did your cork pop out too? If not, hold it over the heat until it does. Let us talk about the reason for the popping of the cork.

What was in the tube to begin with? (5 sec.) Water.

Into what did this water change? (3 sec.) Steam.

What pushed the cork out? (3 sec.)

Steam pushed the cork out. As the steam was formed, it needed more room and kept pushing about in all directions. This is one of the very interesting and wonderful things about steam—its power to push. It pushes, or exerts pressure, while expanding.

You know how you can expand your chest by taking a deep breath. Do this with me. Put your hands on your chest. Take a deep breath. Do you feel your chest expanding or growing larger? Steam can expand to fill a space almost 1700 times as great as the volume of water boiled. In other words, if you boil one pint of water, it will change into nearly 1700 pints of steam. You can imagine how much power it has when expanding or pushing about to find more room.

You will want to continue the list of the things you have discovered about steam. The teacher will write them under the first fact on the board. Statement No. 2 will be—"Steam expands." (15 sec.)

And while it expands, it pushes. So, for statement No. 3, the teacher will write—"Steam pushes while expanding." (20 sec.)

You have seen a little steam do a little work but every day steam is being used to do great tasks. How many of you have ever traveled by train? Did you notice the large locomotive that pulled the cars? The power that turned the wheels of the locomotive was steam—the same power that pushed the cork out of the test tube.

It took men a long time to figure out how to make a steam engine but today one steam engine can do the work that was formerly done by many men. When you hear the word "engine," perhaps you think, "Oh, that is something for men to know about and understand," but the steam engine is something which not only men, but you too, can understand.

On the work table is a bicycle pump or automobile tire pump which has been taken apart. Your teacher will show you the part called the cylinder. (5 sec.) Now she will show you the part that fits inside the cylinder. This part is called the piston. (5 sec.) She will put the pump together by putting the piston inside the cylinder. (10 sec.)

Will a boy go up to the table and operate the pump. (10 sec.) Do you notice how the boy is pushing the piston back and forth in the cylinder? Cylinder and piston are also the names of important parts of a steam engine. Men knew that, because steam pushes, they must give it something to push. So in a steam engine the steam is let into a cylinder where it pushes a piston back and forth. This moving piston is connected to machines in such a way that, as the piston moves, it works the machine. For instance, in some school buildings, a steam engine works the fans that send fresh air to all the rooms in the building.

During the week look up some interesting facts about the history of the development of the steam engine. You will want to learn about the first steam engine made by Hero and used only as a toy. Then, too, you will want to know who invented the first steamboat, and how the steam engine affected transportation. But best of all, try to see a steam engine at work.

And now, we are going to have a contest, so listen carefully. I know that some of you have little boats that you bought at the ten-cent store. Perhaps your class will want to get one, too. One type of boat is called the Pop-Pop boat—p-o-p, p-o-p, and another is named the Pon-Pon boat—p-o-n, p-o-n. I am wondering which class will send in the best answer to the question: "What makes this toy boat run? Please write this question on the board: "What makes this toy boat run?" (15 sec.) I hope you will use an expression that I used in the lesson today.

Teaching History.

Perhaps the most successful method for holding the attention of the student and giving to him facts in history is the dramalogue. Many of the commercial programs that are presenting historical dramas are of value to the student of history and may be assigned for "collateral listening." The historical dramatization must be prepared in such a way that the romantic or fiction material does not overwhelm the historical facts.

These facts must be accurate and gathered by an instructor in history who has conducted research in the particular time and event that are to be presented over the radio. While wars are considered of great importance in the teaching of history, it is generally conceded that history radio programs should not glorify war or arouse hatred for the enemy. It is better in such dramatizations to stress the lives of individuals and through these lives bring out historical facts. The authors must be familiar with the daily life of the time he is portraying, for the diction and the minor events are of vital importance as well as the major historical facts.

A method that has been found very successful is that of tracing history backward, taking some aspect of life today and tracing it to its origin. Such topics as transportation, banking, communication, and cooperative movements can be treated by this method, either through the dramalogue or through other methods of presentation.

The straight-lecture type of program may also be used by the instructor who has the research libraries of a university at his disposal. He will give enriching material to supplement the work of the local teacher, who has neither the time nor the facilities for such research. Bibliographies of collateral reading may be broadcast in connection with such talks.

Civics.

Classes in civics will gain a clearer concept through an actuality type of broadcast. The teachers of civics courses should keep in touch with the daily-program schedules that are distributed by radio stations whose programs may be heard in their locality. They will discover many broadcasts such as those from the Senate Chamber, those by the President, speeches by the Governor, traffic-court broadcasts, and various series dealing with government which will be both timely and instructive to their students. In the majority of instances broadcasting stations are willing to send their weekly schedules to the principals of schools. These can be posted upon the bulletin board for examination by the teachers in various courses.

News broadcasts are frequently of value to the civics teacher, especially those programs which vitalize the study of government through the introduction of speakers who are in the day's news. The local station may cooperate with classes by conducting radio visits to various officials. The teacher should introduce the program, telling something about the man who is to speak and laying a groundwork so that the student can visualize the broadcaster. Unfortunately many of the programs of this type are prepared for adult audiences; consequently the local teacher must be alert to make notes upon any statement that will not be under-

stood by her pupils and to clarify it at the end of the program. Explanations of civil government by officials who would arrange their material for the school level could do much in educating the future citizens.

Geography.

Visual aids are essential in the teaching of geography by radio. A radio tour may be conducted from week to week, visiting various cities and countries. Maps and globes may be used by the students to follow the trips. Sound effects on the program will assist in making the tour more realistic.

The dramatic method is particularly good in such a series. Interest should be built up around a central character. Possibly a father with his son and daughter may be traveling around the world. Human interest will create a week-to-week appeal in such programs. Various modes of travel by rail, steamship, airplane, and even the rocket plane have been used to conduct the schoolroom travelers quickly from one part of the world to another. The speaker must be careful not to attempt to cover too much in a single program. Some limited phase of geography should be chosen for the series. The series might consider the famous art galleries, the industries of different nations, the people and the customs, or agricultural resources. Advanced information concerning each broadcast should be sent out to the schoolteachers who are using the series so that pictures, maps, and other material may be posted upon the blackboards of the schoolroom to interest juvenile travelers.

Speech.

Probably no single course is more extensively taught by radio than that of speech. In fact, every announcer is an instructor in such a course. Speech departments in nearly all the universities have presented radio courses, and there are a number of commercial broadcasts, such as the one given by the Better Speech Institute of America. In most of these programs the instructor is assisted by students whose pronunciation, persuasiveness, arrangement of material, clarity, and speech qualities are criticized by the radio teacher. However, the programs should not be permitted to end until the student has corrected his delivery and material to conform to the criticism that has been made. For such courses mimeographed material is usually provided for the students who are listening from some distant point, or a textbook is assigned. The use of a public-address system in the local school in imitation of a radio program may be used as a tool to stimulate interest in speech instruction. I have always maintained to my students in broadcast speech that, if they were to accept positions in the teaching of speech in a town in which there is a local broadcasting station, they could build short programs to be presented by

their pupils. The local broadcasting station could be induced to present these during the morning hours when sustaining programs are needed. Programs by the school children would bring a definite audience to the station, consisting of parents and friends of the children who participate. These programs will be interesting and will demonstrate what is being done in the classroom. Such an activity would strengthen the position of the teacher, since she would have all the parents enthusiastic about the work they hear over the radio. This project for the speech teacher in the elementary schools would also serve as a wedge to be used in breaking into the field of broadcasting. The radio is an excellent medium of instruction for speech and debating. All radio programs by public men and outstanding announcers enrich and supplement the work of the local teacher.

Other Radio Classes.

Arithmetic has been successfully taught by the radio classroom method, using mimeographed sheets which are distributed to the pupils and which are corrected by the local teacher. Such a program must be given very slowly. The pupil activity will hold the attention of the distant students. Cooperation of the local teacher is essential in such a radio class. Both music and art appreciation have been extensively taught by radio. Visual aids are particularly helpful in the art-appreciation courses, in which familiar statues and paintings are evaluated. Walter Damrosch undoubtedly has done more to educate the school children in music appreciation than any other individual. Small textbooks are distributed to the classes that listen to his programs, which are broadcast nationally. Foreign languages have been taught both on the broadcast and by short wave. Through these mediums accurate pronunciation may be brought to the student. The local student is usually provided with a textbook and follows the pronunciation given by the radio teacher. When such broadcasts are sent from a university or college, it is possible to bring a foreign student before the microphone to speak in the language of his native country and tell about the life of the youth in that country. Such programs must present speakers whose enunciation is precise and not rapid.

Teachers' Guides.

All those who are actively engaged in teaching by radio and in the broadcasting of educational programs to the schools agree upon the vital necessity of preparing teachers' guides to be sent in advance of the programs to the teachers who will be receiving those programs. The Radio Council of the Chicago Public Schools has done an excellent job in the preparation of such teachers' broadcasting handbooks. Harold W. Kent, director of the Radio Council, has prepared an entire series of such handbooks for the programs that are to be presented during the season, and

copies of these may be obtained by writing to the Radio Council, Chicago Public Schools. The following, to be used in connection with a series on dramatized literature for children, is a typical sheet of instructions for the teacher in whose classroom the program is to be received:

OPEN SESAME!

Open, Sesame, open wide,
Come, let's see what's hidden inside—
Tales of travelers in Arctic cold,
Pioneers, parrots and pirate gold,
Stories of sailors, seagulls and snails,
Desert sandstorms and ocean gales,
Through sun and wind and whirling snow,
Into our magic cave we'll go!

And so begins an adaptation of a fine children's book, broadcast for boys and girls in the fifth and sixth grades every Friday afternoon at 2:30 over Station WJJD. The program device centers around Ali Baba's treasure cave and his magic password, "Open, Sesame!" When the door to this rich treasure house flies open, the children may go inside to meet new adventures in books.

SUGGESTIONS

1. The radio should be checked and tuned to Station WJJD, frequency 1130 kilocycles, before the afternoon session begins. Then the switch should be turned off and the radio is ready for instant use at 2:30 o'clock.

2. The radio program and its preparatory and follow-up work should be conducted in a normal classroom atmosphere.

3. Helpful suggestions for using each specific broadcast are included in this manual.

4. Help boys and girls really enjoy this program through:

Reading—School and branch libraries are setting up a **Radio Bookshelf** displaying stories to match the subject of the week's broadcast. Encourage the pupils to go to the library, to look for this shelf, and, if they cannot find the broadcast book, to pick out another of the interesting stories it offers.

Learning to Use the Library. In some schools it may be possible for a teacher to take her class to the library. As she shows them how to find the broadcast book and Radio Bookshelf, she may teach them how books are arranged on the shelf. She may motivate library instruction through radio.

Studying Backgrounds. The broadcasts in this series have varying backgrounds. The pupils' experience range may be broadened by studying them before and after the program.

Self-expression. For their own entertainment or for an assembly program, the class may wish to write and produce their own mock radio broadcast in the style of this series, or, if they wish, they may produce a script that has already been put on the air.

Attention, Teacher-librarians! A special manual with suggestions for library use and supplementary book lists related to this series has been prepared by the Chicago Board of Education Library and is available in your school office.

The balance of the handbook consists of guides on the reception of each of the broadcasts. The following is the sheet of suggestions to be considered by the teacher in advance of receiving the program on "Robinson Crusoe."

ROBINSON CRUSOE

(Sea Stories)

Station: WJJD

Time: 2:30 P.M.

Frequency: 1130 kilocycles

Date: November 1, 1940

Suggestions:

Before the broadcast, you might

1. Talk over these words used in the story:

hurricane	breakers	helmsman	habitation
reef	shoal	raft	barbarous
cable	veer	seven degrees	north of the Equator

2. Let the boys and girls talk about the things they would want to take with them if they were cast away on a desert island, how they would build a house, and how they would find food and clothing.

After the broadcast:

See the Radio Bookshelf in school and branch libraries. These stories are particularly interesting:

Robinson Crusoe (Defoe).

Good Wind and Good Water (Gardiner and Osborne)—tells of a boy who makes a voyage to China in the days when the American clipper ships were the queens of the sea.

Swiss Family Robinson (Wyss)—the adventures of a whole family who manage to live on a desert island.

Smuggler's Island (Kneeland)—the story of a modern family cast away on an island on the Mexican coast, how they dwelt on the island and were finally rescued.

Summary: (It is suggested that the teacher use this as a basis for discussion rather than as material to be read to the class.)

Robinson Crusoe, on a trading voyage to South America, finds himself alone on a desert island when the ship in which he was traveling is wrecked and all hands lost. He builds his house, in fact several of them, finds plenty to eat and to wear but is very lonely during his twenty-odd years on the island. One day he watches a party of savages who have landed on the

beach of the island. One of their captives escapes. Crusoe saves his life and takes the native as his companion, calling him Friday.

In the series which deals with news broadcasts to the schools, the following suggestions are given to the teachers:

THAT'S NEWS TO ME

Each Tuesday at 1:30 P.M., beginning September 17, and thereafter as listed in the schedule of the following pages, WIND will carry the Radio Council's story of current happenings in science, geography, travel, and history. You will note that the schedule contains a column of topics for each broadcast. This represents a special anniversary in each case, which is included largely because of that fact. Not listed but included in each broadcast is an interview. The person interviewed may be a boy or girl, man or woman, who has contributed in some interesting way to the lives of the students.

SUGGESTIONS

In the class discussion which normally follows a broadcast, any one of several lines of activity might be considered:

1. A common device for motivation to listening to the news broadcast is to prepare a class list of topics which the members of the class think the newscaster may cover. Comparisons over a semester, aside from the pleasure derived from a measure of successful guessing, will gradually bring out and develop a good selection sense for the elements of true news and a taste or discriminatory feeling for the important events and happenings in the total picture.

2. Someone in the school engaged in or informed about the subject of the interview might be interviewed by the pupils of the class.

3. A "That's News to Me" scrapbook might be developed. Items of general interest relating to the materials of the broadcast might be contributed by the pupils. An extension of this idea would be the selection of other items not covered by the broadcast, but still of general interest. This would serve to give the pupil an understanding of the broader interests common to all and to give him a definite ability to discriminate in the choice of important phases of the news.

4. Some of the current events treated will readily lend themselves to dramatization. In applying dramatic treatment to an event of current interest, some creative thought and writing will have to be developed. The essential facts of the picture should always be retained throughout the process.

5. Some of the anniversary topics of interviews as broadcast may suggest excursions in which the class can participate. For example, a topic such as that covered in the December 3d listing, where you will notice, "Illinois Admitted to the Union, 1818," might suggest a trip to the Chicago Historical Society, at which time a visit to the Board of Education studios might be included. In this connection, it is our intention to welcome classes listening to these programs who may wish to attend broadcasts of them in the studios of the Board of Education. Arrangements for such visits should be made by calling the office of the Radio Council.

6. While the news covered in these programs is not the fast-moving kaleidoscopic type, it is of sufficient interest to stimulate wider and more intelligent reading of newspapers and periodicals. Regular discussion periods under committee sponsorship might be organized to encourage and direct this reading for better understanding. Teachers can help their pupils compare viewpoints of news broadcasters with those of reporters and editorial writers from the standpoint of emphasis, omission, and general interpretation of the news. A radio reporter might add his out-of-school listening experiences to the newspaper reading reports of the other members of the class.

7. Upper grade teachers can help their pupils to write items of news interest for their school newspaper. Committees may be set up to write certain items in the form of a radio broadcast in city or neighborhood newspaper style. Articles can be rewritten from the news in the broadcast itself, or suggested by the content of the broadcast.

8. Any materials which the various classes listening may prepare over a period of time should be saved against that time when exhibits of subject materials are scheduled. The Radio Council should be notified at any time of outstanding exhibit materials.

Many other activities have been developed, but in so many instances the procedure of using a news broadcast in the classroom arises out of the activity of the individual classroom group. Consequently, the activities are also individual and pertinent to that group. The suggestions outlined above are intended more to be just suggestions and not actual outlines of procedure in specific cases.

Suggested references:

Current Events
Young America
Science News Letter
My Weekly Reader
Junior Scholastic Magazine
National Geographic Magazine
Nature Magazine
New York *Times* (Sunday edition)

The Radio Examination.

In giving a test to students who are enrolled in a radio course, the test questions should be read slowly and repeated. If interpretive explanations are necessary, they should be given. During the broadcast a number of students should take the test in the studio, where the broadcaster can observe the length of time that should be allowed for his listeners to answer the questions. After all questions have been read, listeners are instructed to exchange papers with their neighbors and the correct answers are then given by the instructor. As the phraseology of the students' answers may differ, the instructor should give various ways in which the questions may be answered correctly. Questions should be so phrased as

to be satisfied with brief answers. The plus and minus form is excellent for radio tests. The following test, including the reading of the answers (which are given in italics), required 11 minutes.

7A RADIO SCIENCE LESSON NO. 24

Harry A. Carpenter

SPECIALIST IN SCIENCE

Wednesday

If you have your papers and pencils ready, I shall now read the questions to you. Answer each question quickly, using two or three words. Then answer the next question as I read it. If you cannot answer a question, let it go and answer the next one so as to keep up with me and with the class. Are you ready?

1. Which increases the evaporation of moisture, gently moving air or still air? *Gently moving air.*

2. What effect has gently moving air on the perspiration of the body? *Causes evaporation of perspiration.*

3. What effect on the temperature has evaporation of liquids? *Lowers the temperature.*

4. Is it possible to state a suitable indoor temperature without stating other necessary conditions? *No.*

5. At a temperature of 68 degrees room temperature, how much lower must a wet-bulb thermometer read in order to indicate a satisfactory amount of moisture? *10 to 14 degrees.*

6. What is the name of an instrument used to measure relative humidity? *Hygrometer.*

7. What is a desirable percentage of relative humidity? *Between 40 and 50 per cent.*

8. Will warm air or cold air absorb more moisture? *Warm air.*

9. When cool air with a certain relative humidity is warmed, is the amount of moisture it contains more or less or the same? *The same.*

10. When cool air containing a certain relative humidity is warmed, is the percentage of relative humidity increased, lowered, or does it remain the same? *It is lowered.*

11. Why does the wet-bulb thermometer show a lower temperature than a dry bulb at the same time in the same place? *Because of the evaporation of water from the thermometer.*

12. If a room is supplied with clean air at a desirable temperature and a desirable amount of relative humidity, what other factor should be considered? *Air should be in motion.*

13. Does the percentage of relative humidity change from time to time or is it always the same? *It changes.*

14. About how many times per minute does a person breathe under normal conditions when he is not exercising? *17 or 18 times.*

15. Is nose breathing or mouth breathing more healthful? *Nose breathing.*

16. Give one reason for your answer to the above questioned. *The air is cleaned and warmed.*

17. What happens to the air pressure in your chest cavity when you contract the muscles of your chest between the ribs and your diaphragm? *Air pressure is decreased.*

18. Why does air go into your lungs? *To balance the air pressure from outside.*

19. What is the name of the poisonous substance in tobacco? *Nicotine.*

20. Is alcohol a stimulant or a narcotic? *A narcotic.*

Now, if you will exchange papers, I will read the answers. You may mark as correct any answer if it means the same as the one I give, even though the words are different.

Please send me the papers with the highest and lowest scores from each grade.

Teacher Training.

A number of institutions are now offering instruction for preparing the teacher to receive radio programs. Teachers should know how to use their influence in guiding the listening habits of their pupils so that they will obtain that which is of value from both commercial and strictly educational programs. Naturally, radio programs should not be used in the classroom when other available means will better fulfill the teaching objective. Teachers must familiarize themselves with all the sources of information about forthcoming broadcasts and their value to the pupils. No program should be recommended until other programs in the same series have been studied or advance information from the broadcasting station has been examined from the educator's viewpoint.

An educational program has been defined by Franklin Dunham of the N.B.C. as one "that has for its purpose the increase of knowledge, the development of skills, or the widening of appreciations of the worthwhile activities of life." However, the value of the broadcast depends greatly upon the course being taught by the instructor and the skill and ingenuity of the teacher. Commercial programs which do not come within the limitations of the above definition may be used in courses in salesmanship and advertising. Students in music appreciation may contrast swing music with symphony music. The teacher who assigns a radio program for study must have a justifiable purpose in doing so and a knowledge of the program assigned. In evaluating a program, consider the hour at which it is broadcast and whether it can be satisfactorily received in the locality. Determine whether the program is accurate in facts presented and free from offensive advertising. The program must accomplish an educational objective and fit into the course for which it is assigned. The teacher must determine whether it is suited to the mental age of the students. No program should be assigned which does not supplement the classroom work.

The broadcasting of educational programs to the school is seriously handicapped at the present time by the lack of cooperation between the receivers and the broadcasters. An effort should be made in the various states to organize boards made up of representatives of the state departments of education, superintendents of schools, principals, and teachers to determine what subjects can most advantageously be presented to the schools through the medium of radio. Inasmuch as it has been practically impossible to arrange broadcasting schedules to conform to the class schedules of the various schools, some periods during the day should be set aside for the reception of radio programs that meet the approval of the above unifying group. Such a plan would be helpful to all. If a bulletin listing all the educational programs which are broadcast each week and which are available to the schools of the state could be distributed to teachers, it would aid them in selecting those programs which would be beneficial to their pupils. Such a listing should include an evaluation of each program, the school class to which the subject would appeal, and the mental level to which it would apply. It is further suggested that the continuities of educational programs to be broadcast to classes in the schools should be submitted to a board of the type suggested above to determine whether such instruction conforms to the educational policy of the state. If school broadcasting is to be developed beyond its present status, there is need for properly qualified and trained people to carry it on.

Only those subjects should be taught by radio which can better be taught by this medium than by the local teacher. The local teacher should be convinced that such instruction will not supplant the local teacher but will merely supplement her personal efforts.

Teachers are advised to set the class an example by listening carefully, making notes of words that will require explanation, of ideas that are too advanced, or of links with other work that the class has already done. Unless the broadcast is to teach note taking, the pupils will lose the thread of the talk if they are required to make notes. After the broadcast, class discussion encourages the students to restate ideas that have impressed them. This follow-up work is considered important and evidences the ingenuity of the teacher.

CHAPTER XX

Public-address and Sound-recording Equipment in the School

The use of radio in bringing educational programs to the school classroom has been discussed, but radio equipment also has value as a teaching device within the school. While such equipment was originally devised for broadcasting purposes, it can be used to transmit programs picked up by the receiving set, or information originating within the school itself, to various parts of the educational unit. The installation of such equipment has a double appeal—to the school administration and the faculty, and to the students and their organizations.

By installing a public-address system, with a control panel and output circuits to all class and assembly rooms, the office of the principal becomes a broadcasting studio from which he can send instructions or information to any or all teachers, to every class, or to a single classroom. This is efficient in the large school where the writing of information and its delivery to individuals is a lengthy process. If an emergency telephone call is received in the school office for a teacher or student, the principal or his secretary can plug into the classroom in which the individual is and call him or her to the office phone. The public-address system can also be used for fire drills and in case of fire.

Many large schools do not have assembly halls large enough to hold their entire enrollment, but, through the use of public-address equipment, assembly programs can be transmitted to classrooms, study halls, and the library. Assembly programs are always a school problem, but, if they are piped to the various classrooms from the school broadcasting studio, they can be made to have a program interest that they do not have when given from the platform. The best in music, from recordings, can open the assembly; the speaker should be brief; an overture can introduce a skit; and, after such announcements as the principal desires to make, the broadcast assembly may be concluded with another musical selection. A small acoustically treated room adjoining the office of the principal, from which dramatic skits can be presented, is suggested.

The school executives have difficulty in inducing parents to attend parent-teacher meetings, but the school microphone can easily be hooked into a telephone line and a parent-teacher program piped to a local

broadcasting station. In this way the parent-teacher meeting would be sent to every parent and taxpayer.

By the use of centrally controlled public-address equipment, school plays, debates, contests, and other activities can be advertised to all pupils as they are moving from class to class. The school librarian may use the service to announce new books, reading lists for special courses, and reviews. Student-council reports also can be made in this way at appropriate periods. Nearly all equipment is built so that certain switches may be reversed, with the result that the principal can listen in on any classroom equipped with a loud-speaker. This saves inspection visits, which embarrass both teacher and pupils.

The value of such public-address equipment is even greater for the student than for the school administration. Educational programs picked up from the air by a receiving set in the school control room can be piped to the class desiring that program. This saves the necessity of having a large number of radio sets in the school or of moving them from room to room. A broadcast from the United States Senate, for example, could be piped to a civics class, an excellent dramatic production sent to the loud-speaker in a dramatic class. A university debate broadcast would appeal to the school team. Any classroom acoustically satisfactory for speech is equally satisfactory for reception.

The wise administration or control of the use of the school public-address equipment is vital to its effectiveness and value to the school as a whole. Some one member of the school administration should be in charge and responsible for its use. If the equipment is overworked, if it interferes with classroom work, it will be a nuisance and will be generally condemned. Announcements should be piped only to those rooms for which they are intended. School information should be broadcast at the beginnings of the class period. The announcements should be terse. In order to avoid the excessive use of the public-address system to disseminate school bulletins, 5-minute periods, one in the morning and one in the afternoon, could be set aside for this purpose. The equipment would be used only for emergency calls at other periods. If a teacher or a pupil is wanted in the office during the class period, the public-address administrator should first find out from the school files where that teacher or student is located and then call that classroom only.

Not taking full advantage of the opportunities offered by the public-address equipment is just as bad as excessive use of the equipment. To use it only to replace the intercommunicating telephone system or messenger is neglecting the educational purpose of the equipment. While assembly programs will be sent over the public-address system to all classrooms, those radio programs which have been requested by an individual teacher should be piped only to that teacher's classroom. Furthermore,

such program requests by teachers should be investigated by the administrator before the request is granted. Programs generally are broadcast in series, so that a program in the series can be heard and evaluated before a future one is accepted for use in the schoolroom. The individual in charge of the school public-address equipment should write to near-by radio stations, asking to be placed upon the weekly mailing list for program releases and also for information concerning the educational programs. Nearly all stations supply such information willingly to increase their listening audience. A week in advance of the programs a mimeographed list of acceptable programs should be sent to teachers, so that they may select any they desire for classroom reception.

The "teacher's-aid" administrator should read items in magazines and newspapers concerning programs and be alert to request teachers' manuals, classroom guides, supplementary discussion suggestions and reading lists, and suggestions for utilizing the broadcasts. These aids were discussed in the preceding chapter.

Having made up a schedule of the programs desired, the administrator will tune in the receiving set well in advance of the time of a program, warn the receiving class 30 seconds before the program, and then plug in the radio to the line that goes to that classroom only. The administrator must return to his control board to turn off the program promptly as it ends.

Such a plan would not require an operator on duty at all times, but only according to a definite schedule. The equipment does not require a technically trained operator; it is as simple to operate as a telephone switchboard. Any secretary or stenographer in the principal's office can operate the control board, or students from the school radio club can take entire charge.

If the public-address equipment is not desired for the entire school, portable equipment may be purchased. Such equipment will improve the reception of assembly programs in the assembly hall. It may be used to announce athletic contests upon the school field and may be used extensively for the teaching of speech courses. In the latter case a small booth or studio can easily be constructed of celotex in the corner of the speech classroom, and training can be given in microphone technique as well as in analysis in speech. The objection has been made that the use of such equipment transforms the speech class into a vocational class for broadcasting. To quote Dr. H. L. Ewbank of the University of Wisconsin: "We do not regard this course (broadcasting) as a vocational course. We consider it rather as an advanced course in voice training that will also acquaint the student with problems in the field of broadcasting." Such high-school training creates a more discriminating, appreciative, and understanding audience for radio programs. It is a mistake to think that

the use of a microphone turns a speech course into a radio vocational course.

The public-address system offers an excellent teaching tool in speech and dramatics. By a critical analysis of the best radio speakers the pupils can learn much concerning pronunciation, enunciation, intonation, and cadence. A student from a speech class may be sent from the room to speak over the public-address system. His classmates will be more critical of his delivery if he is dissociated from the voice they hear. As the microphone is very sensitive, any defect will be clearly heard and brought to the attention of the speech teacher. Public-speaking classes of the past were designed to train platform speakers, politicians, lawyers, ministers; today, however, the radio is the platform of the public speaker, and he needs the modernized training offered by the microphone of the public-address system. Finally, as radio speech comes into the ears of every student, microphone training is an excellent incentive to better speech by the student.

Such equipment in the public schools is an incentive and tool, not only for the speech student, but also for students in other courses. A student in English composition will strive for perfection if his essay, his play, or his story is accepted for an intraschool assembly broadcast. The civics class will endeavor to emulate "The March of Time" or the best news commentators in the preparation of copy. Dramatic classes will gain their technique as they rehearse a play for a school broadcast. This creating and participating in local programs will create interest in many classrooms.

The tendency in the modern educational system is to make the curriculum as practical as possible. The introduction of radio equipment into the school is in keeping with this trend. A course in broadcasting should enlist the cooperation of classes in writing, civics, journalism, speech, dramatics, and physics. In many schools the class in physics has installed the public-address equipment for the entire school. These students also maintain the equipment and act as control operators in the school studio. Their training is practical and generally extensive enough to prepare them for a position in a broadcasting station. Students in speech will act as the school announcers as well as give radio talks. Only by practice can the student overcome mike fright and improve his delivery. Consequently, the faculty should allow students to make all possible announcements and to read school bulletins over the public-address system. With the aid of the other classes the teacher of broadcasting can build a weekly program that will be accepted by the local station as a sustaining program. Such a program, after being rehearsed over the school equipment, will show parents what their sons and daughters are doing in school and will advertise the activities of the school.

When a father hears his son in a school broadcast reviewing a book, interviewing a teacher, or taking part in a radio play, he is more appreciative of the teacher who has given his boy this training and opportunity. The person in charge of such programs and of all intraschool broadcasts should first be possessed of a sense of showmanship; second, have an interest in radio broadcasting; third, have had some speech training; and finally, have sufficient common sense to follow mechanical instructions.

The experience of teachers seems to indicate that the appearance of boys and girls before the microphone contributes to their educational development. First, it develops greater interest on the part of pupils, . . . chiefly, perhaps, because the activity is so far removed from the usual academic school experience. Second, . . . radio brings the pupil in touch with the modern world, . . . placing the youth in touch with modern methods of communication. Third, . . . it is difficult to persuade a student of the necessity for good speech; when at home and among friends he is able to get along satisfactorily without it. But with his first trial over the microphone and the criticism of his fellow students, which follows, the need for effective speech is brought home to him in a forceful fashion. The case of turning out a dull program also teaches much to the student whose writing has turned to the radio field. . . .

Drama can be produced over the microphone when the lack of costumes and stage settings makes it impossible for the students to appear in regular theatrical surroundings. Since scripts can be used, attention can be centered on the interpretation instead of the memorizing of lines. Straight talks and discussion groups provide opportunity for instruction in effective public speaking in the modern manner and discourage bombastic utterance. . . . Such broadcasting is possible in any school having radio sound installation.¹

Every school system has some teacher who is outstanding in his or her field but who cannot conduct more than one class in a term. Such a teacher can become a master teacher for a number of classes by conducting them from the school studio. The unique or outstanding method may thus be observed by other teachers while their pupils are receiving instruction.

Those students who have the opportunities offered by the public-address equipment receive excellent training in (1) correction of speech defects and improved diction, (2) self-control under tension, (3) poise, (4) naturalness, (5) joy of achievement, and (6) punctuality.

THE USE OF THE PUBLIC ADDRESS TO TEACH BACKWARD STUDENTS

Carney C. Smith²

I come from an industrial center and the speech problem there is a critical one. We have many students who won't talk. They are listed as a "backward" group, due largely to their inability to express themselves. We have students.

¹ I. Keith Tyler, Ohio State University.

² Carney C. Smith, now at Alma College, Alma, Michigan.

coming from the poorer section of the city and of foreign extraction, who have a decided dialect in their speech and for that reason they are extremely self-conscious. They, like the rest of the world, have become speech-conscious. They realize that they do not speak in the same manner as do students from American families. However, this type of speaking has become a habit with them and they seem unable to break it. They are ashamed of this defect, but they are reluctant to take a speech course or to speak in any other course because they do not want to be laughed at.

Another group of backward students that needed speech training consisted of those whose vocabulary was such that they could not express themselves adequately and were, therefore, reluctant to express an idea even if they had one. They had not had contact with good books or good speakers. Whether this was due to a lack of facilities or a lack of desire and incentive, I cannot say, but probably all played a part in making them deficient in language.

The third group in this division consisted of those who had the knowledge and equipment necessary to be successful students but who were so shy and retiring in their nature that they could not force themselves to get up in class to recite. They were so frightened that the mere mention of a speech class sent shivers of horror up and down their spines.

These three groups constituted a section of the student body that needed speech, and yet it was also the section that was least likely to take it. The problem was to think of something that would motivate them to take speech in high school and to arrange a situation that would not be too antagonistic to their sensitive natures. It was then that we hit upon the idea of the public-address system.

There were several things about this that made it especially adaptable to our needs. It had several qualities about it that would make it easy to sell to this type of student. In the first place, it was novel—it had a sort of glamour to it that appealed to the student; then, too, they could give their speeches from prepared manuscripts; and finally, they did not have to face their audience. Now I realize that this, in most cases, is considered a handicap, but that was not true in this instance. These students dreaded to face an audience, but when they could go into a little room all by themselves and deliver their speeches from prepared manuscripts, some of their dread left them. These were some of the arguments that we used in arousing the interest of the students and by dint of much persuasive speaking on our part and on the part of the class advisers we managed to get together a class which we called "Broadcasting."

Now this class was probably one of the most disheartening groups that ever confronted a teacher. For the first two weeks they were so shy, even of one another, that they would not look at each other. They would look out of the window or at the ceiling or bury their heads in their hands. To alleviate this situation the instructor secured a book of boners that had been made on the radio, some of them by outstanding announcers. Many stories concerning the self-consciousness and nervousness of great speakers were also related. These anecdotes broke the ice somewhat and created a feeling of kinship, not only among themselves but between them and the other people who made speeches. Then the "mike" was introduced. A bare outline was given concerning the

manner in which the system worked and the manner of speaking into the "mike." Then the students were asked to go into the little room that served as a studio, one by one, and give their names and residences. Sometimes it took a great amount of persuasion to get them to do that.

From this small beginning the class developed until students were able to give speeches and complete programs for classroom consumption. We attempted to do the type of thing that interested them in the regular radio programs. We had newscasts, "Man on the Street," and "Professor Quiz" programs. They were taught something of continuity writing and dramatic writing. The class gradually improved until finally they reached the point at which they were entitled to a public hearing. Permission was secured from the principal for them to make a broadcast to the entire school. This was such a success that they were assigned a time twice a week at which they could make an all-school broadcast. A type of broadcasting service was developed in the class. Any teacher who had an announcement to make concerning a meeting of a club, or any other activity that she was sponsoring, would write out her announcement and send it to the broadcasting room and it would be read with the next newscast. We operated our own reporting service and assigned certain students each week to gather bits of news concerning the happenings in the school. This forced the students to talk to their fellow students and to the teachers. Now obviously it took considerable time to get this type of student to the point where he could go "on the air." It was far into the second semester before we reached the point where we could put these various programs over for the benefit of the entire school, but the fact that we did arrive at that point was due largely to the public-address system, because this served as an incentive to spur them on.

The advantages of this class were many. In the first place the audience situation was admirable for the purpose of corrective speech because all of the students knew that they were troubled with one defect or another, therefore the audience was sympathetic. They developed a sincere, helpful attitude toward each other. If they had been in a group with some capable students they would have believed their case to be hopeless, but in this group they were on a par with everyone else and seemed to feel that they were getting a fresh start.

In the case of the dialect, the students realized the "mike" exaggerated a defect and they made a more conscious effort to correct it. In the case of those deficient in language, the class would record the times the student repeated himself. This was not as noticeable in ordinary conversation when you can see the person because you are somewhat influenced by his personality, but when all there is to go by is the spoken word the repetition becomes obvious. In the case of the retiring personalities, they gained confidence from the fact that, although they didn't have to face an audience, they could see the effect of their words when they returned to the classroom. They began to realize that their ideas were good and that people were anxious to hear them. Soon they were beginning to speak out in groups and to recite in their classes.

Another reason why radio was so acceptable in teaching this class was because it necessitated a conversational style of speaking. These students might never have to make a speech but everyone of them will have to carry on conversation if he is to achieve any measure of success in the world. Then too, in radio

the speaker must influence his hearers individually rather than collectively and this was just the type of training that these students needed. They learned the art of conversation through the medium of the microphone and therefore in this school the public-address system paid for itself by proving successful in this one experiment.

Schools which have installed public-address systems report that these systems have been paid for by boards of education, student-body organizations, or parent-teacher organizations. In every instance the officials believe that the expenditure was justified. They report an average maintenance charge of only \$21 a year. In a survey on the "Effectiveness of Sound Distributing Systems," conducted by G. N. Kefauver and H. C. Hand, 97 per cent of the 324 school administrators reported that such equipment was more than satisfactory.

It is difficult to advise the installation of any particular type of equipment because such systems are being improved from year to year, but certain recommendations can be made.

All claims of the salesman should be investigated by someone who understands the technical end of sound transmission and reproduction. The controls must be simple and durable. Maximum flexibility in output is desirable in order to give the greatest service to all parts of the building. The amplifier should have an undistorted and uniform output from 50 to 8000 cycles per second. Arrangements should be made so that volume can be controlled to a limited extent at the listening points. There should be visual indication of volume on the control panel. Buzzer systems should be installed in classrooms to silence the class for the forthcoming program. The main panel should include a monitoring loud-speaker. Provision should be made to transmit phonograph recordings by a turntable, with both speeds, and an electrical pickup, also for telephone connections. The acoustics of rooms in which speakers are located should be considered in the placing of such speakers. The microphones should be of a high quality. Studios to be used by speakers may need to be acoustically treated or may be satisfactory as they are.

In many instances a school will not desire a public-address system serving all classrooms but will use such equipment only in its speech department. In such an instance the playback of a sound-recording machine may be used, thus combining two useful aids to the teaching of speech. Only the microphone, pre-amplifier, and loud-speaker units would be used for a schoolroom public-address system.

Sound Recording.

Recording is a process of cutting or impressing sounds on film, steel tape, wax cylinders, discs made of aluminum or acetate, or thick wax discs so that they may be reproduced at some future time. The recordings

230-206 start

upon film and upon tape are excellent in some respects; when sound film is used in connection with a picture, the posture and mouth action of the speaker can be observed, and in the case of recording on tape the sound can be instantly erased for other recordings. However, these methods and equipment are expensive and not generally used in the schools. The recording upon cylinders is economical because the soft wax may be shaved after recording. However, such recordings are not permanent and can be played only upon a machine similar to the recorder. The recording upon discs is most generally accepted because such recordings may be played upon any ordinary phonograph or may be used as electrical transcriptions

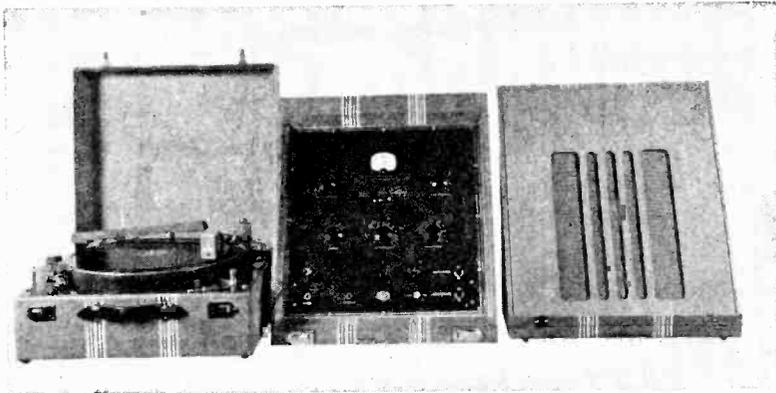


FIG. 33.—Portable sound-recording equipment. The loud-speaker (left) and amplifier (center) can be used with a microphone for public-address equipment. (Picture by Presto Recording Corporation.)

for broadcasting. The metal or aluminum discs are much cheaper to use, but they are more inclined to scratch. Acetate, celluloid, or treated discs give better reproductions but are more expensive. There are various discs which are quite permanent and which may be played many times before they become worn.

There are a number of very satisfactory sound-recording machines upon the market; the purchaser should examine the business reputation and the financial responsibility of the manufacturer as well as the technical excellence of his product before purchasing (see Figs. 33 and 34).

There are certain general requirements of recording equipment which should be considered by the prospective purchaser. It is advisable to seek the advice of some technically trained physicist or electrical engineer in the selection of equipment. The instrument must contain the latest developments, and it is advantageous to demand an agreement that the company keep it in repair for at least six months after purchase. New developments are constantly being added to the equipment. While the best

practice is to install the recording equipment in an acoustically treated studio and to make all recordings under the best possible conditions, it is nevertheless advisable to select portable equipment when purchasing. Portability permits the recording of assembly talks and musical programs, and a single outfit may serve a number of schools. The various parts of the equipment should not weigh more than a man can carry easily and should have comfortable handles; the lids should be hinged so that they can be removed and laid to one side when the equipment is in use.

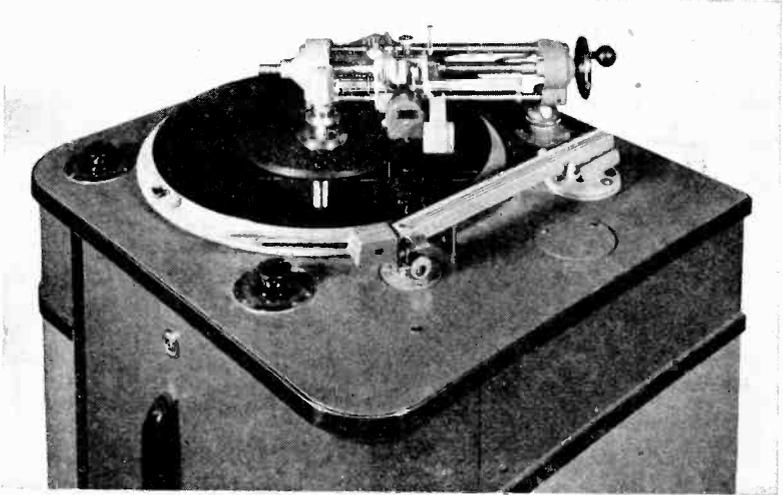


FIG. 34.—R.C.A. Recorder, 72-C. (Photograph by Radio Corporation of America.)

The operator should demand a blueprint of the construction of the entire equipment, to which he can refer in an emergency, but ordinarily repairs should be made by the manufacturer. Anyone using ordinary care can learn quickly to make good recordings even though it is a highly technical operation. The teacher-operator must study carefully all instructions, avoid haste, and be methodical in the operation of the equipment. Repair bills for the equipment are low. Tubes should be tested after every 1000 hours of use but generally are good for longer periods. Briefly, the requirements for such equipment are fidelity of reproduction of all speaking-voice frequencies, sturdy construction, dependability of operation, portability, and simplicity of operation.

The main elements comprising such a recording system are a microphone, an amplifier, a turntable, a cutting head, and some means of feeding the cutting head across the record; also a playback arm, and a loud-speaker to be used with the recording amplifier to reproduce records.

The microphone (see Chap. I) is used to convert the sounds into electrical vibrations; the amplifier increases or amplifies these vibrations

to a point where they are capable of producing motion of the cutting needle or stylus. The feeding mechanism moves the cutting head radially upon the disc from the inside out, or from the outside in, so as to produce a uniform spacing of grooves. The ordinary turntable, used for playing records in any home, is not satisfactory for recording purposes. Extreme stability, freedom from vibration, and, most important of all, constancy of speed are necessary for recording. It is necessary for the motor to have more power and better mechanical construction than is found in ordinary playback machines. Various methods, friction, belt, or gear drives, are used to rotate the turntable. Such drives must be reliable, absolutely constant. The method of shifting from 78 to $33\frac{1}{3}$ revolutions per minute should be simple. The turntable should not be less than 12 inches in diameter. If the school funds permit, a double turntable should be purchased so that there may be continuous recording of long programs, such as plays, addresses, or musical selections. The turntable should be accurately balanced and mounted to assure constant speed and nonwearing operation. No turntable should ever be accepted with a variation of more than 0.5 per cent in its peripheral speed while operating under load. Most recording machines today have satisfactory drive mechanisms.

The grooves are cut in the acetate or metal by means of a needle which is held in the cutting head by a small thumb screw. Needles used are steel, steel alloy, stellite, and sapphire. Good steel needles cost about 30 cents and are satisfactory for ordinary recording. The life of a needle is determined by the amount of scratch which appears on the record when played back. The steel needle produces more scratch than any of the other types. When the scratch becomes too noticeable, it is advisable to use a new needle. The price of a steel needle does not warrant its being resharpened. There are several alloy steel and stellite needles on the market today which are very good. They last longer and give better results than the ordinary steel needle. The sapphire produces hardly any scratch when it is new and gives longer service. In using sapphires, it is necessary to handle the cutting mechanism with extreme care. The point of the needle is very easily chipped, and when chipped it must be resharpened. Stellite and sapphire needles may be resharpened by the manufacturer. Sapphire needles list at about \$6, and can be resharpened for \$2.50. The stellite costs \$1.50 and can be resharpened for 60 cents. The usual life of a steel needle is about 30 minutes of cutting time, while a sapphire will cut for about 6 hours. The life of a needle cannot be positively stated because it depends on the amount of scratch you are willing to tolerate. Although the initial cost of a sapphire is much more than that of steel needles, the cost per record is about the same. A beginner should first practice with steel needles and when he becomes proficient in the use of these needles try a sapphire.

The purpose of a cutting head is to transform electrical energy into mechanical energy; in other words, to synchronize the vibrations of the needle with the sound vibrations. The price of a recording head depends on the purpose for which the equipment is to be used. If the machine is to be used primarily for the recording of speech, the cheaper recording heads will serve the purpose satisfactorily, but, if high-fidelity musical records are to be made and the equipment in general is of high quality, a high-fidelity cutting head is recommended. The cheaper head does not record the lowest frequencies of speech or of music, or the highest frequencies produced by a soprano, a violin, or a flute, with so much volume as it records the middle frequencies. Sound is produced by vibration: frequency is the rate of vibration. A good bass singer uses a frequency range from about 85 to 250 cycles per second, while the range of a soprano is from approximately 240 to 1150 cycles per second. The range of a piano is from 26 to 4100 cycles. The violin produces notes from around 192 to 3100. These frequencies are only the fundamental frequencies; there are overtones (overtones are multiples of the fundamental) which are higher. A high-fidelity recording head will record frequencies as high as 8000 or 10,000 cycles. If high-quality musical records are to be made, it is better to buy an excellent cutting head when the equipment is purchased. Manufacturers also provide, upon demand, separate cutting heads to be used upon metal discs and upon acetate discs.

For recording, there are aluminum discs; discs with a cardboard base, covered with acetate or like material; and aluminum discs coated with acetate. The recordings made on aluminum have more scratch than any of the other types. Since the cardboard-base discs are flexible and frequently warp and their surface is not so smooth as that of the aluminum-base discs, recording upon them will be of a slightly inferior nature. The best recordings are made on heavy-gauge aluminum-base acetate discs. The thickness of the aluminum used for these discs varies. In order to make cheap discs, the manufacturers have used very thin aluminum. Since these discs are flexible, they also warp. For precise work, the thicker discs are recommended. The usual recording speed for records 12 inches or smaller is 78 revolutions per minute. Transcriptions, which are usually 16 inches in diameter, are recorded at $33\frac{1}{3}$ revolutions per minute. The playing time of a record also depends upon the spacing of the grooves. The table on page 235 gives the sizes and playing time for commercial discs.

Recording machines are equipped with a volume control, which is used to vary the amplitude of the cutting needle when recording and to adjust the volume of the recording when played back, and a tone control, which is used to make the reproduction sound less harsh or more mellow. Actually, this tone control makes the higher tones less predominant. In some recorders, this tone control is in operation during recording and on

other machines it is in operation only when playing back a record. Upon each recorder you will find some means of measuring volume. Some recorders are equipped with meters or volume indicators, and the proper volume is that volume which makes the needle swing to zero about every 20 seconds. Other machines are equipped with an electrical eye like that used in tuning certain radios. Different volumes decrease or increase the size of the colored wedge; the minimum-sized wedge should be striven for.

Place the cutting needle in the cutting head so that when lowered to the surface of the disc, the needle will be vertical to the surface of the record. This can easily be determined from the side of the cutting head. When the needle is vertical, the shadow of the needle on the disc and the

Size	Playing time, one side		Speed, r.p.m.
	96 lines per inch	112 lines per inch	
6	1.3	1.6	78
8	2.6	3.0	78
10	3.8	4.5	78
12	5.0	5.7	78
16	13	15	33 $\frac{1}{3}$

needle itself will appear to be in a straight line. Some disc manufacturers recommend the placing of the needle at an angle of 85 degrees, measured between the needle and the part of the record which is approaching the needle point.

When you are thoroughly familiar with the controls and are ready to try your first recording, take a new disc from the package, being careful not to touch the surface of the record, and place it upon the turntable. If you are recording a speech, place the microphone about 15 inches away from the person speaking and, after a voice test, adjust your volume control so as to give the recommended volume in accordance with the instructions from the manufacturer. Start the turntable, lower the cutting head, and let the turntable revolve and make a cutting about $\frac{1}{8}$ inch wide. Never lower the cutting head before starting the turntable. If the needle is in contact with the record when the machine starts, the sudden jerk produced by the starting of the turntable makes the cutting head bounce and usually results in chipping the sapphire stylus. The operator must also remember to raise the cutting head before it reaches the outside of the record, when recording from the inside out, or before it travels to its limit, when recording from the outside in. If this precaution is not taken, a chipped needle will result. The size of the shaving should be approximately the size of a hair. The depth of cut and the volume which you are recording on the disc is best determined by the use of a microscope to

see that you are not cutting through the acetate. After you have the adjustment approximately correct, cut a small sample of speech or music and play it back, noticing the quality. If the playback needle will not follow the grooves, you are not cutting deep enough, and, therefore, you should increase the needle pressure. When making these trial cuts, always note your maximum volume on your volume indicator and adjust the volume control so that the needle swings to the correct position according to your instruction pamphlet from the manufacturer. After a few trial cuts on a record you will become accustomed to what volume is necessary and to the size of the shaving. There is no substitute for experience; therefore, experiment, trying various steps of cuts and various volumes until a satisfactory set of adjustments is determined upon to result in good quality.

It is easier to make recordings by recording from the inside out (starting near the center of the disc), because the shavings will then be behind the needle and will not interfere with the cutting. It is necessary to brush the shaving lightly toward the center with a small camel's-hair brush. Transcriptions are most frequently recorded from the inside out, while phonograph records are always recorded from the outside in. Records recorded from the inside out cannot be played on automatic record changers and in many cases cannot be played on machines which stop automatically when the needle reaches the center part of the disc. The companies will provide equipment that will make it possible to record from the outside to the center. Frequently the small and light acetate records slip on the surface of the turntable, and it is necessary to place a weight in the center if the machine is not equipped with small pins which fit into more than one hole. An excellent instruction book for the beginner is *Techniques of Recording* by F. H. Goldsmith and V. A. Geisel, published by Gamble Hinged Music Company of Chicago.

If one desires several copies of a record, it is necessary to have a second turntable. The best copies are made by feeding the output of the playback arm directly into the second recording machine. When a large number of copies are desired, they are made by a special stamping process by a manufacturing concern from a master record. Reproducing needles for playing the finished recording are steel, special alloy steel, cactus, bamboo, and sapphire needles. Only those steel needles which have been shadowgraph-inspected should be used. A shadowgraphed needle is one inspected by placing it in a strong light beam and magnifying the image on an elevated screen upon which is drawn the contour of a perfect needle. If the shadow conforms to this contour, then the needle is acceptable. If a flat space is seen on the shadow, the needle is rejected. When a needle becomes worn, it should be thrown away. Once a needle is taken from the playback arm, it should never be reinserted.

If it is replaced, the worn side of the needle takes on a different position and becomes a chisel which cuts the record. Do not economize by using a needle too long. It is better to throw away a needle which has played only a short time than to use it too long and ruin expensive records. When playing acetate records, always notice the light reflection from the record. If there is a marked difference between the reflection of light from the part which the needle has just passed over and that from the part of the record which has not yet been played, the probability is that you have a dull needle. Also notice if there are any small shavings accumulating at the needle point. In these instances, it is advisable to install a new needle. A too heavy playback arm will also ruin the record. Cactus and bamboo needles are not recommended for acetate recordings as their points wear rapidly and soon become blunt, causing the thicker portion of the needle to spread or push aside the grooves, distorting the reproduction on the next playing. The purpose of cactus or bamboo needles was originally to produce more mellow tone or reduce the higher frequencies. Most radios and recording machines today are equipped with tone controls which accomplish this; therefore, it is best to use a good grade of steel needle. There is also a sapphire playback needle, a sapphire inserted in the end of a small metal shank. This needle will last much longer than a steel needle, but the needle must not be removed from the playback arm until its life is finished. If the needle is removed and replaced, the worn portion of the needle will act as a chisel and ruin any records that are played. Since it is hard to determine when the end of a useful life has been reached, steel needles are recommended for average use. In many commercial recording machines in the higher price range, permanent diamond points are incorporated in the playback head. These needles last indefinitely if they are not injured mechanically.

Acetate records are soft in comparison with the standard phonograph record, and, therefore, extreme care must be used in placing the needle upon the record and in removing it at the proper time. If the needle is forced across grooves when placing or removing the playback arm, the result will be a scratch. Because of the softness of these records, the playback arm must rest lightly on the record so that the needle can vibrate freely. If there is too much needle pressure on the record, the record will wear out extremely fast. Also, if the needle offers a great deal of resistance to vibratory motion, it tends to eliminate the higher frequencies. For acetate records, a needle pressure of 2 ounces or less is recommended. Recently there has been placed upon the market a playback arm having a needle pressure of much less than this. The light pressure is obtained by using a small sapphire needle, which vibrates a small mirror upon which is focused a light beam; the mirror reflects this light to a photoelectric cell, from which the electrical variations are amplified in the usual

manner. Since the needle pressure of this playback arm is much less than the pressure used on playback machines for the home today, this method will result in longer record life and in fewer scratches on the records. These playback arms are very satisfactory for use with acetate records.

Few people realize the care necessary in handling records. A record should never be picked up with one hand so that fingerprints are left on the record. Always handle a record by picking it up with two hands, one on each side of the record, and touch only the edge of the record beyond the recorded limits. Fingerprints result in a dry, hard film, and, when the record is played, cause added scratch and noise. Records should be stored to avoid bending or strain. If slight warping occurs, it may be corrected by laying the record under a weight on a flat surface in a warm place. Never put a record on a radiator. The paper folder in which a record usually comes helps to prevent scratches. Records should always be kept either in these envelopes or in an album. When storing records in albums, always place them in a vertical position. Never leave them for any length of time lying flat with other things piled upon them. The best way to store acetate records is to place them in the tin boxes in which they come, separated by a thick paper washer. The accumulation of dust in the grooves of any disc record results in added scratch and surface noise. Commercially made records are usually of a shellac compound, while transcriptions for radio stations are made from vinyl acetate. Vinyl-acetate records are more expensive but have considerably less surface noise than the shellac records.

Sound-recording equipment can be used for exercises in voice. At the outset the student is better off if he confines his work to the interpretation of the works of accepted writers. The reading of a selection of prose or easy poetry, with special attention to thought groups, will be the first test. After a brief rehearsal, before he can commit to memory the interpretation of his instructor, his voice should be recorded. It is possible to have a student make two or three recordings upon each side of the disc. The second may be made two weeks later to show progress in the recognition of word or thought grouping. In neither of these first two recordings should any attempt be made to work with other aspects of the voice. The third recording may concern itself with a demonstration of clarity of enunciation. A student with "breathy" speech can be placed close to the microphone and his defect amplified for his own hearing. The results of the difficulty are so apparent that renewed effort will be made upon the part of the student to practice prescribed relaxation exercises. Not only is the use of amplifying and recording apparatus an excellent aid to analysis, but it may also serve to record deliveries for other students to emulate.

I found the Sound Mirror, a tape recording machine which plays back a 1-minute speech repeatedly or which may be stopped momentarily at

any spot for analysis, a great help and interest creator in classes. It was so simple to operate that the students ran it themselves. Unfortunately, it is expensive equipment.

Recording apparatus is most valuable in work in enunciation. Failure of the student in speech work in this field is sometimes due to structural difficulties, but more often it is due to lack of interest in good performance. The hurried chewed-up type of speech that comes from nervousness and the slower type that comes from habitual oral inactivity are seldom apparent to the speaker himself. His friends learn to lip-read or to piece together the intelligible parts into a reconstructed whole. The speaker can be made to recognize his fault by listening to a recording long after he has forgotten what he originally attempted to say. In this connection I quote from an article by Charles O'Donnell Bennett which appeared in the *Chicago Tribune* on March 8, 1936:

The most pitiless critique of o'er-confident notables coming newly to radio is a phonograph recording of them as they speak into the microphone. The sensible ones, who can bear the shock, say: "Good heavens, am I as bad as that!" "Not as bad," the patient director replies, "but the microphone makes you sound that bad. It is as cruel as an enlargement of a poor photograph." Those not so sensible say: "That's an atrocious recording." "Possibly," the director grants, "but the atrocity is fundamentally your doing and not the record's." Dudley Crafts Watson, art critic and lecturer, was shocked by what a record made of his somewhat overprecise diction. But he did not sulk. He modified.

Recording equipment has many other uses in the school besides its service in speech classes. It may be used for research in phonetics and linguistics. Recordings may be made of the correct pronunciation of foreign languages, which the student can use in study periods when the teacher is not available. A debate coach in a Michigan high school, who was training his team for a state-wide contest, tuned in on a university team debating the same question. He recorded the university debate as it was picked up by the recording-equipment microphone and used the record to demonstrate points to his local group. Radio programs, such as Shakespearean plays, which conflict with school class schedules, can be recorded for future use. Musical organizations may make records for analysis.

I found that it was difficult to obtain funds for the purchase of equipment at the University of Michigan until I convinced the authorities that recordings could be made of the University Band and Glee Club and of talks by the president and other members of the faculty, all of which could be sent to distant alumni groups as complete programs for their meetings. In every instance the president addressed his recorded talk to the group receiving the disc, which created a favorable impression. Thus the sound-recording equipment can be made self-supporting. Students

make records and own them at the end of the semester. The student pays for the cost of the disc, for the cost of the cutting needle, and a small charge for overhead. Members of the faculty make records to be used in research at the retail cost of such records, which allows the recording fund a 10 per cent profit inasmuch as it orders records in large quantities.

There are other sources of income to make the recording equipment pay for itself. At Christmas and Mother's Day and upon birthdays, students who are away from home make records of their voices to be mailed to distant parents to be used upon the home phonograph. Local singers and musical groups make recordings to demonstrate their ability when seeking a job. Students who intend to teach speech or dramatics frequently send such recordings with their letters of application. Members of the faculty find it advisable to check up on their lecture delivery. Parents frequently record the voices of their children to bring back memories in future years. Some merchants who were in the habit of using barkers to bring customers into their stores have made records instead, which they play over a loud-speaker either in front of their shops or on sound trucks on the streets.

The Committee on Scientific Aids to Learning, 41 East 42d Street, New York City, issued a pamphlet on Sound Recording Equipment for Schools in 1940. Every teacher using recording equipment should write for this instructive free book and the other research issues on Broadcast Receivers and Phonographs for Classroom Use, and Central Sound Systems for Schools.

CHAPTER XXI

Electrical Transcriptions

Electrical Pickup.

The radio station uses electrical transcriptions for advertising and also for many sustaining programs. In order to use these recordings, the station must be equipped with electrical pickups and turntables.

An electrical pickup is the device used to convert the mechanical recording of the sound into electrical impulses which can be amplified and broadcast. Its construction is similar to that of a microphone except that the diaphragm is replaced by a needle and a metal arm which causes a small coil of wire to move in a magnetic field in accordance with the recorded vibrations. While slightly different mechanical arrangements are necessary for "horizontal" and "vertical" pickups, the principle of the instruments is the same. In the crystal type of electrical pickup the electric impulses are generated by the pressure of the metal arm on crystals of Rochelle salts.

Electrical Transcriptions.

Transcriptions are like phonograph records in that they are discs upon which sound is recorded. This resemblance is superficial, however, for transcriptions are far superior to records in tone, manufacture, and recording.

The making of discs has gone through a rapid evolution in the past few years from scratchy records, upon which the sound was reproduced by the vibration of a diaphragm directly transferred to the recording stylus—a method producing unsatisfactory broadcasting material—to the fine, noiseless recordings put out by the leading companies today. Now sensitive microphones have been substituted for the old diaphragms, and the recording stylus vibrates in response to electrical impulses picked up from the mikes.

The term "electrical transcription" is used to describe any disc recording that has been made by electrical means; this includes all modern records. They are most easily divided into two classes according to the speeds at which they must revolve when played. The most common is, of course, the regular phonograph record, that turns at 78 revolutions per minute and plays from 3 to 5 minutes. The others turn at $33\frac{1}{3}$ revolu-

tions per minute, and this, with their great size (16 inches in diameter), enables them to play for 15 minutes. (For complete programs, the latter type is used almost exclusively, because an entire 15-minute program can be recorded on one side of a record. Two turntables are used, in order that no time will be lost in going from one record to another.) In addition to this longer playing time, it is, for technical reasons, easier to achieve high fidelity on a larger disc. For these reasons they are now widely used for the recorded programs broadcast by radio stations. In the majority of cases a sponsored or commercial transcription is used once and then destroyed.

“Horizontal cut” and “vertical cut” describe the way in which the sound is impressed upon the disc. Until recent years this was done by causing the recording needle to vibrate horizontally in accordance with the sound to be recorded, thus giving a groove of constant depth but with a snakelike appearance when viewed with a lens. Of late it has been found better to make the impressions on the record by vibrating the recording needle up and down, in order to produce a circular groove of varying depth. This method, which is called “vertical cutting,” has the advantage of higher fidelity and a greater volume range than the “horizontal-cut” records.

A ruling of the Federal Communications Commission declares:

A mechanical reproduction shall be announced as such except when its use is merely incidental, as for identification or background. The exact form of announcement is not prescribed but the language shall be clear and in terms commonly used and understood. The following are examples of statements sufficient for the purpose:

- a.* “This is a phonograph record.”
- b.* “This is a player-piano record.”

In all cases where electrical transcriptions made exclusively for broadcast purposes are so constructed as to record a single continuous program upon more than one mechanical reproduction, rather than a recordation of the entire program upon a single mechanical reproduction, the announcement required hereby shall be made at the commencement of each such program and in no event less than every fifteen minutes. All other announcements required hereby shall immediately precede the use of each separate mechanical reproduction.

The foregoing regulation has been changed so that it is no longer necessary to break into a program every 15 minutes. The announcement now must be made at the beginning and at the end of the program.

Libraries.

There are over 100 companies making electrical transcriptions. It is interesting to note that one company manufactures Greek programs,

while another specializes in Jewish transcriptions. Quite a number record newspaper features that are adaptable to broadcasting. At least three companies record sounds to be used in radio plays. Transcriptions are extensively used for advertising programs. The Associated Music Publishers, Langlois and Wentworth (N.A.B. Library), National Broadcasting Company, Standard Radio, Davis & Schwegler, C. P. MacGregor, World Broadcasting System, and others put out transcription libraries usually sold to only one station in a 50-mile area. Large filing cases of recorded musical selections, with a comprehensive cross index, are rented to nearly every broadcasting station to be used either upon sustaining programs or for sponsored programs. Unrecorded spaces upon these transcriptions permit the local announcer to announce the selections. These transcriptions are used to build programs, and, by using the twin turntables, the local musical director can choose his program from the entire library.

Transcription libraries are usually rented to a station at a monthly rental, based upon the power of the station. In addition to the file of transcriptions and cross index, the two turntables, pickups, and motors are leased by the transcription manufacturer. In some instances the transcription manufacturer will sell its services and its recordings to an advertiser. In such cases the company must pay the station for the time. If the station uses the transcriptions on a sponsored program, it must pay for this service. The library is increased by new recordings each month, from 15 to 20 new transcriptions being furnished. All worn records are exchanged for fresh discs. The most popular musical selections are added, keeping the library up-to-date. Also special events and holiday programs are arranged, and continuity supplied to members, including full- or half-hour programs for Mother's Day, Thanksgiving, Fourth of July, and other holidays or celebrations. The transcription company outlines for the station weekly programs in which the library transcriptions are used and also supplies the continuity for the programs.

Service.

Many of the larger companies have a continuity service that supplies the local station with poetry, weekly news, sports comments, and dramatic skits to be used by the local staff in conjunction with the musical transcriptions. This weekly service makes it possible to use the transcription library and make it sound like a live program. Many smaller stations depend almost entirely upon such transcription libraries for their talent. A librarian in the local station keeps a record of transcriptions used in order that they may not be repeated too frequently. The transcription company also provides pronunciation directions to assist local announcers.

Transcriptions of radio-play series, such as Jimmy Allen, Chandu, and many others, are sold to different advertisers in widely separated

sections of the country, the advertising continuity being inserted by the local announcer in a timed period left vacant upon the "platter." Companies maintain staffs for script writing, casting, production supervision, and the delivery of the recordings to the selected stations.

In some instances a live program is presented in the Eastern zone and recorded as it goes on the air. This transcription is played at a later hour and pumped to the far-western time zones, saving the expense of retaining the artists for the later presentation. Such recordings are usually made by direct wire from the studio rather than by being picked up from the air, thus obtaining higher fidelity.

Transcriptions are also made for file copies of programs and for playback purposes, and many artists have their programs recorded in order to observe their faults.

Electrical transcriptions are rapidly losing the aroma of illegitimacy. The transcription business was considered originally to be the natural enemy of the networks, but now the N.B.C. has gone into the business itself, and C.B.S. presents recorded programs to advertise its recordings. Live programs that are heard today may be heard as transcriptions two years hence. The networks freed themselves of programs advertising laxatives, deodorants, and liquor so that these sponsors had to turn to the "transcription network." Of course, the live-talent programs, such as amateur shows, sport announcements, news commentators, and contemporary comedians, do not fit into the electrical-transcription program, but there are many advantages to be found by the sponsor in such programs.

Spot broadcasting enables the advertiser to select the stations over which his program is to be heard, irrespective of the chain affiliations of those stations; thus his program can cover those sections of the country in which he does, or is likely to do, the greatest volume of trade. It is obviously an advantage to be able to select that station which has the highest standing in a particular community, because it lends prestige to the program.

Once a transcription is made, copies of it can be heard over and over again. Single programs may be presented on different nights in different cities, providing multiple reception. Also, coverage in large cities can be assured by using several stations in the same cities.

One of the heaviest blows against advertising by means of a chain broadcast is the coast-to-coast time factor. Crossley, Inc., made some surveys in an effort to ascertain what are the peak listening periods for various sections of the country during the day, and the results are most enlightening. The best time for commercial programs is, of course, the evening, about eight o'clock in the Eastern time zone and nine o'clock in the Central, Mountain, and Pacific zones. A chain broadcast, commencing

at eight o'clock in New York, reaches the Central zone at seven, the Mountain zone at six, and the Pacific zone at five, or even at four during periods when daylight saving is in effect. Hence, in reaching an Eastern audience, a great many listeners in the other section of the country are lost.

The World Broadcasting System not only provides transcription and library service to various radio stations, but has built up a network of radio stations which will use commercial transcriptions. This is not what is technically known as a "network," inasmuch as the stations are not connected by telephone lines, but the World Transcription Service arranges for the presentation of transcription programs upon these stations and provides them with commercial transcriptions. Aircasters, Inc., does much the same thing, providing also spot announcements and programs.

Obviously a major factor in successful radio advertising is entertainment for the listeners. It is an adamant belief among advertisers that live talent is more effective than the recorded programs; consequently, many an advertiser inflicts upon the public mediocre entertainment, which by its evident cheapness does more harm than good. It is possible to secure the leading artists on transcriptions, for, while they may be under contract for chain programs, they make transcriptions under assumed names. Thus the smallest stations can give to their listeners the best there is in the entertainment world at much less cost than the artists would receive for personal appearances. Furthermore, a transcription broadcast is mechanically perfect; there are no mistakes, for the program is "proofread" before being released.

By using the transcription, sponsors find it possible to book artists and authorities who would refuse to appear weekly before the mike. An entire series can be made in the transcription studio in a single day, thus avoiding a long-time contract for the performer.

In certain small networks which use telephone lines of less than "A" quality, the tone production of transcriptions by members of those networks will have a better tone fidelity than the wired program.

Electrical transcriptions are deprecatingly called "canned programs." Better terms are "delayed broadcast" or "custom-built" program. In radio advertising the voice of the announcer, his enunciation, speed of delivery, emphasis, and personality appeal are of greatest importance in sales value. Consequently, if the advertiser can use the same announcer for all his spot programs throughout the nation, he can be assured of the delivery of his sales message. By the use of transcriptions he has complete control of copy delivery. He has the privilege of hearing his copy before it goes on the air. There are many companies which put out transcriptions, consisting of many 1-minute announcements. These are inserted into transcribed music programs or into a live program.

An advertiser using a network is limited in the presentation of his programs to the basic and supplementary outlets of that network. In some instances, advertisers desire to use a greater number of stations than are connected with any network. At one time the Chevrolet Motor Company used 395 stations at one time. This was made possible by the use of transcriptions. If live programs had been presented upon all these stations talent costs would have made the program excessive. Transcriptions are also used for foreign radio advertising since the programs can be produced in this country and shipped wherever desired. While there has been decided feeling that transcriptions were not so valuable to the advertiser as live programs, it is true that some of radio's greatest successes not only have been but are electrically transcribed programs. One-minute transcriptions are broadcast by one 50,000-watt station for \$60 a time in the evening and for \$30 a time in daylight hours. Other transcriptions are broadcast at the regular local rates.

An adverse psychological reaction to the electrically transcribed "canned" program causes stations to adopt methods of making them seem to be live presentations. A brief and hurried announcement at the beginning will comply with the F.C.C. requirement. After that the announcer will talk with another speaker, whom the audience will assume is the orchestra leader. Unless the listener catches the periodic announcement, the program will appear to be presented by an orchestra in the studio if good equipment and the best transcriptions are used. The requirement that stations announce transcriptions as such does not apply to the Canadian stations; consequently, programs upon which recordings and transcriptions are used in Canada appear to the listener to be live programs. A disadvantage of the sponsored transcriptions is that they are spotted at different hours throughout the country; hence national radio logs cannot definitely announce the hours of such programs. This limits any national tie-in campaign in the advertising of the sponsor.

The electrical transcription is taking the place of the soloist and orchestra in broadcasting, and it is not beyond the realm of possibility that the sound motion picture will become the dramatic staff of the television station. The greatest obstacle at present to television is wire transmission over a chain. Consequently, the sending of finished dramatic productions in cans may offer the economic and engineering solution. In its infancy radio depended largely upon gramophone records for its programs. Today radio is returning to recorded music for its entertainment. The future of radio may be truly that of the machine age.

CHAPTER XXII

Musical Mike

Radio Singer.

Richness, smoothness, flexibility, expression, mellowness—these are some of the adjectives that may be applied to a good radio voice. Such qualities may be inherent or they may be acquired. These same adjectives may be applied to an operatic voice, yet that operatic voice may not be at all suitable to radio work. Experimentation is necessary. Lanny Ross has always had a good radio voice. It has always transmitted well and has always been received well because he sings almost entirely in the middle register. Lawrence Tibbett's voice, on his first broadcast, was conspicuous because of its metallic, brittle, and harsh quality. His voice is heavier, more powerful, and not so mellow. Yet after that first broadcast his voice came over the air perfectly. None of its richness and quality was lost. The technicians had placed him in a different position before the microphone and had him behave in a different manner. This method of experimenting with the individual singer's delivery prevails today as it did in 1928.

Microphone Position.

The method of attaining the correct location or position before the microphone depends on several things: the type of accompaniment, the power and flexibility of the voice, the type of song, and the acoustics of the studio. These in turn are dependent on the type of mike in use. I shall take into consideration only the two most popular types of microphone, the unidirectional and the bidirectional. The average voice, whether it is bass, baritone, or tenor, can usually be placed with comparative ease. The rule most generally followed is to have the singer center up on the microphone and stand about 20 to 30 inches away from it. There is too great a tendency upon the part of the singer to hug the mike. One foot should be placed in advance of the other, in order to allow a gentle and easy rocking motion toward and away from the instrument. When gradations in volume are necessary, the singer may move closer or farther from the microphone. A soft note is picked up better close to the microphone. Sometimes the singer, when hitting a shrill note or when vocal strength is necessary, will be told to turn his head away from the dia-

phragm. This has the same effect as drawing away—but is not considered to be so satisfactory. Above all, the singer must observe the fundamental rule of being at ease. His position should not be cramped or unnatural. This is the procedure followed when singing with a piano accompaniment.

If the accompaniment is orchestral, the placing of the singer must be tried out. The singer must not be drowned out or interfere with the reception of any of the instruments. Often it is considered more satisfactory to place the singer at a separate microphone, but this is not necessary. If a bidirectional microphone is used, the difficulties are decreased.

Vocal Setups.

In group singing, in a quartet, for instance, the object is to place each singer at the same distance from the microphone. If it is found that one voice stands out when this is done, then that voice is moved farther from the microphone than the others. If one member of the quartet is to have a solo, that member usually should step forward, closer to the instrument than the rest. This is true with all types of microphones. Even when a larger group is singing, one microphone should be enough. The glee club should be placed so that the voices will blend well, no one voice being more pronounced than another. The reader can see that this necessitates a trial-and-error method. Each singer or musical group has its own characteristics, and the placing must be tested until proper relations between voice and instruments are established.

Women's voices in a mixed chorus are, in general, lighter than men's voices; hence they must be placed closer to the microphone. In a male chorus, it is usually the first tenors who have the lighter, more lyrical type of voice, while the baritones carry the melody; these two groups must, therefore, be the closest to the microphone. The first sopranos and the second altos of a women's chorus are the ones which have the most sonority, hence they are placed on the outsides of the group. On page 249 are given the diagrams of three typical vocal groups (Fig. 35).

In the case of an exceptionally powerful voice, the remedy is simply to place the singer a little farther from the microphone or a little to one side. If the voice is capable of great range, and that range is to be utilized, then the singer's position should be such as to allow him complete freedom of action to turn away from or toward the microphone. He must be able to increase the distance from the instrument with ease and rapidity. It is true that the ribbon microphone has greatly reduced the necessity for this movement on the part of the singer. Its increased sensitivity makes it possible to pick up clearly sounds that would be distorted by the condenser type. However, this increased sensitivity works against the singer as well as for him, because it registers more readily faults in quality, tone, pitch, or timbre. Hence the necessity for "smooth" voices.

The control of the voice when in front of the microphone is of great importance. On the concert or operatic stage it is possible for a singer to shout and gain his dramatic effect. In front of the microphone shouting is forbidden. If a radio singer wants to shout "Hallelujah," he must do it with increased intensity—not *volume*. The greatest bugaboo in regard to the voice-control problem is the singer who has acquired a tremolo. It is often an advantage on the concert or operatic stage, but to a radio performer it is a death warrant if not controlled.

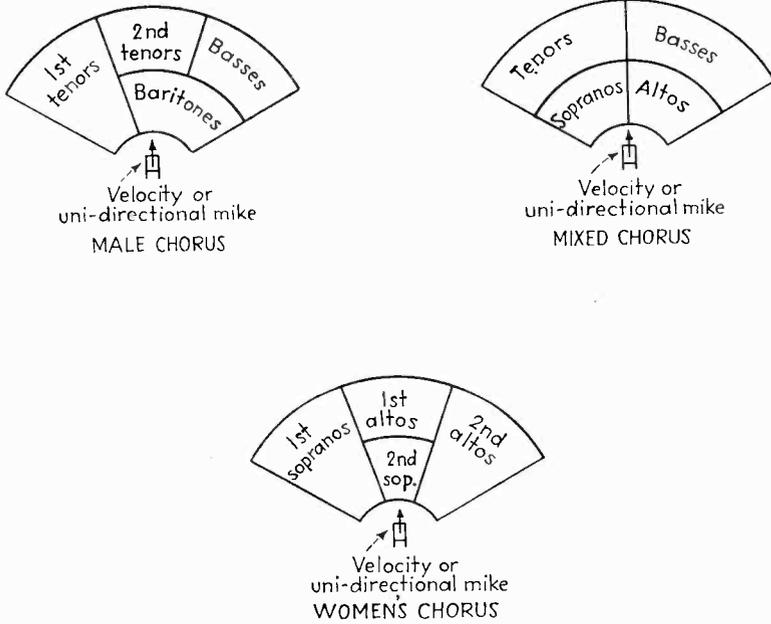


FIG. 35.

Control of the voice reaches farther than the limits just mentioned. Control means also the maintaining of the correct pitch, with or without tremolo, and the acquisition and retention of a good tone, quality, and general technique. Expression, which is a further mode of control, I have already mentioned as the attribute of a good radio performer. It is in the expression given to words and tones that real artistry lies. For instance, it is possible to say "I love you" by bellowing it out like a bull. But it is also possible to say "I love you" by drawing it out, sweetening it, and mellowing it. The difference is obvious; in that difference lies the *expression*—and often the greatness of a performer. Lawrence Tibbett is famous for his expression or dramatic quality. Expression, important as it is to any singer, is most important to the radio singer, because he must accomplish through expression and fine shading what the concert or operatic

singer achieves through action. Wilfred Pelletier, a conductor of the Metropolitan Opera, who listened to 50 or 60 singers each week, pointed out, "While voice quality is essential and of primary importance, it is personality that singles the vocalist from the crowd and stamps the voice with individuality. This applies not only to the 'voice' personality but to those little accidents of voice and gesture and mannerism."

Radio, while creating new problems for the vocal soloist, also has brought about new methods for training voices. It is now possible to attend schools which teach those who are desirous of becoming radio singers. Some of the methods employed are as old as singing itself; others are new. The old methods include training in the placing of the voice, proper breathing, vocal exercises. However, with new problems new methods have been devised. Primarily the training of the radio singer is in the hands of his vocal teacher, but before he can hope for success on the air he must apply to the control operator for additional instruction. Both of these teachers will tell him his faults and how he may correct them, but, if he will make a series of recordings, he will be able to hear for himself how he sounds to the radio listener. As these records are made from the same microphone that he will use for broadcasting, he will be able to experiment with his voice delivery and in the placing of himself before the microphone. Some soloists try to hear their own voices as they sing to the musical microphone by cupping a hand over one ear. It is good practice in the development of a voice level to sing to the microphone and watch a volume indicator. This will train the soloist to maintain a volume smoothness between the minimum and maximum levels that can be broadcast. The best voice for radio is one that is soft, true, and clear. While a soft voice may be amplified, the cutting down of volume of a powerful delivery is not always satisfactory.

This desire for light voices and the appeal of the lullaby melody led to the development of the crooner. The crooner's vocal training has developed a flexible and well-controlled voice. He sings across a microphone only a few inches away from his mouth. As the result of such intimacy with the diaphragm, every breath intake, gasp, and pitch vibration is carried clearly to the listener. The sibilant sound, or hissing, is difficult to avoid; but opening the mouth slightly wider than usual to produce the sound and chopping off the sibilant sound sharply is an experiment, among others, to be tried.

One of the essentials of the radio soloist is clean-cut enunciation that will carry words clearly to the listener. Proper speech and vocal training are vital. The vocal organs must be relaxed, yet fully under control. Sing before a mirror, but do not look into it for reflected beauty of features; rather listen for beauty of articulation and tone. Do not mouth words.

Notwithstanding these new methods and principles, the guesswork has not yet been entirely eliminated from radio performance. The acquisition of a good voice for the radio is a tedious job. It involves hours of lessons and practice. When one has acquired the attributes of the good radio singer, these attributes must be put into practice until they become natural and easy.

Originality is the keynote to success in the radio showman. Consequently the broadcasting soloist of popular tunes takes liberties with the tempo of the song which will contrast with the rhythm of the orchestration. This changing of the song from the score is called a "lick." Nearly all crooners "pep up" their renditions in this manner. The radio has given the singer who lacks volume but who has singing ability an opportunity that the auditorium or theater never offered. But the small voice must be true and the singer must have an individual style. Singers of the "blues," "torch songs," the so-called "heat tunes," and hillbilly numbers usually need the amplification offered by the radio. Because of this tendency to "lick" a tune, radio does not encourage listeners to sing along with the broadcaster. The singer is influenced by the fact that the radio theater has many exits that are easily accessible. Only fresh unsophisticated entertainment will hold the listener.

Lucille Manners of National Broadcasting Company and Cities Service Programs gave the following advice to radio singers:¹

Fallacious ideas about "special radio technique."

1. Simply stand far enough away from the mike (at least 2½ feet), and sing as you would to any audience.
2. Do not get into the habit of "saving" the voice, but do your best in every performance.
3. Use free tone production and be as relaxed and natural as possible.
4. Radio will pick up "forcing" easier than you think.

Radio makes more exacting demands on the singer than either concert or opera, in many ways.

1. Radio singer depends on himself alone, that is, his voice. No stage or settings of any kind . . . nor pretty looks.
2. Repertoire is more exacting and can include less repeats.

Learn to sing "on the breath."

Permit no breath to creep into the tone, however.

Do not use tones in public that do not lie naturally in your range.

1. Use tones that are resonated in the head in the cavities behind the nose, do not force.
2. Be careful of throat constrictions.
3. Writer uses "set" position for high notes; this, however, is different with each singer.

¹ *Etude*, March, 1938.

4. Always warm up the voice with scales and exercises before doing arias and demanding selections.

Need for a foundation of good musicianship.

1. One must be a well-rounded artist and work as hard for radio as one would for the concert stage or opera.
2. Even crooners today are increasing their musicianship.

Music and repertoire.

1. Theoretically the audience is always the "same" in radio, and singers cannot afford to repeat often.
2. There is a greater variety to radio repertoire than for concert or opera work. Lieder, opera, art songs, musical comedy, ballads, good popular music, and language songs are all to be mastered equally for success.
3. "Everyone" is in the radio audience and an artist cannot sing specialized music too much.
4. A radio singer's greatest problem is to sing programs which contain something that everyone likes.
5. Such a list should include: a Schubert song, one of Liszt's, Stephen Foster, a Strauss waltz, a motion-picture hit song, etc.
6. Smooth, lovely melodies are best in the long run.
7. Don't be either too high-brow or too low-brow; all good music is welcome on the air.

Do not be a "prima donna," that is, be a good fellow and be reasonable in your relations with conductors and musicians in the station. Let your development, vocally and artistically, come slowly. Do not be in a hurry to be a "star;" this rating will come of itself in good time. Success will come as suddenly as failure has been persistent. *Above all, never allow yourself to feel that radio demands less than other fields of the vocal and musical arts!*

Song Selection.

In the early days of radio it was important to select songs with a limited range. Notes that were too high or too low were not transmitted correctly. The mechanical difficulties leading to this state of affairs have been largely overcome. The advances in microphones, receivers, and other apparatus no longer impose this limitation in selection. The reasons for selecting certain songs for the radio lie in the whims of the advertiser, the singer, or the studio manager. It is now safe to say that any song suited to the singer's voice is appropriate. The large networks are encouraging, by contests, the writing of musical selections which will meet the requirements of the microphone and studio. In the case of "Lenox Avenue," the composer prepared even the musical backgrounds for the announcements. The composer includes in his score complete directions as to how the engineers shall mix the voices and orchestra.

The choice of songs, however, presents some interesting limitations displaying the desire of the networks and most stations to broadcast clean programs. The music of certain selections may be presented instrumen-

tally, but the lyrics must not be sung. In such a list are songs whose lyrics are suggestive, such as "Come Up and See Me Sometime," "Fooling with Another Woman's Man," and "I'm No Angel." It is amusing to note that the song "Let's Have Breakfast in Bed" can be announced only as "Breakfast in Bed." Lyrics of certain selections must be revised for radio ears. For instance, in the song "I Get a Kick Out of You," the cocaine line must be changed to "Some like perfume from Spain." On the air belonging to the networks, no lyrics are allowed which refer to "reefers," "hop," "coon," "dago," or "Chink." However, the lyrics of a copyrighted song cannot be changed without written permission from the copyright holder. Many of the lyrics of the swing tunes are forbidden on the air. Broadcasting stations are to be commended for their refusal to allow works of a religious nature to be played in dance time or to permit the vocal jazzing of spirituals. In addition to these limitations are those imposed by copyrights and by the restrictions of foreign-owned numbers.

Orchestral Setup.

If we remember that any microphone is merely a mechanical device which converts audible sounds into electrical impulses, it is only natural to expect that there must be certain definite rules for its placement with regard to the musical instruments whose music is to be broadcast. No general rules can be set down which will adequately treat all possible situations, but an understanding of the more important factors involved will enable the broadcaster to solve his own specific problems.

One of the greatest difficulties encountered with this electrical ear called the microphone is that it has no sense of discrimination and faithfully reproduces all the sounds that reach it. A person attending an orchestral concert can focus his attention on the musical sounds being produced and exclude most of the extraneous noises that may be present (coughs, sneezes, reverberation, etc.), but not so with the microphone. It hears all and tells all. Consequently, it must be placed so that it will hear only what it should, namely, the orchestra and its component parts. This means placing the microphone near the orchestra.

When the microphone is near enough to the orchestra to minimize unwanted sounds, a new problem arises—that of picking up just the right amount of sound from each instrument. This is what the engineer refers to when he talks about "balance"; in modern acoustically treated studios it is really the only problem of technique with which operators and producers must concern themselves.

The loudness of any instrument, as picked up by the microphone, depends upon three things: (1) its distance from the microphone, (2) its position relative to the sensitive face of the microphone, and (3) the loud-

ness and directionality of the instrument itself. By directionality I mean that all instruments do not radiate tone equally in all directions. A violin does, but certainly the loudness of a trumpet depends upon whether one is in front of or beside the bell.

All microphones can be divided into three classes with regard to their sensitivity. They are unidirectional, bidirectional, or nondirectional. Most dynamics fall into the first classification. In the second are ribbons (or velocities) and certain crystal types. The salt-shaker, eight-ball dynamic, and certain crystal types make up the last group. A unidirectional microphone of the diaphragm type has its maximum sensitivity in a line perpendicular to its face, and as one goes around it the sensitivity falls off, so that at an angle of 40 degrees it is only 75 per cent efficient and at an angle of 60 degrees only 50 per cent efficient.

The proper height of the microphone can be determined only by experimentation. For a small orchestra, first try it at a height of 5 feet. For a larger organization try it at a height of from 6 to 8 feet. In a live studio the microphone should be lower than in a dead studio, in order to cut down on reverberation. Also, where there is much reverberation, the microphone should be placed closer to the orchestra. The microphone is usually placed between the orchestra leader and his musicians, but to one side.

For piano solos a microphone should be set facing the piano and about 6 or 8 feet from the high-register side. A separate microphone is provided if there is to be a piano solo. When the piano is used with an orchestra, it is located either far to one side or behind the musicians. If it is a grand piano, the sounding lid is closed.

The bidirectional microphone has a double sensitivity pattern. There are two regions of sensitivity, on opposite sides of the microphone, each having the same general fan shape as that of the unidirectional type. If the musical group is on a stage or platform, the arrangement of instruments already outlined can be used. However, there is always present the possibility that the opposite sensitive face will pick up unwanted noises from the audience or auditorium. The microphone may be tilted toward the orchestra to lessen the sensitivity of the back face. In broadcasting studios it is possible to set up the orchestra on both sides of the microphone, keeping the same relative distances that have been outlined.

When a nondirectional microphone is used, sensitivity is the same in all directions, so that the only factor that need be considered in the placing of instruments is that of distance, and this will, of course, depend upon the instruments and the acoustics of the room.

When an instrumentalist is to play a solo part with orchestral accompaniment, he will leave his position in the orchestra and play from a position nearer the microphone, so that his tones will stand out above the

other instruments. This is also true of a small group in the orchestra who will rise when playing certain parts of the arrangement. In any studio

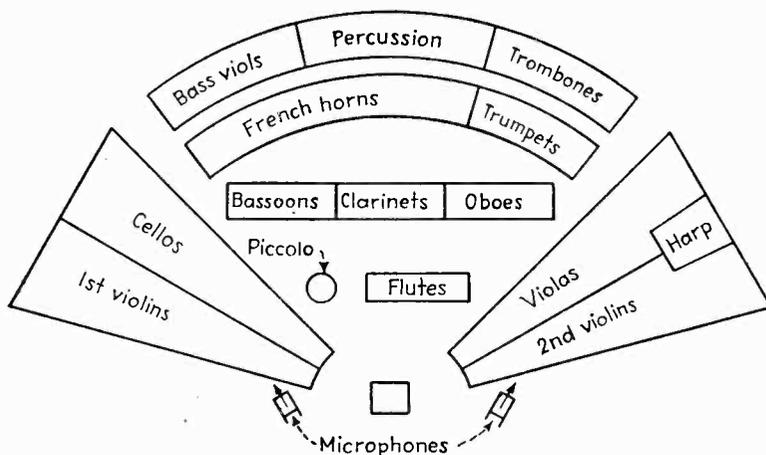


FIG. 36.—The National Broadcasting Company symphony orchestra.

which has a live end, the orchestra is placed with its back to that live end which acts as a shell for reflecting the sound.

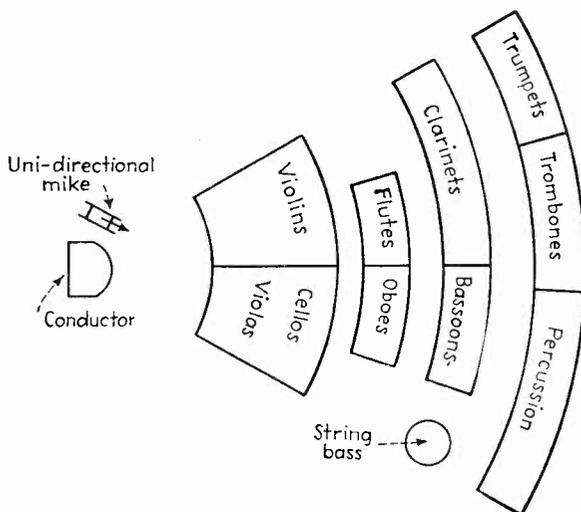


FIG. 37.—Studio concert orchestra.

The reader should bear in mind that what has been said here is a very general summary arrived at through years of experimentation by accredited broadcasters; it is not, by any stretch of the imagination, to be construed as a solution to all problems. These facts should aid in the pre-

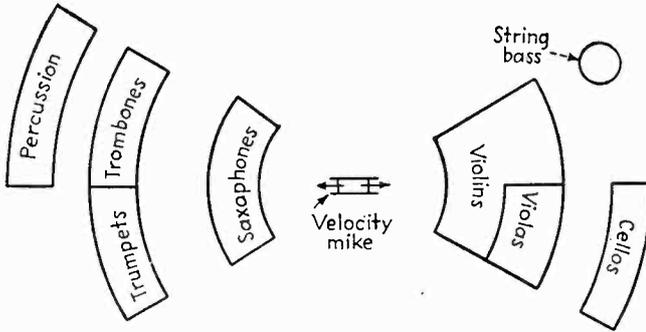


FIG. 38.—Studio combination concert and dance orchestra.

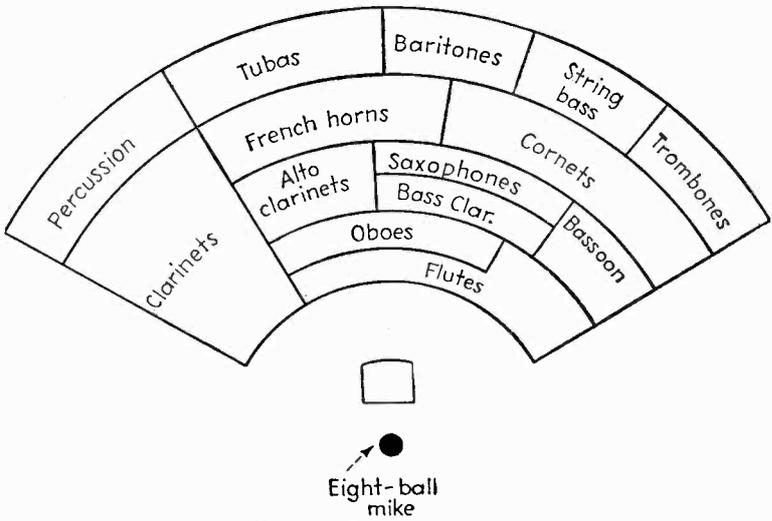


FIG. 39.—Symphonic band.

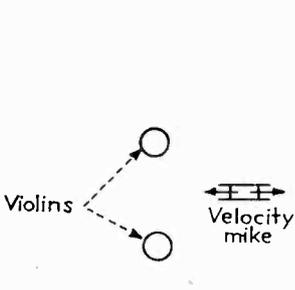


FIG. 40.—String quartet.

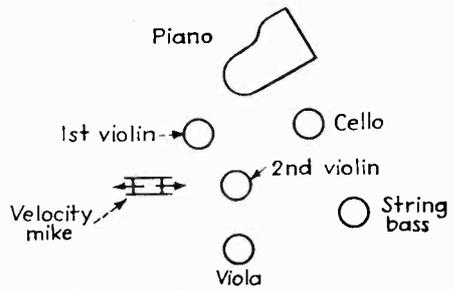


FIG. 41.—Piano string quintet.

liminary setup of the orchestra or vocal group, but the final test is the quality of the program as it issues from the audition loud-speaker to where the musical director is auditing the rehearsal. When special effects are desired, there must, of course, be considerable deviation from the general rules. Every leader has his individual effect to emphasize. Some will bring his violins close to the microphone, others the brass instruments.

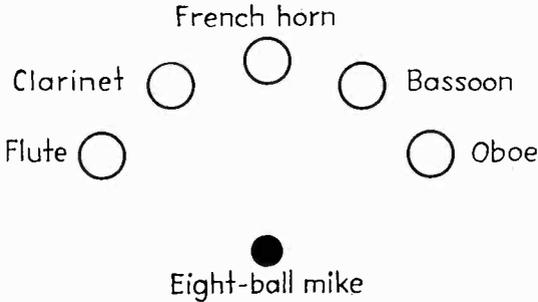


FIG. 42.—Woodwind quintet.

Often a single studio orchestra must sound like three different orchestras upon different programs, with the result that the setup of the orchestra will be different for each presentation. There will also be varied musical arrangements.

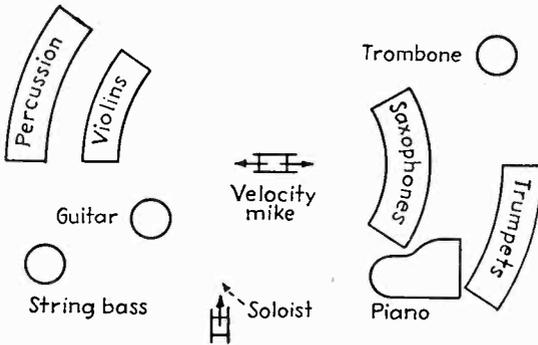


FIG. 43.—The dance-orchestra setup.

The final arrangement of the orchestra will depend upon the balance heard from the loud-speaker during rehearsal. The musical director is concerned with what the listener hears, not with how his orchestra looks in its radio setup.

The foregoing diagrams (Figs. 36 to 43) show the more accepted arrangements of orchestra and groups for broadcasting.

CHAPTER XXIII

The Radio Day

In the early days of broadcasting, when the Red Apple Club and the Merry Old Chief were features received by the marveling listener, the arrangement of a daily schedule of radio programs was a job to tax the ingenuity of the most versatile of variety-house impresarios. Today the term "program building" in broadcasting may be applied either to the process of combining various entertainment and advertising units into an individual performance complete in itself or to the task of arranging a series of such units into a sequence of acts for the day or the week. The problem of the program builder is to present entertainment that will hold the wavering attention of the great number of listeners; the income of his station depends ultimately upon that. To accomplish this he must consider the domestic and work habits and the attitudes, at various hours, of his listening audience. He must keep in mind the potential purchasers of the product to be advertised who will be reached during certain hours of the day. The program director of the network or of the local station, however, conforms to certain principles in the booking of the daily programs. The average radio station is on the air approximately 18 hours a day, from six o'clock in the morning until twelve o'clock at night; the director divides his day into approximately six parts of 3 hours each.

The local director should be less concerned with the quality of a single act than with the entire program for the day. In the majority of the stations associated with the various networks, the director aims to get variety and entertainment value by inserting contrasting local features between the programs received from the network. It is essential that he build up for his station a reputation for excellent programs in order to induce the listener to tune in to that station automatically. To create this interest he must present a sequence of performances that are varied in character, all the time bearing in mind that different classes of people listen to programs at different times during the day.

The better practice is to avoid developing a type of listening audience, as this discourages certain sponsors. In building programs, however, the director is conscious of the strata to which his station appeals. In larger cities, where there are a number of stations, one may appeal to the "carriage trade," using fine music and educational features for sustaining programs. Another station will feature sports broadcasts and dance selec-

tions. In many cities one station will direct its programs to foreign-speaking audiences. The result is that programs are arranged to conform to the policy of the station as established by sponsors and listeners. No hard-and-fast schedule exists for assembling the daily offering.

Morning Programs.

From six o'clock until nine in the morning the program director will arrange programs to appeal to the lower and middle class in the wealth bracket. During this period there is a great deal of activity in the home. The head of the family is leaving for work, children are getting ready for school, and the mother is preparing breakfast; there is little opportunity for attentive listening. The programs for this period should be cheerful, bright, and lively to start off the day. Announcements should be short and musical selections brief and popular. Talks during this period lose their value unless they are short, and each must be a complete unit in itself to be quickly digested with the breakfast. Fifteen-minute programs are preferred at this time; they will be largely musical. There may be broadcasts of morning news. A soloist and pianist may present songs which may, from day to day, offer new versions and lyrics submitted by the radio audience.

During the second period, from nine until twelve o'clock, the audience is largely housewives. While the mother is engaged in her household tasks, she will have the radio turned on and will be listening to shopping news or cooking recipes. Announcements may be longer during this period and the programs may be largely special features arranged for the feminine listener. It is during these hours that the majority of women are heard over the radio as announcers and speakers. Women may give long commercial plugs, may describe the latest fashions, discuss interior decoration, and carry the burden of the programs. Skits that will appeal to the housewife are the types that predominate during this period. The program director will be careful to vary the programs and avoid putting two dramatic skits together. An organ program or an electric-transcription library furnishes selections appealing to the women; thus the presence of the station's orchestra is not required during the forenoon.

Afternoon Programs.

The noon hour is not considered a valuable hour for commercial sponsors in metropolitan areas. During this time there is generally a news broadcast or a religious program. However, the rural listener is an excellent prospect for midday programs. In examining the programs of stations we find that weather reports, market news, crop conditions, and information of interest to the farmer are broadcast around the noon hours. Between twelve and three o'clock the listener is inclined to be more

leisurely, with the result that longer talks and educational programs, traffic-court programs, and others of this type are broadcast in the early-afternoon hours. The housewife is a good prospect for early-afternoon programs; this is the time for intimate chats concerning the personal problems of the mother, such as those dealing with health and reading, child care, or dressmaking. However, the program schedule must not be allowed to become monotonous, and consequently the musical, the dramatic, the conversational, and the straight radio address must give variety to the hours of listening.

The late-afternoon programs bring the children to the radio, and their value as allies in an advertising campaign is not overlooked by the sponsors. It is a general principle that the commercial plugs in daylight programs may be longer than those in the evening programs. Daylight hours reach not only the feminine and youthful audience; there is an increasing tendency upon the part of masculine workers in small shops to turn on their radios and listen as they work. Consequently these afternoon programs, while they may appeal primarily to the feminine and youthful audience, must have qualities that will interest the workers as well. Of course, during this period there are sports broadcasts.

Evening Programs.

The networks generally release the period between six and seven-thirty o'clock to the outlet station for its own local programs. During this time the broadcasting of news seems to be a feature of nearly all stations. There may be sports résumés and dinner-music programs. With the start of the evening-program period the length of commercial copy is reduced. The whole family comprises a potential audience in both rural and urban areas, with the result that programs in the early evening are designed to appeal to all members of the family and to all wealth brackets. The program designed for children and the one designed for the feminine listener give way to a type designed to entertain the entire family. During the winter months this period is the most valuable of the radio day; the charge for the broadcasting facilities is highest between seven and ten o'clock in the evening, with the result that sponsors endeavor to present programs of an excellent caliber.

There is a constant search upon the part of the program director for originality and distinctiveness in program types. There have been air waves of popularity from the jazz orchestra to the symphony orchestra, from crooning to operatic selections, from the Red Apple Club to the amateur show, from radio dialogue to the theater of the air, and from the Merry Old Chief to the popular comedian. In each instance the radio showman has overworked and exhausted the popularity of the type so that new ideas must be sought. After ten o'clock in the evening, enter-

tainment of a light nature is stressed, with dance orchestras and musical programs predominating. As the evening grows later, sustaining programs are presented by the station and must be arranged in such a way as to build up a listening audience that will attract sponsors to these hours.

General Requirements.

All programs over the air are made up of music or talk; there are no other fundamentals than these from which to draw. The builder of programs must be ingenious in devising different arrangements. Music by itself for a long period is not advisable; it is much better to have the music interrupted by short skits or dialogues or monologues.

A radio program should be harmonious, that is, all features of the program should fit together smoothly. If the parts are not properly related, the result is discord and lack of effectiveness. In constructing the longer period for a sponsor, the builder may seek either a smooth harmony of entertainment or a contrast. As listening has been found to be an arduous occupation, there is a trend toward a contrast of component parts of the entertainment rather than a homogeneous linking of the whole. This results in a demand for variety in comedy, drama, music, and information; for unless the program contains a variety of entertainment features, certain members of its audience who demand those features will tune off. The tendency seems to be to present at least two features upon every program—an excellent orchestra and dramatics, music and a comedian, or amateurs. The feeling is that sponsors, by maintaining this formula in the building of their programs, gain a larger audience than if they presented merely a single feature. The program must start off in such a way as to attract the listener immediately and then must maintain that interest; however, the tempo of the musical numbers may be changed. The broadcaster must keep abreast of the thought, activities, and mental habits of the public. Audience interest is fickle. It is the business of the radio showman to give the public what it wants today. The program must be fresh and contain novelty from week to week. Dramatic surprises should be permitted so that the director may infuse new interest, new characters, and new entertainment ideas from time to time. As in every entertainment field, the impresario must constantly be seeking originality, ingenious combinations of old acts, new styles, unusual rhythms, or unique humorous situations, and his finger must be upon the pulse of public interest.

It is a fact that famous people are received with much enthusiasm in spite of radio disabilities. That is, a famous flier may have an unsatisfactory voice over the air and yet be a drawing feature on the radio entertainment bill. In the radio play, or in any presentation in which the content is more important than the personalities, the trained radio per-

former is more valuable than the individual who has only a name or reputation to offer. When the program builder has people on his program who are not famous, he must see that their diction is perfect, that their personalities are pleasing, and that their performances will be a drawing card to the sponsor. Standard radio generalship demands carry-over value in the program; that is to say, some popular fundamental feature must remain the nucleus of the program from week to week.

An extremely important factor in a musical program is variety. The musical director in choosing selections will avoid having series of numbers in the same key or rhythm. Such selections are generally chosen with an ear to their tempo, which is selected to fit the product being advertised. Even in the selection of musical numbers for a 15- or 30-minute program, variety is sought by the musical director in order that the appeal may be wide. Variety is essential in any program, regardless of the type. The hour at which the program is broadcast should be especially considered. The type of music played on an afternoon program should usually be different from that on the evening program. One must never forget the mood of one's audience. While piano music is not the most popular of musical programs, short piano programs of 15 minutes are often well received. If the artist is a noted concert pianist, the public will listen to an entire program of his over the air, but these occasions are rare. Popular music is generally liked, but jazz in most cases is disliked.

It is difficult for a program director to say how long a successful program should be. This is a problem for which no rule can be laid down but the rule of common sense. The broadcaster must remember that the length of the program is first of all determined by the amount of money the sponsor of the program wishes to spend. He must then try to find out which will have the greater advertising value—several short programs or fewer long programs. In determining the length of each individual program or "act" in this variety show of the air, the director must recognize the fact that, regardless of the type of performance, the broadcast version should be shorter than it would be if it were presented visually to an audience.

The element of timing is vital. A few seconds one way or another can, and often does, spell disaster for the program director and result in the loss of a long-time contract with a sponsor. The program builder must have a fine sense of timing or tempo, for pauses are as important as situations and gags. The listener must be given time to digest and appreciate what he hears. The pause must be accurately timed as to its location and duration. Every program is based upon the advertising program and upon the product of the sponsor. The program builder should know all about the product before building his program: what it is used for; who uses it; its distinctive package; trade-mark; slogan; price; how frequently it is pur-

chased; and to what class of society it is sold. Is it of interest to men, women, or children; does it appeal to urban or rural purchasers; is the article a necessity or a luxury; and what are its competitors? When all these questions have been answered, the program builder may formulate his idea and work it into a program. When this program is roughly worked out, the idea is submitted to the sponsor for his approval. The program is then finished; musical selections are chosen; actors, announcers, and artists are selected. The program is rehearsed and timed, and, when satisfactory from the broadcaster's standpoint, it is audited by the sponsor. He may discard it entirely, suggest changes, or approve of the performance.

Sponsors have found that straight announcements have greater advertising value in their commercial plugs than statements or testimonials by actors or artists upon the program. The handling of commercial announcements requires a knowledge of sales psychology. Such announcements must not be too lengthy or too frequent. It has been found that the brief and skillful handling of the commercial announcement rather than excessive and incessant sales talk creates effective response and approval. Consequently, advertisers are condensing their sales announcements. The announcer, however, should not be forced to an unpleasantly rapid delivery of the sales message in order to effect a crowding of excessive material into the period allowed for the commercial announcement.

Surveys.

Radio stations, advertising agencies, and special agencies conduct surveys to determine the popularity of programs, presentation types, and stations. These surveys not only concern themselves with the preference of the listener but also with his economic and social status and his intelligence. The listener's habits and his activity while listening are also discovered by surveys. This information is sought to determine whether the program is reaching the audience to whom the product advertised will appeal. Surveys of this type are made by mail questionnaire, mail response to broadcast offers, personal interview, or telephoned questions. The interview survey by a trained staff brings the most satisfying results. Devices which attach directly to the radio receiving set and which record electrically the stations tuned to are being used experimentally at present. These electric recording devices have a stylus, resting upon a tape, which is connected to the dial.

Tastes vary from time to time; however, there is slight change evident in audience response to program types. Thus the program type has less to do with its popularity than has its presentation. In order of wide appeal, popular music comes first, followed by comedy and drama. Then comes the sports broadcast, followed by classical music. The speech pro-

grams are next in the popularity ranking, then news, talks, religion, education, children's programs, special features, and finally women's programs. These radio measurements also disclose a tendency to select programs rather than to remain tuned to a single station, but only 70 per cent of the time does the listener realize to what station he is tuned, and only about 35 per cent of the time can he identify the sponsor. Hence it is the program that is important. In 1938 it was estimated by the Joint Committee on Radio Research that there were 26,666,500 radio families in the United States, and that these sets are turned on an average of 5 hours a day. Probably the best known of the surveys is the continuous Crossley, Inc., survey made for the Association of National Advertising, which concerns only network programs of national interest. In 1940 it was estimated that there were 29,300,000 radio sets in United States homes and 8,000,000 in automobiles.

The program builder should be familiar with all the programs that are being broadcast by various stations. He must evaluate their ideas and improve upon those that have been originated by others. He should have a complete knowledge of just about everything in the broadcasting station, particularly dramatics and music. He need not be the last word as a dramatic director but he should be surrounded by persons in that field who are capable.

Local Features.

The alert program director will study the community in which his station is located and build programs to appeal to listeners. One Detroit station, recognizing the fact that that city had over 400,000 Polish listeners, has arranged programs in Polish for the listeners. Because of the large listening audience, this program is sponsored and the price that is charged the sponsor is more than that charged for the ordinary program in English. This station also presents programs in German, Czechoslovakian, Bavarian, and Italian. A foreign resident speaking these languages is put in charge of the program and sells time. The announcements are all made in the language and the musical portion of the program consists of recordings, which are generally obtained from the native land, and live talent from the local foreign settlement. These programs are presented at hours when the small station would find it difficult to compete with the excellent chain programs that are offered by local stations. They are very popular and have a distinct and positive audience. Frequently competition between various language groups makes for better programs. Nearly 400 stations now accept foreign-language programs.

A few stations are recognizing the fact that a large proportion of laborers work all night in the cities; thus some stations are on the air for 24 hours a day. One station broadcasts programs that would appeal to

the owners of beer gardens between twelve and two o'clock in the morning, presenting 10 minutes of dance music, followed by 10 minutes of music of a character that will force the listener to sit at a table where it is hoped he will drink beer. Such programs also find sponsors among the all-night barbecue stands that are equipped to deliver food. The early morning programs from five-thirty on are excellent mediums to reach the invalid, the milkman, and the all-night worker. They largely consist of requested musical selections. Such programs furnish an excellent advertising medium, building up a listening audience for the station. This is one of the problems of the program director—the creating of an audience that will be a sales factor for daylight programs.

While the evening hours bring the finest programs from the networks, the local station relies upon the daylight programs for its greatest audience and income; consequently its daylight and evening rates are usually the same. In the evening the local manager must arrange special features, such as the foreign-language programs, local news broadcasts, and club programs, to attract the resident from the networks. Local merchants would be wise to recognize that competition is less during the daytime. A high proportion of existing radio stations are licensed to serve the particular needs of the areas in which they are located. Station managers are searching for good local-program material. The most important developments in broadcasting will probably occur in the improvement of local programs rather than in any change of national programs. According to Franklin Dunham of the N.B.C., the gauge for the successful program is threefold: "(1) the popularity of programs which compete with the one being evaluated, (2) the attractiveness of the first two or three minutes of the program, (3) whether the whole content of the program, rather than some part, holds the interest to the end."

Special-day Programs.

The World Broadcasting System prepares a special-day program for the use of those who have subscribed to its transcription library. Special-day programs may be arranged by local stations. There are patriotic and religious holidays, sentimental holidays, as well as national holidays. There are also the various weeks, such as Book Week, Safety Week, and Health Week. Programs for these days may take a variety of forms.

New Year's Day, with its new vistas of hope for the world and the individual, offers many splendid opportunities, both serious and light, for broadcasting. There is also the opportunity for a résumé of the outstanding events of the past year, or a forecast of the events of the future. Patriotic programs positively flood the air waves. Dramas about Lincoln are pretty well overdone, but some of his sayings could be presented with

appropriate musical background. Also, there are many poems about the Great Emancipator, showing different sides of his character. The possibilities for Valentine's Day are as numerous and as varied as the messages sent on that day. Many excellent scripts have been written for Memorial Day, using the theme of the Unknown Soldier. A brief sketch of this type follows.

THE UNKNOWN SOLDIER

ANNOUNCER: The scene is Somewhere in Heaven on Armistice Day. As the scene opens, Red is looking down upon the earth. National airs can be heard played by a band and the atmosphere is created of a dignified, solemn, imposing ceremony at the dedication of the Tomb of the Unknown Soldier being conducted below on earth. The presidents, kings, emperors, and rulers of the countries of the world are in attendance to pay tribute to the Unknown Soldier. Red is gazing attentively at the ceremony.

QUINTON: What's going on, Red?

RED: Big doings down there—bands, speeches, and everything.

QUINTON: Boy, that's a wonderful sight! Never saw so many people in one spot. What's it all about?

RED: That's the Tomb of the Unknown Soldier and all the "head men" of the world are there to—what do you call those affairs?

QUINTON: Dedication ceremony.

RED: That's it. I've been watching and listening for half an hour—all the presidents, kings, princes, generals, admirals, the Pope, bishops, rabbis—they're all there, from all over the world.

QUINTON: What's the idea back of it all? I'm sorry I missed it.

RED: It's great—the finest notion that came out of the lousy war. It seems that a little country preacher thought it up—with all the hate, blood, guns, gases, subs, propaganda running wild, he donated to the world this simple, wonderful thought. You know there were thousands killed in the big scrap that were unidentified and their folks never heard from 'em. This preacher thought up the idea of picking one from the unknown bunch and burying him with great honors. You see, all the mothers of the missing thinks that's her boy—

QUINTON: And she's right—maybe it is her boy.

RED: (*Cynical laugh*)

QUINTON: Why the laugh—what's funny?

RED: That's me down there and all the world is around my tomb. (*Laughs*)

QUINTON: You lucky stiff, put it there. Glad and proud to meet you, kid. What's your name?

RED: Red.

QUINTON: Red—what?

RED: Just "Red."

QUINTON: Cut the kidding. What's your last name?

RED: Don't know—that's why I'm laughing. Never had any. On the square.

QUINTON: Never had a mother?

RED: Never knew who she was—or a dad either.

QUINTON: You don't mean to say you're a—

RED: Yes, isn't it funny, of all the thousands of guys unidentified they just happened to pick on me. The Unknown Soldier. I'm a real Unknown Soldier. When I tried to check up on myself I found out that I was left on a door-

step—raised in an orphan asylum—ran away—peddled papers—hung around the curbstones—worked in a factory—went to war and got knocked off in the Argonne.

QUINTON: What a break!

RED: Now you know why I laughed. But listen, kid! I know this is Heaven 'cause I got more mothers than any guy in the world!

Hallowe'en, while primarily a children's holiday, might be made to appeal to the adult with a ghost story of the weird happenings within a haunted house. Armistice Day might bring forth a program showing what has happened to the treaty of Versailles, how other treaties ending wars have lasted and been observed. What Thanksgiving means to Americans gives us an opportunity to get a little bit away from the Pilgrims. The original proclamations issued by Governor Winthrop of Massachusetts, or the first Thanksgiving Day proclamation by President Washington could be used on this day. Christmas offers many approaches. The subject of radio programs for special days is endless. Many educational broadcasters and local and regional stations find such programs timely and of interest to the listener.

Novelty is the greatest desire of the broadcaster, and yet it is decidedly an elusive quality, because, once a novel program is originated, it is adopted by others and soon becomes commonplace. Novelty attracts listeners; attracting listeners is the broadcaster's business. In an effort to originate new ideas and techniques of broadcasting, the Columbia Broadcasting System presented an eight-week experimental series called "Forecast." These were sustaining programs, each developed along a novel line with the idea of attracting sponsors who would purchase and further develop such trial shows. There was the "Battle of Music," which consisted of a contest between a swing orchestra and symphonic organization. A trial program was entitled "When You Were 21," drawing upon the slang, news, sports, books, and plays of a year when listeners were coming of age. The program, "Duffy's Tavern," was a series of music-hall terms. "Of Stars and States" illustrated what kind of program and talent could be provided by a different state each week. "The Life of the Party" carried the illusion of a good-natured get-together.

Commercial broadcasters arrange their programs to appeal to the great majority of listeners. If it were possible for them to have a program that would appeal to every listener, that would be their ideal. I feel that there are instances where the minority should be considered in some programs. However, there is always an audience for every good program. The program builder considers his average listener as the resident of a middle-sized town, earning approximately \$2,500 a year, the father of a small family. He has had a high-school education and his children will probably stop their school training at the end of highschool. The average listener

owns an automobile, attends the movies. His principal reading is the newspaper. It is felt that sports and headlines, politics and business are his news interests. In determining his fiction preferences, those magazines which have the largest circulation give to the broadcaster an idea of the material which can form the basis for dramatization for the average listener.

CHAPTER XXIV

Teaching the Broadcaster

On January 1, 1940, there were 881 broadcasting stations in the United States. Twenty-seven million families owned 40 million receiving sets, of which 8 million were in their automobiles. Radio broadcasting as an industry had grown in a scant twenty years to a point where it is included among the six largest industries of the United States. With these facts in mind it is not hard to understand how courses in radio work have increased greatly in recent years. According to a survey made by the Radio Education Committee under the supervision of the U. S. Office of Education, there were 357 colleges and universities offering 564 courses for the broadcaster. It has been suggested that such courses be divided into three groups. The first group would include those designed to give the student a broad understanding of radio and its place in society; these courses would consist of lectures, assigned reading, discussions, and reports. In the second group would be those courses which give the student practice in writing and in producing various types of radio programs. In the third group students would consider the effective use of radio programs in the field of education.

According to the survey made by the Radio Education Committee, existing courses were also classified as to subject matter: general course in radio, radio program planning and production, education by radio, radio script writing, announcing, speech, dramatics, music, station management, advertising, technical courses, television, and radio law. Universities are training future broadcasters not only in these classes, but also by permitting them to assist in the operation of educationally owned stations. There were 36 educational institutions operating either full- or part-time stations. Many of these institutions do not give academic credit for work done by students, but do give them training and experience of a very practical nature. The courses in broadcasting in various universities are under different departmental or school supervision, but by far the largest number of such courses are a part of the speech department curriculum. In some instances, the broadcasting of programs is under the supervision of a separate radio department, not the speech department or any other department conducting classes in broadcasting. This, I feel, is rather unfortunate, because it does not give the instructor an opportunity to give adequate training to the student.

A college workshop is an important factor in the training of future broadcasters; it is a broadcasting outlet for the college, a laboratory for students of radio, and it may serve as a filter through which commercial stations pass their broadcasts by local groups. An excellent discussion of college radio workshops has been prepared by Leonard Power for the Radio Education Committee; it may be obtained by writing to the U. S. Office of Education. In order to function satisfactorily, the college radio workshop should be equipped with facilities to meet the most exacting requirements for the satisfactory production of musical, dramatic, and other programs of high quality. There should be a control room with standard broadcasting equipment and a trained technician who can give to the student valuable information concerning the technical side of radio. There should be a studio that has been acoustically treated for broadcasting and additional studios with control room and possibly observation rooms for rehearsals and experimental classwork. The directors of workshops should be so experienced in broadcasting that their productive abilities are appreciated and valued by station managers for whom they work.

In order to comply with the requirement set forth by the networks, that future broadcasters must have a cultural background, it is advisable to require of the student two years of preparatory work before he is admitted to the broadcasting classes. English courses in composition or rhetoric are essential both for the preparation of continuity and for grammatical speech. A knowledge of English literature is helpful to the interpretative reader and book reviewer. An insight into civics or political science will be a worth-while foundation for the commentator or interviewer. Probably one of the first questions asked by the station manager of an applicant is whether or not he has had any dramatic training. Announcers for the networks are required to have some knowledge of foreign languages. Courses in music appreciation, the history of music, and creative listening will prepare the announcer for the introduction of and comment upon operas and classical selections. Many schools of journalism are recognizing the entrance of radio into the field of dissemination of current news, and journalistic training is of great value to the broadcaster. Courses in business management and economics will help the announcer into executive positions with the station. The lifeblood of the broadcasting station is its commercial accounts, and over one-half of the station staff is in the sales department; consequently courses in advertising and the psychology of advertising are among those recommended. Finally, I would make a course in typing a prerequisite for all broadcasting work.

The technician will gain his scientific background in physics and electrical engineering, and the broadcaster will do well to choose physics

for a college science course. Naturally, speech courses are vital in preparation for broadcasting; public speaking, linguistics, dramatics, and oral interpretation are generally given as prerequisites for the courses in broadcasting.

Introductory Course in Broadcasting.

The teacher in broadcasting should be able to assume that those enrolled have had general training in diction, pronunciation, articulation and enunciation, voice quality, and speech vocabulary. However, a review is an excellent method of beginning the semester's work. A popular introductory course in broadcasting may be given which will appeal to all radio listeners and users. If the class is located in a city where there is a radio station, members of the staff of the station may grant weekly interviews concerning their work in the station. The technical staff will explain the operation of the microphones, control board, and electrical-transcription pickup, and will take the class to visit the transmitter. The general manager will discuss contractual relations with the network and with ASCAP and B.M.I., costs of operation, the N.A.B., and F.C.C. The program director, announcers, sports announcer, and news commentator will explain and demonstrate their methods and duties. The dramatic director, with his cast, will demonstrate a rehearsal of a play, later to be heard over the station's facilities. Using the public-address equipment, the musical director will illustrate balance and distortion caused by different placing of musical instruments before the microphone. Continuity writers will discuss their problems. The sales-department representatives will tell of the station's rates, explain how campaigns are planned for the sale of radio time, show by charts the station's coverage, and explain tie-in and merchandising campaigns. Through these interviews and demonstrations the class will gain a general view of the work done in the station and studios by the broadcaster.

I have found that it is helpful to enlist the aid of those in the radio department of advertising agencies to explain the relation of the advertising agency to broadcasting. Inasmuch as some of the students who are taking such courses in broadcasting may go into commercial motion pictures, I have been fortunate in inducing such manufacturers to allow me to bring my classes to the studio to show how the microphone is used for making commercial motion pictures. In this connection the Jam Handy Company of West Grand Boulevard, Detroit, one of the largest manufacturers of commercial motion pictures, has three sound films made for the Chevrolet Motor Car Company. One of these is *On the Air* and shows by the use of motion pictures and moving diaphragms how sound waves travel through the air and gives pictures of the control room and some of the signals used in broadcasting. A second motion picture, *Behind*

the Mike, illustrates the making of a great number of sound effects for the radio drama. The picture is entertaining and instructive to classes in broadcasting. The third picture, *Quiet, Please*, deals with acoustics of studios. These pictures are generally available to schools equipped to project sound motion pictures. I think that they can be obtained without cost. The National Broadcasting Company also has motion pictures of network broadcasting which might be obtained to show before beginning classes in broadcasting.

The class will be given auditions over the classroom public-address equipment so that those whose voices are unpleasant or who have speech defects may be eliminated from more advanced classes. Individual difficulties in speech may be given special attention in the speech-correction clinic. Other members will be advised to select classes in continuity writing, sales, or production, all of which require the foundation knowledge given by the station staff. By the close of the semester the students should have gained a foundation knowledge of microphone technique, have become aware of their speech faults, and have developed into critical listeners.

Courses in Radio Speech.

Those students who have passed the audition tests of the introductory courses may enroll in radio speaking. Again relying upon the generosity of the local station, the teacher will have built up a library of electrical transcriptions. The words of the commercial continuity upon these transcriptions will be typed for the students, who will record their own delivery of such commercial announcements upon the classroom recording equipment. Their recording will be compared with the announcement upon the electrical transcription; in this way they may hear their own faults in enunciation, emphasis, and intonation. Students will listen to and study the announcements heard over the radio from recognized broadcasters and analyze their virtues. Different types of announcements will be given by the students in their auditions—station breaks, straight commercial, introductions of speakers, musical announcements, mail pulls, announcements of children's programs—all of which are given in slightly different styles.

Those students who have successfully found employment in broadcasting studios as announcers are the ones who have practiced constantly in the studio in reading commercial announcements. Probably too great stress is laid in radio speech classes upon conversational style. There are usually three or four students who are particularly good who wish to be announcers and they, using copy obtained from broadcasting stations or copied from the air or continuity found in Sherman P. Lawton's book, *Continuity Types*, practice to one another the punch style of commercial

announcing. The use of the Sound Mirror, the tape recorder, is particularly helpful to the student in this training.

One of the first things to do in training the radio announcer or speaker is to create within him the feeling that he is reading to a small audience when he is addressing the microphone. With this in mind, at the outset I place the radio speaker with his copy at a table with the microphone before him and a listener on the opposite side of the table and try to get the speaker to read his material as if he were talking to the person who is opposite him. His auditor in this case must show by facial expressions he understands what is going on. After the speaker becomes accustomed to the microphone and to reading in such a way that what he is reading sounds conversational, I allow the auditor to remain in the same room with the speaker while he is addressing the microphone. It is not until after the novice has been accustomed to the microphone that I take away a visible auditor.

The students of radio speech will next be trained for actuality broadcasts. A small, domestic, motion-picture projector can be used to throw a picture on a screen which can be seen through a window in the announcer's booth. The student announcer will be required to describe the action vividly and clearly so that the rest of the class who cannot see the picture will be able to visualize the scene through their ears. This will require vocabulary control by the announcer and concentration upon his task. Another student who has previously seen the picture can blend the necessary sound effects from recordings to make the audition realistic. Such auditions should start with simple types of motion pictures. Comedies and parades should be practiced before football, baseball, and tennis games are attempted. In most institutions the athletic department has films that have been taken during games to show the players their faults; these films may be borrowed by the teacher of broadcasting.

These are just some of the exercises that may be tried out in extemporaneous and impromptu speech, which has been discussed in a previous chapter. We have a small announcing booth at the University of Michigan, adjoining a larger studio. Using some of the bridge hands that are given in the daily papers, we have allowed a quartet of students to play a game of bridge while the announcer carries on a running commentary upon their play from the adjoining studio, the idea being that he will have to fill time and yet make the listener see the game as it progresses. He uses headphones to hear the bids made by the players.

All types of radio speech should be practiced over the public-address equipment in this radio speech class: educational addresses, political talks, interviews, conversations, round-table discussions, inquiring reporter, and news presentation. Speech programs of the local station should be listened to and the continuity used should be obtained and used by the students

for comparison. The instructor should be aided in his criticism of the auditions by the class, which constitutes the radio audience for the student speaker. The auditors should be concerned with the qualities of the voice, its shading, melody, vitality, and personality. Is it well modulated, full, soft, low pitched, strong, buoyant, well directed, convincing, attractive, magnetic, warm, sincere, friendly, live, and convincing? If so, it has the qualities sought in the radio speaker.

Courses in Writing.

For the class in writing for the radio, the teacher will do well to gather a library of used continuities from broadcasting stations. All types of commercial plugs may thus be studied. The World Broadcasting System furnishes weekly continuities to be used in conjunction with its transcriptions (as well as a pronunciation guide to be used in announcing musical selections), which the station will give to the teacher for educational purposes after they have been used. The station usually will also give the scripts of its local dramatic productions to student broadcasters. It is more difficult to obtain scripts of network plays, for these belong either to the sponsors or to the artists; but in some instances they may be obtained for classroom study. Mimeographed continuities of government programs, such as the "Farm and Home Hour,"¹ can be obtained for study. There are many books which contain sample continuity; a bibliography will be found on page 371. Also contained in this text is a list of sources of scripts that can be studied by the student. Most of the continuity contained in such books is copyrighted and cannot be used upon the air without permission. Having this in mind I have selected the plays in this text from scripts that have been handed in by my students in the past year. There are no restrictions upon the use of any skit in this book. These samples of student writing may be compared with professional writing in determining imperfections. The United States Department of the Interior, Office of Education, has established an Educational Radio Script Exchange, from which various types of manuscripts may be obtained for analysis. It is helpful to place the students in charge of the script library and have them solicit copies of acceptable continuity. The students should type additional copies so that there will be enough for the casts of the plays when used in the classroom.

After the class has studied the forms and diction of such professional scripts, it may write original copy. As it is best for the radio writer to construct his skits about characters and situations with which he is familiar, the college student may wisely start with short informative skits upon college life. Skits that have human interest but little conflict or de-

¹ Releases of the Department of the Interior, U.S. Office of Education, Washington, D. C.

nouement are popular and simple to write for anyone who is observing. Skits about student life, university research, a campus news dramatization must be realistic to meet the approval of the student critics; they are excellent broadcasting material and they are easy to cast in a college class. Journalistic training is an excellent prerequisite.

The next step in dramatic writing may consist in the dramatization of short stories. O. Henry, Bret Harte, and other modern writers furnish excellent plots for classroom exercises but, because of copyright restrictions, are not available for broadcasting. Short stories that come in the public domain are possibilities for broadcasting; these include the works of De Maupassant, Balzac, and the Russian writers.

I have found that my students in writing courses are offered outside opportunity to practice the preparation of radio skits. The Bar Association of the state was eager to have a series of programs prepared to familiarize the public with the service rendered by the lawyer. The legal group furnished facts to be used in the preparation of such programs, which combined the dramatic and discussion, and the students prepared the continuity, which was then submitted to the committee of lawyers before it was put on the air. Another group that appealed to the university was the Forty-Plus Club, which requested that the students prepare dramatic programs for these men over forty, who are seeking employment. Such programs offered problems that had to be met by those in the writing class. Historical groups, medical societies, and other organizations need aid in the preparation of their programs which may be obtained through the writing class and the workshop.

It is advisable for the author of a radio play that is to be produced to sit in upon the rehearsals of the play so that he may check upon the faults that are brought out during such rehearsals. Such things as difficult words, poor dialogue, lack of clarity, and timing can best be determined during such rehearsals.

Radio Reading and Dramatics.

The course in radio reading and dramatics generally draws students who have had training in oral interpretation and in dramatics. Students required to interpret poems that will appeal to the radio audience will first study the author, his times, and his purpose. The instructor in radio dramatics will obtain from near-by stations a list of poetry programs and radio plays that may be heard in the college town. Students should study these professional productions, as well as such skits on electrical transcriptions as are available. They should examine the types of scene transitions used, the speech and "sound action" of the characters, as well as the effective use of voice by the actors. Field trips to local stations will give the students an opportunity to see and hear the players in action.

Over the classroom public-address system the radio actors may practice first the simple skits of student life. In these there will be less difficulty in voice casting and in inducing the actors to feel their parts. The students should early learn the vital necessity of correct timing. Follow these with scenes from older plays.

Next the students should be given practice on plays that have been produced professionally. The teacher can usually establish relations with the local station to obtain plays. Sample script sources are listed on page 373.

When the students have studied the dramatic radio programs and have practiced skits used by the professional radio actors, they may rehearse for presentation original plays prepared by the radio-writing class. These will require practice in developing sound effects. As the average university broadcasting course has a limited budget, plays should be produced with as few effects as possible. Whenever possible these sound effects should be originated by the students rather than by recordings.

The radio actors must study their parts until their parts become parts of them. They must organize their material so that it has ear appeal, so that action is made obvious by words and sound, and so that voice contrasts will project facial movements. As teachers usually learn more than their students, it is advisable to have members of the class act as dramatic directors for various plays in early auditions.

Production, News, Advertising, and Law.

Classes in production should be assigned to the task of arranging and presenting the university broadcasts. For theoretical practice the students may be required to arrange full-day schedules for the public-address system. Programs should not run for more than 15 minutes and should be live presentations. Station breaks, spot announcements, sustaining programs, and sponsored programs should all be given. The musician, actor, commentator, and writer all will have a part in making the abbreviated "day" realistic. Production requires a broad background, showmanship, and a thorough knowledge of broadcasting. Daily and weekly program schedules are easily obtained from stations for study.

Forms such as are used in radio stations should be provided. All musical numbers must be cleared, logs must be kept, and the routine of the regular station observed. Students are appointed as station manager, program manager, continuity manager, etc. Students of all radio classes are then assigned to different periods of time during the day for which they are responsible. The students write, cast, direct, and act in their own productions. In short, the entire studio and the operating thereof is placed entirely in the hands of the students. The broadcasting is continuous for eight to ten hours and is transmitted by public address to a jury

which criticizes each individual production. When each student has received his criticism and has had ample time to correct his mistakes and build up his good points in the revision of his work, the experiment is repeated upon a later date. To make this work even more satisfactory, the instructor might assign types for production which the student might not choose himself. For example, the person or persons who choose to do a dramatic program might, after the revision and correction of that, be assigned to take over a news broadcast or a children's program the next time. This would eliminate the possibility of students' doing only one type of work and also would insure variety and desirable time placement of programs.

The experience of the full day of broadcasting reveals to the student a goodly portion of the difficulties which arise in professional broadcasting. It brings to light the problems which are easily overlooked or unnecessary to consider in the presentation of single radio programs. Furthermore, the students are brought to a fuller realization of the different types of audience that are appealed to during the day. We begin our broadcasting at seven o'clock in the morning with a program of popular music which is interspersed with advertising continuity covering a wide range of merchandise. This sort of program appeals to almost the same type of audience to which the evening programs cater. After this, practically the entire morning is given over to women's programs: serial dramas, shopping news, recipes, etc. At noon there are news broadcasts and stock-market quotations, which are followed by musical programs. Fashion news, music, drama, sports talks, poetry, news, and children's programs fill the rest of the day in the order in which you would expect to find them on your radio.

Schools of journalism are recognizing the popularity and importance of news broadcasting, with the result that courses in this type of broadcasting are being inaugurated in some institutions. Those students who are interested both in broadcasting and in journalism may be organized into a news dissemination service for the university. Their copy should embrace material of an educational nature designed to inform the public accurately concerning the scholastic news of university life. Classroom news, advances in educational methods, and the value and extent of research as presented by such news broadcasts will give to the public a different insight into college life than it receives from newspaper items. Accuracy, methods of unifying the news, transitions from one item to another, and the development of an individual style are matters to be stressed in addition to journalistic principles.

The radio-advertising field is one of the most promising for the college graduate. While a college education in business is not essential for the student entering this department, it certainly provides an excellent

background. Classroom work in salesmanship, merchandising, marketing, personnel management, and psychology is helpful.

Courses in radio law are best described by this catalogue announcement:

The development of the legal regulations of wireless telegraphy and telephone; the Federal Radio Act of 1927 and its amendments; a study of the Federal Radio Commission and its general orders; procedure and practice before the commission; the law of crimes, torts, and contract applicable to radio; licenses, and copyright; rights and liabilities of wireless operators and Government regulations of their activities; rights and liabilities of other persons affected by such activities; State and municipal regulations of radio; and international agreements and international aspects of radio control.

Teacher-training Course.

A course offered by a teachers' college to train teachers properly to receive programs in their classrooms does not exactly come under the heading of teaching the broadcaster. Such instruction, however, would be a valuable aid to the educational broadcaster. While some teachers make effective use of the radio as an instructional device, the majority would be aided and made more cooperative if they were instructed in the purposes and methods of the broadcast. In such a course the teacher should learn how to tune and operate the receiving set correctly. She should be informed of the worth-while educational programs available and how to keep informed concerning programs. She should be taught the value of visual aids, how to create student interest in the programs, and how to evaluate the effectiveness of such programs. Since one of the greatest problems of the teacher is how to obtain a receiving set for her classroom, various plans for earning or securing radios should be outlined. In many districts local stations do not carry educational programs; in such a class teachers can be shown how to arouse public demand for such programs. In many instances these teacher-students will return to their localities to educate their school officials to an appreciation of the educational opportunities offered by the radio. The teacher-training course should instruct the student how to tie-in the radio presentation with classroom work. Teachers must find out who is broadcasting and why before they bring any broadcast into the classroom. Teacher instruction can be given over the radio or in the summer-session classroom and will provide the teacher with background attitudes and broadcasting technique that will help her to use educational programs more effectively. A number of teacher-training institutions are offering such courses.

Research in the field of broadcasting is being conducted by many institutions. In some cases research is being carried on as a part of the regular radio classwork, and a number of universities and colleges in the

country are conducting surveys on various phases of broadcasting through other departments of instruction or through administrative divisions.

A Course for the Radio Educational Director.

During the summer session there are many teachers who anticipate an opportunity to become radio educational directors for their school systems or colleges. A seminar for them is much in demand. A broad education is necessary for the undergraduate who looks forward to this position, to be followed by teacher education and internship. The radio educational director should enroll in all general and specialized courses in broadcasting, including technical radio training. He should have experience both in teaching and in a broadcasting station before applying for the position of educational director. His or her position (a very large proportion of radio educational directors are women) entails a great variety of tasks.

1. *Planning Programs.* Developing, outlining, checking general plans, originating program ideas.
2. *Research.* Gathering data for scripts and program effectiveness; assisting graduate students with master's and doctor's theses.
3. *Script Writing.* Inspiring and editing programs of all types for both faculty and students.
4. *Program Directing.* Scheduling, casting, rehearsing, arranging sound effects, engineering services, obtaining music.
5. *Administration.* Taking charge of publicity, music clearance, copyright releases, public relations.
6. *Radio Contacts.* Obtaining time from commercial stations, inducing professional broadcasters to address class, begging for free equipment, obtaining continuity for classroom examination, arranging dates and hours for programs.
7. *Extramural Activities.* Giving extension talks, soliciting cooperation from schools and listening groups.
8. *Broadcast Participation.* Conducting interviews, talks.
9. *Library.* Reading everything on the subject of radio; clipping and filing worth-while material and ordering all new books and pamphlets; taking advantage of all offers of free material.
10. *Student Placement.* Building up a reputation and developing friends in stations so that graduating students may be placed.
11. *Instruction.* Teaching classes in broadcasting. There is a tendency under pressure of program production always to use those students who excel as actors and announcers and to neglect others who desire and deserve training. The director-teacher needs to remember that workshop classes are training schools, not professional studios.

The radio educational director is all the buttons. The responsibility and success of radio in education rests upon his or her shoulders. There is a need for trained directors in order that radio education will not be

neglected and that fine programs packed with information will be arranged, broadcast, and called to the attention of teachers.

Semitechnical Course.

Students who have been graduated after having taken courses in broadcasting find that, upon obtaining positions with small stations, they will be required to handle controls and transcription turntables in

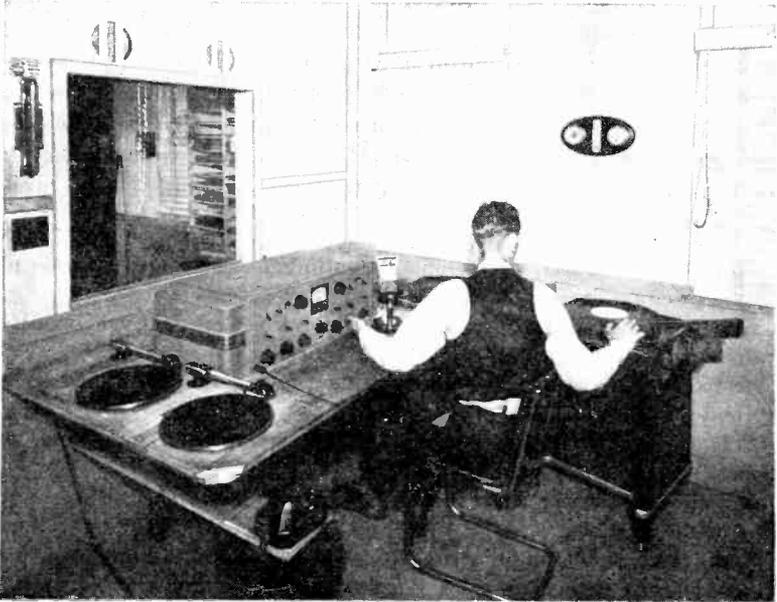


FIG. 44.—This illustration (an announcer in the control room of Station KGFW, Kearney, Neb.) shows how the employee on the "dawn patrol," as well as the announcer in a small radio station, must handle the controls, the transcription turntable, and announce the program all at the same time.

addition to serving as announcers (see Fig. 44). Such technical training has not been given to them in their speech courses. There is a definite place for a course of such a nature that would include a semitechnical understanding of the control board and handling of the technical side of studio production. The course would also offer instruction in the use of the transcription turntables, the making of recordings, and sound effects. A large proportion of those enrolled in such a course at the University of Michigan are teachers whose schools are equipped with public-address systems and recording equipment. Information is also given by the studio technician concerning frequency modulation, short-wave, television, facsimile, etc. Students enrolled in this course are generally given practical experience in handling auditions and rehearsals as well as in building

sound-effect equipment. Field trips to police broadcasting stations, visits to amateur short-wave operators, station transmitters, and studio-control rooms are interesting. Displays of recording equipment, radio, and public-address equipment are made by local dealers during the course. A library of catalogues from all manufacturers is easily built up.

Equipment to Be Used in Classes in Broadcasting.

The announcing booth and studio should be acoustically treated. The ideal size for a speaker's studio is between 2000 and 4000 cubic feet; the general purpose studio should be between 20,000 and 40,000 cubic feet. The treatment is best left to engineers provided by the various companies manufacturing acoustical materials, but note should be taken of the fact that the majority of acoustical plasters do not have sufficient sound absorption. It is best to avoid parallel and opposite reflecting surfaces, as these cause persistent reflections or flutter. Where two opposite walls are hard reflecting surfaces, they should be treated or the surfaces should be made saw-toothed in such a way as to disperse impinging sound. The floor is best covered with inlaid cork, rubber tiles, or a nonabsorbing material. There is a definite relation between the height (2), width (3), length (5), or 2, 3, 4. Thus a studio may be 20 feet high, 30 feet wide, and 50 feet long. Studios should not have low ceilings. It is advisable to have large double windows set in rubber between the studio and the classroom so that the students who are watching a rehearsal may observe the placing of speakers before the microphone and the making of sound effects. The control room is best placed in a corner of the classroom and raised above the level of both the studio, into which it should have windows, and the classroom. There should be windows between the classroom and the control room also so that students may observe the operation of control equipment. There should be a sound vestibule between the classroom and the studio. If possible, there should be a small room off the studio in which sound equipment may be kept.

The studio and classroom should be wired for high-fidelity public-address equipment (see Chap. XX), with broadcasting microphones both in the announcing booth and in the studio and less expensive talk-back microphones in the classroom as well as in the control room. There should be loud-speakers in the classroom and control room, as well as a speaker to be used for talk-back in the studio. The broadcasting microphones should include a velocity and either an eight-ball or salt-shaker. In the control booth there should be a transcription turntable arranged for both $33\frac{1}{3}$ and 78 revolutions per minute, with electrical pickup. This should be connected through the control board to the speakers in the classroom and in the studio, to be used in the studio for sound-effect recordings and in the classroom for playback for analysis. If possible an old microphone

should be reconstructed as a filter mike. Adequate mechanical equipment, including speakers, amplifiers, microphones, turntable, console, etc., should not cost more than \$925. A sound table may be built by students and such recordings as may be obtained should be card-indexed. The sound recordings should include mood music, transitional music, general sound, and general musical records. If the studios are to be used for voice recording as well as for teaching of radio speech and dramatics, instantaneous sound-recording equipment as described in the chapter

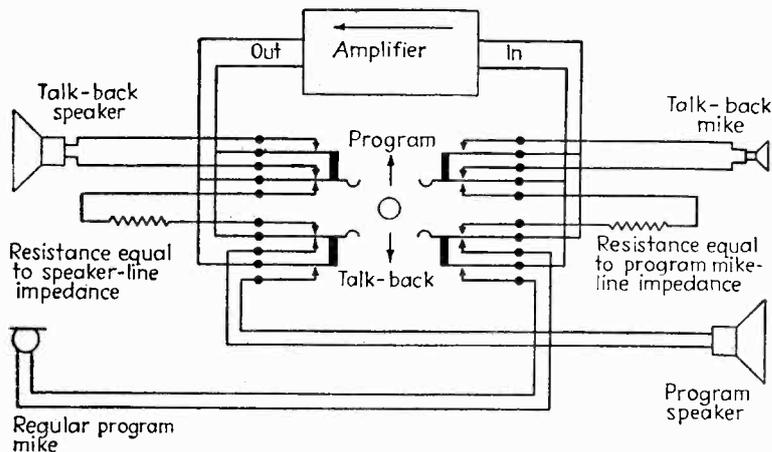


FIG. 45.—Diagram of talk-back wiring.

on Public-address and Sound-recording Equipment in the Schools should form a part of the teaching equipment.

Students in physics or in electrical engineering can do much in the building of equipment. The following plans and instructions dealing with the talk-back system, an inexpensive microphone for talk-back, enlarged volume indicator, and variable-speed turntables can be built by students, as well as many of the manual sound effects.

Talk-back Microphone. A program director who has a talk-back setup will be able to hear his rehearsal as it will sound over the air and be able to give his directions and comments to the cast as he hears it. Ordinarily, this would require two amplifiers. However, under the following arrangement the director may interrupt the rehearsal and use the same amplifier for his talk-back microphone. Materials needed are: a special switch, a talk-back microphone, a talk-back speaker, and some miscellaneous small parts such as wire, plugs, and perhaps a box to mount the switch in. The diagram (Fig. 45) shows how to hook up the circuit of such a system.

A satisfactory microphone for such a talk-back system can be made from an ordinary 3-inch permanent-magnet loud-speaker. All the parts

necessary for the microphone unit and the connecting transformer may be purchased for approximately \$4. The speaker, transformer, and plug are obtainable at any radio supply house. A lathe tool handle, or a good file handle purchased from a hardware store, makes a convenient handle, and a small aluminum dime-store saucepan, $3\frac{3}{4}$ inches in diameter and $1\frac{3}{4}$ inches deep, will serve as a microphone case. (A drum of sheet metal was used in the microphone illustrated in Fig. 46.) A few small bolts and nuts, a $\frac{1}{8}$ -inch pipe nipple $1\frac{1}{4}$ inches long, a little solder, a small piece of sheet metal, and a small piece of wood 4 by 4 inches and $\frac{1}{4}$ inch thick complete the list of necessary parts.

The speaker that you purchase will probably have a square flange with mounting holes in the flange. In order to keep the case small, it will

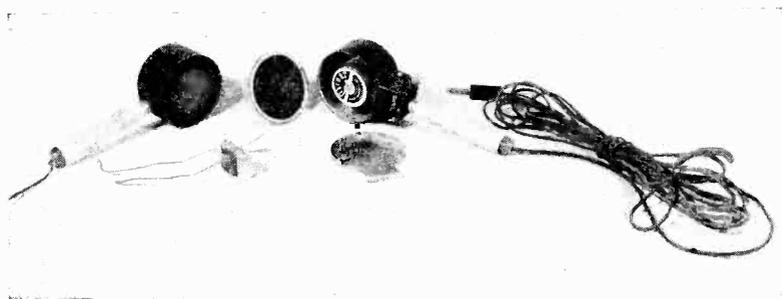


FIG. 46.—Inexpensively constructed talk-back microphone.

be more convenient if the square flange is cut off with a pair of tin shears. It will then be necessary to drill and tap three holes in the speaker, or, if the tools are not at hand, small machine screws and nuts may be used. Remove the handle and the knob from the cover of the pan by drilling the rivets out. Holes drilled in some regular pattern in the bottom of the pan form the protecting grid for the speaker. A piece of silk or rayon placed over the face of the speaker and held there by a drawstring protects the paper cone from dust and moisture.

The speaker may now be fastened in place, face down, in the bottom of the pan. Drill a hole through the wooden handle large enough for the cord. In the end of the handle next to the pan drill a hole slightly smaller than the $\frac{1}{8}$ -inch pipe nipple so that the nipple can be screwed into the wood, making a tight fit. The other end of the nipple can be soldered, threaded into, or held by two nuts to a small piece of sheet iron. (Since the aluminum is very thin, it is necessary to reinforce it where the handle is fastened to the pan.) The metal plate is then bolted to the pan. If the depth of the speaker is such that the cover of the pan will not go in place, a wooden ring can be used to increase the depth of the pan. Small wood screws will hold the cover and the ring in place. A machine screw placed

in the hole left by the removal of the wooden knob from the cover improves the appearance. Run the two-conductor cable (rubber-covered lamp cord is very satisfactory) up through the handle and solder one end of each wire to the speaker terminals. Tie a knot in the cord or wind some tape around the cord so that, when the cord is pulled, the strain will be taken by the handle and not by the speaker terminals. The cover can now be fastened in place. If you have a fine wire buffing wheel, the shine on the aluminum may be removed and a very pleasing brushed finish obtained by subjecting the pan to treatment by the buffing brush. After placing a suitable plug on the end of the cord (whatever length you need), your microphone unit is complete.

The transformer should be placed in the circuit, in the amplifier, or near it. Care must be taken in selecting its location. If placed near a power transformer, the system will have a very annoying hum; therefore, keep it away from power transformers. Perhaps it will be necessary to place the transformer outside the amplifier case. The location must be selected by trial. The transformer may be placed in the microphone housing if the housing is made large enough to accommodate it (as illustrated, Fig. 46). In this case a shielded two-conductor cable will be necessary instead of the lamp cord. The hum problem will be lessened but the weight of the microphone will be increased. The transformer may have a switch on it or it may have several taps. The proper one to use is the one which gives you the greatest volume. In general this will be the one which gives the transformer the highest turn ratio.

If you desire a stand microphone instead of a hand microphone, the only changes necessary will be to mount the microphone on top of a stand instead of fastening it to a handle. Of course it is much nicer to purchase an inexpensive aerodynamic microphone of the pressure type.

An Enlarged Volume Indicator.

It is very helpful to a person practicing before a microphone to know when he is too close or too far away. Usually the only way to get this information is from someone else, who is either listening or watching the volume indicator on the control board. This handicap is eliminated by the use of the enlarged volume indicator to be described (see Fig. 47).

Essentially this meter consists of the movement of an ordinary volume-indicator meter, behind which is mounted an automobile head-light bulb so that, as the meter needle swings, the needle shadow is cast on a ground-glass screen. The entire mechanism is housed in a metal box and is mounted on the wall in the studio in a place convenient for the student to observe his own volume level as he practices.

Anyone who is gifted at making things and is a careful workman can make and install a similar meter. The necessary parts are: A volume-

indicator meter; a 50-candle-power automobile-headlight bulb; a 6.3-volt radio filament transformer capable of carrying at least 5 amperes (Thor-darson transformer T 19F98 is satisfactory); a 3- by 7-inch piece of ground glass; one piece of 24-gauge galvanized iron 7 by 30½ inches; two pieces of 24-gauge galvanized iron 7¾ by 8¾ inches; one piece of sheet zinc or aluminum 9 by 7 inches (this is easier to cut than sheet

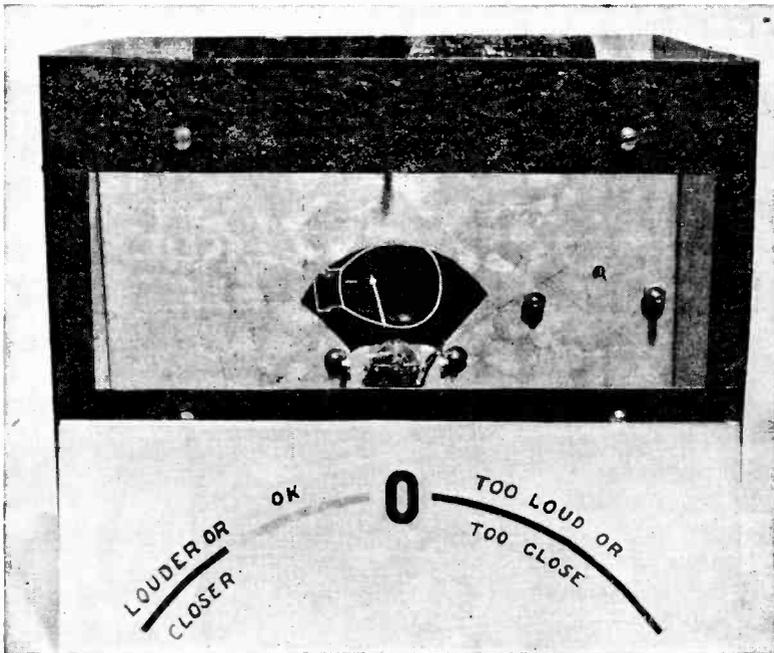


FIG. 47.—Enlarged visible volume indicator for teaching studio.

iron—otherwise sheet iron is all right); electric switch, cord, and plug, wire, solder, miscellaneous nuts and screws.

The meter needs a little revamping before it can be used. Remove the meter case and you see a magnet and the meter movement. The magnet as it is placed in the meter will cause a shadow on the screen and block out the shadow of the pointer at some positions; so loosen the two small screws and turn the magnet down. After cutting a hole in the 9- by 7-inch piece of metal and bending the ends, mount the meter with two small machine screws.

The 7- by 30½-inch and the two 9- by 8-inch pieces of metal are bent and cut to make the box. The headlight bulb, which is outlined in the illustration (Fig. 47), is mounted in a ½-inch piece of bakelite. The ground-glass screen (removed from its frame in the photograph) is held in place by two wooden strips fastened by six No. 32 machine screws. The ground side

of the glass should be on the outside. The meter panel should be mounted last in assembling the unit so as to avoid damage as much as possible. After the assembly and wiring are completed, the unit is ready to be connected to the amplifier. Since there are so many makes and kinds of amplifiers it is very hard to give directions for connecting the volume indicator. Therefore, unless the services of one familiar with radio circuits is available, it is recommended that you secure the services of your local radio service man for this purpose.

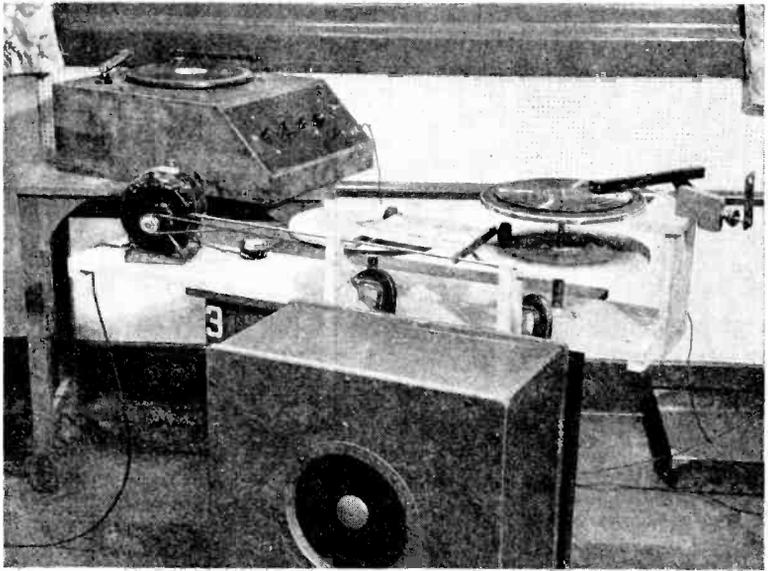


FIG. 48.—Student-constructed variable-speed turntable.

A Variable-speed Turntable. The variable-speed turntable consists of an arrangement of three turntables (propelled by an electric motor) so that the turntable upon which the record rests can be speeded up or slowed down gradually or abruptly, as the operator desires. Figure 48 shows this variable-speed turntable. The two turntables to the right are on the same stem; the top table is cloth-covered and carries the record. The lower two turntables are on the same level, the first being revolved by the power supplied by the electric motor and the second turntable being revolved by the right wheel of the car (which rides on the bar in front), which in turn receives its power from the left wheel, which rests on the first turntable. The operator increases the speed of the third table by moving the car along the bar to the right. As the car moves from left to right the wheel on the first turntable is revolved by the faster outer edge of the turntable; the wheel on the turntable to the right rests near

the center of the second table, increasing its speed and turning the second and third turntables faster as the wheel approaches the center of the second turntable.

The building of a sound wagon should be within the ability of many high-school science and manual-training departments. Briefly, a sound wagon consists of a rectangular box mounted on noiseless castors, with two or more electrically driven turntables accommodating 12- or 16-inch sound-effects transcriptions, with high-fidelity phonographic pickups having about 14-inch arms, a high-fidelity amplifier of from 8 to 10 watts output mounted on the floor of the box, a high-fidelity loud-speaker (preferably one of the heavy-duty, PM type) mounted in the front of the box, and balanced-impedance attenuators for varying the volume of either pickup. A substantial door in the side nearest the operator and another on the left end will be useful additions, and drop leaves at each end provide space for records when raised.

The studio should be equipped with a large electric wall clock with a second hand. A good stop watch is also valuable equipment. The classes should be organized to conform with the organization of a broadcasting station and in accordance with the chart (Fig. 49). A minimum library for the teacher of broadcasting is given in the General References on page 393.

Forms, Records, Logs.

A duty that perplexes the student of radio who enters the radio profession after graduation is the keeping of station forms. Students should practice filling in these forms in all their experimental broadcasts, whether these are over public-address systems in a studio, or actual radio presentations. A log is a record of every minute of broadcasting, including all errors—an accurate journal required by law of all broadcasting stations.

When the announcer has checked in at the studio, he studies the log for the day. (See chart on page 289.) In the first column are the initials of the announcer who is to take charge of the program. In the second column is the time at which the program is to be presented. In the third column is the title of the program. The fourth column informs the announcer whether the program is to be transcribed upon discs revolving at $33\frac{1}{3}$ revolutions per minute or upon recordings at 78 revolutions per minute or, if it is to be a live program, in which studio it will originate. If the program is to be a network program, this information is also given in this column. The fifth column tells whether the program is sustaining, sponsored, or a participating program.

After ascertaining the programs he is to announce, the announcer next refers to the daybook, which contains the commercial copy that he is to deliver upon each one of his programs. Adequate space is left in the center of this form for the "spot," "1-minute," "100-words," "station-

tions keep time charts of competitor stations in the same town so that they can easily see what other stations have on the air at the same time that a program is being presented over their station. Traffic is really a separate job in the broadcasting station.

The librarian who is in charge of transcriptions is required to keep a transcription cue sheet which he makes out after playing the record upon his play-back equipment. Such a cue sheet takes the form shown in Fig. 52. A report is made by the accounting department of the station, by the program or production director, or by the announcer in charge of the program. It is essential that this production report (Fig. 53) be kept ac-

ORCHESTRA		REN.	AIR	PRODUCTION REPORT				DAY	DATE	TO ACCOUNTING
Director				(AUDITION)						
1st Violin				PROGRAM (STANDBY)						
2nd Violin				ORCH	REN	TIME	ON	M	OFF	M
Viola										
Cello										
Bass										
Flute										
Oboe										
Clarinet										
Bassoon										
Tuba										
Percussion										
Saxophone										
Horns										
Trumpet										
Coronet										
Trombone										
Banjo										
Xylophone										
Celeste										
Harp										
Piano										
Organ										
Accordion										
TOTAL										

FIG. 53.

curate. In many broadcasting stations the actors, artists, musicians, and other participants are paid in accordance with the record of performance. Failure to give an exact list of all participants causes great confusion in the accounting department. This log is kept for both the rehearsal and the air performance and a copy of the script or continuity is usually attached to the form. A second production report (Fig. 54) lists all musical selections used, the rehearsal time of each number, and the actual broadcasting time of each selection. Such a report is vital in case of controversies over the use of copyright or restricted selections and also avoids the too frequent repetition of selections. This report goes to the music department. A similar performance record is used in making a permanent timing record of music; It serves to indicate the time taken by each standard piece of music and by each particular arrangement. Thus by referring to a program record, one can easily arrange a program that is accurately timed.

UNIVERSITY OF MICHIGAN
AUDITION EVALUATION CHART—RADIO SPEECH

Student's Name _____

Title of Material _____

Date _____

This chart is for negative criticism only. Study example of criticism given. Use proper index letter and list error or fault.

The voice			Material	
Enunciation; pronunciation	Quality	Variety	Delivery; interpretation	Introduction
(a) Slovenly (b) Finals dropped (c) Bad syllabants (d) Local accent (e) Mispronunciation (List words mispronounced below)	(a) Too thin (b) False tone (c) Muffled (d) Throaty (e) Nasal (f) Breathy (g) Colorless	(a) Monotone (pitch) (b) No emphasis (c) Poor word grouping (d) Too uniform rate (e) Overinflection (f) Jerkiness (g) Precise (h) Meter	(a) No spirit (b) Overdramatic (c) Too fast (d) Too slow (e) Antagonizes (f) Not conversational (g) Hard to follow (h) Nervousness (i) No personality (j) Wrong emphasis (k) Inappropriate spirit	(a) No interest (b) Involved (c) Doesn't introduce (d) Scene not clear <i>Material</i> (e) Wordy (f) Poor construction (g) Involved sentences (h) Uninteresting (i) Bad development (j) Poor radio diction
Example (b) Smilin(g)	(b) High	(d)	(i) Cannot visualize speaker	(g) Too many modifiers

Comments:

FIG. 56.

In case any original musical selection or arrangement which has not been cleared is used, a release of the following type should be signed by the composer before the broadcast.

WJR—The Goodwill Station,
Fisher Building,
Detroit, Michigan.

DEAR SIRs:

I am the creator and owner of the following composition(s): _____

and I hereby grant to you and your affiliated radio stations the right to broadcast such composition(s), without fee, until 30 days' written notice to you of revocation, and to make arrangements and transcriptions thereof and to broadcast the same. In consideration of your cataloguing such composition(s) as available for broadcasting, I agree to hold you, your affiliated stations, sponsors, agencies and others making use of such composition(s) under this license free and harmless from any and all claims arising out of any such use hereunder.

Yours very truly,

Because of the care with which radio stations protect themselves from suits resulting from the unauthorized use of copyright selections, a careful record is kept of every musical selection presented by live talent or upon a transcription. A list of all selections to be used must be filed well in advance of the program so that they may be cleared (copyright released). Evidence of such clearance and of performance are recorded upon the music Record of Programs (Fig. 55).

Audition logs are kept by stations for radio performers. Such logs list the voice qualities, parts for which the performer is acceptable, and other records for the benefit of the dramatic or musical director or for the chief announcer. At the University of Michigan the audition card shown in Fig. 56 is used for students; however, a blank sheet of paper will serve the purpose.

CHAPTER XXV

The Law as It Affects Broadcasting

In 1909, Enrico Caruso sang into a megaphone, with a vibrating diaphragm at its apex, located upon the stage of the Metropolitan Opera House in New York. A telephone line carried his voice to Lee B. De Forest, in his laboratory on the bank of the Harlem River, who took the telephoned music from the first remote-control wire in history and put it into the air. Wireless operators on ships reported that they had heard fragments of Caruso's voice through their earphones. For nearly ten years after this initial broadcast anyone who wanted to could set up broadcasting equipment upon any wave length desired. However, shortly after the Armistice the government was induced to take over the control of the air—to allot wave lengths and to control their use. The Department of Commerce had been commissioned to control radio under the Marine Act of 1912. This act broadly covered the regulations for the use of wireless in the United States and placed the licensing power for the transmission of broadcasts with the Secretary of Commerce. A controversy arose, however, as to whether the Secretary of Commerce had the right to regulate the time that the stations he licensed were to be on the air. This question was submitted to the Attorney General of the United States and his opinion concerning the Act of 1912 was that it was a "direct legislative regulation of the use of wave lengths" and that the Secretary of Commerce did not have the authority to regulate the amount of power a station might use, the time it might operate, or the frequencies it might occupy.

The government realized the need for a unified system of regulation of radio and therefore the Radio Act of 1927 was passed and the Federal Radio Commission established. The source of authority was found in the Constitution, which conferred upon Congress the right to make treaties with other nations and to carry them into effect by appropriate legislation, to establish post offices and post roads, to declare war, and to regulate commerce with foreign nations and among the several states. It was decided by the courts that the transmission of intelligence is commerce. Early cases decided that the national government had exclusive jurisdiction over radio and that state or local government could not tax receiving or transmitting equipment.

The Radio Act of 1927 functioned quite efficiently, but with the growth of the industry a new law was needed which would be more explicit in its regulation of broadcasting. The Radio Act of 1927 was designed primarily for the regulation

. . . of all forms of interstate and foreign radio transmissions and communications within the United States over all the channels of interstate and foreign radio transmission; and to provide for the use of such channels, but not the ownership thereof, by individuals, firms, or corporations, for limited periods of time, under licenses granted by Federal authority, and no such license shall be construed to create any right beyond the terms, conditions, and periods of the license.

The Radio Act of 1927 also provided for the creation of a body of five members, to be known as the Federal Radio Commission.

Briefly, its duties were to (1) classify radio stations; (2) prescribe the nature of the service to be rendered by each class of licensed stations; (3) assign bands of frequencies or wave-lengths to the various classes of stations, and individual stations, and determine the power which each station shall use, and the time during which it may operate; (4) determine the locations of stations, or classes of stations; (5) regulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions of each station and from the apparatus therein; (6) make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this act.

One of the first acts of the Federal Radio Commission was to assign the region in the radio spectrum from 500 to 1500 kilocycles to commercial broadcasting; later it made three high-fidelity channels available for a combined experimental-commercial use—1530, 1550, and 1570 kilocycles. It also divided the country into seven radio zones and decided what frequencies and powers should be available in those zones. The following classification of radio stations has now been established: (1) clear-channel, consisting of frequencies on which only one station may operate; (2) high-power regional, which is usually not less than 5000 watts and shares frequency with some other station in a distant part of the country; (3) regional, not less than 250 watts and usually 1000 watts at night and 2500 in the daytime; and (4) local, having 50 to 250 watts. The commission may also give the following time designations to stations: (1) unlimited, (2) limited, (3) daytime only, and (4) sharing time with another station.

On June 19, 1934, the Congress of the United States approved the Communications Act of 1934, which broadened the scope of Federal control over communications so as to include telephone and telegraph as well as radio communication. This act also provided for certain changes

in the commission itself, but left the radio laws essentially as they were defined by the Radio Act of 1927. The Communications Act of 1934 was based upon three fundamentals: first, the air should be public property; second, the radio industry should be privately owned and operated; and third, free speech on the air should be preserved. These principles were incorporated in Title Three of the Communications Act of 1934.

Although the Radio Act specifically says that the Federal Radio Commission is to exercise no censorship over broadcasting, the commission has been able to exercise a large degree of censorship. This is because of the requirement that a station must be operating in the public interest, convenience, and necessity before its license can be renewed. Thus, if a station has not lived up to the requirements placed upon it by the commission, when the station wishes to renew its license, the commission can decide that the station is not operating in the public interest, convenience, and necessity, and so deny the application for renewal. The commission has been upheld in cases involving this very point.¹

There was a provision in the new law, as there was in the old one, that in the case of national emergency, all the wire and radio services could be taken over by the government. (This was done after the United States had entered the First World War.) The President was given the power to take over these services but was required to give the employees just compensation for their services.

The 1934 act provided for the Federal Communications Commission to be composed of seven men appointed by the President with the advice and consent of the Senate, each serving for a term of seven years. The stipulation was made that not more than four of the men on the commission should be members of the same political party. At the inception of the act the members of the first commission were appointed for staggered terms so that only one member of the commission would retire each year. One of the changes that the later law made was that of authorizing the commission to issue radio licenses for a period of three years instead of six months, as had been allowed under the act of 1927. The act also forbids the conducting of lotteries over the radio.

The first duty of the F.C.C. is to supervise the granting of licenses to applicants for radio stations, in order to assure good, strong radio signals, tolerably free from interference, to all sections of the United States. This involves the assignment of the number of electromagnetic waves sent out per second over the air by a transmitter, commonly known as frequencies. This is an engineering problem and requires the applicant to prove to the commission that its requested frequency will not interfere

¹ See *KFAB Broadcasting Association v. Federal Radio Commission*, 47 F. (2d) 670; and *Trinity Methodist Church, South, v. Federal Radio Commission*, 62 F. (2d) 850; 60 App. D. C. 311.

with any other station using the same wave length. Surveys are made by engineers employed by the applicant and the results are considered by the technical staff of the commission. This power to regulate the granting of licenses is probably the most important duty of the commission.

The Communications Act of 1934 applies to all interstate and foreign communication by wire or radio which originates in the United States or which is received within the United States, and to the licensing and regulation of all radio stations. Not only does the Federal Communications Commission regulate the standard-broadcast stations, but it also has control of those that are designated as relay, international, television, facsimile, high-frequency, development, and noncommercial and educational stations.

In connection with this supervision of the technical details, the commission has the power to approve or disapprove proposed mechanical equipment to be used by a station and the location of the antenna, and it may require the use of directional antennas in the case of interference. Application forms for the different types of broadcasting are obtained from the commission and they are very penetrative in their technical requirements. Various prerequisites are set down for good standards which must be complied with by the station.

In receiving application for a radio station, the F.C.C. requires a vast amount of data. Not only does it insist that the applicant set forth all the equipment that will be used by the proposed station, but it desires to know about the location of the transmitter and the property rights of the applicant in the ground upon which the antenna and transmitter are to be located. The applicant's profession or occupation must be thoroughly outlined, particularly because no alien is permitted to be the owner of a broadcasting station. If the applicant is a corporation, all the facts concerning the incorporation, stock, sales, etc., must be set forth. It must be shown that the station will be self-supporting; consequently, even before the license is granted, tentative contracts must be entered into between the applicant and local concerns which agree to broadcast commercial programs. A complete statement of the anticipated income and the cost of operation must be submitted. Typical program schedules for a week are required. Before the application will be accepted the necessary funds for the building and equipping of the station and for its maintenance must be placed in escrow. The applicant must submit its proposed wave length or frequency and request a power assignment. Letters are generally obtained from all civic bodies pointing out that the proposed station will serve public interest, necessity, and convenience. The population of the city in which the station is to be located must be given, together with its annual sales and bank clearances. Surveys must be made of ground conditions in the location where the transmitter is to be built, because

these affect the signal. Other stations which are on the same frequency are permitted to file exceptions to the granting of the application. At present it is extremely difficult to obtain a license for a radio station in the standard band; however, as a result of the Havana Conference and the shifting of frequencies, additional openings will be available. Approximately the same procedure must be followed in applying for one of the new frequency-modulation stations, either in the commercial band or in the educational band.

There are two ambiguous phrases which really are the basis of radio law: first, "power to determine whether or not a radio station is acting for public interest, necessity, and convenience," and, second, "no person within the jurisdiction of the United States shall utter any obscene, indecent, profane language by means of radio communications." If it is found by the commission that the area which should be served by the proposed station is already well served by other stations, public necessity and interest would not demand the establishment of a new station. It must be shown by the applicant not only that commercial programs are to be broadcast, but that there will also be public-service programs of interest to the particular locality. Just what types of programs satisfy public interest and necessity is not known. The terms "profane" and "indecent" have been far from positively defined by the courts, legislature, or commission, much to the dismay of broadcasters. Whether words such as "damn" and "hell" and expressions such as "My God!" are considered to be profane depends much upon the way they are uttered and used. That the Federal Radio Commission had the right to prohibit the use of obscene language over the radio was established in the case of *Duncan v. U.S.*¹ Matters of indecency in many instances depend upon the presentation. Stations are inclined to lean over backward in order to avoid censorship in these respects. The commission is a quasi-judicial body and all complaints against any radio station in the United States are referred to it. These complaints most often come in letters from the listening public or from the field staff which the commission maintains for this particular purpose. When a complaint is received, if it does not demand immediate attention, it waits until the six months' period for which the station is licensed has expired and the station in question has come up for relicensing. When such a hearing is held, the legal staff of the commission sits as judges to decide whether or not the license should be refused, or what action should be taken. The decisions of the commission may be appealed to the Court of Appeals of the District of Columbia and then to the Supreme Court of the United States. This, however, is very seldom done for the simple reason that the industry has adopted the attitude of peace at any price.

¹ 48 F. (2d) 128 (1931).

The commission considers applications for licenses, for the renewal of licenses, for the modification of such licenses, and for the transfer of a license. It has laid down regulations for the use of facilities by candidates for public office. It requires a radio station to make clear that broadcast matter of a commercial nature is paid for by the advertiser. It grants separate licenses for mobile service. The commission determines whether material may be originated on a foreign soil and carried by remote control to an American station to be broadcast, as well as whether such material may be taken across the border from the United States and broadcast by a foreign station. It does not permit a station to pick up a program being broadcast by any other station and rebroadcast it without the written consent of the originating station and of the commission. It has the power to determine whether programs in other than the standard band may be of a commercial nature. Recently it determined that short-wave programs might be commercial and set aside a band in the frequency-modulation allotment for commercial broadcasts. The commission has gone so far as to determine when television sets can be justifiably marketed for the reception of television programs. All operators obtain their licenses from the Federal Communications Commission. There is very little difference in ruling by the present commission with regard to sustaining programs originating in an educational institution and commercial programs originated by an advertiser. It seems to be the attitude of the present commission that educational programs advertise the educational institution and are therefore in the same category as any advertising presentation.

In connection with the condemnation of the content of the commercial radio program, the advertising matter is considered by the Federal Trade Commission, which is not a part of the Federal Communications Commission, but is a separate governmental agency supervising the truthfulness of advertising material. If the radio station is found to be giving commercial programs which do not conform with the standards of advertising set down by the Federal Trade Commission, its license may be revoked. This happened in the case of a doctor who used a radio station to give medical advice of doubtful value over the air.

In order to eliminate international interference on standard-broadcast channels, the North American Regional Broadcasting Agreement called for the reallocation of frequencies in the United States, Canada, Cuba, and Mexico. This agreement was drawn up in the form of a treaty dated December 13, 1937. Although it was ratified by the first three countries, it was not until 1940 that Mexico ratified it. The terms of the agreement governed the distribution of the 106 channels in the broadcast band, ranging from 550 to 1600 kilocycles. This agreement requires the shifting of frequencies of 777 of the 862 American stations.

Radio Libel.

There have been two types of laws concerning defamatory remarks. These may be classified as libel and slander. The main distinction between the two is that libel is written and slander is oral defamation. Libel is considered the more serious of the two. For libelous utterances a man can, in most states, be held criminally liable, while for committing slander he is accountable only for civil damages. These laws have their basis in the old common law, and at the present time every state in the Union has legislative statutes concerning slanderous and libelous remarks.

With the advent of the radio, a whole new field was made available to which the laws of defamation could apply. The first case for defamation by radio did not arise until twelve years after the introduction of broadcasting on a commercial scale in the United States. In 1932, Station KFAB, located in the state of Nebraska, allowed a political candidate to speak over the radio. The station had been compelled to allow him to speak by a provision in the Federal Radio Act of 1927 which made it mandatory for a station to give to each of rival candidates an equal opportunity to speak over its facilities. KFAB had allowed Mr. Sorenson, who became the plaintiff in the subsequent suit, to speak, and it therefore had to permit Mr. Wood, who became a codefendant with the radio station in the suit, to speak also. This same provision in the Federal law prevented the radio station from exercising any censorship over Mr. Wood's speech. Mr. Wood spoke and uttered defamatory remarks about Sorenson, who thereupon sued both Wood and the broadcasting station.

In the case of *Sorenson v. Wood and KFAB Broadcasting Co.*,¹ the Supreme Court of Nebraska applied the same defamation doctrine to the radio station that applies to the newspapers. It held that the station was jointly liable with the actual defamer. In this connection the court said:

The publication of a libel by a radio to listeners over the air requires the participation of both the speaker and the owner of the station. The publication is not completed until the material is broadcast.

This is exactly the same doctrine that applies to defamation by publication in newspapers. The court also declared at the same time that, as in the case of newspapers, defamatory remarks over the radio constituted libel and not slander.

The fundamental principles of law involved in publication by a newspaper and by a radio station seem to be alike. There is no legal reason why one should be favored over another or why a broadcasting station should be granted special favors as against one who may be the victim of a libelous publication.¹

¹ 123 Neb. 348, 243 N.W. 82 (1932).

In the answer to the defense of KFAB that the Federal statute prevented the station from censoring the speech of Wood, the Nebraska court held that this statute merely prevented the station from censoring words as to their "partisan or political trend," but did not give the radio station the right to "join and assist in the publication of a libel." The significance of this decision is that *Sorenson v. Wood* declared that defamatory language broadcast by a radio station is libel rather than slander, and that, as is true with newspapers, due care and honest mistakes do not relieve a broadcasting station from liability for libel. While radio defamation is oral in its inception, it is more akin to the common-law libel action, for in the preparation of a program a great deal of deliberation is required and a broadcast results in a very wide dissemination of the defamatory material. The fact also must be taken into account that many programs are now transcribed before going on the air and many are cut directly from the air, thus making it possible to retain the defamatory matter in permanent form to be disseminated at will.

The next important case along the same line was that of *Miles v. Louis Wasmer, Inc. et al.*¹ In this case, Louis Wasmer, Inc., the owner of Station KHQ, had sold time on the air to an organization crusading in the interest of prohibition. In the defamatory remarks, read by an announcer of KHQ, it was strongly implied that the local sheriff had been confiscating stills and then reselling them at a very low price, thus allowing other "moonshiners" to start up cheaply. Miles, the sheriff, brought suit against the radio station, the announcer, and the author of the defamatory passage. The Washington court, in awarding the decision to the plaintiff, quoted approvingly the principles declared in *Sorenson v. Wood* and added:

It seems to us that there is a close analogy between the words spoken over the radio station and libelous words contained in a paid advertisement in a newspaper. The owner of the station furnished the means by which the defamatory words could be spoken to thousands of people.²

The third suit of importance on the question of defamation is that of *Coffey v. Midland Broadcasting Co.*³ In this case the Midland Broadcasting Co., owning Station KMBC, had broadcast defamatory remarks against Coffey. KMBC was an outlet for the Columbia Broadcasting System and had broadcast these remarks as part of a chain program sponsored by Remington Rand, Inc. The defamatory remarks had been spoken into the microphone in New York by an employee of Remington Rand, Inc., and carried over telephone circuit to KMBC, from where

¹ 172 Wash. 466, 20 Pac. (2d) 849 (1933).

² 172 Wash. 466, 20 Pac. (2d) 849 (1933).

³ 8 F. Supp. 889 (1934).

they had been sent out over the air. All three participants in the program were sued. This suit was also decided in favor of the plaintiff. This decision carried the case one step further than *Sorenson v. Wood* and *Miles v. Wasmer* and placed the liability on the outlet chain station—or rebroadcaster—as well as on the station where the defamatory remark originated.

There is a legal tendency to establish a distinction between broadcasts which are extemporaneous and those in which the speaker reads from a script (reading aloud has been considered libel since 1610). The most apparently unjust cases of liability are those that result when a speaker to whom air time has been rented departs from the previously submitted and approved script and utters defamatory remarks. It would seem that a radio station should be protected if due care is used, but this doctrine can be invoked only when the courts depart from the application of libel and slander to broadcast defamation and this they have not seen fit to do.

As to remarks uttered by a party who is speaking extemporaneously or ad-libbing if defamatory remarks are made, whether they are true or not, the station's liability seems definite, for, say the courts, the station is negligent in not having demanded a script to be examined before the broadcast. Absolute liability, based upon the same reasoning, also follows when defamation overlooked by the station is included in a previously submitted script. In those programs which are essentially impromptu, such as current events, sporting contests, parades, etc., the station's liability also exists.

The sponsor of a commercial broadcast is liable, as are each and every other person and station which participated in the defamatory broadcast.¹ One of the difficulties in prosecuting a defamation action, as shown in the *Boake Carter* case, is to effect service on the proper parties. In this case the broadcast was heard in New Jersey and the plaintiff attempted to sue jointly a nonresident news commentator, a nonresident sponsor, and a nonresident network system, all of whom were domiciled in different states. The plaintiff would have to sue only certain defendants or start a suit against each separately.

The so-called rules of privilege and fair comment are important in political campaigns. A statement must be recognized as comment and not a statement of fact.² Criticisms may, under these rules, be made of authors and their works, composers, public officials, candidates for public office, and other persons in the public eye. Such broadcasts, however, must not go beyond the limits of criticism and opinion by attacking the motives or character of such persons.³

¹ *Hoffman v. Boake Carter*, 187 Atl. 576 (1936); *Locke v. Benton & Bowles*, 165 Misc. N. Y. 631; 1 N. Y. Supp. 2d 240 (1937).

² *Foley v. Press Publishing Co.*, 226 App. Div. N. Y. 535 (1929).

³ *Irwin v. Ashurst*, 74 P. 2d 1127 (1938) (Ore.).

In addition to the court decisions declaring defamatory remarks over the radio to be libel, four states (California, Illinois, North Dakota, and Oregon) have statutory provisions that do this.

Music.

A number of years ago, in a case having nothing to do with radio, that of *Herbert v. Shanley Co.*¹ the Supreme Court decided that a performance of a musical composition or any other copyrighted article was a performance within the meaning of the law so long as it was performed with the purpose of gaining some profit, whether that profit was gained directly or indirectly.

The first case concerning the violation of the copyright laws by a radio station was that of *Wilmark v. Bamberger*² in 1923. In that case the court decided that the broadcast of a copyrighted song by a radio station constituted a public performance for profit. In 1924, Jerome H. Remick & Co. brought suit against the American Automobile Accessories Co.³ for using its copyrighted songs, unauthorized, over the air. In this case the musician was an employee of the station, which was owned by the defendant. The court held that broadcasting a copyrighted musical composition by an artist employed by the broadcaster was an infringement of the copyright laws "where the purpose was to stimulate the sale of radio products."

In 1926, in the case of *Remick & Co. v. General Electric Co.*,⁴ the application of the copyright laws to radio was carried still further. In this case the court decided that the station was liable even if the performer was not an employee of the station, that is, the station was liable on the ground of contributory infringement, it having contributed to the performance by transmitting the composition over the air.

The most important and significant decision, however, in the realm of copyright laws and the radio was that of *Buck et al. v. Jewell-LaSalle Realty Co.*,⁵ decided in 1931. The defendant in this case was the owner of a hotel that had installed radio loud-speakers in all its guest rooms. These loud-speakers were connected with a master receiving set in the hotel. This master set picked up the broadcast of a radio program on which were broadcast compositions whose copyrights were owned by the American Society of Composers, Authors, and Publishers. The radio station

¹ 242 U.S. 591; 61 L. ed. 511.

² 291 Fed. 776 (D.C.N.J. 1923).

³ *Jerome H. Remick & Co. v. American Automobile Accessories Co.*, 5 F. (2d) 411: 40 A.L.R. 1511.

⁴ 16 F. (2d) 829 (S.B.N.Y. 1926).

⁵ 283 U.S. 191; 51 Sup. Ct. 410; 75 Led. 971; 76, A.L.R. 1266. *Buck v. Jewell-LaSalle Realty Co.*, *supra*.

had not been authorized to broadcast these compositions; and Buck, acting for the ASCAP, had repeatedly warned the radio station against doing this and had also warned the hotel against distributing the programs over its loud-speaker system. When the broadcasts continued, Buck brought the action. In a historic decision, the Supreme Court of the United States held that:

The acts of a hotel proprietor, in making available to his guests, through the instrumentality of a radio receiving set, and loudspeakers installed in his hotel and under his control, and for the entertainment of his guests, the hearing of a copyrighted musical composition which had been broadcast from the radio transmitting station constituted a performance of such composition within the meaning of the copyright laws.

It is on this case of *Buck v. Jewell-LaSalle Realty Co.* that the ASCAP bases its present policy of control over the copyrights that it holds on musical compositions.

The American Society of Composers, Authors, and Publishers is an unincorporated organization made up of music composers and a certain number of music-publishing houses. The individual members and publishers in this voluntary society own the copyrights and merely assign the performing rights to the society. The society negotiates for the sale of licenses to use the music and takes care of the collection of fees and other details of making available to orchestras and other performers, including radio stations, the music held by the society's members. The American Society of Composers, Authors, and Publishers has worked out a price scale that has proved, in the main, satisfactory to all concerned.

The amount of the royalties, or license fees paid, is based upon such factors as the wattage of the radio station, the surrounding population of the city where the station is located, and the extent to which the broadcasting station commercializes its facilities in selling commercial advertising programs, and subject to restrictions as to certain song numbers.

The fee is usually for a blanket license. All noncommercial educational, municipal, and religious stations enjoy complimentary licenses from ASCAP, and have used this music royalty free for years; even those educational institutions not owning their own stations but broadcasting over commercial stations are licensed free by ASCAP. If such stations are affiliated with BMI instead of ASCAP, they generally refuse to carry the ASCAP selections despite these educational privileges. BMI also grants privileges to educational institutions.

Since 1936 broadcasters have been revolting against the charges assessed against them by ASCAP for the privilege of playing copyrighted music. In 1936 the use of such selections was prohibited. The Duffy Copyright Bill introduced in Congress and the antitrust case against

ASCAP were steps in this revolt. In 1941 consent decrees were filed by both ASCAP and BMI, in which they agreed to conform to the government's demands. In 1940 the broadcasters formed BMI (Broadcast Music, Incorporated) to compose and arrange music for radio performances. Program logs revealed that while 21,000 pieces from the catalogues of popular music and 4500 from standard numbers were broadcast in a single year, only 388 tunes actually accounted for 47 per cent of the performances and 2500 pieces made up 83 per cent of the music on the air. The broadcasters insist that the monopoly of ASCAP will be ended by BMI, to which a large majority of them have subscribed. The purpose behind such centralized authority as ASCAP, BMI, MPPA (Music Publishers Protective Association), and SESAC is excellent, for it obviates the necessity of dealing with individual copyright holders.

To constitute an infringement of a copyright in a musical selection, three elements must exist: (1) there must be a performance, (2) it must be public, and (3) it must be for profit, either direct or indirect.¹ Any substantial portion of a selection constitutes a violation of the copyright. This is generally accepted as being over four bars of a musical number. The common-law copyright applies to music.

The remedies for infringement of copyright are: injunction, recapture of profits, and damages for the infringement.²

Copyrights.

The broadcaster and the author are equally interested in what they may use with impunity. The broadcaster desires to know what written material of the present day or of the past may be adapted for radio or be used in its original form. The author desires to know what novels, short stories, and plays may be adapted for radio. The broadcaster and the author are equally interested in the protection of their original material—the broadcaster in protecting scripts prepared by his employees, the author in protecting his original manuscripts. There are two types of copyrights, the common-law and the statutory copyright.

Common-law Copyright. N.B.C. places the following notice upon the flyleaf of all of its sustaining scripts:

This dramatic work is the property of the National Broadcasting Company, Inc. It is fully protected under what is known as a common law copyright and damages may be assessed for unauthorized performance thereof or for the making of copies thereof.

An author of a literary or other artistic work is granted exclusive ownership thereof.³ His common-law rights are protected until he has

¹ *Air Law Review*, 1933, p. 316.

² *Ibid.*

³ *Morrill v. Smith et al.*, 271 Fed. 211.

permitted the content of his work to be communicated generally to the public. The present copyright law expressly provides that the statutory law does not in any way annul or limit the enforcement of common-law rights, either in law or in equity. However, when the owner of a common-law copyright avails himself of a statutory copyright, he thereby abandons common-law rights. Until publication, therefore, intellectual creations are protected perpetually at common law in the form in which the author has expressed his originality. The duration of such common-law rights is perpetual so long as the work is unpublished, but publication terminates all rights.¹ This, of course, vests exclusively the right of first publication in the author. There is no legal procedure, no registering of the manuscript, no filing of the copy on the part of the author to obtain a common-law copyright. It is his by virtue of his writing the original manuscript.

The physical transfer of an unpublished manuscript does not divest the author of his common-law rights. An author may transfer a manuscript with reservations limiting the extent of common-law rights granted. For instance, he may give his ownership of a manuscript for motion-picture production and retain his common-law copyright for radio production. If such a work is published without the authority of the author, this does not divest him of his common-law rights. The distribution of copies need not be for profit. Mere printing without circulation, however, is not publication. The courts have usually held that the typewriting or even the mimeographing of a limited number of broadcast scripts for the purpose of making the work available for several potential program producers should not alone divest the author of his right at common law and dedicate the work to society at large.²

To have a publication at common law you must always have a concrete tangible form by means of which the work can be communicated intelligently to the public. The actual presentation of the work to the public by an unrestricted performance, reading, or expression thereof has been held not to constitute a publication. The performance of a play,³ the rendition of a musical composition by an orchestra, and the public delivery of a lecture or other address⁴ have been held as not constituting an abandonment of the work by an author so as to constitute a dedication thereof to the public. As was held in the now famous case of *Uproar Company v. The National Broadcasting Company*,⁵ this theory was extended to radio broadcasting by holding that the rendition and per-

¹ *Caliga v. Inter-Ocean Newspaper Co.*, 215 U.S. 182; 30 Sup. Ct. 38.

² *Macmillan v. King*, 223 Fed. 862.

³ *Ferris v. Froman*, 223 U.S. 424; 32 Sup. Ct. 263.

⁴ *Nutt v. Natl. Inst. for Improvement of Memory*, 31 F (2d) 236.

⁵ 8F. Supp. 258.

formance of a work publicly by means of the facilities of a network of broadcasting stations or by one broadcasting station is not an abandonment of ownership of the work or a dedication thereof to the public at large. However, if the manuscript is sold, absolutely and unconditionally the common-law rights are lost. Such common-law rights are terminated by publication, which means the act of making a book, writing, or other work offered or communicated to the public generally available in the sale or distribution of copies. Such distribution need not take place in the United States. When one or more copies of a work have been prepared and made available to the general public there is publication at common law, and as a result the author loses his common-law rights. If the work be leased or loaned, the author's rights at common law will be barred because the work has thereby been made generally available to the public.

The author of a creative work may secure damages at law for any unauthorized use of his property; and a court of equity will issue an injunction to restrain any unauthorized use and will decree an accounting of profits derived from such use. Suits of this sort are properly lodged in the state courts. A common-law work may not be copied, mechanically reproduced by any device whatsoever, arranged, translated, adapted, or performed by any means or through any media, without the consent of the owner of the work so protected.

The time element is of importance in establishing a common-law copyright. It is always possible for someone to claim that his manuscript was written previously. Consequently, authors have adopted the practice of sending to themselves by registered mail, a copy of their manuscripts; when the manuscript is received, they do not open it but keep it sealed so that, by placing a sealed envelope with its postmarked date in evidence, they can establish the date upon which their manuscript was completed.

The writer of a letter has a common-law copyright in his missive.¹ The writer has the right to make copies of the letter, although it has been sent to its recipient. The person who receives such a letter, be it testimonial or comment, owns no literary property whatsoever in the letter, and its use without the consent of the writer is a violation of the common-law copyright, unless from the terms of the letter or from its implications the author extends such permission. The sender of a telegram has the same literary property in his telegram. In many ways it seems that the common-law copyright is adequate protection for the author, but the proof of his common-law right is probably more difficult, inasmuch as the original manuscripts or artistic creations have not been filed for reference.

Statutory Protection. Article One, Section Eight, of the United States Constitution provides that Congress shall have the power: "To promote

¹ *Folsam v. Marsh*, Fed. Case No. 4901; 2 Story 100.

the progress of science and useful arts by securing for a limited time to authors and inventors the exclusive right to their respective writings and discoveries." This grant of power to Congress did not divest the several states of jurisdiction to grant authors judicial protection at common law of literary and intellectual property, but copyright was thereby placed in the domain of Congress exclusively, so that the states now have no power to pass substantive legislation in this field. In 1790 the first Federal copyright statute was enacted. In 1831 a revised and consolidated statute was passed, which for the first time granted protection to authors and composers of musical compositions. In 1856 a supplementary act was passed which enlarged the scope of copyright protection to dramatic work by granting to the authors thereof the exclusive rights to perform, act, or represent such works, in addition to the then existing and now existing sole right to print and sell copies. In later statutes other creative works became the subject of copyright protection. The need for an international arrangement for copyright reciprocity became apparent and led to the enactment in 1891 of appropriate legislation. After that date no important changes occurred until the 1909 act, which is still in force.

The first United States copyright act provided for a period of protection for fourteen years and a renewal period of the same duration. By the Act of February 3, 1831, the original period of protection was extended to twenty-eight years, but the renewal period of fourteen years was not changed. Under the Act of 1909 a period of twenty-eight years of original protection was granted and a renewal period of the same length was permitted, provided that the application for such renewal should be made to the Copyright Office and duly registered therein one year prior to the expiration of the original term of copyright. The periods for such protection run from the earliest date when the first copy of the best edition is placed on sale. In the case of default of renewal or failure to renew from any other cause, the work falls into public domain. If such renewal is made according to the legal requirements, the work falls into the public domain at the end of the renewal period. A work which was copyrighted previous to the 1909 act, it would seem, should have a renewal period of only fourteen years because that period was allowed at the time the original copyright was taken out. However, according to *Silverman v. Sunrise Picture Corporation*¹ and *Southern Music Publishing Co., v. Bibo-Lang, Inc.*,² a renewal of copyright is a new grant of copyright, and the rights which accrue to the owner of such a renewed copyright are the rights granted under the provisions of the law which is in effect at the date of the commencement of the renewal term. The renewal of a copyright depends upon

¹ 273 Fed. 909.

² 10 F. Supp.

the validity of the original copyright, although it is considered as a new grant of copyright.¹

A renewal may be obtained by the author, by anyone to whom he has sold his copyright privilege, by an employer for whom the work was made for hire and who secured the original copyright, or by the author's heirs or administrators. However, the proprietor of a literary work cannot under any circumstances have a greater right than the author. The contract between the two should always definitely state the rights which the proprietor is to enjoy. Under this act an employer of an author who is hired not as an independent contractor, but on a stated salary basis, is considered the author thereof and is himself entitled to a copyright of the work in question. For instance, those employed by a radio station to write scripts ordinarily have no copyright privilege in what they write, but the copyright lies in their employer. However, the mere fact that the author is an employee does not necessitate the conclusion that the copyright privilege to all said author shall produce shall be in his employer, the determinate being the intent of the parties with the presumption in favor of the employer, unless the author-employee is a so-called independent contractor, in which case the presumption rests upon the side of the employee.²

An author employed to write a series of scripts or a serial for a sponsor, an author employed by an advertising agency, broadcasting station, or network to produce scripts, a gag writer who originates jokes for a comedian—in each of these cases the author has no copyright privileges in what he produces unless his contract with his employer so specifies. The copyright lies in the employer. If, on the other hand, the author is considered to be an independent contractor not directly in the employ for the purpose of writing, the copyright exists in him. It is very hard to differentiate at times as to whether the author is an employee or an independent contractor. The most logical rule was laid by the New York Court of Appeals in *Beach v. Velsey*,³ where it was ruled, "The test as to whether an author is an employee or an independent contractor lies in the extent of the control and the amount of direction of detail and etc., that the so-called or alleged employer exercises over the progress of the work." It is usually said that if the producer contracts for the script itself and says nothing more about it, the script writer is an independent contractor, but if the author is dominated throughout the process of completing the work, the author is usually said to be an employee.

Section 11 of the Act of 1909 expressly extends copyright protection to designated works of which copies are not produced for sale. Among

¹ *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591; 8L. Ed.; 1055 (1834).

² *Uproar Co. v. National Broadcasting Co.*, 81 Fed. (2d) 373.

³ 238 N.Y. 100-103; 143 N.E. 805.

the specified classes of work are various types of material for broadcast purposes, including lectures and addresses, dramatic and musical compositions.

Under treaty regulations, benefits of copyrights on substantially the same basis as those granted to citizens of this country are extended to approximately fifty nations, the first agreement having been made with Belgium, France, Great Britain, the British Possessions, and Switzerland in 1891 and the most recent with Argentina in 1934.

The broadcast program script is a comparatively new form of literary expression and it is still a controversial matter as to whether the entire program script may be copyrighted as such, or whether it needs to be copyrighted in parts. In the vernacular of the radio industry the two terms "script" and "continuity" are often used interchangeably. However, the law seems to make the following distinction between the two. A script is material prepared for performers, announcers, speakers, and others whose voices are broadcast and who must have before them in written form the words they intend to use in the broadcast. Continuity, on the other hand, is more like a timetable or a chronological development of the contents of the program. A continuity is necessary in order to plan and control the use of the time within the broadcast period. The continuity is the shell of the program and the script the substance thereof. A single program, therefore, may be composed of many scripts, those of the announcers, the actors, and so on.

In determining whether a broadcast script may be copyrighted, it is necessary to make a detailed analysis of it; although the Copyright Act was passed before the radio industry came into being, Section Five of the act specifies with some generality what works may secure copyright protection, and although, of course, the broadcast script is not specifically mentioned, such script may secure protection under the general classification therein. Of course those scripts which are not published are protected at common law. Authors of scripts embodying lectures, addresses, and so forth, may obtain statutory protection under Section Five-C, which provides parenthetically for registration of works prepared for oral delivery.

Continuity is the sum total of all materials and scripts in a specified program. If such continuity is coextensive with a complete dramatic program, it may be separately registered and receive copyright protection. However, to be eligible for protection, continuity and scripts must have unity. This is a question of fact to be decided by a jury.¹

If a script is copyrighted as a dramatic composition, the copyright owner has the exclusive right to make other forms or dramatizations thereof² or to convert his work into a novel or other known dramatic

¹ *Seltzer et al. v. Sunbrock et al.*, 22 Fed. Supp. 621.

² *Fitch v. Young*, 230 Fed. 743.

compositions. If the script or continuity is sold outright, this includes all the rights which the author had. It is advisable, however, in the sale or the purchase of such material, to specify definitely what rights are transferred.

If a script is registered for copyright as a dramatic work, it may not be broadcast without the consent of the copyright owner. Broadcasting is a public performance despite the fact that broadcasts are not publications under common law. It makes no difference whether such a broadcast is for profit or is merely a sustaining program, such a broadcast would violate the copyright privileges and both civil and criminal proceedings may be instituted in such a case.¹ If the author has transferred all his rights in the script to the producer, it may be changed or altered in any way, except that it may not be distorted to the extent that it will injure the reputation of the original author. The grant of the right by an author to use a script in one particular broadcast program does not give the producer the right to use it in any other broadcast program.

If a statutory copyright is to be obtained, the author, his assignee, or employer should write to the Library of Congress, Copyright Office, Washington, D.C., and request form 12. This application form lists the various types of creative effort for which copyright may be obtained and enumerates the forms that must be filled out to obtain final copyright. When the application has been forwarded to the Library of Congress, another form is obtained to be filled out for the type of material on which a copyright is desired. This is returned with a specified number of copies of the first and best publication, together with the specified amount. The act provides that the registrar of a copyright shall receive, and the author or owner of the copyright shall pay, the following fees. If a play is to be copyrighted and to be published, it is necessary to send two copies of the play, together with \$2, to the Copyright Office. If statutory protection is desired for a speech which is not to be published, the registration requires only one copy and costs only \$1. No attempt is made on the part of the Copyright Office to scrutinize the work, except to ascertain that it complies with the laws prohibiting the publication of obscene matter, etc.

Infringement of a copyright exists where the defendant has appropriated copyrightable material. Once such appropriation is thoroughly established, a question of fact exists for the jury in determining whether a substantial and material portion of the plaintiff's work has been appropriated. The whole work need not be appropriated; it is sufficient that the labors of the author be substantially appropriated by another.²

¹ *Marks v. U.S.*, 96 Fed. 2d 204.

² *West Publishing Co. v. Edward Thompson Co.*, 169 Fed. 833.

The idea of the work or, as it is customarily termed, plot, is not copyrightable, but where the expression of the fundamental theme is appropriated infringement takes place.¹

The result of the action and not the intention of the actor is the thing that determines the question of infringement. Where the infringement of a copyright is established, intent is immaterial.² If the infringement is proved, the intent to infringe will be presumed; nor does the infringing act need to be for profit.³

In a few limited instances a copyrighted work may be used without constituting an infringement. It was held in *Chapel & Co. v. Fields*⁴ that the imitation, mimicry, or parodying of a copyrighted work is a fair use thereof. However, it is essential that good faith serve as a basis for the imitation and that due acknowledgement be made to the author or to the copyright proprietor. While damage awards under the statute are controlled under detailed regulations, it will suffice to say that in addition to injunction relief from infringement, the author is also entitled to damages and all profits derived from said infringement. According to Section 35 of the Act of 1909, damages for such infringements must be assessed by the court of not less than \$250 nor more than \$5000.

Under existing copyright laws, the scope of copyright protection to both dramatic and musical compositions and the exclusive right to produce such work mechanically is vested in the copyright holder. The right of recording or transcribing a copyright program script for broadcast purposes exists in the name of the copyright holder only. However, works in the public domain may be freely transcribed, modified, or transformed with impunity. Care should be observed, however, that a copyright arrangement of a public-domain tune is not used. In checking the availability of a selection, one must know the author, composer, publisher, and arrangement.

According to this ruling, it is a violation of the copyright to record a broadcast program, picking it up from the receiving set, or to rebroadcast such a program, to send such a program over telephone or electric-light wires, or to present it over public-address equipment or upon a television screen in a theater.

Copyright runs from the time when the first publication is made of a work to the end of the original copyright period, plus the renewal period, if such renewal is obtained. If a compiler at the present time gathers into a single book a large number of short stories or plays and

¹ *Simonton v. Gordon*, 2 Fed. (2d) 116.

² *Altman v. Newhaven Union Co.*, 254 Fed. 113.

³ *Pathe Exchange, Incorporated v. International Alliance*, 3 Fed. Supp. 63.

⁴ 210 Fed. 864.

obtains a copyright for the compilation, he does not extend the copyright period of any one of the plays or stories contained in the book. His copyright is upon the compilation, the collection, rather than upon the individual contents of the book. It is safe to assume that anything written fifty-six years ago is in the public domain and may be used or adapted with impunity. Otherwise the consent of the copyright holder should be obtained before adapting or using such material.

Well-known authors retain legal agents to check up on radio violations of their copyrights. The minimum civil damages for use of copyright material without a release from the holder is set at \$250 with a maximum of \$5000, with additional fines for criminal infringement of not less than \$100 nor more than \$1000. There has been some difference in judicial opinion as to whether the copyright law, which specifically lists "a lecture, sermon, address or similar productions, a drama or musical composition," applies also to poems and dramatizations of short stories and novels. One court has held that the recitation of a poem did not constitute a violation; however, the tendency is toward a liberal construction of the copyright law to entitle the creator "to any lawful use of his property whereby he may get a profit from it." The copyright holder is put to the expense of protecting his rights and many broadcasters take chances on the presentation of poetry, feeling that the poet either appreciates the public presentation of his poems or is too poor to protect his rights.

In the United States it is impossible to copyright an idea, character, or title of a work.¹ However, the infringement of such ideas, characters, and titles or trade may give rise to a right of action. Broadcasting organizations are frequently confronted with claims of infringement of titles of programs, characters in programs, and the infringement of ideas claimed to have originated by some other person. It usually develops, however, that the other person's idea was not original.

An interesting question was brought to the courts in the case of *Brown v. L. Bamberger & Co.*² The question is a serious one and is as follows: When an author is engaged to write dramatic sketches for radio presentation and that author originates the idea on which the sketch is based, creates the characters, and names them, and is later discharged, can he restrain the broadcasting organization from continuing with the same type of sketch under the same title, using the identical characters? In this case, the author's motion for a temporary injunction was denied by the court, 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.

¹ *Ibid.*, 1930, p. 343.

² *Unreported.*

The reluctance of broadcasters to pay for copyrighted material during the early stages of broadcasting in the United States was due to the large fees demanded rather than to any denial of the right of copyright. After the broadcasters began to "sell time" on the air, they were then willing to pay for the use of copyrighted material.

Most radio-station and educational broadcasters possess recording equipment and in some instances desire to make recordings for public sale. The law provides that the copyright holder of a musical selection such as a college song or march may license a manufacturer of recordings to record his selection and file notice of this license in the Copyright Office. Thereafter any other person can make recordings of the selection upon serving notice upon the copyright holder and upon paying him 2 cents for each record manufactured. Until the copyright holder has granted such an initial license no recording can be made without his consent. However, the copyright on a musical selection does not prevent the recording of adaptations and arrangements of that selection. The right to public performance of such recordings requires the consent of the copyright holder. It is dangerous to cut records of a broadcast from the air unless permission is first obtained from the holder of copyrighted selections being performed.

The American Society of Composers, Authors, and Publishers sponsors the Nathan Burkan Memorial Competition among law students who submit essays on copyright law. The most recent volume was published by ASCAP in 1940. More complete articles on copyright regulations are printed in the annual yearbooks of *Broadcasting Magazine* and *Variety*. The most comprehensive work on radio law is *The Law of Radio Broadcasting* by A. Walter Socolow, Baker Voorhis & Co., New York, 1938 (2 vols.).

CHAPTER XXVI

Radio as a Vocation

The Studio Staff.

There is always considerable glamour attached to radio, and this fact largely explains the interest that so many people have in it as a possible vocation. Furthermore, broadcasting offers a career that is not seasonal, for the station operates upon a nearly full schedule, summer and winter.

The field of radio is becoming more and more expanded and specialized, with the result that the demand for a variety of talent continues to grow. Whereas in its early days radio broadcasting was poorly organized and talent was scarce, today each of the 881 broadcasting stations has its announcers, actors, musicians, writers, technicians, and sales and office staff, each with a specific latitude in which to work but all cooperating.

The Announcer.

In launching into a discussion of radio as a vocation, the logical place to start is in the studio, with the employees who come into more direct contact with the listening public. Of these persons probably the best known is the announcer. As is the case with practically all branches of radio today, the supply of announcing talent far exceeds the demand.

The mistake that is made by most persons who desire to enter the radio profession is that they attempt to start in the more important stations. The networks require an announcer to have had experience with an outlet station. The larger outlets suggest that the radio speaker gain training in the small local station. The ideal way to break into broadcasting is to start with a local station, where the work of all departments of the station may be studied. Here there is also opportunity for trying out types of programs, writing dramatic skits and continuity, and selling advertising time. If the neophyte is successful, he may be called to an outlet station; at least he will have a background of experience when he applies for a position.

A few of the more fortunate beginners may find employment in the network outlets, but such cases are rare. The place to start is at the bottom and learn the task thoroughly, so that you may be able to do not only the job for which you have been employed but someone else's too—for that is the way advancement is obtained. Too many beginners

take a job with a small station feeling that in such a job they will hear of other jobs that they can try out for. This is the wrong attitude. Make a business of getting a job, and after securing one make a business of keeping it. Do not make a business out of employment seeking. Appreciate your affiliation with the small station; it has all the ramifications of a large network, only on a smaller scale and with fewer people to engage in them.

Auditions.

Applications for an audition may be made in person, by telephone, or by mail (Figs. 57 and 58). The applicant must be persistent and not easily discouraged. Although he may take an audition and although his name may be placed upon record, the applicant who happens to be in the studio when a position is open usually gets the job. Some stations, in order to discourage the applicant, will give him a pronunciation test to read such as is sent out free by the G. and C. Merriam Company, publishers of *Webster's New International Dictionary*. In every instance the applicant will be given sight reading and may read copy he has himself prepared. In the outlet and local station an applicant who can double as a singer or an actor as well as an announcer has an advantage. Some stations, overwhelmed by applicants, refuse personal interviews or auditions and merely listen to the voice over a telephone. If the voice is pleasant, the applicant is invited to the studio for an audition. Many applications are received by mail, and the writer is judged by his letter; however, he is not employed until he has passed a studio audition.

The following is an outline of the Announcer's Test used by N.B.C.:

1. Knowledge of foreign languages. Frequently used names of foreign operas, arias, and composers. Italian, French, German titles of songs and arias. Some Spanish.
2. a. Verbal ad lib. To test presence of mind. Description as in special event. Patrick Kelly, chief announcer, assigns subject at time of test.
b. Mr. Kelly at time of test frequently gives list of musical numbers to aspirant and asks him to ad lib as though program were on the air.
3. Candidate is given sample of commercial announcement to read in order to demonstrate both sales ability and diction as announcer.

Those who are intent upon becoming radio announcers should not neglect backdoor methods. Any job in a radio station is a steppingstone to the microphone. Many announcers who began in technical work have become radio personages. Important sponsors are frequently able to place capable friends in a station, and, if these friends prove their worth, they are on the job when a permanent position is open. The ability to get along with other people is first among the qualifications sought in an announcer.

music, and art. To prepare himself for this he should have covered as much ground as is possible during his four years upon the campus. He should not have overlooked physical development, because he needs a healthy body for the fatiguing grind of a life composed of split seconds and his body must be healthy to make his voice sound that way. The N.B.C. expects its announcers to have a speaking knowledge of several languages as well as a good background in music.

With the development of the radio receiver to its present status, where it can reproduce the sounds almost exactly as they leave the studio, the importance of a particular type of voice is not so great as it once was. Sponsors, however, demand announcers with "commercial voices," that is, voices that command attention in a friendly and unassuming manner. It should be said, however, that a pleasing voice, a "voice with a smile," is a decided asset to any radio announcer, and the lack of it is a decided handicap. In addition, the announcer must be capable of reading fluently at sight. He must speak clearly and without affectation. He must have a pleasing personality and be able to project it through his voice, as well as conform to all the requirements set forth in previous chapters for the radio speaker.

Additional qualifications for the announcer include the command of a good English vocabulary; confidence, initiative, and quick thinking to describe a program; the ability to give an impromptu talk if the emergency occurs; a good sense of news values and the ability to describe news, sports, and other special events. The ability to use a typewriter is a decided asset.

The announcer may be called upon to perform his announcing duties at any time of the day or night, and he must be willing to subordinate other interests to his job. The quality of punctuality is essential. Radio is not looking for men who make excuses. There is a certain amount of routine in the announcer's work, but, on the whole, with its irregular hours and variety of programs and artists, it is far from a routine job. Among his many qualifications are the ability to write continuity and take complete charge of a program, acting as producer or dramatic director when necessary.

Announcers start at \$25 a week, with salary changes depending on their value to the studio. Announcers' salaries reach a maximum at from \$75 to \$90 a week. The average pay for network announcers is \$65.54 a week and for those in independent stations \$32.52. The greatest advantage is that an announcer is on the permanent staff of the station. Of course, some announcers get much larger pay for their work, but in these cases the checks come from certain advertisers who have happened to take a fancy to a particular voice or manner of speaking and specify the individual announcer, who thereupon becomes an artist. Even on the

national chains, salaries seldom run much higher than on the larger local stations.

Of course, if a man is good, there are opportunities offered to him for making money on the side. He will be employed to make announcements for electrical transcriptions and also for commercial talking pictures. During athletic contests and public events a man is often needed to announce the events and the results over a public-address system, a "pickup" that will usually net him a little extra cash. Sometimes a sponsor will ask an announcer to step into a dramatic part, for which he receives extra pay.

The present and wise tendency is to do away with titles in the broadcasting staff. Individuals will be given specific duties to perform, but they are not encouraged to assume the attitude of importance that a title seems to create. While various individuals will have definite tasks, every member of the staff is responsible not only for his own performance but also for the smooth operation of the station.

Among the various tasks that may bring additional income to the announcer is that of preparing the daily schedule for the announcers, showing what programs and what standbys they are to take. It is his duty to see that the requests of sponsors for particular announcers are satisfied, that voices are varied upon successive programs, and that the announcers are on the job at the required times. In some stations he is given the title of "studio manager."

Next comes the announcer who is in charge of traffic, sometimes called "program director," whose duty it is to oversee the work of everyone in the studio and to see that everything runs smoothly. In many radio stations he also assumes the function of planning what will be broadcast during the intervals between commercial programs. In this capacity he receives daily-program announcements in advance from the network with which his station is affiliated, and, combining these offerings with the facilities at his immediate command, he must so arrange and organize each day's broadcast that a variety of entertainment will be provided, taking into account the types of programs that are to be presented by the network through his outlet as well as commercial programs and those sponsored by his local advertising clientele. He will be the connecting link between the artistic side of broadcasting and the business department. He will keep his finger on the public pulse and induce artists and those who are in the day's news to give personal appearances over his station. His greatest task is to put originality into his day's entertainment.

The announcer may obtain his position with a local station as the result of an audition for the dramatic, vocal, or announcing field; or as the result of some connection with a sponsor or advertising agency. His first advancement in the local station is either to become assistant pro-

duction manager or into sports; if he is good he steps into the chain gang. If he goes into production he advances to become local production manager, where he hesitates long and uncertainly, hoping to become manager of the station. His chances are slim. If he goes into local sports he can advance to network sports, where he finds himself stymied unless he pays the forfeit of going back into announcing for the network. The network announcer may work up to be program manager. Seldom does the announcer rise higher than production manager for the local station or program manager for the network.

Radio Writers.

The copy that the announcer reads on the air is prepared by another member of the staff, the continuity writer. For the local station usually one or two continuity writers are sufficient to handle all the work to be done, especially if that station is affiliated with a network from which it can draw programs. The continuity writer must be one who is able to imagine just how the announcer assigned to a particular program will read the copy, so that he or she can prepare copy best adapted to that person's manner of speaking. This author prepares commercial copy as well as announcements for sustaining programs. The continuity writer has frequently worked into radio writing from a newspaper or an advertising agency and has a knowledge of writing principles.

There is a decided shortage of good dramatic scripts written for the radio. Many try their hands at it, but in most cases they lack the natural ability to write good plays. When once a playwright's reputation is established through his products for the legitimate stage, he will not risk it on radio plays. As was pointed out by Eugene O'Neill when he was asked to prepare a play for radio presentation, most authors spend many months in developing a good product for the stage and cannot hope to produce as good work at the rate of one play a week or more.

Writers for radio are placed in three classes, those on the staff, those under contract, and free-lance writers. Staff writers do not make so much as contract writers but they have a definite salary and work during definite hours. Staff writers prepare commercial continuity, talks, announcements, interviews, special-occasion scripts, original plays, adaptations, and often station publicity. In the local station they are paid from \$15 to \$75 a week; if connected with a network they get from \$40 to \$150; and in the advertising agency the range is from \$25 to \$250. The national average for staff writers is \$56.74 for the networks and \$32.46 for independent stations. Program agencies and syndicates also have staff writers preparing serials, news releases, and drama series; for these the prices vary.

Writers under contract earn up to \$100 in preparing serials for local stations and up to \$1250 for the networks, depending upon the number of serial scripts and their popularity. You have to be funny for \$10 when dealing with a local program but a name comedian upon a network show pays as high as \$1500 a week to his gag writers and continuity staff. A single play will bring from \$5 to \$100 from a station and from \$75 to \$750 from the network.

The free-lance writer gets what the sponsor will pay, if he satisfies the sponsor's demands and the agencies and the program has pull. The free-lance writer is a gambler with his wits and time, usually being paid about \$25 for a program, in exceptional cases as high as \$100. The free-lance writer who has material accepted, for even a sustaining program, has established an "in."

Dramatic writers also sell their plays to electrical-transcription houses. A single script can be sold to a number of different local stations in widely separated parts of the country. There does not seem to be any line of advancement for the continuity writer except that he may become a better continuity writer. He is in a blind alley.

The best paid continuity writer is represented by those who write for the radio comedians. Frequently they are employed by the comic for whom their gags or situations are created, while in some cases their scripts are syndicated by concerns which furnish continuity to widely separated local stations. Humorous writing is divided into situation writing and gag writing. The former consists of connected comedy, the latter of jokes. The situation writer builds skits that run for months, even years; the gag writer lives from program to program or supplies only a small portion of a single program.

The gag writer has a difficult task, for constant broadcasting has nearly exhausted the joke book, despite the fact that the gag writer usually has a huge file of jokes that have been used for centuries. Celebrated comics require as many as 50 gags for a single program. Consequently there is a demand for good writers who can be relied upon to supply both quality and quantity. Few can maintain the pace. The neophyte must establish a name for himself, submit to the comedian gags styled especially for him, and continue to write regardless of discouragements. Gags may be sold to the comedians, to advertising agencies, to syndicates, or to broadcasting stations. They must be original. If they are not merely adopted without the writer's consent, they will bring from 50 cents a gag to \$1000 a program. The gag writer must have boundless energy, talent, persistence, and material in addition to experience and contacts before he can anticipate steady employment or a living wage. Those who can write fresh material which creates laughter and

which is acceptable in both Pine Center and Boston have "names" in radio that result in excellent incomes but in little publicity.

Musical Staff.

There is, of course, always the possibility of working into radio as a vocalist or musician. The musician must be versatile and capable of playing everything from symphony to jazz music. Studio orchestras are usually very carefully chosen and contain excellent musicians. They frequently make special arrangements of selections and write musical bridges and theme music, as well as background music. At one large station, the pay of the studio orchestra is \$5 an hour for 12 hours of work, rehearsals included, and \$7 an hour for any time over 12 hours. The musicians are paid on a weekly basis and are highly unionized. The musical director in a regional station gets from \$75 to \$200 a week.

The Producer.

The production director is sometimes called the "dramatic" director; however, production is a more inclusive term, for the producer puts together the musical program, the variety show, the dramatic performance, and in fact all productions. He generally has had dramatic training as well as experience in all the radio departments. His qualifications have been enlarged upon in a previous chapter. In local stations he may be an announcer as well as director and frequently does a bit of dramatic writing. He receives an average of \$100 a week, and advancement consists of moving into a network position. The national average weekly pay is \$55.87 for the network station and \$39 for the independent station. With additional features, such as commercial dramatic announcements, he has opportunities for outside income and frequently serves both a station and a transcription service. Program manager of a chain is about tops in advancement. He may be employed by an advertising agency with a production department or by one of the many agencies that specializes in production to put on a show.

The Actor.

The station may have a nucleus of a dramatic staff on its regular pay roll but the majority are on call. The radio actors' training and requirements have been discussed in a chapter devoted to them. They come from dramatic schools, from stock companies and vaudeville, from motion pictures, and even from the opera. Unknowns do leap to fame after auditions. Recently a network production chief noticed a lack of available talent and developed a training department; candidates were selected from six colleges and were instructed in radio techniques and twice each week required to attend the theater, opera, concerts, motion pictures.

Few radio actors belong to Equity but the number is growing. Many advertising agencies employ their own actors, and name characters are under contract. In a local station actors receive from \$3 to \$5 for a program, which includes rehearsals. The announcer who is "a voice" in a play becomes an artist and is entitled to additional pay. In the larger network stations the actor receives from \$10 to \$25. Pay always includes a stipulated rehearsal period.

Classification of artists	15 minutes	30 minutes	60 minutes
New York and national network rates:			
Solo singers and actors.....	\$17.00	\$21.00	\$25.00
Duos, trios, quartets, per person.....	12.00	15.00	18.00
Groups of 5 or more singers, per person.....	11.00	13.00	15.00
Chicago local and regional rates:			
Solo singers and actors.....	12.00	15.00	18.00
Duos, trios, quartets, per person.....	10.00	12.00	15.00
Groups of 5 or more singers, per person.....	8.00	10.00	12.00
Los Angeles local and regional rates:			
Solo singers and actors.....	10.00	12.50	15.00
Duos, trios, quartets, per person.....	9.00	10.00	12.00
Groups of 5 or more singers, per person.....	8.00	9.00	11.00

The sound-effects operator has been discussed in the chapter on sound effects. Frequently he is drafted from the technical staff. There is no logical advancement from his position.

Many stations operate Artists' Service Bureaus to secure employment for artists upon sustaining programs and for personal appearances. The management of such a bureau collects a commission upon the remuneration received by the artist.

The music library is a very important part of the broadcasting station's equipment and must be in charge of a capable librarian. He must have various types of indexes; the selections must be timed and classified for different kinds of programs. He will also be in charge of transcriptions and sound-effect recordings.

Technical Staff.

Each station has a staff of about six or seven licensed technicians working in shifts in the control room in connection with the studio; where the transmitting station is located away from the studio, as is becoming more and more the case, a staff of at least four men is required at the transmitter. Many radio technicians are former "salt-water operators," who have left their ship radio cabins.

A licensed radio operator must be in charge of the transmitter at all times that it is in operation. Licenses for operators are granted by the F.C.C. upon the successful completion of a written examination, which must be taken at any one of several of the commission offices. This examination is highly technical and is designed to test the applicant's knowledge of the care and operation of the transmitter with broadcasting transmission laws. Such licenses are granted for a period of three years but under certain conditions may be revoked by the commission.

The qualifications for such positions have been set up by R.C.A. Communications as follows:

1. Foresight, judgment, resourcefulness, industry, and cooperation.
2. Knowledge of radio engineering and associated branches of electrical engineering and detailed knowledge of plant he supervises.
3. Knowledge of radio laws and regulations and possession of a radiotelegraph and/or a radiotelephone operator's license.

With the development of highly technical phases of radio, especially television, the demand for college and technical-school men is rapidly increasing. The F.C.C. restrictions are becoming more rigid, thereby further increasing the need for highly trained personnel.

A college education in engineering is not essential to the radio operator. A high-school background of mathematics and physics, coupled with a flair for radio and four to six months in a training school, is usually enough to enable him to get a license. The designing of radio apparatus is a different field entirely, and for it a college degree in electrical engineering is important.

Salaries range from \$45 to \$80 a week for operators, and chief engineers in key stations may receive upward of \$6000 annually. Smaller stations pay considerably less for engineers with salaries ranging from \$25 to \$40 a week for operators and about \$35 to \$60 for chief engineers.

In the local station the technician usually comes from a trade school to become an apprentice. He works up to chief engineer and has a better chance of becoming the station manager than anyone outside of those upon the business staff. In the network setup there are monitors, field engineers, control-room head, and operations chief. Here again the engineer can rise to an executive position in the chain.

Advertising or Sales Department.

The business of the advertising sales department of the broadcasting station is to sell the radio medium to buyers of advertising media in coordination with other media. All forms of advertising are worked into a unified campaign to sell a product. Broadcasting stations are going back into the business of selling direct to advertisers, adapting the radio

medium to the advertising program of the sponsor. Frequently the radio merely focuses attention upon the product while visual media are used actually to sell it. The radio station cooperates with the advertising agency, and often it is unnecessary for the sales department of the station to make the original contact with the advertiser. Practically every large broadcasting station has its central sales representatives in New York, Chicago, San Francisco, and Detroit.

The ideal salesman for the station is one who has had a university education or at least a high-school training. He should also have had actual experience in selling advertising, and the training received in an advertising agency is of great value. The salesman's personality is important. The turnover in the sales department is very low. The salesman's salary generally starts at about \$60 a week. The national average weekly pay for the salesman connected with the network is \$121.23, while he gets approximately \$48.50 with an independent station. A promotion manager creates the trade for the salesman by advertising the station in trade periodicals. A few years' service upon the staff of a small newspaper is excellent preparation for radio sales work. Native ability and deftness in the turning of phrases are steppingstones.

The radio salesman must have business ability, selling ability, and showmanship. He must be familiar with all advertising media. He must have originality and imagination to create commercial programs that will attract purchasers. He should be honest with a prospective client and refuse business or programs that will be unproductive; this will result in fewer cancellations and more good friends. The salesman is generally paid on a commission basis, receiving 15 per cent on time charges.

In this department, also, commercial programs are planned. For example, when an advertiser has been contacted and has agreed that radio advertising would be valuable to him, he informs the sales department that he has a specific amount of money to spend and asks what he can get for that amount. What seems to be a good program is outlined, and if the client likes it the details are completed and the deal is consummated.

If you want to get to the top either in local stations or in the networks join the sales staff. The salesman is very likely to advance to sales manager, business manager, and then to station manager. The accountant and the financial secretary are also in this line of march according to surveys made of different stations.

Publicity.

The function of the publicity department is to call the public's attention through other advertising media, such as the newspaper and the billboard, to the value of the station and its contributions to the community. Its duty is to put the station "on the map" from the lis-

teners' viewpoint, while the advertising and sales department deals with advertisers.

Staff Turnover.

Since the studio routine in each station is somewhat different from that in any other, an effort is made to keep the staff, which has been trained in the routine, intact. However, as must be the case in a profession closely allied with the entertainment business, where an effort must be made to satisfy the ever-changing tastes of both the public and the advertiser, there is likely to be a moderately rapid turnover, especially among those persons directly connected with actual broadcasting. This is particularly true in the case of the smaller stations in the larger chains. The high turnover on the smaller stations arises from the fact that their talent is continually looking for something a little better, so that these stations become practical training schools.

If a person wishes to become connected with an industry which, without doubt, is still in its infancy and is rapidly growing, and one which will not soon be outdated, he can make no better choice, I think, than radio—that is, if he is willing to sacrifice the glory of the public eye and take a place behind the scenes for permanence and stability of employment. If, however, he is interested in the actual broadcasting of radio programs, he must risk the danger of a shorter period of employment and prepare himself for some other profession to keep him alive after he has outlived his period of usefulness to radio. Radio has not yet discovered what to do with the weathered old voice. The considerate station owner is perplexed by his loyal old employee.

Women in Radio.

It cannot be denied that there is a definite place for women in the field of radio. Perhaps no other profession that includes both men and women holds so many places for the woman as does radio. Women are today found in almost all positions in this field.

Early in the life of radio, women entered into the fields of acting and singing and later into writing, but it is only recently that we find them directing, taking charge of advertising, and occupying other positions of responsibility. There is a very definite place for the ideas and suggestions of women, especially since the radio audience is largely made up of women. From early morning until dinner the majority of the listeners are women, and these women must be pleased.

Many positions in the radio field are not open to women; it might be better to say that it is difficult for women to enter certain branches of the work. Few women are engineers in radio stations, partly because most station managers prefer a man in a position of this kind. The small number

of women announcers is to some extent due to the fact that they are not physically able to endure the long hours of work. However, many women would enter this type of work were it not for the prejudice the public has against women announcers. There are without doubt many programs that should be announced by women. Programs that advertise products for women are among these. By stressing voice culture and training, women may overcome the faults that often keep them from entering the field of announcing.

On the other hand, women are better able to do secretarial work in the broadcasting station than men. Many young college graduates who wish to go into radio as a career begin as secretaries and eventually work up to executive positions. Every station uses women as singers and actors. Many stations have hostesses who meet the visitors and conduct tours through the studios. The young woman who wishes to be a hostess must have a charming personality, must be attractive, and must enjoy talking with and meeting people.

Besides acting in these capacities, women act as telephone operators, publicity writers, directors of children's programs, studio librarians, and traffic managers. Those women who actually get before the microphone give talks on household hints, fashion revues, recipes, child training, etiquette, and other subjects that are closely associated with the home and the women. Movie chats and reviews of plays are often given by women, and programs presented for the entertainment of small children are usually written, directed, and given over the air by women.

The filing and recording of fan mail is another important task performed by women. All fan mail that comes to a station must be examined, since a program is to a certain extent judged according to the fan mail it brings to the station. It is through this public reaction to radio programs that many decisions are made as to what programs and artists are to be kept before the microphone. The work of the studio librarian is also important. All scripts, music, and any other written material must be filed under every possible heading so that it can be found at a moment's notice. A file is kept of all the phonograph records and transcriptions. Dictionaries of books on pronunciation, poetry, and biography make up an important part of the studio library, and it is up to the librarian to have these ready for use at all times.

Courtenay Savage, director of dramatics and continuity of the C.B.S., has pointed out that today the best field for women interested in the radio as a career is that of writing plays and skits. He said:

At present there is a great lack of thoroughly good children's programs. Such programs will always be important and the finding of the right type of children's entertainment will always be a major job. The modern child does not want a fairy story after he or she has passed the age of six or seven, and the

youngster of ten should not be entertained by gangsters or too harrowing mystery tales. There is a happy medium—a clean exciting story that is not sappy. The woman who could write a modern *Tom Sawyer* or *Rebecca of Sunnybrook Farm* for the air would soon find a great demand for her material.

It is much less difficult for a woman to become a radio writer than an actress or a singer; and a woman in a little town or even on a farm can learn to write and send her manuscripts to the city. The small-town writer has the advantage of coming into contact with many types and many dialects. All the small-town girl needs to do is to open her eyes and ears to what is going on about her, and she may not only create plays with real live characters in them, but she may write plays that will be unusual in plot, thus making her chances for success much greater.

Today, with the increase of radio advertising, many women who have been educated with the thought of going into advertising agencies are changing their minds in favor of radio advertising. Writing advertisements for the radio and for the magazine and newspaper requires the same psychological attack, that is, appealing to the people's likes and avoiding their dislikes; the difference lies in the use of words themselves. The woman who desires to write radio advertising copy should have a good vocabulary of picturesque words and should know how to use it.

How can I get into radio work? This is the question the young woman who is interested in this field asks. The best way is to ask for any kind of job in a radio station, even if it is far removed from what she wants. The main thing is to get into the station and to learn everything possible about the profession. Girls who are willing to work at a minimum salary for the experience often eventually get good positions in the studio and make themselves indispensable to the station. Breaking into radio work is difficult but it can be done by hard work, ability, and lots of enthusiasm.

With expansion in the radio industry there are more and more places being made every year for women who have the ability and the interest in broadcasting. As women make a definite study of broadcasting as a career, more successful members of the feminine sex will be found in radio work.

The National Broadcasting Company employs 1900, the Columbia Broadcasting System has 1650 upon its regular pay roll, five regional networks employed 770; yet only the two national networks and one of the regional networks have personnel managers. Twenty-seven stations reported 2950 employees but only four had personnel directors. It would seem that a man or woman trained in every department of broadcasting and in personnel work would be able to sell himself to the station manager. At present the various directors pass upon the qualifications of applicants for their departments and final employment is passed upon by the

manager, the auditor, or the office manager. A typical organization chart of a station follows:

ORGANIZATION CHART

Station WTAM

<i>Executive:</i>	<i>Talent:</i>
General manager	Sustaining and commercial
Manager's secretary	Variable in accordance with needs of programming
<i>General Office:</i>	<i>Auditing:</i>
Stenographic supervisor	Office manager and auditor
3 stenographers	Bookkeeper
2 telephone operators (day and evening)	Assistant bookkeeper
2 information clerks (day and evening)	<i>Press Relations:</i>
2 page boys	Press representative
1 porter	<i>Artists' Service:</i>
<i>Sales Department:</i>	Representative
Sales manager	Secretary
2 salesmen	<i>Program Department:</i>
Secretary	Program director
<i>Engineering:</i>	Traffic clerk
Studio:	Night program manager
Engineer-in-charge	2 production men
Operations supervisor	1 home economist
2 control supervisors	6 announcers
6 studio engineers	Copyright clerk
1 field supervisor	<i>Musical Department:</i>
Transmitter:	Musical director
Station engineer	Librarian
Assistant station engineer	Staff orchestra (16 men)
7 radio operators	Studio organist
Watchman-janitor	Studio pianist
<i>National Sales Department:</i>	
Representative	
Secretary	

Glossary

THE SIGNALS, SLANG, AND ABBREVIATIONS OF RADIO

Signals

During the presentation of a radio program it is impossible to instruct the artists or speakers by spoken words. Consequently a system of signs has been developed for conveying instructions. Each director, control operator, and conductor has his own "handies." A great deal depends upon the ability of the individual to convey instructions by pantomime and facial expression. The following, however, are rather well established by broadcasting stations:

If the program is moving too slowly, the production director uses a circular motion of his index finger indicating that he desires the tempo speeded up.

If, on the other hand, he desires to slow down the program, he makes the "stretching out gesture," drawing his hands apart as if he were stretching a rubber band between them.

Signs are used to direct the artist to come closer or to move back from the mike; the director uses one hand as though pushing the artist closer to or pushing him away from the microphone.

Lifting the hand, palm upward, means that the voice, the music, or the sound effect should be louder. The opposite sign, palm downward, means that it should be softer. Some directors use both hands instead of one for these signs.

At the beginning of a program the man in charge will lift one hand, as if giving a benediction, which means to stand by.

Bringing the hands slowly down, palms downward, and then spreading them apart indicates that the director desires to have the music or sound effect faded out and then "cut" or ended.

An upraised fist means that the selection is to be played right to the finish.

Crossed wrists, hands extended, indicates that the rehearsal is to be stopped so that instructions may be given over the talk-back.

Lifting the left hand and forming a circle by the thumb and index finger indicates that the director considers the program to be perfect.

Placing the index finger on the tip of the nose means that the program has ended on time or "on the nose."

Another sign indicating that the program must be cut or the musical selection ended is made by drawing the hand across the throat as if the production director were cutting his throat.

To begin a scene, sound effect, or musical number, the production director frequently points his finger directly at the person involved.

The control operator or announcer will frequently show by the number of fingers the number of minutes left in the program. Crossed fingers or hooked fingers show that there is less than one minute.

Studio Expressions

Radio phraseology is decidedly local. While there are certain expressions that are used by those who are in broadcasting, in general the broadcaster and technician speak approximately the same language that is spoken by the average layman. However, there are some words and phrases that are not in the layman's vocabulary.

- across the board**—a program presented five days a week at the same hour.
- across the mike**—the projection of speech parallel with the pickup face of the microphone rather than speaking directly to it.
- ad lib**—the insertion of lines that are not in the copy, or the impromptu speech of the master of ceremonies or performer who has to fill in.
- audition**—the studio testing of talent for a presentation or of an applicant for a position. It generally consists of presenting material over a public-address system.
- audio**—equipment such as microphones, amplifiers, cables, and lines used in the transmission of a program. It also is used to designate the range of audible frequencies.
- background**—sound that forms an atmosphere behind the speech of an actor.
- balance**—the arrangement of musicians, sound, and speakers so that the correct impression of the location of such participants is clear to the listener, a blending of sounds to create a natural effect.
- beard**—an error made by an announcer, such as the announcer who was introducing the "Early Bookworm," program and his fluff or heard resulted in his announcing "Burly Hookworm" program.
- blasting**—putting too much volume into the microphone. This formerly threw the equipment off the air, but now is taken care of by automatic methods.
- board**—the control panels through which the program passes from the studio control board to the master control or the transmitter.
- bug**—some intermittent trouble in the equipment which is not easily found.
- bug juice**—carbon tetrachloride, which is used for cleaning the equipment and which usually corrects these intermittent troubles.
- build it up**—The instruction given to the operator to increase the volume.
- call letters**—the initials assigned by the F.C.C. to identify a station. Many applicants try to get call letters that are appropriate. For instance, Battle Creek has WELL, a laundry company WASH, a lumber concern WOOD, Ohio State University WOSU, etc.
- cans**—the headphones that are used by the control operator.
- clear channel**—the frequency upon which no other station in the United States is operating.
- clearance, music**—the obtaining of releases from the copyright holders of music or ascertaining whether the station, as the result of contractual relations with organizations holding copyrights, is privileged to present a musical selection, or whether the station is restrained from presenting a selection because it is restricted by the copyright holder or his agent.

- clear a number** (*see* Clearance.)
- cold**—the opening of a radio program which begins without a theme, announcement, or introduction of any kind.
- continuity writers**—those who prepare the entire program, which includes entertainment or dramatic features, commercials, musical introductions, and the listing of music.
- cross-fade**—the gradual dimming of the volume of one sound and the increasing in volume of another sound.
- cross talk**—extraneous conversation picked up by the microphones which leaks in through some transmission fault.
- dawn patrol**—those announcers and engineers who open up the studio and put on the early-morning programs.
- dead end**—the end of the studio in which there is very slight reverberation.
- dead mike**—one which is not connected or is out of order.
- dead spot**—an unintentional silence on the air.
- drooling** (seldom used)—implies the filling in of time on a program by means of speech.
- dub, dubbing**—to transfer material from one record to another.
- echo chamber**—a room with a great deal of reverberation which is used to create hollow effects.
- fade**—a decreasing of volume.
- fading in**—increasing the volume in such a way that the music, sound, or speech seems to come in gradually.
- feedback**—the return of a sound from a loud-speaker to the microphone in which it originated—a whistling sound.
- feeding**—the delivery of a program over a telephone line, either to a network or to some other station.
- filter**—an electrical device which, under ordinary circumstances, eliminates the low frequencies—generally used to create the effect of a telephone conversation being heard by a person in the studio.
- gain**—the control of volume used in transmission.
- gobos**—screens for deadening or livening studios. One side of the screen is faced with folded monk's cloth backed with hair felt. The other side has a plain wooden facing. With several gobos it is possible to vary the quality of the pickup, either by livening it or by deadening it. They also may be used to block off sound effects or cast from the rest of the studio.
- hot platter**—a record on which the music is very lively.
- in the beam**—that territory where speech is most effectively picked up by the microphone.
- jacks**—the sockets into which the plugs of a patch cord are pushed.
- jumping a cue**—an actor has come in earlier than he is supposed to.
- key station**—the point of origination or the first station in the network.
- level**—the amount of volume noted upon the meter of the control board.
- line**—a telephone wire used for the transmission of the program.
- live mike**—a microphone through which current is flowing, sometimes called a "hot mike."

- live program**—one in which live performers take part, in contrast to the transcribed program, which consists in the playing of electrical transcriptions or recordings.
- local program**—one that is put onto the air by the station's own transmitter.
- loop**—a two-way circuit or line connecting the broadcasting location with the control board. A telephone line connecting a small group of stations, forming a part of a network.
- master control**—the control board to which all studios are connected and from which programs are sent on the transmitter.
- middle break**—a station announcement or identification in the middle of a program.
- mike hog**—an actor or speaker who stands in the beam, preventing other speakers from getting right positions before the microphone.
- mixer**—the panel for control and blending sound picked up by various microphones.
- monitor**—the control of the volume level by the technicians.
- musical bridge**—a musical transition used in a radio play or production of any sort.
- mud, in the**—an expression used to denote that the speaker's or actor's voice has an improper pitch and is picked up faintly so that he sounds as if he were bubbling through the mud.
- network**—a network program is one that is released over two or more stations connected by telephone lines. A network is a series of stations regularly joined by lines.
- off mike**—the instruction to an actor to turn his head away from the mike or speak his part at a distance from the mike to create an effect.
- on mike**—speaking directly into the microphone at the proper distance.
- on the air**—the period when a program is broadcast.
- patch cord**—an emergency hookup of electrical impulses, merely a short utility cord of insulated wires used in the control room.
- peak**—the maximum amplitude of sound in electrical energy formed while passing through a circuit. It is the highest point reached upon the volume indicator.
- picking up a cue**—beginning one's lines immediately after the last word of the preceding speaker.
- piping** (*see* feeding)
- platter**—a record for the gramophone, an electrical transcription, a sound-effects record, or any other disc.
- plug**—a short commercial that is more or less jammed into the program and given in a hurried manner, sometimes called a "blurb."
- primary area**—that area in which the signal of the station is heard with assured regularity.
- production director**—the official who is responsible for the preparation of a program. He combines the work of the music director, dramatic director, and the announcers into a single program, building and shaping the program by bringing all these factors into harmony.
- read-y**—an actor is reading his part rather than interpreting it.
- rebroadcast**—the picking up of a radio program from the air and rebroadcasting it over the station's transmitter.

- remote**—a program that is picked up from some point outside the studio. Such programs originate in dance halls, hotels, churches, educational institutions, mobile trucks, athletic fields, etc.
- remote control**—a program which originates outside the studios of the station.
- riding gain**—the control of the volume of a program by the engineer previous to putting it upon the lines to the transmitter.
- round robin**—the telephone line that connects stations upon a network returning to the key station.
- script writers**—those who write the commercial announcements advertising the products of the sponsor.
- signal**—any sound that may be picked up from a station's transmitter.
- sound man**—one who creates by original methods or recordings the sounds that are required in a program. He is often called a **pancake turner** if his work consists in using recorded sound.
- sponsored program**—a sponsored program is one that is an advertising program for which the station receives remuneration.
- station break**—the pause in a network program to permit outlying stations to identify themselves.
- stand-by**—a program that is relied upon in emergencies, that is available when a program for an allotted time has been cancelled or because of technical difficulties cannot be picked up. Such a stand-by is sometimes necessary when a speaker is taken off the air because of inappropriate remarks or speech. In a case of this sort, a stand-by pianist or other performer must be on hand to fill in. **Stand by** is the instruction given by a production manager to a cast to be ready to go on the air in less than a minute.
- sustaining program**—a sustaining program is one that is presented by radio stations without profit or income of any sort.
- tag line**—a line in the copy that must be "hit" or given emphasis. It may either be the gag that ends a short scene or the climax spoken before a musical transition.
- tie-in**—A commercial announcement given by the local announcer immediately after a break in a network program or at the end of a network program. It generally takes the form of naming the local merchant who sells the product that has been advertised upon the main program.
- transition**—the moving from one scene to another in a dramatic presentation; it may be effected by a musical bridge, by fading out the speaker, by the use of a sound effect, or by some other method devised by the director.
- trailer** (*see tie-in*)
- volume indicator**—the dial on the control board on which the volume is shown.
- wrapping it around the peak**—means that if the speaker shouts, he will send the needle to the very top of the dial. This results in blasting.

There are many other expressions that are used in the studio, but the majority of them are strictly local.

Abbreviations

The call letters of a station are written in capital letters, but, as they are not abbreviations, no periods are placed between these letters. However, there are quite a number of abbreviations in radio.

AFRA—The American Federation of Radio Artists.

ASCAP—The American Society of Composers, Authors, and Publishers. This abbreviation has been generally accepted in radio fields as a word, "Ascap."

AM—amplitude modulation—the standard band.

B.B.C.—British Broadcasting Corporation.

B.M.I.—Broadcast Music Incorporated.

C.B.C.—Canadian Broadcasting Commission.

C.B.S.—Columbia Broadcasting System.

ET—electric transcription.

F.C.C.—Federal Communications Commission.

FM—Frequency modulation.

F.T.C.—Federal Trade Commission.

Kc—kilocycles.

Kw—kilowatts.

M.B.S.—Mutual Broadcasting System.

M.C.—"master of ceremonies;" this is now being written quite generally as a word, "emcee."

M.P.P.A.—Music Publishers Protective Association.

N.A.B.—National Association of Broadcasters.

N.A.E.B.—National Association of Educational Broadcasters.

N.B.C.—National Broadcasting Company.

P.A.—Public-address system, described elsewhere in this book.

R.C.A.—Radio Corporation of America.

R.p.m.—revolutions per minute (of a record upon a turntable).

V.I.—volume indicator. This is a delicate instrument or meter on the control board which indicates the amount of volume or sound that is being fed from the microphone.

V.U.—volume units (in place of decibels upon the V.I. indicator)

W.B.S.—World Broadcasting System. Frequently, in a studio, this abbreviation, (W.B.S.) is made into a word "Wabus," which means that electrical transcriptions furnished by the World Broadcasting System will be used upon a program.

Appendix

Included herein are a number of amateur scripts for different types of programs and purposes. These were written by students in the class in radio writing. When a plot or idea is approved the student writes a first draft. From this rough draft copies are run off on the duplicating machine, allowing adequate space upon each page for corrections and comments. A tryout-cast then presents the play in a reading rehearsal over the public-address system to the other members of the class for criticism. In order to point out some of the errors made in the writing of radio plays, the scripts included in this appendix are given in their original draft form, together with the criticisms that resulted in changes before the programs were broadcast. As there are no copyright restrictions upon these plays they may be improved upon for classroom exercises or broadcasts.

There are a number of recent compilations of professional scripts used upon radio programs, as well as a large number of textbooks which include specimen scripts. There are various sources from which radio plays may be obtained. Some of these give scripts free, while others require a fee. There are also companies making transcriptions of dramatic programs which may be secured for analysis. In the majority of instances these printed scripts are copyrighted and not available for broadcasting without permission. Teachers in colleges for women seem to have difficulty in finding scripts for all-women casts, hence I include a list of nouroyalty plays for women which may be adapted for radio. A list of such sources follows the sample scripts.

MICHIGAN'S MARCH OF SCIENCE

By PHILMOUR B. HILLMAN

FIRST MAN PATIENT: Doctor, why has my skin become yellow? Why?

WOMAN PATIENT: Doctor, why has my tongue become so sore? Why?

DOCTOR: I'm sorry but it appears you have pernicious anemia.

FIRST MAN PATIENT: Doctor, I've been feeling dizzy.

WOMAN PATIENT: Doctor, I'm short of breath.

SECOND MAN PATIENT: Doctor, I can't feel the floor when I walk.

DOCTOR: I'm afraid you have pernicious anemia.

FIRST MAN PATIENT: My ankles swell.

WOMAN PATIENT: I bruise easily.

SECOND MAN PATIENT: My fingers are numb.

DOCTOR: Pernicious anemia.

FIRST MAN PATIENT: Pernicious anemia?

WOMAN PATIENT: Pernicious anemia?

ALL THREE: Pernicious anemia?

Montage opening gives the symptoms of the disease quickly and immediately attracts the listener's attention.

Patients give their lines fast-staccato, the doctor more deliberately.

The repetition mounts in delivery.

WOMAN ANNOUNCER: This afternoon, the Michigan University of the Air presents directly from its campus studio in Ann Arbor, Michigan's March of Science!

Sound: March music: After three bars, fade into man announcer's voice, but keep playing while he speaks.

Lively marches are well suited to health programs.

MAN ANNOUNCER: Of vital interest to all should be the disease, pernicious anemia. Of vital interest to Michigan citizens should be the great work done by its famed university. The story of man's conquering this disease is as fascinating as it is important to each of us. The story begins in Boston, fifteen years ago. Place: A Boston hospital. We hear three young doctors speaking.

Combine the last three sentences. Avoid the stereotyped scene opening "We hear—"

FIRST DOCTOR: Well, another day.

SECOND DOCTOR: Another day, another dollar.

FIRST DOCTOR: None of us are on duty tonight; how about seeing a movie?

SECOND DOCTOR: I'd just as soon. How about you, Baxter?

THIRD DOCTOR: (*Glumly*) No, you can count me out.

FIRST DOCTOR: Say, what are you thinking so seriously about?

THIRD DOCTOR: Well, I've been in better moods, if that's what you mean.

SECOND DOCTOR: The patient in room two-sixteen got you down again?

FIRST DOCTOR: (*Chuckling*) Why is it that young doctors worry more about their patients than the patients do themselves?

THIRD DOCTOR: (*Quietly*) You'd think as long as they know what the disease is, by now they would have found something, something of some sort to cure it. But . . .

FIRST DOCTOR: Well, there's nothing we can do to help her. All you young doctors are visionaries. After all, she's not the first and she won't be the last that pernicious anemia will claim.

THIRD DOCTOR: That's just it! Those poor people don't seem to have a chance in a thousand. Live two, maybe three years—no more than five years. Surely something can be done.

SECOND DOCTOR: I don't know, but I understand some doctor, Whipple, I guess his name is, has been doing some good work in the field.

THIRD DOCTOR: Well, I wish him luck. I don't know of any disease that is quite so deadly. Once you've got it, there's no getting away from it.

SECOND DOCTOR: Well, crazy as it sounds, he found that peaches, apricots, and liver have some effect on the blood quality and content.

FIRST DOCTOR: For that matter, I understand that Minot and Murphy and a couple of others are working on that angle now. If your patient can hang on long enough maybe she can be saved.

THIRD DOCTOR: Do you realize that there are about thirty thousand suffering in this country alone, and not one single thing can be done for them?

As originally submitted 32 speeches opened with "Well." These have been printed as submitted as a warning to the student writer of conversation.

The number of the room is unimportant here but when numbers are important write them out so that announcers can't muff them.

Grammatically confusing. Use dashes, the most helpful of radio punctuation, between the "some-things." Interest aroused by a specific case rather than generalization.

Dialogue is informative, also brings in medical research.

Doctors don't guess.

Antecedent too remote, use doctor's name again.

Omit "for that matter" and bring out the idea by delivery.

Statistics worked in not too obviously.

SECOND DOCTOR: Well, if Minot can turn the trick, maybe it won't be long before . . . (*Fading*)

ANNOUNCER: The year is 1924, two months later. Doctor Baxter, whom we just heard, is with his patient. He enters her room.

PATIENT: (*She speaks in a strained voice, weakly*) Good morning, Doctor.

DOCTOR: Good morning! Say, I've got the best news for you, you've ever heard!

PATIENT: (*Sighs and laughs weakly*) Got a reprieve from the warden for me?

DOCTOR: You weren't fooling when you said that!

PATIENT: But . . . but what do you mean? It's hopeless, Doctor; you needn't try to make me feel any better. I know how things stand. I don't have a chance.

DOCTOR: (*Excitedly*) Yes, yesterday I would have agreed with you. Today, no. Do you realize, young lady, you're going to make medical history? Do you realize that?

PATIENT: What are you talking about? Have they found a cure? Have they? Oh, don't hold anything back from me!

DOCTOR: Look, I didn't want to tell you before, in case anything fell through, but they've found a cure. After a long series of laboratory tests, Dr. Minot and Dr. Murphy have announced what should be an infallible cure for pernicious anemia. And you're going to take the first treatment as soon as your nurse gets back from the kitchen.

PATIENT: The kitchen? Don't tell me I have to eat pie?

DOCTOR: Well, not quite. But listen to this. All you have to do is eat a pound of liver a day in any form you want. And, dear madam, I think we can safely promise you, you'll live to hold your great grandchildren on each knee!

PATIENT: Oh, doctor . . . No . . .

DOCTOR: Yes, yes! I mean every word of it! Now isn't that wonderful?

PATIENT: Wonderful? It's a recall from the grave. But we must call my husband and children.

DOCTOR: Don't worry. I called them up already. They'll be right over.

PATIENT: But just what's the idea of liver instead of nasty medicine?

DOCTOR: Well, it's this way. Imagine that the marrow of your bones is your blood factory. It really is, you see. Well, when that goes on the blink in a certain way about which we don't know, your red blood corpuscles never get a chance to get out into your blood, and, bingo, you have pernicious anemia. Anyway, somehow the eating of liver corrects that; understand?

PATIENT: And, Doctor, I'll never have a sword hanging over my head again?

DOCTOR: Well, I don't like to make any rash promises, but just between you and me, I think that everything is going to be all right.

Omit "whom we have just heard." That was two months ago we heard him.

Giving sick woman hope has an audience appeal. Listeners like vicarious happiness.

Omit the "yes."

Poor excited conversation.

Omit "Look." Rather an emphatic statement from a doctor, yet the skit was checked. I think the doctor might have been more reserved, but that might slow down the tempo.

Has the author sacrificed pathos and realism for colloquial speech?

Repetition of sounds "recall" "call." She is quite wordy for one so sick.

It takes more than "buts" and "wells" to make conversation.

A little confusing but it gets away from medical terms.

PATIENT: Oh, how can I thank you, Doctor? What is there to say?

DOCTOR: Don't thank me, young lady. Minot and Murphy may be your saints . . .

Fade-out.

ANNOUNCER: And so a week passes. Again we hear Doctor Baxter. He is speaking with another doctor.

FIRST DOCTOR: Well, Baxter, a week has passed now. How's your patient coming?

SECOND DOCTOR: Looks all right so far. Her complexion is improved, heart palpitations have slowed down perceptibly. Yes, she's all right so far.

FIRST DOCTOR: What do you mean, "so far"? Expect a relapse?

SECOND DOCTOR: No, not that, thank heavens.

FIRST DOCTOR: Well, what's wrong then?

SECOND DOCTOR: My dear sir, the trouble is that we have not taken into consideration the human element.

FIRST DOCTOR: The human element? What do you mean by that?

SECOND DOCTOR: Did you ever try to eat one kind of food every day for a week?

FIRST DOCTOR: Oh, oh, I think I understand. Lady no like liver, right?

SECOND DOCTOR: Right. And I don't blame her one bit. Except that if she doesn't continue with her liver she won't have to worry about eating anything hereafter except milk and honey.

FIRST DOCTOR: Well, how do you give her the liver?

SECOND DOCTOR: Look, we've fried it, chopped it, boiled it, broiled it, baked it, stewed it. We've mixed it with everything but the bed linen and its still liver.

FIRST DOCTOR: Well, that isn't so funny.

SECOND DOCTOR: I should say it isn't so funny. We've just begun to find the solution. In short, the battle isn't over yet by any means.

FIRST DOCTOR: Anything being done about it?

SECOND DOCTOR: Yes, I guess there is. Both Minot and Isaacs are trying to dope out some extract from the liver and then inject the stuff.

FIRST DOCTOR: How are they coming?

SECOND DOCTOR: What can you say? Either you've got it or you haven't got it. They *do* seem to be on the right track, though.

FIRST DOCTOR: Well, if they are, it'll mean life and happiness to between twenty and fifty thousand people in this country alone.

Fade-out.

ANNOUNCER: The year is 1926. Dr. Isaacs, later to become Doctor Isaacs of the University of Michigan, is heard talking with a colleague. The doctor speaks:

When possible avoid announcer transitions. Particularly over-worked are such scene introductions as "we find," "we hear," "the place." My, how fast these weeks are passing—just proves how unnecessary the announcer was.

Light vein in conversation is relief from serious subject matter.

Awkward. Change to "It's hard to say."

Dr. Raphael Isaacs, Bad. "Is talking—the doctor speaks."

DOCTOR ISAACS: (*It is a mild, pleasant voice*) Well, gentlemen, I think we have it. The days of liver stuffing should be over.

SECOND DOCTOR: May I be the first to congratulate you and your colleagues? When will the extract be ready for use and how will it be used?

DOCTOR ISAACS: Well, it is ready for use right now. Laboratory tests have been most successful and there is no reason to wait any longer. As for its use, well, it will be done by muscular injections.

SECOND DOCTOR: And how often will the injections be administered, Doctor?

DOCTOR ISAACS: Well, you see, that's one of the best parts of it. Whereas the patient formerly had to down a half pound of liver a day, one of these injections a week should suffice.

SECOND DOCTOR: That's certainly marvelous. To think that the victims of pernicious anemia need worry about old age and not anemia!

DOCTOR ISAACS: Yes, if he realizes that he has pernicious anemia. The tragedy is that people may suffer a loss of strength, see their complexions grow yellow, etc., and still do nothing because they don't realize there is anything wrong with them.

Fade-out.

ANNOUNCER: The year is 1927. The place: The Thomas Henry Simpson Memorial Institute for Medical Research. For a year now the liver extract has been given to the victims of the dread disease. A nurse and a doctor are speaking.

DOCTOR: Good morning, nurse. How is room two-nineteen doing?

NURSE: Fairly well, doctor.

DOCTOR: Anything wrong?

NURSE: Not with his physical condition, doctor, no.

DOCTOR: Well, just what is the matter then?

NURSE: Well, the thing is, doctor, those intramuscular injections are causing him a lot of pain.

DOCTOR: Hmmmm, I remember his complaining about that before.

NURSE: Well, it seems to be causing him more trouble now.

DOCTOR: If the latest developments work out he needn't worry about that any longer.

NURSE: Why, doctor, is there something new being brought out?

DOCTOR: Yes, some Boston doctors have suggested that the intramuscular extract be injected into the vein instead. Not only would it cause less pain, but it could be administered less often. Say, once a month instead of once a week.

NURSE: Are they making any progress in that direction?

DOCTOR: As a matter of fact, we're going to try it out in the morning. If it succeeds, a great advance has been made. If not . . .

I rather doubt that Dr. Isaacs would use the expression "liver stuffing."

Wordy.

Not clear.

"The place . . . are speaking."

Fade-out.

ANNOUNCER: The next morning, two men and a woman, the doctor, his patient, and the nurse are in a white-walled room. The place: The University Hospital. The doctor speaks:

DOCTOR: All right, now, if you'll just sit back and relax, Mr. Chalmers. Is everything ready, nurse?

NURSE: Everything is ready, doctor.

DOCTOR: Is the needle sterilized?

NURSE: Here it is, doctor.

DOCTOR: All right, swab the arm and hand me the needle.

NURSE: Here you are, sir.

DOCTOR: All right, Mr. Chalmers, just relax now. It won't hurt a bit.

CHALMERS: Don't worry about me, doctor. I'm ready.

DOCTOR: All right. Here we go. (*A moment's silence*) There we are.

CHALMERS: Doctor, doctor. I'm beginning to feel faint!

DOCTOR: It looks like his blood pressure again. Must be going down fast. Quick, nurse, is the adrenalin ready?

NURSE: Here it is.

CHALMERS: Doctor, doctor (*weakly*), can't you do something? I'm . . . (*Pause*)

DOCTOR: Blood pressure still going down?

NURSE: Yes, sir.

DOCTOR: There, this should check it. (*Pause*) There we are. Yes, that seems to have done it all right. He should be all right now. How's his pulse?

NURSE: Getting stronger, sir.

DOCTOR: Well, that was almost a close one. Feel better now, Mr. Chalmers?

CHALMERS: (*He speaks very weakly for the rest of the scene*) A bit better, doctor. Awfully weak though.

DOCTOR: Well, I think you'll be all right now.

CHALMERS: I'm afraid I almost passed out. What happened?

DOCTOR: It's difficult to say. It was more or less unexpected. It appears as though we'll have to go back to the muscular injections.

CHALMERS: (*Hopelessly*) Oh, doctor, not that, I hope. That's worse than this!

DOCTOR: Well, we'll have to resort to that for the time being, at least until we find out what's wrong with the intravenous injection.

CHALMERS: Doctor, I think if I had to get stuck in the muscle again like a pig or eat another ounce of liver, I'd just as soon give it all up.

DOCTOR: Now don't you worry. We've gotten this far and we're not going to stop now, I can assure you.

CHALMERS: Well, Doctor, I'm in your hands. It's up to you.

DOCTOR: (*Dryly*) Yes, so are twenty thousand other patients. But, as I say, don't worry. In the meanwhile, you had better get a good rest. In case you don't realize it, that was

This whole announcement should be omitted. It is trite, stereotyped, and unnecessary.

The conversation in the operating room is not accurate according to fact but it gives a necessary picture to the listener.

Repetition of "all right" as a sentence opener.

Picturesque but wordy.

Stick to the thirty thousand mentioned previously.

somewhat of a shock you had. All right, nurse, you may take him back to his room.

CHALMERS: Well, I certainly hope you men find something quickly.

DOCTOR: (*Half to himself*) No, Mr. Chalmers, we haven't reached the final solution yet. If there's something in the extract itself that raises such a rumpus with you, we're going to find it and take it out. But until then, and I may give you some hope that it shouldn't take too long, you'll just have to be content with the muscular injections.

CHALMERS: But, doctor . . .

DOCTOR: Come now. You're no baby any longer. Don't worry about it. I'll see you in the morning.

CHALMERS: All right, doctor, you're the boss.

DOCTOR: Good day, sir. All right, nurse. Please help him back to his room.

Fade-out.

ANNOUNCER: No easy matter did the doctors find it. Days passed, then weeks. After locating what caused the sudden lowering in blood pressure, no suitable filter could be found to remove the harmful substance. How the filter was finally found is a story in itself. Ann Arbor residents may still recall with bitter taste in their mouths the drinking water of but a few years past. But let us reconstruct the scene for you when the filter was found. The scene, Dr. Isaac's office in the Simpson Memorial Institute. Weeks after the episode with patient Chalmers, we find Dr. Isaacs and the Institute Head, Dr. Sturgis, talking.

DR. ISAACS: Well, at least we've found what causes the trouble.

DR. STURGIS: How is the man doing now?

ISAACS: Nothing serious, once the effects wear off.

STURGIS: Certainly amazing the way his blood pressure dropped off.

ISAACS: Well, at least it's quite clear that we can't use the intravenous injection the way it is. Incidentally, I suppose you know the man underwent a severe chill later.

STURGIS: Yes, the nurse in charge told me.

ISAACS: Well, I, for one, am stumped. After all, how can we filter out the troublemaker without taking out everything that makes the extract what it is?

Sound: There is the slam of the door as Dr. Bethell enters.

ISAACS: Hello, hello, Dr. Bethell.

BETHELL: Sorry I'm late.

STURGIS: Doesn't matter. We haven't accomplished anything anyway.

BETHELL: It's certainly a pleasure to drink that water now. If it weren't for this conference I could have stood at the fountain all afternoon. It's the first decent drink of water since I've come to this town.

ISAACS: I still don't see how they could take all the stuff out of *that* water. That water must have been ninety per cent calcium and iron and ten per cent water.

Conversation is no excuse for bad grammar. Weak scene ending. Strengthen by having doctor end with an idealistic positiveness that research will conquer in the end.

Awkward.

Sound.

STURGIS: I don't know myself. I understand they use Permutit as a filter.

ISAACS: Hmmm, Permutit? Hmmmmm, certainly must be a wonderful filter.

BETHELL: Well, there's certainly no comparison. The only thing the filter left behind was the water!

ISAACS: Well, it seems to me if Permutit could filter out the impurities in the water, it could filter out anything. (*They all chuckle*) Say, suppose we were to try it on the liver extract? (*Pause*)

BETHELL: That isn't a bad idea at that! We haven't used it yet, have we? Can't lose anything but a little time.

STURGIS: Well, we might try it at that. As you say, gentlemen, we have little to lose. If it does succeed, queerer things have happened. If it doesn't, well . . .

Fade-out.

DOCTOR: All right, nurse. Is everything ready?

NURSE: Yes, sir.

DOCTOR: Don't forget. The minute there is any change in blood pressure, let me know immediately.

PATIENT: Do you think there will be, doctor?

DOCTOR: No, frankly, I don't. We seem to have discovered something that has turned the trick. You may laugh, but it's the same filter they use to clear the water in this city. We tried it as somewhat of a last resort and, after extensive laboratory tests, it seems to work. We're going to see definitely now.

PATIENT: But what if it doesn't?

DOCTOR: Well, we'll just have to keep trying. The new intravenous injection is too valuable a method to drop and forget about.

PATIENT: But . . . but if it doesn't work now, will it harm me at all?

DOCTOR: No, you needn't worry. Now just relax, Mr. Johnson. Hand me the needle, nurse. All right. (*A slight pause*) (*Slow down considerably in tempo. Increase intensity of voice.*) There we are. Blood pressure, nurse?

NURSE: No change, doctor.

DOCTOR: Pulse?

NURSE: Strong.

DOCTOR: How do you feel, Mr. Johnson?

PATIENT: Fine as ever, doctor.

DOCTOR: Any change yet, nurse?

NURSE: No, sir. Blood pressure one-twenty. Pulse normal. (*Pause*)

DOCTOR: Then . . . this *is* it. Thank God! After all these years. Then this *is* it!

Fade-out.

Sound: Three bars of march music. Fade into announcer's voice and keep playing.

ANNOUNCER: Yes, it *was* it! After years of research, after years of death and suffering, what may be the final solution has

been reached! From the daily diet of liver to the monthly injection of the extract was the progress made. No longer does the victim of pernicious anemia need live in the shadow of fear. Once a hopeless case, it is now subject to simple, sure, safe treatment—thanks to the patience of such great humanitarians and scientists as Doctors Minot and Murphy and the men of Michigan.

Already the death rate has been cut to one-half and is going down steadily. Citizens of Michigan may well be proud of Doctors Sturgis, Isaacs, and associates. It is men like they who offer the greatest justification for the existence of the democratic state-endowed university. It is men like they who have led and will lead the irresistible march of science! It is because of men like they that Science Does March On!

Sound: Bring out the march in full to close the program just before station identification.

THE GRAY-EYED MAN OF DESTINY

BY PHIL MILHOUS

ANNOUNCER: Washington, D.C., February 11, 1939, by Associated Press: Two cases of musty documents which arrived in Washington today may shed new light on one of the most lurid tales in the history of the Americas, a story replete with adventure and freebooting. These papers are understood to tell more of the story of the Tennessean, William Walker, who, just before the Civil War, made himself president of Nicaragua with the help of a few Americans and was well on his way to uniting all the Central Americas until he fell into the hands of the British navy.

Sound: Bugle calls.

NARRATOR: We present here a fictionalized account of the career of William Walker, known to history as the "Gray-eyed Man of Destiny." Walker was born at Nashville, intended for the ministry, educated at schools in the South, East, and in Europe. He successively turned to medicine, law, journalism, and military conquest. With less than 100 men—the self-styled "90 Immortals"—he made himself president of Nicaragua, much to the embarrassment of the government at Washington.

What was behind such amazing audacity? He met a girl . . . The time is 1850. The scene a ballroom in the gay Maxwell House at Nashville, Tennessee. William Walker, just returned from Europe, stops his friend, Lawrence:

Sound: Waltz music . . . faint voices . . . and laughter.

WALKER: Lawrence! Lawrence, I say! Here . . . by the window.

LAWRENCE: Yes, William?

WALKER: Who is she? There, she in the white with red roses. I haven't taken my eyes from her all evening.

The purpose of the above skit is obvious. Medical skits must be checked by medical men before they are presented. The combining of real individuals such as Doctors Isaacs, Sturgis, and Bethell, with unnamed characters gives greater authenticity.

A newspaper clipping as the basis for a story is trite but attracts attention. Except for the "1939" the item was used exactly as printed. It shows how unsatisfactory the long sentences and diction of a news item are for radio.

Bugle calls followed by waltz music are bad. Replace with theme music.

Biographical material adds to authenticity of the skit.

As much of the plot is exposed in introduction "He met a girl," which is banal, is permitted to create interest.

Carry through the scene.

LAWRENCE: Why, ah . . . she . . .

WALKER: Well? Out with it! There, Lawrence, is the girl I'm going to marry.

LAWRENCE: M-marry?

WALKER: Yes, marry!

LAWRENCE: But you can't. She . . . she is already engaged!

WALKER: Not after she has met me, she isn't. I shall have her.

LAWRENCE: You—! You're crazy!

WALKER: Crazy with love for her with whom I have not spoken.

Lawrence, I tell you, I shall have her. I always have what I want. Will you tell me?

LAWRENCE: Really, William. This isn't Europe, you know. At least wait until the "new" has worn off and you are at home again in local society.

WALKER: (*Abstractedly*) Oh, bother local society. She is all I care for.

LAWRENCE: But . . .

WALKER: But me no buts. Come, will you tell me her name?

LAWRENCE: Not until I am sure you will behave as a gentleman should!

WALKER: Then the devil take you! I'll go to her myself!

LAWRENCE: Come back here! William!

Fading: Music in background.

WALKER: I beg your pardon.

MARGARET: Sir?

WALKER: I am going to speak to you!

MARGARET: Wh—what!

WALKER: I said, "I am going to speak to you."

MARGARET: Ye-Yes. That's what I thought you said!

WALKER: It's as good an introduction as any. Come now—can't we dispense with the usual falderal?

MARGARET: You seem to have.

WALKER: I could persuade any one of a dozen matrons on the floor to present me, but I hate doing things that way.

MARGARET: Why, may I ask?

WALKER: Oh, because I should then have to stay and answer questions for the rest of the evening, and to ask about their families of whom I have happily forgotten and to accept invitations to this and that until—in short, I shouldn't have a word alone with you all evening.

MARGARET: That would be sad.

WALKER: To me it would be. My dear young lady, you can't possibly imagine how you have taken me. If you but dance one-quarter so divinely as you look, we shall be the focus of all eyes!

MARGARET: We, sir!

WALKER: Pardon me—do I know you well enough to request the honor of a dance?

MARGARET: Sir! What a question upon first sight!

WALKER: What a girl!

MARGARET: I don't know what to say.

WALKER: Then I'll tell you.

Conversational style and diction of Walker is stilted to bring out his educational background, the period, and the locale.

"I shall have her" is bad. The radio audience is alert to find an unexpected interpretation.

A very awkward sentence to read understandably.

Characters are introduced gradually in this skit so that the listener may become acquainted with each voice before a new one is heard.

Walker through his reading must make himself a romantic washbuckler, a gentleman not bound by conventions. Director must see that Walker does not sound rude or conceited. He should be rather a dashing and winning young man.

This love interest which is in reality introductory, is taking too much time. However that is the material that was discovered in the documents mentioned in the new release.

MARGARET: Yes?

WALKER: Yes!

MARGARET: Yes, what?

WALKER: That's it—"Yes." Say it, won't you? Say you will dance with me.

MARGARET: I . . .

WALKER: It doesn't matter how you say it—only say, "yes."

MARGARET: You are the strangest person!

WALKER: You think so because I have been out in the world and don't care for your silly conventions. You'll think otherwise when you know me as I already know you.

MARGARET: (*A touch of mischief*) You know me?

WALKER: Ah, yes, Gracious Lady! I have known you always in my dreams!

MARGARET: Did your dreams tell you my name?

WALKER: "A rose by any other name"—what does it matter? You are beautiful!

MARGARET: Really, sir. You are most forward. And not even to know my name!

WALKER: Do you know mine?

MARGARET: Certainly not.

WALKER: Then we are on even ground. But I could tell you mine.

MARGARET: It would be strange if you couldn't.

WALKER: But I can—I could say, "Miss—ah, Miss"? . . .

MARGARET: Alexander!

WALKER: (*Triumphantly*) Miss Alexander, may I present myself, a most humble and unworthy wretch at your feet, William Walker, esquire, of the Capitol Boulevard Walkers, lately returned from six dreary years of European exile . . . a man upon whom the gods have just now smiled!

MARGARET: Very well, Mr. William Walker. If you will go now and contrive to be properly presented, I shall be honored to dance with a young man of the Capitol Boulevard Walkers. Until then I must not be seen with you. Oh bother! I have an escort somewhere about. I can't imagine what could be keeping him.

WALKER: No doubt he has seen how beautifully we are getting on together and shot himself in despair.

MARGARET: Go now. And don't forget the introduction. How do you think Mother would regard this little affair?

WALKER: Oh, she'd be most delighted. Quite a worry, getting one's daughter to know the right sort of people.

MARGARET: Being a Walker is a step in the right direction, but it doesn't mean that you are the right sort of person.

WALKER: For you, dear lady, I dare hope to be the only person!
Fades . . .

NARRATOR: One month later—Walker in the parlor of Margaret Alexander's home:

WALKER: Very well. Don't draw away from me. I shall not touch you again.

"Out in the world" trite.

Walker seems "gushy," not sincere. It seems out of character, but according to the final climax she influences his life.

When read aloud this does not sound conversational. Revise.

Merely a fade is not adequate as a transition.

MARGARET: You mustn't.

WALKER: Am I so repulsive?

MARGARET: No, I rather . . . I *like* you . . .

WALKER: That is not enough. Can you love me?

MARGARET: I can never love you.

WALKER: I shouldn't have made you say that. You will regret it when you realize that you do love me.

MARGARET: William, I have told you every way I know how. I like you. I admire you—at least I did before you went mad.

WALKER: Mad?

MARGARET: What else do you call this scheme of leading seventy men against a whole nation?

WALKER: If you could only see it as I do! I have every plan mapped out, every move! With a little luck I can't fail.

MARGARET: You must really think little of me to ask that I accompany you in search of this will o' the wisp.

WALKER: If you only believed in me! With you near me I should conquer the world and lay it at your feet.

MARGARET: William, if you could, do you think you have the right?

WALKER: Have you heard the phrase "manifest destiny"? It was created, perhaps, by the late Napoleon?

MARGARET: And are you another Napoleon?

WALKER: Napoleon failed. I shall not fail!

MARGARET: You believe it!

WALKER: I know it! Let the lord of the lands above the Great Lakes and the tawny peoples of the south look to it—America is destined to round out her territories with the sea!

MARGARET: That is more ridiculous each moment. You are ruining, destroying all the esteem I once held for you.

WALKER: How?

MARGARET: How? Oh, William—With your comic-opera schemes and your comic-opera army?

WILLIAM: You have hurt me, Margaret, as only you could; but still I love you. When I have conquered—and I shall conquer, I shall send for you and ask you to share it with me. *(Fades)*

ANNOUNCER: The scene changes to Walker's rooms one year later. We find him with his friend Lawrence.

LAWRENCE: William, you must give up this nonsense. You have the brightest future of any man in Nashville if you'll only settle down. Return to the law, or the ministry, or medicine! Imagine, a brilliant career in any one of three professions, and you must be off to Nicaragua with a handful of men!

WALKER: If you don't wish to accompany me, Lawrence . . .

LAWRENCE: I gave you my word. You know I'll be with you, but it's hopeless. You can't do it!

WALKER: You'll see!

The facts contained in this skit were checked for historical accuracy. In order to condense the story into a 15-minute skit subscenes had to be eliminated and the build-up for scenes cut to a minimum. The combination of inconceivable facts, though true, and condensed form detract from the truthful impression. It is a 30-minute plot in a 15-minute period. It is educational in that it tells of a little-known historical incident.

Character delineation.

An announcer breaking in to give a time lapse and scene change is bad. How can this transition be improved?

Beginning of the historical plot. If there is a fault in this play it is that there are two plots—the love story, which dominates the first half, and the historical, which fills the second half.

LAWRENCE: But is any girl worth it? Now, listen, I know Margaret rather well, and . . .

WALKER: (*Sharply*) Lawrence, as you value our friendship, say nothing against . . .

LAWRENCE: Never! But you will get over it. Remember, "Men have died and worms have eaten them—but not for love."

WALKER: Do you think she would pity me if I were dead? Some heroic death? That at least would be something!

LAWRENCE: This has gone far enough.

WALKER: She dreams of knights in armor, perhaps. (*Excited*) She doesn't notice me. But she will. She will when I have conquered a nation and laid it at her feet!

LAWRENCE: You're mad!

WALKER: Then let the world look to my madness—and yours. For I shall take you with me, Lawrence, and you shall share second only to me. Is romance dead? Not while I live! Oh, I'll show her! (*Fades*)

ANNOUNCER: In a New Orleans fortuneteller's booth Walker heard the prophecy that was to make for his temporary success and to give him his name of "Gray-eyed Man of Destiny." New Orleans!

Sound: Street noises . . . hucksters.

GYPSY: Señores! Señores! I tell fortune! I read palm!

LAWRENCE: Try her, William. She is really good—she told me remarkable things.

GYPSY: Si! Si! Cross my palm weeth seelver an' I weel tell you!

WALKER: I have not time for such foolishness!

LAWRENCE: She told me that I should be unlucky in this war, but that I was lucky in love!

WALKER: Hmmm—lucky in love . . . ? Very well, I'll humor you. Here—now your palm is crossed with silver, tell me what is in store for me?

GYPSY: Ah, thees lines! It foretell gr-r-ate theeings for Señor.

WALKER: Come. I want facts. What do you see for me in Nicaragua?

GYPSY: Señor, your eyes!

WALKER: Yes. Yes. My eyes. They are gray. I know it. People often remark about them.

GYPSY: And you are going to Nicaragua, yes?

WALKER: Yes.

GYPSY: But, Señor, I come from Nicaragua, and . . .

WALKER: Here. Did I pay you to tell my fortune or your own? I don't care where you were born.

GYPSY: But señor, the prophecy! It is legend in Nicaragua that the people who are poor and oppressed there weel one day be liberate by a man weeth gray eyes! Eet ees all written in your hand—señor, you are zat man!

Fades

NARRATOR: At first the Gypsy's prophecy made little impression upon Walker. He met many exiles from Nicaragua

I would prefer to have this brought out in dialogue; the announcement, however, saves time. A transition to New Orleans was necessary to comply with historical facts. In too many instances the announcement gives away the story that follows.

In writing dialect the author must be consistent—don't write "is" in one line and "ees" in the next. Don't omit the article in one place and insert it in the next. It is wiser to allow the director to put in the dialect than to bind actors by the script form.

seeking haven in New Orleans, who remarked upon his resemblance to the legendary deliverer of their country, and finally he grew to believe in his destiny himself. The revolution he engineered has been successful for the time being. We are in the audience chamber of the presidential palace.

WALKER: You forget that I am president, Lawrence. I shall see whom I please.

LAWRENCE: But, William, you must see him. Castrillon is a proud man. He . . .

WALKER: All the more reason to let him cool his heels! He will learn what it is to disobey my orders.

LAWRENCE: All the more reason to play up to his pride—to see that he meets with no affront.

WALKER: His pride! Affront! And do you think it's no affront to me to have my orders disrespected? Pride? I shall teach these people to have pride!

LAWRENCE: William, will you never learn? You spend six months in Paris, visit the Riviera for a while, perhaps, and you think that qualifies you to understand and handle the Latin temperament!

WALKER: I shall show you how I handle the Latin temperament!

Sound: Bang of fist on desk.

WALKER: Orderly!

ORDERLY: Yes, sir!

WALKER: Have the guards bring in the prisoner!

ORDERLY: Yes, sir.

Sound: Door opening.

ORDERLY: Bring in the prisoner!

Sound: Tramping in. Door closes.

CASTRILLON: Señor Presidente! Ah, at last I see you! I do not understand. I have presumed that you are honorable man, yet I have been arrested, thrown into prison—I . . . !

WALKER: You can understand that I am president, Castrillon, that it is death to disobey my orders. You refused my order that you should contribute to the war fund, did you not?

CASTRILLON: But señor President! Ze amount! Eet was too much. Eet would ruin me!

WALKER: I shall ruin you if you do not—and take all your property.

CASTRILLON: But señor—*(laughs)* you make American joke! You Americans are so fond of ze joke!

WALKER: I never make jokes, Castrillon. Will you obey my order? It is already doubled by your insolence.

CASTRILLON: I see—first you weel ruin me, zen you weel make it double! You do make joke, señor, ver' funnee joke! But I weel not obey eet. Perhaps you do not know who I am? Allow me to introduce myself—Don Pedro Felipe Antonio de Castrillon y Sanchez, el conde de Campostelo, el . . .

WALKER: That will do. There are no more titles of nobility except when I shall give them. So you will not submit?

A little theme music in background will give relief from the talking transition.

The repetition of this speech opening is bad.

"Affront." Can't you find a better, more vivid word?

Use sound to bring orderly in.

Change "except when" to "unless."

CASTRILLON: Nevaire! My ancestors, zey do not submit. Zey were at ze siege of Zamorra. Zey fought ze Moors for Ferdinand and Isabella. We do not submit, señor!

WALKER: I have no time to waste with Spanish fools. Corporal! This man is to be executed.

CORPORAL: Yes, sir!

LAWRENCE: This is no time for jest, William.

WALKER: Do you think I jest, Lawrence? Castrillon does not think so. Perhaps you will go to the window and watch the proceedings. Take him away!

CORPORAL: Fall in!

CASTRILLON: You may shoot me, el presidente, but you cannot shoot us all. You weel see!

Sound: Sound of marching . . . the door closes.

LAWRENCE: William, if you go through with this, whatever allegiance I have owed you is at an end. I will not be a party to this butchery. I am going home.

WALKER: Butchery? War is always butchery—but necessary. I am sorry you feel that way about it. However, it suits my plans well enough to have you go. I have an errand for you.

LAWRENCE: Let me warn you, before you shoot all the prisoners. There are some British subjects among them.

WALKER: No need to warn me, Lawrence. I know it.

LAWRENCE: I didn't want you to make a mistake and shoot them.

WALKER: What makes you think it was a mistake?

LAWRENCE: William, we must get out of here immediately!

WALKER: Must we, Lawrence? (*Continuing his bantering tone*)

LAWRENCE: We shall be trapped like rats—with the mob in our teeth and the British navy at our backs!

WALKER: Stick to the duties that I assign you. I'll see you through.

Sound: Footsteps.

ORDERLY: A detachment, sir, from the British ship *Iris*.

Sound: Door opens. Footsteps enter . . . halt.

ENSIGN: Ensign Barton, sir, from His Majesty's ship, *Iris*. My commander's compliments; he requests that you immediately release certain British subjects whom you have arrested.

WALKER: An ensign! Does your commander wish to insult me?

ENSIGN: He has no wish to insult you, sir.

WALKER: Has he no more manners than to send an ensign to treat with me?

ENSIGN: I am under orders, sir.

WALKER: No doubt. Go then and tell your commander until he sees fit to treat with me according to my rank, I have no message for him.

ENSIGN: Sir, my commander does not recognize that you have any rank beyond a self-assumed one.

WALKER: Have a care. You are impertinent!

Minor climax in character development.

Fading.

Underline "was." Radio plays must be rather obvious. If the actor does not make it clear by his reading that the British have been killed then lines must be added for clarity. Subtleness is unsatisfactory in radio.

A good many sibilants.

Every incident must aid in the character development and lead to the climax.

ENSIGN: If there is no message, sir, I feel it my duty to warn you that you shall hear from us shortly in quite a different manner.

Sound: Click of heels. Steps out. Door closes.

WALKER: You see how I handle the majesty of the great British navy, Lawrence. In another moment I should have shot the impudent puppy!

LAWRENCE: Maybe I should go before you shoot me!

WALKER: It will not be necessary to shoot you. But as I said, it suits my plan very well to have you go. In fact, I intended sending you. I want you to go to Margaret.

LAWRENCE: I shall!

WALKER: (*Affably*) Yes, I know. Tell her what glory I have won. How I dazzle the eyes of this entire country. Tell her I offer her . . .

LAWRENCE: (*Brutally*) It would be useless!

WALKER: Useless? Do you consider it useless, Lawrence?

LAWRENCE: Worse than useless—when she loves someone else!

WALKER: If I thought she loved another—any other—I'd kill him!

LAWRENCE: She loves me!

WALKER: You lie!

LAWRENCE: No, William. There has never been a time when I could tell you. She loved me when you first met her.

WALKER: You! I see it now! It was you who stood between us! And I never suspected. *You* to have betrayed me!

LAWRENCE: I never betrayed you. It is you that has betrayed me—betrayed the trust I held in your greatness—betrayed our friendship—smeared blood upon the honor of a soldier and a gentleman. You are a murderer, now—a fiend. Do you think Margaret would have you now, even if she loved you?

WALKER: You ungrateful dog!

LAWRENCE: I won't stay to be reviled. I shall take the first boat to America.

WALKER: But you aren't going to America, Lawrence, my once-friend.

LAWRENCE: What do you mean?

WALKER: I mean just this—

Sound: Sound of walking to and opening door.

WALKER: Sentry!

SENTRY: Yes, sir!

Sound: Walks in.

WALKER: Arrest this man!

SENTRY: Th-this man, sir!

WALKER: This man! What other man do you see?

SENTRY: Sir, I place you under arrest!

WALKER: Charge him with attempted desertion!

LAWRENCE: "We who are about to die, salute you. O Attila of 1860!"

Fades

Rehearsal will take out some of this stilted speech.

The friendship between Walker and Lawrence could have been built up a bit more in order to achieve a greater denouement.

Off mike.

Too melodramatic and probably over the radio head.

NARRATOR: After the execution of Lawrence, events moved to a rapid climax for Walker. Before him were the howling armies of the Nicaraguans and Costa Ricans; behind him the sea and the vengeful guns of the British navy. There could be no escape. When his men rebelled, he knew his "destiny" had tracked him down.

Faint battle sounds; carry through scene.

Sound: Noise of door thrust open . . . pause.

CORPORAL: General Walker, sir!

WALKER: What is it, corporal?

CORPORAL: Sir, we've had enough. We are going to surrender to the British!

WALKER: (*Voice very tired*) Are you, corporal?

CORPORAL: Yes, sir. But we wouldn't have, sir—not if you hadn't shut yourself up like this and refused to lead us out. So help me, we'd still a-been followin' you.

WALKER: I know, corporal. Thank you. Is that all you have to say?

CORPORAL: Yes, sir . . . No, sir—that is, them British, they hate you, sir, like pizen. You could still get out. They's a little boat right at the back entrance, sir. You could get away easy.

WALKER: I'm tired, corporal. Leave me, will you?

CORPORAL: But, sir, them Britishers—they'll do you in, sir. They'll hand you over to the greasers.

WALKER: No matter, corporal. You may go now. Send the padre to me, will you? That's all, I must write a letter.

CORPORAL: Yes, sir—only—very well, sir!

Sound: Steps away . . . door closes.

Sound: Sound of pen scratching on paper.

WALKER: Dearest Margaret! . . . No, let me see. I can't write to her with the hand that has spilled the blood of the man she loved!

Sound: Sound of crumpling paper . . . door opens.

PADRE: William Walker!

WALKER: Yes, padre, I asked for you.

PADRE: It is time! Behold your shadow, William Walker! How it cringes there behind you, a thing of black in the shadow of this little lantern! How much more black will your soul appear when the light of God's face is shining upon you!

WALKER: Peace, good Father. The hour of my destiny is near!

PADRE: Are you ready to die, William Walker? You who have made the streets of León run red with the blood of friend and foe!

WILLIAM: I am ready, Father. (*To himself*) To think that love could turn a man to such a beast!

PADRE: My son, my son, you have sinned before the Lord, your God.

WALKER: It is true, Father. I loved a woman. It was love that made me mad.

PADRE: "We brought nothing into this world, and it is certain we can take nothing away."

"Greasers." Forbidden by radio practice to use such slang designations of race.

Bad characterization; no priest, whose duty it is to comfort all people about to die, would speak in this manner.

Wordy.

Good punch line. Despite all the criticism, I think this resulted in a very satisfactory radio play with such qualities as romance, action, setting, characterization, complications, and the bizarre. Aaron

WALKER: I should prefer that they not blindfold me. I do not wish my eyes—my gray eyes!—to be covered at the last. She was mistaken in one thing, good father. It was not a comic opera! (*Laughs sardonically*)

Music.

Burr, Maximilian, and others could be used to build a series. More sound, mood music and tense speech would increase the suspense.

GAME OF THE WEEK

DICK: This is the Michigan University of the Air, broadcast directly from the campus studios in Ann Arbor. Today we present the third "Game of the Week." Jack Silcott, our master of ceremonies, will tell you what he has planned. Jack, did our listeners like "Roman Adders," last week's game?

JACK: Thank you, Dick Slade; by the requests we've received from our radio friends they certainly did enjoy "Roman Adders." One of our listeners, Mrs. F. P. Langschwager of Bridgeport, Michigan, sent us a good "Adder." Dick, I'll try it on you.

DICK: Just a minute. Now to play "Roman Adders" you ask me to discover two words. After I've found the first word I am to add the letter for the Roman numeral you ask me and build the second word.

JACK: That's right, Dick. Now to a girl's name add the Roman numeral for fifty and get a chronicle of history.

DICK: Let's see. First I find a girl's name, add the Roman numeral for fifty which is "L," and I shall have a chronicle of history.

(*Ans.: Anna + L*)

JACK: I wish more of our listeners would send in words for our games which they have thought up, or send in games which they have found interesting to their clubs, church groups, or friends.

DICK: We still have available copies of last week's game, "Roman Adders," which will be mailed free of charge if you write for them. Just address your request to "Game of the Week," Morris Hall, Ann Arbor, Michigan.

JACK: Here are Johnny Gelder and June McKee to tell us about today's game.

JOHNNY: Thanks, Jack. Our game today is called "State Briefs."

JUNE: Johnny, what do you mean by "briefs"?

JOHNNY: By "briefs" I simply mean an abbreviation. You know what the abbreviation of our states and possessions are, don't you?

JUNE: I believe I know the states, but the possessions of the United States are a little harder.

JOHNNY: I'll try a brief on you, June. Which brief, state abbreviation, is also a girl's name?

Ans.: Minn for Minnesota, or Ida for Idaho.

JUNE: Just what do these briefs include?

This is one of a series of twenty-one game programs. Each week a different word game was played. The ideas of some games were taken from game and quiz books but the names of the games and the words used were changed to avoid copyright violation. Copies of some of the other games will be mailed upon request to the author.

These programs were extemporaneous; therefore only this outline was prepared for the announcer and the emcees. It is merely an outline to be altered as required by the responses of the participants. The program was an excellent exercise in ad libbing for the students.

A program of this type cannot be rehearsed else it will lose its spontaneity. The emcees plan jokes to be used during the program but they spring them for the first time during the broadcast.

Everyone participating must enjoy himself.

JOHNNY: They include all the states, Washington, D.C., and the possessions of the United States. Remember, by the word "brief," we mean abbreviation of a state name.

JUNE: Which state did Noah prefer?

Ans.: Ark for Arkansas.

JOHNNY: Which state is the most religious?

Ans.: Mass for Massachusetts.

JUNE: Which state is "mightier than the sword"?

Ans.: Penn for Pennsylvania.

JOHNNY: Which state is sought by miners?

Ans.: Ore for Oregon.

JUNE: Which state is unhealthy?

Ans.: Ill for Illinois.

JOHNNY: Which state does the Ill state require?

Ans.: Md for Maryland.

JUNE: Which state is a former president's nick name?

Ans.: Cal for California.

JOHNNY: Which state means to read carefully?

Ans.: Conn for Connecticut.

JUNE: Which state is used by singers?

Ans.: La for Louisiana, Me for Maine.

JOHNNY: Which state is "as good as a mile"?

Ans.: Miss for Mississippi.

JUNE: Which possession is an expression of sadness?

Ans.: Alas for Alaska.

JOHNNY: Which possession do we find in geometry?

Ans.: PI for Philippine Islands.

JUNE: Which is worth nothing?

Ans.: O for Ohio.

JOHNNY: Which will a courteous person mention last?

Ans.: Me for Maine.

JUNE: In which state would you find the farmer?

Ans.: Del for Delaware.

JOHNNY: Which state has no automobile?

Ans.: No Car for North Carolina.

JUNE: An electric current which isn't an alternating current?

Ans.: D.C. for District of Columbia.

JOHNNY: Which state is the hero in "Arabian Nights"?

Ans.: Calif for California.

JUNE: Which state is the first name of a famous sports promoter?

Ans.: Tex for Texas.

JOHNNY: Which state means "to understand"?

Ans.: Ken for Kentucky.

JUNE: Which state do little boys hate to do? (Especially to the back of their necks)

Ans.: Wash for Washington.

JOHNNY: Which state is equal to two five-dollar gold pieces?

Ans.: Tenn for Tennessee.

JUNE: Which state means "to deem"?

Ans.: Wis for Wisconsin.

The monotony apparent in the form of the questions must be eliminated in the extemporaneous questions of the emsees.

The most successful game used was Hanky Panky, sometimes called Inky Pinky. A modifier and a noun are given, for instance—"in-ebriated animal." The contestant is required to use synonyms that rhyme, the correct answer being "drunk skunk." Unfortunately the boy answered "soused louse." The latter word is in bad repute among broad-casters. Before questions for any quiz program are accepted now they are submitted to student research on possible risque answers—research conducted with amazing enthusiasm and expurgated results.

The success of a program of this type depends upon the quick wit of all participants.

Such books as *The Giant Quiz Book* and *the Second Giant Quiz Book*, by R. Slifer and L. Crittenden, published by Crown Publishing Company of New York, will give ideas for such series of programs.

JOHNNY: Which state is a beak or bill?

Ans.: Neb for Nebraska.

SPECIAL CASE

By MICHAEL P. KINSELLA

SCENE I

MOTHER: George, do you know what time it is? It's five minutes of five, and Buddie isn't home.

FATHER: Oh, don't worry about him. He's probably just out with some of the boys.

MOTHER: I'll bet he's down at that pet shop again, watching the puppies. He can't think of another thing.

FATHER: Well, after today, he'll come home to his own puppy. Isn't this the darned cutest pup you've ever seen?

Sound: Puppy yapping.

MOTHER: He certainly is. You have no idea how much this will mean to Bud.

FATHER: Haven't I, though? You forget that I was a boy once. There isn't a ten-year-old boy alive who wouldn't jump out of his skin to get a dog of his own. I'll bet Bud'll be wild about him.

MOTHER: Oh, dear, I hope so. Every day for two weeks he's been late. And when I ask where he's been, he says: "Just looking at the puppies in Mr. Fraser's window."

FATHER: Can't say as I blame him. I stop there myself every time I go past. That's where I got this dog.

MOTHER: You paid quite a price for him. I had no idea a little puppy could cost so much.

FATHER: Buddie's such a thoroughbred himself, I thought nothing but the best would do.

MOTHER: (*With a laugh*) You've said that for ten years. And now you say it about the puppy.

FATHER: Sure. A dog and his master have to understand one another. From now on, our boy'll be able to come home to play with his own pup.

MOTHER: I hope so. I'm so afraid he'll get tired and his leg will bother him . . . if he stands around in the cold.

FATHER: The trouble is, he wouldn't say anything about the pain. He's such a good sport about it, he never complains.

MOTHER: Do you realize it's almost seven years since the day he fell down and hurt his hip?

FATHER: It seems so unjust and cruel, somehow, to have him limp through life, one leg useless . . . when other boys have two good legs to go forward on.

MOTHER: (*Softly, tenderly—with deep understanding*) Someway, Dad, I feel that our boy will limp his way to greater heights than most of those boys you now envy will ever attain.

The opening of any play selects its audience; therefore the first few sentences should secure the listener's attention and at the same time give necessary information. Since the radio play is brief the author cannot spend much time in setting the scene. In the opening sentences of this play all important characters are introduced. The mother is speaking to her husband, George, whom she calls by name; and Buddie, about whom the play is written, is also introduced. The scene is set by the word "home." The scene is familiar to everyone, and parent-child problems are close to the mass listening audience.

It is advisable to have sound before the sound is mentioned in speech, therefore the puppy should yap before and after the father's speech.

Hint of the plot.

A boy and a dog have a wide emotional appeal.

Names should be chosen with care so that no confusion may result in careless listener's mind. Buddie and puppy are dangerously alike. Hint of Buddie's disability.

Boy's physical disability adds to the emotional appeal.

FATHER: Yes, I know he will. I wish I could be as little conscious of his lameness as he is. You've been grand about helping him to not feel inferior to other children.

MOTHER: I've tried. But when I see him limping along, and hear the tap-tap of his little crutch, I sometimes think my heart will break.

FATHER: I feel it, too. But for his sake, we have to hide our own feelings.

MOTHER: I think your idea of telling him that he's a *special case* was a stroke of genius.

FATHER: It has helped, hasn't it?

MOTHER: Tremendously.

FATHER: Instead of feeling sorry for himself, he feels that he's been set apart for a special reason.

MOTHER: You've done wonders with him. A boy couldn't have a more perfect father. It's because of you that he has a normal boy's outlook on life.

FATHER: Say, hasn't he, though? Take this puppy, for instance. He's hinted around for a pup for weeks. That's typical of a boy.

MOTHER: (*Tenderly, yet teasingly*) And it's typical of you to do everything within your power for him.

FATHER: He deserves the best that life has to offer in compensation for his handicap. Though I've convinced him that he's a special case, and his lameness was given him for a purpose . . . I wish I could feel as proud and carefree about it as he does.

MOTHER: I know it's hard for us to see the justice of it . . . but we have loads to be thankful for. He's alive, normal in his outlook, and happy.

FATHER: You're right, as usual, Mother, and making him happy has given us happiness for ourselves.

MOTHER: I can hardly wait to see his eyes light up when he gets home and sees his puppy.

FATHER: Isn't he unusually late tonight? I'm getting worried.

MOTHER: Well, don't worry about him. He's probably standing at Fraser's pet shop, with his nose glued to the window, aching for a puppy . . .

Fade down

SCENE II

Sound: Traffic noises . . . fade out . . . bring in voices.

COP: Say, there, Bud, what in the world be ye doin' here agin'?

BUD: Oh, hello, Mr. Moore. I'm just lookin' at the puppies.

COP: Be ye plannin' to rob the place, now?

BUD: O, gee no, Mr. Moore. I'm just window shoppin'.

COP: Oi guiss Oi bitter be arrestin' ye fer loiterin'. Ivery noight fer two weeks now ye've bin hangin' around this window.

BUD: Ho! You can't kid me. Cops don't bother arrestin' little boys.

The father and mother are to be very vital, human, and understanding. The opening scene should not be tremulous, doleful, or tragic. Only at the climax, in the pet shop, should there be a clutching of the heart strings.

Mother's sentence about boy limping to heights is too long and difficult for conversational style.

All characters are easy to portray except possibly the policemen and Buddie. As the lines give little inkling to the actors about how the characters should be played, the director will have to humanize some of the dialogue.

A good picture carryover for Scene II.

Traffic in background runs through the scene. Do not burlesque the brogue. Scene I introduced two characters clearly to listener's ear; now Scene II introduces two more. Good voice contrast in both scenes. Characters are not rushed at us.

- COP: An' what gives ye that idea, Oi'll be askin'?
- BUD: Why, they're too busy catching robbers and kidnapers. Anyway, that's what the G-men do.
- COP: Oh, so ye don't think Oi'm as smart as the G-men, eh?
- BUD: Oh, sure—I guess you are—only their work is different an' more excitin' than yours.
- COP: So it is, eh?
- BUD: Sure. They hunt around for clues and take fingerprints, an' use tear-gas bombs and disguises and things.
- COP: Shure, and what do ye think a policeman does?
- BUD: Oh, most of the time, just blows his whistle at traffic, an' walks up and down the street lookin' in case he can find some trouble.
- COP: Now, ye mustn't be judgin' all cops by what ye read in the funny papers. Ye may not be believin' it, but there's more to keepin' the world straightened out then playin' at detective.
- BUD: Oh, bein' a detective isn't playin'.
- COP: Ye're right there, Buddie. But jist to show ye—Oi don't need to be wearin' a disguise or takin' ye're fingerprints to know that roight now, ye're mither must be a-worryin' and a-wonderin' what's happened to you.
- BUD: Gee, I bet she is. I'd better get home as fast as I can. I didn't mean to be late tonight again . . . but when I start lookin' at the puppies, I just can't stop.
- COP: An' who knows . . . one of these days, you might be gittin' a puppy o' yer own.
- BUD: Gee, do you think so, Mr. Moore? I've got mine all picked out.
- COP: Shure, an Oi do. But ye bitter be gittin' on with ye now.
- BUD: Okay. So long, Mr. Moore. See you tomorrow.
- Fade out.*

SCENE III

- Sound: Opening and closing of door . . . walking, with tapping of crutch.*
- BUD: Hi, ya, Mom.
- MOTHER: Buddie, where have you been?
- BUD: Down at the pet shop. Gee, I'd still be there if Mr. Moore hadn't come along and told me I'd better get home.
- MOTHER: Well, get your things off and go in the front room. Dad's there.
- BUD: He is? What's he doin' home this early?
- MOTHER: You'll find out all about it in a minute. Run along.
- Sound: Walking, with tapping crutch.*
- BUD: Hiya, Dad.
- FATHER: (*Kindly*) Hello, son.
- BUD: Is there anything wrong, Dad?
- FATHER: (*With pretended sternness*) I hear that you've been coming home late every night.
- BUD: Oh, yes, Dad. I don't really mean to, though.

Emotional appeal aided by the friendly policeman. Action and setting brought out in the scene very well by words; the audience cannot see so conversation such as "I'm just looking at the puppies" and "I'm just window shopping" carry the picture through the air.

I think the dialogue is well written and in character for each character.

Correct the repetition of sentences opening with "Oh."

Mild humor has value in an emotional play.

I considered changing this scene between Buddie and the policeman to the opening, thinking that it would be more attention-catching. Leaving it in this location allowed the skit to "build."

There are only four scenes in this skit, just about the right number.

Sounds are good, helpful, not difficult; while they are largely used for transitions they aid in visualizing the story and characters.

Dialogue sounds very natural, almost foolproof. It is ideal to have lines so written that no actor can spoil them.

Rising action and suspense.

FATHER: What's the reason for it?

BUD: You see, Dad, down at Fraser's pet shop, they have the swellest pup in the window. I always stop and watch it.

FATHER: Oh, you do, eh? Something'll have to be done about that. I can't have you loitering on the streets.

BUD: Yes, Dad.

FATHER: Better look into that basket behind the big chair in the corner. Maybe that will bring you home on time.

BUD: This one, Dad?

FATHER: Yup. That's the corner.

BUD: Oh, here's the basket—Dad! I hear something—it sounds like—Gee, Dad, it's a—a—a puppy!

FATHER: Better bring it out here and take a good look at your property.

BUD: Mine? Gee, thanks, Dad . . . and you, too, Mother. It's a fat little thing, isn't it? (*Bud is not as enthusiastic as might be expected*)

FATHER: It certainly is. I bought one that Fraser had in the window, so you'd have the kind that you wanted.

MOTHER: (*Laughingly*) Now you won't have to glue your nose to the pet shop window and ache for a puppy.

BUD: (*Hesitantly*) No, I—I—guess I won't.

FATHER: What's the matter, son? You don't seem very excited about it. You did *want* a puppy, didn't you?

BUD: Oh, sure, Dad, only—only—

FATHER: Only what? Now that you have it, you seem to have lost interest in it.

MOTHER: Dad thought you'd be terribly happy over it.

BUD: Oh, I am, Mother. I don't want to spoil your surprise.

FATHER: (*Impatiently*) Well, what's wrong, then? Isn't it the kind of pup you wanted?

BUD: Oh, sure, Dad. It *looks* just like it.

FATHER: Well, I'm glad to hear that, at least. (*A bit angrily*) If it *looks* like it, it must *be* it.

MOTHER: Just a minute, George. Maybe Bud formed an attachment for one of the other pups.

FATHER: Why, I had trouble telling one from the other. I don't see what attachment could be formed through a plate-glass window.

MOTHER: Stranger things have happened. Bud, did you have your heart set on some other puppy?

BUD: Well, gee, Mother. I don't want to hurt Dad's feelings after he surprised me and everything, but . . .

FATHER: Then this *isn't* the pup that you wanted.

BUD: No, sir. He looks like him . . . only, mine's different.

FATHER: (*Beginning to be amused*) Oh, he looks like him, but he looks different. I suppose in order to solve this puzzle, we'd better go to Fraser's and exchange this pup for the mysterious one you want.

BUD: Oh, gee, would you, Dad? Oh, boy, gee! You're a swell dad. An' you won't feel hurt, or anything?

The listener is surprised at the lack of enthusiasm.

What's the trouble?

Father must be careful in his interpretation.

That word "attachment" seems a bit wrong.

And the listener cheers up, too.

FATHER: It's hard for a mere father to understand longings of youth—but if it will make you happy, it's all right with me.

BUD: Gee, thanks, Dad. Can we go right now? Please, Dad, I can't wait.

MOTHER: It seems as if you've started something, Dad. I think the only thing to do is go down to Fraser's and see if we can exchange this for the pup he wants.

FATHER: All right. Get your things on, Mother, and come along.
Fade out.

SCENE IV

Sound: Tinkle of bell . . . footsteps.

FRASER: Good evening, Mr. Madden. Is anything wrong?

FATHER: Not much . . . excepting it's the wrong pup.

FRASER: Oh, I thought it was one of those in the window he had his heart set on.

FATHER: It is . . . but it seems we haven't picked the right pup.

FRASER: Well, that should be easily remedied. I just finished putting a new litter in the window. I have the pups I took out in the back room. Just a minute, and I'll see if we can find the one he wants.

FATHER: Thanks, Fraser. I hope it isn't sold.

BUD: Oh, it was still in the window after school.

FRASER: Well, if it was there after school . . . I still have it. Just a minute, please.

BUD: Oh, boy, Dad . . . I can't wait.

FATHER: Hold on, fellow, you won't have to wait much longer.

FRASER: Here's one of them . . . I'll put him down and let your son get a good look at him.

BUD: Nope, that's not it.

FATHER: You're sure you'll know your dog when you see it?

BUD: Oh, sure! Mine's different.

FRASER: How's this one? He's a bit more playful.

BUD: Nope, that isn't it, either. Hey, look, that's my dog in that box. See, he knows me.

FRASER: Why, Mr. Madden, you don't want that one. I'm sending it to the Humane Society, to be put away.

BUD: Oh, gee, no, Dad. Don't let them have my dog killed. Please, dad. Here, puppy, don't you worry. I won't let them hurt you. Come on, puppy. I'll let you out. Come on over here.

MOTHER: (*with sobs*) Oh, George! Look! Look at the poor little thing. John!

FATHER: (*Stunned*) Lord, Mary . . . it's (*gasp . . . pause*) . . . it's lame.

FRASER: Mr. Madden, you don't want that dog . . . he's crippled.

FATHER: (*Filled with emotion . . . snaps angrily at Fraser*) You heard my son, didn't you? That's the dog he wants. We'll take it.

Action and suspense still rising, attention well held and denouement concealed.

Words portray action.

Denouement.

The listener is somewhat surprised by the ending and yet pleased.

FRASER: (*Embarrassed and apologetic*) Yes, sir. I'll give you your change.

BUD: Gee, thanks, dad. You see, a dog and his master have to understand each other. An' we will, cause he's just like me. He's a *Special case*, too.

Fade out.

NARRATOR: When the pack of life grows heavy
And its weight slows your pace,
Be thankful for the chance to prove
Yours is a special case.

You are the craftsman working,
Life gives only the tools.
Sunshine belongs to wise men—
Shadows belong to fools.

Excellent punch line.

No anticlimax.

Even if the listener wants a moral, a purpose, in the play he can find one in this skit.

A FICKLE WIDOW

ADAPTATION BY ESTHER A. KERN FROM FIFTEENTH CENTURY STORY

ANNOUNCER: The Michigan University of the Air presents the second program in a series of broadcasts, each of which is based on a short story selected from the literature of a different nation. Today's presentation, "A Fickle Widow," is taken from the Chinese. Its author is unknown. The original story appeared in a collection of tales made during the fifteenth century. The author may have been interested in pointing a moral, but he seemed more concerned in satirizing the frailties of human nature. The same plot has been used many times. In the time of the Romans it was "The Matron of Ephesus." Anatole France told it in his own style.

Sound: Mood music, Chinese.

ANNOUNCER: In the peaceful retirement of the country, there dwelt many centuries ago a philosopher named Chwang. Chwang had not been fortunate in his early married life. His first wife died young; his second he found it necessary to divorce on account of misconduct; but in the companionship of the Lady T'ien he enjoyed a degree of happiness which had previously been denied him.

CHWANG: Today while I was seeking peace in the solitude of the hillside, I came unexpectedly on a newly made grave beside which was seated a young woman dressed in mourning. She was gently fanning the new mound.

LADY T' IEN: Why was she fanning the mound?

CHWANG: She explained that the grave contained her husband and that just before the stupid man died he made her promise that she would not marry again until the soil above his grave should be dry.

LADY T' IEN: She should not have need to wait long.

CHWANG: Indeed, she had watched it for some days, but it got dry so very slowly that she was fanning it to hasten the process.

This script is included as a sample of an adaptation. All the short stories used in this series were written over 56 years ago and therefore their copyrights had expired.

The title is short which makes it usable in the newspaper listing of programs.

Chwang, an elderly philosopher; Lady T'ien, Chwang's young and attractive third wife.

The diction and sentence structure are somewhat stilted to give the impression that foreigners are speaking.

One difficulty in writing an adaptation is that you are inclined to retain the written style instead of using a "spoken style."

The opening is amusing, rapid, and good.

LADY T' IEN: Why are you sighing and . . . where does the fan come from which you hold in your hand?

CHWANG: I noticed that her wrists were not strong enough for such work, so I asked her to let me assist her.

LADY T' IEN: And you forgot to return the fan?

CHWANG: This embroidered fan was one she had in reserve and she gave it to me as a token of her esteem, because, by the exercise of my magical powers, I extracted every drop of moisture from the grave with a few waves of her fan.

LADY T' IEN: Was the embroidered fan all that she offered you for so great a favor?

CHWANG: Oh, no, she offered me one of her ornamented silver hairpins, but, my dear wife, I thought you might object.

LADY T' IEN: Such a bold, scheming young thing is a disgrace to her sex. You certainly are not stupid enough to believe that she had fanned that grave for any length of time. She waited until someone came with whom she could flirt. You were a willing victim. If I had not observed the fan, you would doubtless have concealed it and found need again tomorrow of seeking peace in the mountain solitude, once more to fan a grave for a beautiful young widow.

CHWANG: If I were to die would you, possessed as you are of youth and beauty, be content to remain a widow for five, or even three years?

LADY T' IEN: A faithful minister does not serve two princes, and a virtuous woman never thinks of a second husband. If fate were to decree that you should die, it would not be a question of three years or of five years. Never, so long as life lasted, would I dream of a second marriage.

CHWANG: It is hard to say; it is hard to say.

LADY T' IEN: Do you think that women are like men, destitute of virtue and devoid of justice? When one wife is dead, you look for another; you divorce this one and take that one. But we women are for one saddle to one horse. Why do you say these things to annoy me?

CHWANG: Calm yourself. Ah, my dear, you have torn that beautiful fan to shreds. I only hope, if occasion offers, you will act up to your protestations.

ANNOUNCER: Not many days after this, Chwang fell dangerously ill, and, as the symptoms increased in severity, he thus addressed his wife:

CHWANG: I feel that my end is approaching and that it is time I should bid you farewell. How unfortunate that you destroyed that fan the other day! You would have found it useful for drying my grave.

LADY T' IEN: Pray, my husband, do not at such a moment suggest suspicions of me. Have I not studied the *Book of Rites*, and have I not learned from it to follow one husband, and one only?

CHWANG: I desire no more. (*Faintly*) My eyes grow dim. I die.

Many speeches will be hard to deliver. Do not rely upon printed punctuation for pauses.

Denouement forecast.

The use of a Chinese gong would be good to introduce transitions.

When adapting a story the writer falls into the fault of using the same style for the modern announcer that is used by the ancient characters.

In radio great liberties are taken with time, it takes only a few seconds to die or to cook a 3-minute egg.

ANNOUNCER: For days and nights Lady T'ien wept and fasted. As was customary on the death of so learned a man as Chwang, the neighbors all came to offer their condolences and to volunteer their assistance. As the last of these had retired, there arrived at the door a young and elegant scholar, whose face was like a picture. His servant announced that he was a prince of the Kingdom of Tsoo, and he himself added by way of explanation:

PRINCE: Some years ago I communicated to Chwang my desire to become his disciple. In furtherance of this purpose I came hither, and now, to my inexpressible regret, I find on my arrival that my master is dead.

LADY T'EN: I should have declined to see you, my good prince, except that it has been pointed out to me, according to the most recondite authorities, that the wives of deceased philosophers should not refuse to see their husband's scholars.

PRINCE: You are most kind. I am indeed unfortunate in not having been permitted to receive his instructions face to face. But to show my regard and affection for his memory, I will exchange my colored clothing for mourning garments and here remain to mourn for him a hundred days.

LADY T'EN: If that be your desire, I beg you to take up your abode in my house.

PRINCE: You are too kind. I do not feel that I dare . . .

LADY T'EN: This evening, when we have finished our repast, I shall bring you the copies of *The Classic of Nan-hwa* and the *Sutra of Reason and Virtue* which my husband was in the habit of using. They are to be yours.

PRINCE: I cannot accept so great a gift. I had a great desire to become one of his disciples, but dare not hope to fall heir to his two greatest manuscripts.

LADY T'EN: Had he seen your beauty and grace, had he known your deep regard for him, it would have been his wish that you have his most cherished possessions.

PRINCE: For one so great as he, I must needs kneel and lament by the side of his coffin. Few men were ever so learned or so great as Chwang.

ANNOUNCER: Constant meetings at Chwang's coffin provoked short conversations. The glances, which on these occasions were exchanged between them, gradually betook less of condolence and more of affection. It was plain that the prince was enamored, while the lady was deeply in love. Being desirous of learning some particulars about her engaging guest, she one evening summoned his servant to her apartment.

LADY T'EN: Come, Ling, have another glass of wine.

LING: No more please; my master does not like for me to . . .

LADY T'EN: Your master shall never know. I shall never tell him.

LING: Then I shall take one more. It is very good, though the last glassful did make me somewhat dizzy.

Could have been done with crowd noises, speech, and music. Possibly a montage might be tried.

Too long a sentence for speech.

There is some difficulty in casting the prince. His voice must be like that of Chwang but more youthful.

The literary style is evident.

Must be delicately handled. Women and wine do not mix in the air.

LADY T' IEN: If you are too dizzy and tired to return to your master's apartment, I shall have Wu take you with him. Tell me, Ling, is your master married?

LING: My master has never yet been married.

LADY T' IEN: What qualities does he look for in the fortunate woman he will choose for his wife?

LING: My master says that if he could obtain a renowned beauty like yourself, madam, his heart's desire would be fulfilled.

LADY T' IEN: Did he really say so? Are you sure you are telling me the truth?

LING: Is it likely that an old man like me would tell you a lie?

LADY T' IEN: If it be so, will you then act as a go-between and arrange a match?

LING: My master has already spoken to me of the matter. He would desire the alliance above all things, if it were not for the respect due from a disciple to a deceased master, and for the animadversions to which such a marriage would give rise.

LADY T' IEN: As a matter of fact, the prince was never my husband's disciple. And as to the neighbors about here, they are too few and insignificant to make their animadversions worth a thought.

LING: Then when my master awakens, I shall tell him what you have said.

LADY T' IEN: I shall be impatient. You must promise to bring word of the result of the negotiations at any hour of the day or night at which you may have anything to communicate.

LING: Yes, my lady.

LADY T' IEN: I shall go back and forth to the chamber of death, that I may pass the prince's room and perhaps hear some of the discussion of my proposed alliance.

ANNOUNCER: In her impatience, Lady T'ien could not rest. She even listened at the prince's window, hoping to hear some news. She was shocked and terrified when she heard an unmistakable sound of hard breathing as she approached the coffin, but her apprehensions were relieved when she discovered the form of the prince's servant lying in a drunken sleep on a couch by the corpse! On the next morning she accosted the defaulter without any reference to his escapade of the night before.

LADY T' IEN: Tell me quickly, Ling, what does your master say on the points which I proposed last evening?

LING: There are three unpropitious circumstances which make him hesitate.

LADY T' IEN: There need be no circumstances to form an obstacle to our marriage.

LING: First, my master says that the presence of the coffin in the salon makes it difficult to conduct marriage festivities in accordance with usage.

"Animadversions" is not a radio word. The listener would not have opportunity to look it up in a dictionary as I did.

All through this adaptation literary words are used in place of conversational ones.

Even the announcer chooses his words badly for the ear—accosted—defaulter—escapade—apprehensions.

"Unpropitious."

"Salon."

LADY T' IEN: I can easily have the coffin removed into a shed at the back of the house.

LING: Secondly, that the illustrious Chwang having so deeply loved his wife and that affection having been so tenderly returned by her in recognition of his great qualities, he fears that a second husband would probably not be held entitled to a like share of affection.

Confusing to the ear; simplify.

LADY T' IEN: Though my husband was a great Taoist authority, he was not by any means a man whose affections were for only one lady. After his first wife's death, he married a second, whom he divorced. And, just before his own decease, he flirted outrageously with a widow whom he found fanning her husband's grave on the hill yonder. Why then should your master—young, handsome, and a prince—doubt the quality of my affection?

LING: But my master has still a third objection. Not having brought his luggage, he has neither the money nor the clothes necessary to play the part of a bridegroom.

LADY T' IEN: Your master need not trouble himself about the expenses connected with our marriage. I will provide them. At this moment I have twenty taels of silver in my room, and these I will readily give him to provide himself with clothes.

"Tael"—make that "pieces of silver."

LING: I shall tell my master what you say.

LADY T' IEN: Remind him, too, that there could be no more felicitous evening for our marriage than that of today. Tell the prince, your master, that when he sends word of his consent all will hastily be made ready.

"Felicitous."

LING: I shall return promptly, Lady T'ien.

LADY T' IEN: (*Calling*) Tsang-ku, come quickly. Help me to exchange these mourning clothes for wedding garments.

TSANG-KU: Wedding garments, Madam?

LADY T' IEN: Yes, hurry! Help me to paint my cheeks and redden my lips . . . and, I nearly forgot, order some of the villagers to carry Chwang's coffin into a shed at the back of the house and to prepare for the wedding.

TSANG-KU: Yes, my lady.

LADY T' IEN: And tell the house servants that I, myself, shall arrange the lights and candles in the hall.

TSANG-KU: Yes, my lady. Is there anything else?

LADY T' IEN: Not now. But hurry, Tsang-Ku, for the prince will soon enter.

ANNOUNCER: When the time arrived, Lady T'ien stood ready to receive the prince. Bright as a polished gem and a gold setting, the two stood beneath the nuptial torch, radiant with beauty and love. When the ceremony was over, the gay festivities commenced, but they had not yet concluded when the prince was seized with violent convulsions. Lady T'ien, frantic with grief, embraced him, rubbed his hands, and finally called in his old servant.

LADY T' IEN: Tell me, Ling, has your master ever had any fits like this before? See how his face is distorted, how his eye-

brows stand on end, and how he beats his breast with his hands!

LING: He has often suffered thus and no medicine ever alleviated his sufferings; in fact, there is only one thing that does.

LADY T' IEN: What is that?

LING: The brains of a man, boiled in wine. In Tsoo, when he has these attacks, the king, his father, beheads a malefactor and takes his brain to form the decoction; but how is it possible here to obtain such a remedy?

LADY T' IEN: Will the brains of a man who has died a natural death do?

LING: Yes, if forty-nine days have not elapsed since the death.

LADY T' IEN: My former husband's would do then. He has only been dead twenty days. Nothing will be easier than to open the coffin and take them out.

LING: But would you be willing to do it?

LADY T' IEN: The prince and I are now husband and wife. A wife should not refuse to do so small a favor for a husband out of regard for a corpse, which is fast becoming dust. Look after your master and I shall return soon.

LING: I shall do your bidding.

LADY T' IEN: Tsang-Ku, call the gardener to bring me a hatchet at once.

TSANG-KU: Yes, my lady, at once.

ANNOUNCER: Seizing the hatchet, Lady T'ien went straight to the shed to which the corpse had been removed. Having arranged the light conveniently, she tucked up her sleeves, clenched her teeth, and with both hands went to work.

Sound: Chopping of wood with hatchet: splintering—piercing shriek and hatchet falling.

LADY T' IEN: You! You are not dead!

CHWANG: My dear wife, help me to rise. Twenty days in a coffin have somewhat stiffened my bones.

LADY T' IEN: Oh, my poor dear husband. Here! Let me help you. This way! I shall carry the lamp.

CHWANG: Twenty days without food have left me somewhat weak. Why are you trembling, my good wife? I am not a spirit. I am your very own husband.

LADY T' IEN: I tremble because of the grief I have borne. Ever since your death you have been in my thoughts day and night. Just now, hearing a noise in your coffin, and remembering how, in the tales of old, souls are said to return to their bodies, the hope occurred to me that it might be so in your case. So I took a hatchet to open your coffin. Thank Heaven and Earth, my felicity is complete—you are once more by my side.

CHWANG: Many thanks, madam, for your deep consideration. But may I ask why you are dressed in such gay clothing?

LADY T' IEN: When I went to open your coffin, I had, as I say, a secret presentiment of my good fortune, and I dared not receive you back to life in mourning attire.

I have always marveled that women's clubs, which denounce in general radio plays as being too gory, sent in more requests to have the students present this play to their meetings than they did for any other play.

Speech much too long. However, if given in a manner which shows she is just talking for time to think, to cover her fear, it might work.

In writing an adaptation read the story three or four times, then lay aside the printed pages and write the adaptation in speech style. If you have the book before you as you write you will use the style and diction of the original author.

CHWANG: Oh, but there is one other circumstance which I should like to have explained. Why was not my coffin placed in the salon, but tossed into a ruined shed? Answer me that!

LADY TIEN: Shall I warm you some wine?

CHWANG: Yes, I will drink some wine . . . You need not employ all your engaging wiles to win a smile from me. Look at those two men behind you.

LADY TIEN: I see no one. Chwang, where are you? What has happened?

CHWANG: My *dear* wife, the prince and his servant were but my other self, which, by my magical power, I was able to project into separate existences. All your attempts at concealment were in vain.

LADY TIEN: My husband, you see me take this girdle from my waist.

CHWANG: I am watching . . .

LADY TIEN: Now I tie it to the beam above my head . . .

Watch that I make this noose a firm one . . .

CHWANG: I shall see to that.

LADY TIEN: Now, I am ready to put my head in the noose . . .

CHWANG: A very good idea.

LADY TIEN: Let me hang here until I die.

CHWANG: And when your life is extinct, I shall put you, my third wife, into the coffin from which I so lately emerged and set fire to the house, burning it with its contents to ashes. I shall journey toward the West and remain a widower for the rest of my life.

There is little motivation and no suspense in this plot; all that made it an interesting radio play is the moral and the presentation. The script presents an exercise in direction and acting as well as editing.

She is very plaintive, appealing, not at all dramatic. The play is played as a comedy not a melodrama.

Rather gay Chinese music is used for the closing theme to carry out the desired effect.

Bibliography

LIST OF COMPILATIONS OF SAMPLE CONTINUITY

- COULTER, DOUGLAS: *Columbia Workshop Plays*, Whittlesey House, McGraw-Hill Book Company, Inc., New York, 1939. Fourteen plays which have been broadcast over the Columbia Broadcasting System.
- JONES, CARLESS: *Short Plays for Stage and Radio*, University of New Mexico Press, 1940. Three adaptations and four original plays.
- LAWTON, SHERMAN P.: *Radio Continuity Types*, Expression Company, Boston, 1938. Contains all types of continuity—dramatic, talks, novelties, variety shows, etc.
- OBOLER, ARCH: *Fourteen Radio Plays*, Random House, Inc., New York, 1941. Complete texts and an introductory essay by the author on The Art of Radio Writing.
- WYLIE, MAX: *Best Broadcasts of 1938-39*. Whittlesey House, McGraw-Hill Book Company, Inc., New York, 1939. Contains sample scripts of various types—adaptations, news, variety, round-table discussions, children, historical, occupational, verse, etc. Rights reserved.
- : *Best Broadcasts of 1939-40*. Whittlesey House, McGraw-Hill Book Company, Inc., New York, 1940.
- YOUNG, BLANCHE: *Collection of School Radio Scripts*, Indianapolis Public Schools, Indianapolis, Ind. A compilation of scripts from the school systems of various American cities. Published in mimeographed form by the author.

BROADCASTING TEXTBOOKS CONTAINING CONTINUITY TYPES

- CANTRIL, HADLEY: *The Invasion from Mars*, Princeton University Press, Princeton, N. J., 1940. The script of the Orson Welles broadcast with a study of audience reaction.
- DIXON, PETER: *Radio Writing*, D. Appleton-Century Company, Inc., New York, 1931.
- : *Radio Sketches and How to Write Them*, Frederick A. Stokes Company, New York, 1936. Contains eighteen skits produced upon network programs.
- EWBANK, HENRY L., and SHERMAN P. LAWTON: *Project for Radio Speech*, Harper & Brothers, New York. Contains three scripts.
- FIRTH, MAJOR IVAN, and GLADYS SHAW ERSKINE: *Gateway to Radio*, Macaulay Company, New York, 1934.
- GIELGUD, VAL: *How to Write Broadcast Plays*, Hurst and Blackett, London, 1932.
- KESTER, M.: *Writing for the British Broadcasting Corporation*, Pitman Publishing Corporation, New York, 1937.
- LAWTON, SHERMAN PAXTON: *Radio Drama*, Expression Company, Boston, 1938.
- : *Radio Speech*, Expression Company, Boston, 1932.
- MCGILL, EARLE: *Radio Directing*, McGraw-Hill Book Company, Inc., New York, 1940. Contains *The Canterville Ghost*.

- NAGLER, FRANK: *Writing for Radio*, The Ronald Press Company, New York, 1938.
- ROGERS, RALPH: *Do's and Don'ts of Radio Writing*, Associated Radio Writers, Inc., Boston, 1937.
- SEYMOUR, KATHARINE, and J. T. W. MARTIN: *How to Write for Radio*, Longmans, Green & Company, New York, 1931.
- and ———: *Practical Radio Writing*, Longmans, Green & Company, New York, 1938.
- SIEVEKING, LANCE: *The Stuff of Radio*, Cassell & Company, Ltd., London, 1934.
- WHIPPLE, JAMES: *How to Write for Radio*, McGraw-Hill Book Company, Inc., New York, 1938.
- WHITAKER-WILSON, CECIL: *Writing for Broadcasting*, A. & C. Black, Ltd., London, 1935.
- WYLIE, MAX: *Radio Writing*, Farrar & Rinehart, Inc., New York, 1939.
- ZIEBARTH, E. W., and R. B. EREKSON: *Six Classic Plays for Radio and How to Produce Them*, Burgess Publishing Company, Minneapolis, Minn., 1939. Litho-printed adaptations.

RADIO PLAYS PUBLISHED

- BROSIUS, NANCY BANCROFT: *Sue 'em*, Brentano's, New York, 1925. The first radio play printed in America; awarded first prize in WGBS radio drama contest.
- CARLTON, H. F.: *Caesar Rodney's Ride*, Teachers' College, Columbia University, New York, 1932. *Henry Hudson, Landing of the Pilgrims, The Pig That Gave Us a Two-house Congress, Right to Print the Truth, Story of Major John André, The Tree That Saved Connecticut, Twenty Pounds Reward*. All these plays were published in 1932 by Columbia University Press and may be secured in single copies.
- CORWIN, NORMAN: *They Fly through the Air*, Vrest Orton, Vrest, Vt., 1939. A poetic radio drama based on the air raids on civilians during the recent Spanish Civil War.
- : *Seems Radio Is Here to Stay*, Columbia Broadcasting System, 1939.
- COULTER, J.: *House in Quiet Glen and The Family Portrait*, The Macmillan Co. of Canada, Ltd., Toronto, 1937.
- DANIELS, LESLIE NOEL: *Dick Steel, the Boy Reporter*, Chicago, 1934. A mimeographed radio script of the Educator Biscuit Company program. For further information write the Educator company.
- DENISON, M.: *Henry Hudson and Other Plays from the Romance of Canada Series*, Ryerson Press, Toronto, 1931.
- : *On Christmas Night*, Samuel French, Inc., New York, 1934. A mimeographed radio script of the Educator Biscuit Company program. For further information write the Educator company.
- Dramatizations as a Part of a Series on Vocational Guidance*, published by the National Advisory Council on Radio and Education, 1934.
- DRINKWATER, J.: *Midsummer Eve*, Sidgwick & Jackson, Ltd., London, 1932.

- ELLIS, K. M.: *Trial of Vivienne Ware*, Grosset & Dunlap, Inc., New York, 1931.
- FOLGER, J. A., & Co.: *Judy and Jane*, Chicago, 1930. A mimeographed radio script used on the Folger program and written under the direction of Blackett-Sample-Hummert, Inc. Write Folger & Co. for further information.
- GILPATRIC, C. D.: *Please Stand By*, Walter H. Baker Company, Boston, 1933.
- GUTHRIE, T.: *Squirrel's Cage, and Two Other Plays*, Cobden-Sanderson, London, 1931.
- HOWLAND, A. H.: *Good Afternoon, Children*, Hodder & Stoughton, Ltd., London, 1932.
- KREYMBORG, A.: *Planets*, Farrar & Rinehart, Inc., New York, 1938.
- MACKENZIE, COMPTON: *The Lost Cause*, Oliver & Boyd, Edinburgh, 1933. A Jacobite play, the first broadcast from the Glasgow studio by the British Broadcasting Corporation, 1931.
- MACLEISH, ARCHIBALD: *The Fall of the City*, Farrar & Rinehart, Inc., New York, 1937.
- MEES, H. E.: *Three Radio Plays*, The Priory Press, Ltd., The Friary, Cardiff, Wales, 1933.
- PEACH, L. DU GARDE: *Path of Glory; The Mary Celeste; Love One Another; La Bastille; Ingredient X*, George Newnes, Ltd., London, 1931. American edition: *Radio Plays*, Walter H. Baker Company, Boston, 1931 (these are the same plays).
- SPAIN, G.: *R. B. Bridge of Tyne*, T. & G. Allen, Northumberland, England, 1929.

SOURCES OF SCRIPTS FOR AMATEUR BROADCASTS

- Alameda City School of the Air, Alameda Board of Education, Alameda, Calif.
Copies of scripts produced by the Alameda City School of the Air may be obtained for library or for school use by writing them. Suggested plans for planning, executing, and evaluating a radio lesson will be sent on request.
- American Red Cross, Public Information Service, Washington, D. C. Catalogue of about 70 plays dealing with different aspects of Red Cross services and lives of famous people who have contributed to the growth of the organization. Chiefly 15-minute plays. Catalogue and plays may be obtained free of charge by writing the Red Cross.
- Association of Junior Leagues of America, Hotel Waldorf-Astoria, New York. Famous Children's Series by Elizabeth H. Brace and miscellaneous radio scripts. For further information write Miss Alice Grant of the Children's Play Bureau.
- Automobile Clubs of America. Automobile clubs frequently prepare scripts for the use of various local clubs on safety, which generally can be obtained through your local automobile club.
- Cavalcade of America*, edited by D. R. Fox and A. M. Schlesinger, Milton Bradley Company, Springfield, Mass., 1938. Educational radio series of lives of famous Americans and important events in American history, in two volumes, as broadcast on the E. I. du Pont de Nemours & Company program; 30-minute plays. Permission for broadcast must be obtained from the publishers.

- Chicago Social Work Publicity Council, Chicago. With *Other People's Money*, a radio series produced by the Chicago Social Work Council. Separate scripts or the entire series may be obtained by writing the council. Scripts are for sale.
- E. P. Dutton & Company, Inc., *Your Health* series, New York, 1939. Radio health dramatizations (30-minutes) of the American Medical Association by W. W. Bauer, B.S., M.D., Director of the Bureau of Health Education, and Leslie Edgley of the National Broadcasting Corporation, written especially for senior high and junior high schools, adapted to meet the need for classroom or assembly programs. Scripts are based on courses of study in health education in use in public schools. Scripts may be used as actual broadcasts, simulated broadcasts, stage plays, informal classroom plays. Permission for broadcast use may be secured through Dutton & Company or the American Medical Association.
- Family Welfare Association of America, New York. Various scripts illustrating family society work and social problems. May be obtained by paying costs for publication.
- Federal Council of Churches of Christ in America, New York, has religious scripts available.
- Federal Radio Education Committee, United States Department of Interior, Office of Education, Educational Radio Script Exchange, Washington, D. C. More than 300 educational dramatized scripts on various subjects of history, natural science, wildlife conservation, biography, literature, safety education, scientific discoveries, social science, vocational guidance, national parks, industries, music appreciation, and miscellaneous subjects.
- FINDLAY, BRUCE ALLYN, and ESTHER BLAIR FINDLAY: *Tell-A-Vision Plays*, Row, Peterson & Company, Evanston, Ill., 1938. A combination of radio and stage presentations for "early 'teen age to act, or to read aloud." A complete *Leader's Manual* is furnished free with each book.
- French's Basic Catalog of Plays*, Samuel French, Inc., 25 West 45th Street, New York City; 811 West 7th Street, Los Angeles, Calif. *Scholastic's Radio Plays*, original broadcasting scripts prepared especially for nonprofessional broadcasters, popular appeal with educational value; suitable for club and school use. Royalty free with courtesy announcement of *Scholastic Magazine*. Slight cost for publication. Seth Parker series, available for amateur production. These plays are taken from Seth Parker's radio broadcasts. Royalty and publication charges.
- Girl Scouts, Inc., 14 West 49th Street, New York. Girl Scout Radio Script Library, a catalogue of radio scripts dealing with American patriotic subjects, famous Americans, and various aspects of Girl Scout activities. Chiefly 15-minute scripts. Scripts may be secured free of charge. Write for catalogue.
- Harter Publishing Company, Harter Radio Play Series, Cleveland, Ohio, 1938. *Paul Revere*, by Florence Reynolds and William A. D. Millson. An original radio play (30 minutes) with complete instructions for production. Per-

mission for broadcasting may be obtained by writing the Harter Publishing Company.

Hygeia, the medical magazine, contains many medical scripts from time to time.
LESTER, HUGH: *Radio Scripts*, 1157 North Alexandria Avenue, Hollywood, Calif.

Will supply scripts to responsible faculty members who desire to examine them. All 15-minute plays are leased at \$1 a performance; cast scripts are 10 cents each.

Los Angeles County Superintendent of Schools, Radio Script Series, 1939.

National Association of Educational Broadcasters, c/o University of Illinois.

Distributes to its members scripts which may be used without restriction.

Northwestern Press, 2200 Park Avenue, Minneapolis, Minn., 1938. Louis J. Huber, *Short Radio Plays*.

Ohio State University publishes a classified list of radio scripts available for circulation among the members of the Ohio Radio Workshop group.

One Act Play Magazine frequently has radio scripts published for analysis.

Parents on Trial, Earl C. Anthony, Inc., Los Angeles, Calif., 1938. A series of 30-minute radio dramas presented by the California Congress of Parents and Teachers Association, written by John Boylan, continuity editor of Stations KFI-KECA, Los Angeles. Dramatizations are taken from cases selected from juvenile court, police, and social agency files. Permission for broadcast obtained by writing the California Congress of Parents and Teachers Association.

Radio Station WBAA, Purdue University, makes available certain of its scripts.
Radio Writers' Laboratory, Brennan Building, Lancaster, Script catalogue mailed on request.

RAND, ROYDEN NELSON: *It Happened This Way*. L. L. Fuller, Albany, N. Y., 1932. A series of biblical plays broadcast over Station WGY on "The Book Club of the Air" program. Permission for broadcast must be obtained from the publishers.

Scholastic Magazine publishes frequent scripts in its monthly issues.

Scholastic Radio Guild, 250 East 43d Street, New York. Original broadcast plays prepared especially for school use. Royalty free with courtesy announcement of *Scholastic Magazine*. Slight cost for manuscripts.

Studio and School Plays, Welles Publishing Co., Wellesley Hills, Mass., 1935.

A series of plays with fundamentals of radio techniques prepared especially for schools by Joseph B. Egan, editor, the *Egan Monthly Journal of Character Training*. Permission for broadcast must be obtained by consent of the publishers.

U. S. Government Printing Office, Superintendent of Documents, Washington, D.C. Bound volumes of scripts broadcast over national networks by: U.S. Department of Commerce, *Stories of American Industry*; U.S. Department of Interior, Office of Education, *Let Freedom Ring*.

Michigan, University of, has duplicates of many scripts prepared by students which are available without restriction. These are 15 minutes scripts and those requesting copies should specify the type of play desired.

EDUCATIONAL TRANSCRIPTIONS FOR ANALYSIS

- Alameda School of the Air, Alameda Board of Education, Alameda, Calif. By writing you may get a list of transcriptions available. "Please feel free to call upon the technicians of the Alameda City School of the Air in helping you solve your problem. A letter or phone call will bring a quick reply, or, if the distance is not too great, a visit will be made to talk over your problem."
- Boston University, Institute of Oral and Visual Education. Various series of transcriptions, 15-minute programs.
- California Congress of Parents and Teachers, Mrs. James K. Lytle, president, Los Angeles. *Parents on Trial*. "Any State or district Parent Teachers Association organization may secure these half-hour transcriptions for broadcasting over their own local stations, merely by paying the cost of the records."—*Radio Guide*, January 14, 1939.
- Local Broadcasts to Schools, The University of Chicago Press, Chicago, 1939.
- United States Department of Interior, Office of Education, Educational Radio Script Exchange. *Americans All—Immigrants All*. The first educational series made available through the Office of Education. This program was awarded national prize by the Women's National Radio Committee as "the most original and informative radio program of 1938-39." The series tells the story of the different nationalities who came to America to make their homes and their contributions to the nation. Twenty-four recordings are available. Further information may be obtained by writing the Office of Education.
- University of Wisconsin, Madison, Wis. *American Youth Speaks*. Recordings of the opinions of selected young people in various sections of the country from industrial centers, as automobile, steel, and coal, mountain districts, and the Tennessee Valley region. These youths were contacted through ministers, labor unions, settlements, and clubs. "After these transcriptions have been used on radio broadcasts they will be made available to groups at a nominal rental price."—*The Inter-Collegian and Far Horizons*, November, 1938, p. 45.

NONROYALTY PLAYS FOR ALL-WOMEN CASTS

- BARNUM, MADELENE D.: *Our Aunt from California* (6 women), Samuel French, 30 cents.
- BREEN, BESSIE S.: *Twelve Good Men and True* (12 women), Samuel French 30 cents.
- BRIDGHAM, GLADYS R.: *Tillie Listens In* (11 women), Baker's Plays, 30 cents.
- BROWN, MAY B.: *References Required* (3 women), Samuel French, 30 cents.
- DORAN, MARIE: *Eyes of Faith* (9 women), Samuel French, 30 cents.
- DORAN, MARIE: *Ghost of a Chance* (6 women), Samuel French 30 cents.
- FORD, HARRIET: *Wanted Money* (5 women), Samuel French, 30 cents.
- GLEASON, ORISSA W.: *How the Story Grew* (8 women), Baker's Plays, 25 cents
- KEMPER, SALLIE: *Mothballs* (3 women), Baker's Plays, 25 cents.
- LOWELL, EDITH: *Tell a Woman* (2 women), Baker's Plays, 25 cents.

- McMANUS, POLLY: *Between Trains* (4 women), Dramatic Publishing Co., 25 cents.
- OLSON, ESTHER E.: *They Say* (5 women), Baker's Plays, 35 cents.
- PACKARD, WINTHROP: *Man in the Case* (6 women), Baker's Plays, 30 cents.
- PALMER, BELL E.: *Truth Party* (13 women), Baker's Plays, 30 cents.
- TILDESLEY, ALICE: *Cast Rehearses* (5 women), Baker's Plays, 25 cents.
- WILKINSON, GEOFFREY: *Cure for Indifference* (4 women), Samuel French, 30 cents.

The above plays (one-act) are published separately. The addresses of the publishers are: Baker's Plays, 178 Tremont St., Boston; Dramatic Publishing Co., 59 East Van Buren St., Chicago; Samuel French, Inc., 25 West 45th Street, New York.

The following is a list of information sources regarding one-act and three-act plays:

- Catalogue and Review of Plays for Amateurs*, Cecilia M. Young, Loyola University Press, Chicago, 1924. Lists copy price of each play but not royalty. Classifies plays as to type and production problems.
- Library Extension Service News Letter*, Vol. 17, No. 9, September, 1938, University of Tennessee Extension Service, publishers. Lists type, royalty, cast, publisher, author, and classification for grade school, high school, or little theater.
- Bureau of Community Drama, North Carolina. Lists children's plays, folk, one-act, full-length, and Carolina folk plays.
- University of North Carolina Extension Bulletin, No. 4, November, 1936, published by the University of North Carolina Press. Classifies plays as to type, copy price, royalty, characters, production problems.
- United States Catalogue of Books*.

Suggested Class Assignments

The following assignments are not questions upon the contents of the text, but are exercises designed to encourage further study, practice, and research upon phases of broadcasting dealt with in the chapters.

The student should be required to examine the *Reader's Guide*, *International Index*, *New York Times Index*, and other periodical indexes for recent references. Collateral reading can be found in bibliographies, which may be obtained from the Library of Congress, The Columbia Broadcasting System, The National Broadcasting Company, Broadcasting and Variety Yearbooks.

CHAPTER I

FUNDAMENTALS OF RADIO

1. Start a scrapbook of instructive and informative articles about broadcasting taken from newspapers and magazines. Classify material in the scrapbook according to the chapters in this textbook.

2. Start a classroom library of free bulletins and pamphlets. The magazine *Broadcasting*, in a section named The Radio Book Shelf, publishes bimonthly the names of recent publications. Watch the advertisements of stations, networks, and advertising agencies for additional material. Report to the class on contents of each bulletin.

3. Purchase an outline map of the United States and, using different-colored pencils, trace the basic Red and Blue Networks of the National Broadcasting Company, the Columbia Broadcasting System, and the Mutual Broadcasting System.

a. Mark the location of each outlet with its call letters.

b. Draw, in the colors of the network represented, the primary coverage area of each station. The following basis for such areas, while not accurate, will give the approximate coverage: 1000-watt stations, use a radius of 30 miles; 5000-watt, 40 miles; 10,000-watt, 50 miles; 25,000-watt, 60 miles; 50,000-watt, 70 miles.

4. Visit the local station to observe the acoustic treatment of the studios, types of microphones in use, and the control room. Report your observations to the class.

Clip from magazine advertisements pictures of the different types of microphones or write to manufacturers for them.

5. Referring to the listing of the radio programs of your local station for a single day, analyze the programs:

a. Network programs:

Sponsored.

Sustaining.

- b. Programs originating in the local station:
 - Sponsored.
 - Sustaining.
- c. Make a comparative evaluation of like programs.
6. Purchase an outline map of your state. Mark the location of each radio station in the state with its call letters. Using the same radii given above, mark the coverage areas of state stations. For 100-watt stations use a radius of 15 miles; for a station of 500 watts, use a radius of 20 miles.
7. Make a dial chart of all stations that may be heard regularly in your area.
8. Visit the transmitter of your local station. Report to the class your observations. Draw the type of antenna used.
9. Check up on the programs from your local station. In what way and to what extent does the station conform to the ruling of the F.C.C. that it must serve "public interest, convenience, and necessity?"
10. Appoint one member of the class to:
 - a. Obtain forms for the application for a station license. Address: Federal Communications Commission, Washington, D.C.
 - b. Write for *The Rules and Regulations of the Radio Division of the F.C.C.* Address: Government Printing Office, Washington, D.C. (10 cents).
 - c. Get your class placed on the mailing list of the National Advisory Council on Radio and Education, 60 East 42d Street, New York City; *The Federal Radio Education Committee Service Bulletin*, U.S. Office of Education, Washington, D.C.; *Education by Radio*, issued by the National Committee on Education by Radio, 1 Madison Avenue, New York; *Broadcast News*, issued by the R.C.A. Manufacturing Company, Inc., Camden, N. J.

CHAPTER II

RADIO SPEAKING

1. Listen to and evaluate various professional announcers. Compare the merits of those upon the local station with those of the network.
2. Attempt to make a catalogue of voices on the air according to their quality, tone, pitch, and appeal.
3. Using a stop watch, check up on the number of words that you deliver a minute in:
 - a. Conversational speech.
 - b. Reading copy.
 - c. Reading poetry.
 - d. A sales talk.
4. Note the emphasis that is placed upon certain words by experienced announcers, and try to determine why these words are emphasized.
 - a. Is accent used more effectively than a change of pitch?
 - b. Is it advisable to emphasize a word by lowering the pitch or by raising it?
5. Radio stations are generally very willing to give auditions. Take one of these auditions and ask for criticisms that you can report to the class. What type

of material was given to you to read? How long did the audition last? What instructions were given to you before the audition? What criticism was made? What type of job application did you fill in?

6. Write to various radio announcers whom you consider to be outstanding, to learn where these announcers received their education, in what part of the country they were born and brought up, and where they live. Do you find that the best announcers come from any particular section in the nation?

7. From the following bibliography of monologues, select one or two for presentation over the public-address equipment. *Monologues for men: Five Vaudeville Monologues with Nonsense Poetry and Monologue Fillers*, by Arthur Leroy Kaser, and *Headliner Monologues for Men*, by Ward Morley (both these selections are available from Walter H. Baker Company, 178 Tremont Street, Boston), *Your Show* by Clay Franklin, and *These Mortals among Us* by Clay Franklin, both obtainable from Samuel French, Inc., 25 West 45th Street, New York, \$1 each. *Monologues for women: Character Monologues*, by J. C. Geiger, Fitzgerald Publishing Corporation, 75 cents; *A Dash of Vanity and Other Monologues* by Eve Bretherton, Samuel French, Inc., 50 cents; *Fifteen Funny Monologues*, by Lorene Bowman, Fitzgerald Publishing Corporation, 75 cents; and *My Operation and Other Uncommon Monologues*, Fitzgerald, 60 cents.

8. Using the audition chart to be found in the chapter on Teaching the Broadcaster, analyze some radio speaker's delivery.

9. Have various members of the class deliver the same 3-minute talk to the class. Determine to what extent listening interest is due to the manner of speaking.

10. Listen to your best radio station and compare the commercial with the noncommercial announcements. Is there a difference in the style of delivery?

11. Students frequently learn a great deal about radio speech by giving auditions to each other.

CHAPTER III

ARTICULATION, INTONATION, RHYTHM

Innumerable authors of speech textbooks have presented voice exercises for students of speech. Select those which will be most helpful to the radio announcer and speaker.

CHAPTER IV

RADIO PRONUNCIATION

1. Purchase a copy of *You Don't Say, or Do You?*, by F. F. Tilden of Melrose, Mass., 50 cents. Use this in practicing pronunciation.

2. Compare the pronunciation of foreign names and titles as given by announcers with pronunciations of these same names and titles as given in a pronouncing dictionary. Which are the more understandable? Do your findings prove or disprove the idea that foreign names should be Anglicized for American listeners?

3. Ascertain what are the colloquialisms in general use in your locality. Are these ever heard over your local radio station?

4. Are there examples of sectional or regional speech to be heard over stations in your locality? What is the public reaction to such speech?

5. Using one of the pronouncing aids mentioned in the text, practice the correct pronunciation of at least five words each day. Select words that are frequently heard over the radio.

6. Select ten words with disputed pronunciations and discover the preferred pronunciation by educated people in your locality.

7. Write to the G. & C. Merriam Company, 10 Broadway, Springfield, Mass., for the pronunciation test, "The Sheriff's Dilemma." Enough copies of this will be sent to your instructor for the entire class. Make it the basis of an announcer's test over the public-address system. It is admittedly poor radio copy but is good practice in pronunciation. Only a part of the copy is reprinted here; the balance may be obtained by writing to the publishers of Webster's dictionaries.

THE SHERIFF'S DILEMMA

"Form a posse!" shouted the robust sheriff. "A most formidable brigand is at large."

"Is where?" asked the comptroller, lying on an exquisite divan. He was enjoying a respite from the worries of finance.

"You chimpanzee," replied the sheriff, gnashing his teeth, "your ignorance is lamentable—and grievous, and—"

"Irremediable," supplied his incomparable deputy, who hated the comptroller for divers causes. With an admirable twist to his mustache, he continued, "Unless I err, the gibbet, an elephantine tripod, is ready, sheriff. Let's end this longevity of our barbarous brigand."

"He means levity," roared the comptroller. But they had left, carrying with great travail a tarpaulin and a tepee.

After passing a commandant and his corps, who offered means of condign punishment—but no help or victuals—they halted their excursion, for culinary purposes, albeit they had only one vegetable, some pecans, a salmon, and little venison.

"We must wrestle with this further," bade the sheriff in his address.

"Aye," responded a mischievous adult, chewing in bestial fashion, "although genuine venison would be preferable. In zoology, I remember, viscera were not—"

"I reckon," calmly interrupted the incomparable deputy, gnawing, "we'd better reconnoiter. Our infamous, despicable combatant—"

"Competent," corrected the agile comptroller, who, completing his chores, had arrived. "Your orthoepy is—"

"Admirable," finished the sheriff, all roiled. "Let's cross this bayou."

"Chaos and mortgages!" shouted the comptroller, scratching himself as they forded the creek. The water had rinsed off his medicinal preparation for eczema.

"The curse of the brigand!" was the cry, and they seized him. An epistle and a coupon disclosed his cognomen. Mounting a natural dais near a crevasse, he gave, somewhat awry, his version of his biography.

(Printed with the permission of the publishers of "The Sheriff's Dilemma," copyright, 1940, by G. & C. Merriam Co.)

CHAPTER V
NEW PROGRAMS

1. Write a 10-minute news program in the style of your favorite news commentator.
2. Select items from a newspaper which you would use in a news broadcast. Arrange them in the order in which you would present them. Justify the selection and arrangement.
3. Write a news program to be broadcast to children.
4. Dramatize a short news item. Trace the news backward in a short dramatization.
5. Have a student obtain from the local newspaper a strip of A.P., I.P., U.P., or Transradio Press news. Rewrite this strip for radio presentation.
6. Try preparing scripts for different types of news broadcasts, such as women in the news, youth makes news, science in the news, etc.

CHAPTER VI
SPORTS PROGRAM

1. Read the rule books for various major sports and report to the class on those rules which the sporteaster must know.
2. After attending a sports event (football, basketball, baseball, etc.) write a résumé of the game for radio presentation.
3. Prepare the filler to be used by the sports announcer for a sports broadcast.
4. Attend a sports event with a portable radio. Listen to the announcer describe the plays and compare his description with the actual event.
5. Prepare a sports program for an imaginary program broadcast at a time when there is little national interest in sports.

CHAPTER VII
IMPROMPTU AND EXTEMPORE PROGRAMS

1. Conduct a 15-minute round table, using a stop watch. Arrange it so that those participating in the discussion are invisible to the balance of the class. Have the other members criticize the presentation from the standpoint of human interest, unity, sequence, delivery, and summary.
2. Conduct a classroom interview with another student on a topic of local interest. Have it criticized as above.
3. Using the public-address system for a room-to-room broadcast, the teacher should assign a speaker to be introduced by a student. Shortly after the speaker starts his talk he should either run out of material or become physically incapacitated to finish, requiring the student announcer to ad-lib the balance of the assigned period. The announcer should not know such a burden will be placed upon him.

4. Prepare quiz programs for your various classes, bearing in mind that the material presented must be interesting, entertaining, and test the knowledge not only of those participating but also of the radio audience. Have quiz programs in civics, English literature, political science, botany, history, etc.

5. Make a small scrapbook of material which could be used by a master of ceremonies when he is ad-libbing on a variety show.

CHAPTER VIII

POETRY PROGRAMS

1. At what rate of speed (words per minute) does it come natural for you to read poetry aloud? Do you read all poems at the same rate?

2. Listen to and report about the poetry-reading programs that can be heard in your territory.

3. Using an appropriate musical selection (recorded), try reading poetry with a musical background.

4. Catalogue the types of poetry that seem to be used most generally upon radio programs.

5. Organize a choral-speaking chorus and rehearse.

6. Make a notebook of poetry taken from magazines and newspapers. Try to arrange material for unified programs.

7. Select a poem that you think would be particularly good for a multiple-voice choir. Arrange it for radio presentation.

CHAPTER IX

PREPARING THE RADIO ADDRESS

1. Write a 2-minute speech on something you have observed during the day, following the principles outlined in the chapter. In your selection of material, how will you be guided by what to accept and what to reject?

2. Copy several complex sentences from a printed article and then rewrite them, incorporating the fundamentals of proper radio sentence structure.

3. Select a descriptive sentence from some article and rewrite it in such a way that the description is addressed to an individual. Use the second-person pronoun.

4. Listen to a radio speech and:

a. Determine how close it follows Morse Salisbury's formula for the organization of the radio talk.

b. Be specific and illustrate from the speech.

5. Criticize a radio address upon the following points:

a. Conversational style of the speaker.

b. His choice of words.

c. Sentence structure.

6. Make a list of ways to attract interest in the opening of a radio address.

7. Write to the broadcasting services of some universities which broadcast programs requesting copies of radio talks. Criticize these. Mimeographed copies will be mailed on request by University Broadcasting Service, Ann Arbor, Mich.

CHAPTER X

RADIO IN THE PUBLIC SERVICE

1. Listen to the local stations and report upon all community and public-service programs.

a. Are they presented during the morning, afternoon, or evening?

b. Are they prepared, presented, and conceived by the station or by local groups or individuals?

2. Originate and plan additional programs to serve the local audience. Submit these to the local station manager. Report upon his reaction to your suggestions.

3. Classify programs being broadcast in the public service into sustaining and sponsored programs. Which have the greater audience appeal? Why?

4. Evaluate the programs that are broadcast to appeal to the community to determine whether they are entertaining as well as instructive. If they are not, suggest methods by which the audience appeal may be increased.

5. If your community has an outlet station for a network and also a local station, evaluate the programs over both to determine which type of station serves the community better.

6. By personal interviews determine the influence of the local station upon the community.

7. Visit your city health department and discuss with the health officer a program of current interest which might be presented over the radio. Prepare such a program with his cooperation.

8. Present a radio dramatic version of a medical fact; then present a straight talk on the same topic. Which method of presentation results in the more lasting impression upon the audience? Dr. Bauer of the American Medical Association has a great number of scripts on medical subjects. It is possible to obtain from him mimeographed copies of some of these scripts and various instructions and informative papers on different phases of medical radio programs.

CHAPTER XI

WRITING THE RADIO PLAY

1. Listen to and analyze a radio play.

a. Type of plot.

b. How much of the program time is devoted to the play?

c. Number of main characters.

d. How are characters identified?

e. Is there a contrast of voices?

f. How is the scene set?

g. How are the transitions or scene changes made?

h. What are the sound effects?

i. Were they essential?

j. How important to the play was the announcer or narrator?

2. The radio skit must introduce characters and plot quickly. Write the first 100 words of a skit introducing essential characters, plot, mood, and setting.
3. Dramatize and cut for a 10-minute radio play a story by O. Henry, Bret Harte, Morgan Robertson, or other short-story writer.
4. Use some school or college situation (*The Blind Date*, *The Rooming-house Bath*, *Behind First Base with a Girl*) as a plot foundation. Write an 8-minute skit.
5. Write to the Educational Radio Project, U.S. Office of Education, Washington, D.C., for *Interviews with the Past*.
6. Write a brief radio skit using the same plot for the radio presentation and for a stage presentation. Present the radio version to one group of students and the stage presentation to another group, and try to ascertain which group got more out of the presentation.

CHAPTER XIII

WRITING THE RADIO SERIAL

1. Analyze a radio serial which is presented five days a week. How much advance is made in plot development during the week? Is plot or characterization more important?
2. The series of radio skits is very much like a comic strip in a newspaper. Frequently the cartoonist will use a strip to summarize the action of the past month. Write a summarizing program for a series of radio skits.

CHAPTER XIV

THE PREPARATION OF CHILDRENS' PROGRAMS

1. Classify and analyze the so-called children's programs broadcast by a local station during a single day.
 - a. "Kiddie" programs (for those under eight), children's programs (for young listeners over twelve).
 - b. Dramatic, musical, or storytelling programs.
 - c. Instructive, entertaining, harmful, innocuous programs.
2. Listen to a program and criticize it from the standpoint of:
 - a. Clarity for child comprehension.
 - b. Interest for the listener.
 - c. Plot.
 - d. Personality and voice of performer.
 - e. Percentage of commercial copy.
3. Write the opening skit (15 minutes) of a series of broadcasts for boys based upon the Tom Swift books.
 4. Select an historical incident that may be used as the plot for a play arranged for children. It must be interesting, informative, accurate, and have plenty of action.
 5. Prepare a program of poetry that will interest children.
 6. Discuss the statement, "The majority of children's programs now on the air are emotionally overstimulating and have undesirable effects upon the characters of the young listeners."

7. Of what value is the child audience to the radio advertiser?
8. Many children's plays require the dramatization of such characters as frogs, fishes, dolls, dogs, etc. Attempt to evolve speech modes that might be used by these characters—for instance, how would a frog talk?

CHAPTER XV

DIRECTING THE RADIO PLAY—THE ACTOR

1. Through correspondence with stations and from the newspaper schedule of radio programs, list all dramatic programs that may be heard in your locality. Tune in on these plays and criticize.
2. Attend the rehearsal of a radio play in the studio of your local station.
3. Select short stories or one-act plays that could be satisfactorily adapted for radio presentation and justify your choice:
 - a. For a youth (over twelve years) audience.
 - b. For an evening adult audience.
4. Having adapted the play for radio, cast it from among your classmates.
5. Direct the reading of the play from behind a screen. Watch for a read-y style, interpretation, characterization.
6. Rehearse the plays obtained from the Educational Radio Project, U.S. Office of Education, Washington, D.C.
7. Compare the acting in a Columbia Workshop broadcast or one of the evening plays with that in one of the soap-opera serials.

CHAPTER XVI

SOUND EFFECTS

1. Make a card index of how all manual sound effects are made. Cross-index this so that when you are required to prepare a sound for broadcast you merely have to refer to the card index. (See chapter on Sound Effects.)
2. From the yearbook *Broadcasting Magazine* obtain a list of manufacturers of sound-effects recordings. Obtain their catalogues for your sound-effects library.
3. Write a script using all possible, logical sound effects, then rehearse this script.

CHAPTER XVII

WRITING COMMERCIAL CONTINUITY

1. Listen to the commercial continuity from your local station and criticize. What type of copy seems to have the greatest sales force? Why?
2. Listen to any advertising plug broadcast over a national hookup and evaluate the copy and its presentation.
3. Make a comparison of the commercial copy used over the radio to advertise a product with the copy printed in magazines to advertise the same product.
4. Give some examples of "class advertising" as heard in your locality.
5. Go to your local station and obtain copies of its used commercial continuity for class examination. Endeavor to emulate the copy for the same product.
6. Write a sample of each of the three types of commercial copy: reminder, educational, and action. Use any product, fictional or real.

7. Using a newspaper advertisement as the basis, prepare a one-hundred word commercial announcement for radio.
8. Write a series of dramatized commercial continuity slanted toward:
 - a. Human interest.
 - b. Economy.
 - c. Hospitality.
 - d. Personal appearance.

CHAPTER XVIII

SERVING THE SPONSOR

1. You are preparing to approach a merchant with the idea of selling him time upon the local station. Prepare a prospectus showing station coverage, the cost, the advantages, the tie-in campaign, and the program to be presented.
2. Make a survey of local merchants.
 - a. Interview those who are advertising by radio. Are they satisfied with the results?
 - b. Interview those who are not advertising by radio. Why not?
3. Analyze a number of commercial programs. How much time is devoted in each to straight advertising? What proportion of the program period?
4. Examine commercial announcements over the local station in accordance with the tests set forth by Roy C. Witmer in the N.B.C. *Little Book on Broadcasting*, New Series F.
 - a. If straight commercial announcements are used, do they give the listener some interesting and worth-while information about the product?
 - b. Do they tell the story in a pleasant manner?
 - c. Are they positive, or do they have a tendency to belittle a competitor's story?
 - d. Do they ring absolutely true?
 - e. If you were actually calling on the listeners personally, would the same story be used in the same way?
 - f. Are they so technical that the layman cannot understand or be interested?
 - g. Are they in good taste? Human nature does not like to hear or discuss disagreeable things unless compelled to.
 - h. Does the commercial part of the program harmonize in spirit and tone with the rest of the program?
5. Can you find any illustration of the use of a tie-in campaign locally?
6. Originate new methods to tie the entertainment continuity to the commercial copy. Evolve names for programs which are catchy, which suggest the product, and which will be published in the newspaper announcements that eliminate free advertising.

CHAPTER XIX

BROADCASTS TO SCHOOLS

1. Make a comparison of the educational programs presented by the networks with those presented by near-by educational institutions over the radio.

Requests addressed to the N.B.C. and the C.B.S. in New York and to the educational institutions will bring you announcements of their educational programs. Which have the greatest local value? Why?

2. Write to the stations heard in your locality for a weekly announcement of all radio programs. Draw up a list of all educational programs available to schools in your area.

3. Using the above schedule, divide the broadcasts among students in the class so that each student will evaluate a program.

a. What is its age or class level?

b. In what courses may it be used?

c. Why is it good or valueless?

d. Type of program, length, hour, day, station.

4. What sponsored program may justly be considered educational? How do they compare in value and presentation with sustaining educational programs?

5. Prepare visual aids to be used in conjunction with a program to be received in the classroom.

6. Write a 15-minute program addressed to a definite grade and course. Prepare advance material to be of value to teacher, also follow-up suggestions.

7. Visit a classroom in which an educational radio program is being received. Report on the visual aids used, student attention, teacher attitude, reception, the program itself, and what the class retained from the program.

8. Write to one of the university broadcasting departments for copies of radio talks that have been delivered. Upon the assumption that one of these talks is to be broadcast, prepare an advance sheet of instructions to be sent to teachers. List all essential information, including visual aids, etc.

9. Write to the various boards of education in cities (Cleveland, Detroit, Chicago, Rochester, Indianapolis, Alameda) where school broadcasting is extensive and obtain from these cities sample scripts and other informative material.

10. Write to the Chicago Radio Council for some of the teachers' guides that are used for educational programs and observe the things that should be done by the teacher in the classroom receiving a program. Build one program of an educational nature and make out a teacher's guide for that program.

11. List all educational programs that are heard in your area and make available to the teachers of your schools such a listing. Obtain from Ben. Darrow, Station WBEN, Buffalo, N. Y., various questionnaires to be used in evaluating such programs.

CHAPTER XX

PUBLIC-ADDRESS AND SOUND RECORDING

1. Write and arrange an assembly program to be presented from a central studio in a high school over the public-address system to the various assembly rooms. Write the announcements, arrange a skit to be presented by some chosen class, and select the music, using recordings.

2. Arrange and write a 5-minute library program, including book reviews.

3. Write to the Federal Radio Education Committee, U.S. Department of the Interior, Washington, for a copy of the *Radio Manual* and follow the instruc-

tions contained therein for the organization of a school radio-producing unit. Also ask for other free pamphlets.

CHAPTER XXI

ELECTRICAL TRANSCRIPTIONS

1. Listen to your local station for announcements of transcribed programs.
 - a. What proportion of programs (morning, afternoon, evening) are transcribed?
 - b. What proportion of the transcribed programs are (1) sponsored; (2) sustaining?
2. Report your reaction to a program announced as transcribed, as compared with your reaction to a program with live talent.
3. Compare the quality of a transcribed musical program with that of a program presented by a local orchestra.
4. Obtain from your local station a used commercial transcription. If you have a turntable revolving at $33\frac{1}{3}$ revolutions per minute, play the record for class criticism.
5. Write to the companies manufacturing transcriptions for advertising material concerning their products.

CHAPTER XXII

MUSICAL MIKE

1. Arrange a half-hour program of dance music. How would you unify the program? How will your announcer relieve the monotony?
2. Prepare a musical program understandable and of interest to children. Write the continuity to be included in the program. Make the program lively, entertaining, and instructive.
3. Tune in on a musical program. Criticize it from the standpoint of balance, timing, monotony, selection, continuity. How could the faults, if any, have been eliminated?

CHAPTER XXIII

THE RADIO DAY

1. Evaluate a musical program, a dramatic presentation, and a children's program upon the following bases:
 - a. Technical perfection: is the program well produced, lively, smooth, unified, carefully cast, balanced?
 - b. Ability of performers: were they chosen for their names or for their radio ability; are they musicians or speakers, artists, or authorities?
 - c. Amount and type of advertising: dignified?
 - d. Manuscript: is it well written or thrown together by an inexperienced writer?
 - e. Honesty in representation: are the facts and incidents truthful?
2. The Manufacturer of Ironclad Overalls has decided to broadcast a series of 5-minute advertising programs.

- a. Decide upon a name for the series.
 - b. Decide upon a time for presentation.
 - c. Will the programs be given over a network, by transcriptions, or by spot programs?
 - d. Create a distinctive idea for such a series.
 - e. Plan and write continuity for the first program.
 - (1) To what extent will music be used? For what purpose? What selections?
 - (2) Will the program be in the form of skits, talks, or dialogues?
 - (3) How will the advertising material be tied into the program material?
 - (4) Number of voices required. Types.
 - f. Outline the remainder of the series.
3. Among the programs that you listen to regularly, choose the one you consider best from the standpoint of program building. Justify your choice.
 4. The person most apt to succeed in radio is the individual who has something new to offer. Try to evolve an original idea for a broadcast series.
 5. Which radio program do you consider to be the best on the air? Why?
 6. Prepare for the class a schedule of your radio listening for the coming week. Why have you selected the programs that you indicate? Compile such schedules handed in by all the students for purposes of analysis.

CHAPTER XXV

TEACHING THE BROADCASTER

1. Induce members of the staff of the local station to appear before the class and be interviewed concerning their work.
2. If public-address equipment is available, organize the class into a broadcasting-station staff. Operate or present an abbreviated day of broadcasting which will run for three hours. During the first hour present shortened and typical morning programs, during the second hour broadcast afternoon types, and during the third period present typical evening programs. Students should write all copy, direct, rehearse, and produce programs. No program period should be over 15 minutes in length. Maintain a rigid time schedule. Observe rules for station breaks. Emulate programs that are on the air. Present all types of programs that are popular during the three-hour period.
3. Working in conjunction with your school administration, try to get the local station to give your school a one-hour period during the month. Induce the station to allow you to sell announcements during this period, the income to be used for the purchase of equipment for the class. The class should take over the entire operation of the station (except the technical) during the period—announcing, acting, directing, and acting as hostesses. Take care of all mail that comes as a result of that program. This has been done in some cities.
4. Radio stations make surveys to determine the popularity of their programs. See if you can induce your local station to assign some survey to the members of your class. Such a survey should be useful to the station and instructive to the students who make it.
5. For additional assignments refer to the chapter on Teaching the Broadcaster.

General References

(Sources of free material are marked *. Books recommended to be included in a minimum library are marked †.)

AGNEW, HUGH E., and WARREN B. DYGERT: *Advertising Media*, McGraw-Hill Book Company, Inc., New York, 1938.

Contains a chapter on broadcasting as well as a comprehensive study of all media.

ALICOATE, JACK: *Radio Annual*, Radio Daily, New York, 1939.

This annual compiled by the staff of Radio Daily has general reference material about radio.

ARNHEIM, RUDOLPH: *Radio*, Faber & Faber, Ltd., London, 1936.

Deals with broadcasting from every aspect: its scientific angle, program analysis, studio production, the psychology of the listener, and its probable developments in television.

ARCHER, GLEASON L.: *History of Radio to 1926*, American Historical Society, Inc., New York, 1938.

The outgrowth of a lecture course, this book covers the early historical background of radio.

———: *Big Business and Radio*, American Historical Society, Inc., New York, 1939.

History of the technological, legal, and commercial struggles within the radio industry.

ARNOLD, FRANK A.: *Broadcast Advertising*, John Wiley & Sons, Inc., New York, 1933.

A discussion of the medium by one of the pioneers in the field is given.

He takes up such angles as broadcast advertising, fitting programs to products, broadcasting and the advertising agency, etc.

———: *Do You Want to Get into Radio?* Frederick A. Stokes Company, New York, 1940.

Vocational information.

ATKINSON, CARROLL: *Education by Radio in American Schools*, Edinboro Press, Edinboro, Pa., 1938.

———: *Development of Radio Educational Policies in American School Systems*, Edinboro Press, Edinboro, Pa., 1939.

*BARTLETT, KENNETH L.: *How to Use Radio*, National Association of Broadcasters, Washington, D.C., 1938.

Discusses the importance of American broadcasting and the problem of what education and radio can each contribute to the other.

BARNOUW, ERIK: *Handbook of Radio Writing*, Little, Brown & Company, Boston, 1939.

Deals with the technique of writing and gives markets for scripts and types of serials. Contains illustrative material.

BICKEL, KARL A.: *New Empire—The Newspaper and the Radio*, J. B. Lippincott Company, Philadelphia, 1930.

Cooperation between radio and the newspaper. An international broadcasting survey in which each country's radio regulations are mentioned.

BOUCK, ZEH: *Making a Living in Radio*, McGraw-Hill Book Company, Inc., New York, 1935.

Suggestions to radio servicemen, operators, engineers, writers, announcers, and artists.

BRINDZE, RUTH: *Not to Be Broadcast*, Vanguard Press, Inc., New York, 1937.

Discussion of advertising, government, and broadcasting companies as conflicting factors in the control of radio broadcasting.

†*Broadcasting Yearbook*, Broadcasting Publications, Inc., Washington, D.C.

An annual reference book on radio stations, networks, agencies, artists, organizations, law, bibliography, obtainable with a year's subscription to *Broadcasting*.

BRODIE, W. H.: *C.B.C. Handbook for Announcers*, Canadian Broadcasting Corporation, 1938.

Concise handbook prepared for Canadian announcers; gives requisites for good speech.

*BRYSON, LYMAN: *The Use of the Radio in Leisure Time*, The Radio Institute of the Audible Arts, New York, 1934.

Women in the home should direct their own listening and that of their family. They should work out a well-rounded program of listening to music, news, drama, educational programs, and lectures, as well as entertainment. When this has been accomplished, radio will be an important factor in the use of leisure time.

*BRUNNER, EDMUND DE S.: *Radio and the Farmer*, The Radio Institute of the Audible Arts, New York, 1935.

The relation of radio to rural life is presented.

BURNS, ELMER: *Radio*, D. Van Nostrand Company, Inc., New York, 1928.

This book presents simply and clearly the fundamental principles of electricity as applied to radio.

CANTRIL, HADLEY: *The Invasion from Mars*, Princeton University Press, Princeton, N.J., 1940.

A complete script of the Orson Welles broadcast together with an analysis of the public reaction to the broadcast.

———, and G. W. ALLPORT: *Psychology of Radio*, Harper & Brothers, New York, 1935.

Mental setting of radio; a practical interpretation in broadcasting is given.

†CARLILE, JOHN S.: *The Production and the Direction of Radio Programs*, Prentice-Hall, Inc., New York, 1939.

This is a detailed study of the factors involved in building a program.

Many illustrations, such as scripts, photographs and diagrams of studios, and studio sign language are given.

CARMEN, RUTH: *Radio Dramatics*, John C. Yorston Publishing Co., New York, 1937.

A series of nine lectures on radio dramatics with a chapter on television.

CARTER, BOAKE: *I Talk as I Like*, Dodge Publishing Company, New York, 1937.

Radio news broadcasts. Shows the background, the research, and the writing which must be put into a radio news broadcast and gives a picture of the news broadcaster at work.

*CHARTERS, W. W.: "Research Problems in Radio Education," National Advisory Council on Radio in Education, Inc., New York, *Bulletin 4*, 1934.

CHESMORE, STUART: *Behind the Microphone*, Thomas Nelson & Sons, New York, 1935.

CODEL, MARTIN: *Radio and Its Future*, Harper & Brothers, New York, 1930.

General presentation of the varied aspects of all fields of radio by outstanding authorities is given.

*Committee on Scientific Aids to Learning, 41 East 42d Street, New York.

Broadcast Receivers and Phonographs for Classroom Use.

Central Sound Systems for Schools.

Sound Recording Equipment for Schools.

These reports, compiled and published by a committee of the National Research Council, will be invaluable to school administrators and teachers who are responsible for the purchase and use of sound-recording and -reproducing equipment. They answer, in layman's language, almost every question that such a person might ask and a great many important questions that he would not think of asking or know how to ask unless he were a technical specialist as well as a school official.

CONNAH, DOUGLAS DUFF: *How to Build the Radio Audience*, Harper & Brothers, New York, 1938.

A discussion of subjects, such as what makes people listen to radio programs, showmanship, and audience building, is presented in the first part of the book. The second part deals with advertising, publicity, merchandising, promotion, local program promotion, and the like.

COULTOR, DOUGLAS: *Columbia Workshop Plays*, Whittlesey House, McGraw-Hill Book Company, Inc., New York, 1939.

Fourteen radio dramas, selected and edited, including such well-known plays as *The Fall of the City*. An excellent case book.

CULLINAN, HOWELL: *Pardon My Accent*, Plimpton Press, Norwood, Mass., 1934.

DARROW, BEN. A.: *Radio Trailblazing*, Roycroft Shop, East Aurora, N. Y., 1940.

—: *Radio the Assistant Teacher*, R. G. Adams & Co., Columbus, 1932.

The use of radio in formal education is given.

DASHIELL, B. F.: *A Popular Guide to Radio*, The Williams & Wilkins Company, Baltimore, 1937.

DAVIES, JOHN LANGDON: *Radio, the Story of the Capture and Use of Radio Waves*, Dodd, Mead & Company, Inc., New York, 1935.

It is the story of how radio works, including more than the usual amount of straight electrical background.

*DENISON, MERRILL: *The Educational Program*, The Radio Institute of the Audible Arts, New York, 1935.

Radio is an important element in the field of education and educational bodies should take advantage of it to reach the people.

———: *Henry Hudson and Other Plays*, Ryerson Press, Toronto.

DIXON, PETER: *Radio Writing*, D. Appleton-Century Company, Inc., New York, 1931.

Six sample radio sketches.

———: *Radio Sketches and How to Write Them*, Frederick A. Stokes Company, New York, 1936.

Eighteen short radio plays.

*DRURY, FRANCIS K. W.: "The Broadcaster and the Librarian," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 3, 1931.

This bulletin aims to point out how the librarian and the broadcaster may cooperate in building programs, particularly educational programs. A few suggestions such as the librarian's preparing a radio bookshelf and giving space on the bulletin board to program announcements, and the broadcaster's encouraging listeners to do more reading about the subject of the broadcast, etc., are given.

DUFFY, BEN: *Advertising Media and Markets*, Prentice-Hall, Inc., New York, 1939.

A complete picture of the part played by media in the advertising campaign is given.

†DUNHAM, FRANKLIN, and ROLLO REYNOLDS: *Radio in the Classroom*, McGraw-Hill Book Company, Inc., New York, 1941.

DUNLAP, ORRIN E., JR.: *Advertising by Radio*, The Ronald Press, New York, 1929.

Radio as an advertising medium is presented in this book.

———: *Radio in Advertising*, Harper & Brothers, New York, 1931.

Putting over the radio sales message (programs and continuity).

———: *Outlook for Television*, Harper & Brothers, New York, 1932.

This is a general discussion of the technical program and economic outlook for television.

———: *The Story of Radio*, Dial Press, Inc., New York, 1935.

A popular discussion of the rise of radio and its scientific bases is presented.

———: *Talking on the Radio*, Greenberg, Publisher, Inc., New York, 1936.

Suggestions for catching and holding a radio audience, with emphasis upon the political and instructive lecture. Fifty practical rules which will aid the average speaker.

*DYKEMA, PETER W.: *Women and Radio Music*, The Radio Institute of the Audible Arts, New York, 1935.

Women are lovers of music, and, therefore, radio music should be planned with that in mind.

*———: *Music as Presented by Radio*, The Radio Institute of the Audible Arts, New York, 1935.

Music is on practically every radio program; it satisfies the human needs.

*———: *Men and Radio Music*, The Radio Institute of the Audible Arts, New York, 1935.

Radio is doing much to bring music back to man, the creator of music.

*———: *Radio Music for Boys and Girls*, The Radio Institute of the Audible Arts, New York, 1935.

Children's artistic tastes should be encouraged and the radio can do a great deal to further their tastes as well as their knowledge of music.

†*Education on the Air*, annual year book of the Institute for Education by Radio, printed at Ohio State University annually since 1930.

Each volume contains copies of lectures on various phases of education by radio and on broadcasting topics in general.

Educational Recordings for Classroom Use, Association of School Film Libraries, 9 Rockefeller Plaza, New York.

Contains titles of 375 recordings available for schools.

EISENBERG, AZRIEL L.: *Children and Radio Programs*, Columbia University Press, New York, 1936.

This is a study of children in the metropolitan area and their habits and tastes in regard to radio programs.

†EWBANK, HENRY L., and SHERMAN P. LAWTON: *Projects for Radio Speech*, Harper & Brothers, New York, 1940.

An excellent workbook for the student of broadcasting. Mike projects, laboratory or listening projects, four scripts, bibliography, to help the student participate in radio projects.

FELIX, EDGAR H.: *Television, Its Methods and Uses*, McGraw-Hill Book Company, Inc., New York, 1931.

Mr. Felix endeavors to give the reader of this book a clear understanding of how the existing television systems work and of the basic processes involved in any system.

*Federal Radio Education Committee, U.S. Department of the Interior, Washington: "College Radio Workshops," 1940; "The Groups Tune In," 1940; "Radio Script Exchange Catalog of Scripts," 1940; "Local Station Policies," 1940; "Handbook of Sound Effects"; "Radio Glossary"; "Radio Bibliography"; "The A.B.C. of Radio"; "Public Forums"; "How to Use Radio"; "How to Use Radio in the Classroom"; Service Bulletin (monthly); "Radio in Education," a syllabus; and other bulletins.

Write for an order blank. There is a small charge for some items.

FIRTH, IVAN, and GLADYS SHAW ERSKIN: *Gateway to Radio*, Macaulay Company, New York, 1934.

A discussion of program and production aspects of broadcasting.

FLAHERTY, J. J.: *On the Air*, Doubleday, Doran & Company, Inc., New York, 1937.

A description of radio broadcasting, sound effects, rehearsals, and television, and the historical background of radio. Illustrated.

FROST, S. E., JR.: *Education's Own Stations*, University of Chicago Press, Chicago, 1937.

A list of educational institutions which had or have radio licenses is given, plus the work carried on by each.

———: *Is American Radio Democratic?* University of Chicago Press, Chicago, 1937.

An analysis of American radio in terms of the democratic philosophy of social life is presented in this book. The problem is approached from the point of view of the Federal government, the station owner, the advertiser, the educator, and the general public. Comparisons are made between the American and the foreign systems of radio. Certain changes are suggested in the American system which will tend to make it more democratic.

GIELGUD, VAL: *How to Write Broadcast Plays*. Hurst and Blackett, London, 1932.

A good study of writing radio plays from the British viewpoint.

GOLDSMITH, A. N., and A. C. LESCABOURA: *This Thing Called Broadcasting*, Henry Holt and Company, Inc., New York, 1930.

For the most part this is a history of radio and of radio broadcasting. Discussions of building the radio program and of writing radio drama and humor.

GOLDSMITH, F. H., and V. G. GEISEL: *Techniques of Recording*, Gamble Hinged Music Co., Chicago, 1939.

Explains the how and why of recording equipment. Rather technical instruction but comprehensive and valuable.

GOODE, KENNETH M.: *What About Radio?* Harper & Brothers, New York, 1937.

Advertising man discusses the question of radio advertising. The book contains the results of a survey on methods of audience appeal. The pages dealing with audience appeal will be of value.

GRANDIN, THOMAS: *The Political Use of the Radio*, Geneva Studies, Vol. X, No. 3, distributed by the Columbia University Press, 1939.

The nature and extent of radio propaganda, both national and international. The author presents data on wave lengths, kilowatt strength of stations, number of receivers, types of propaganda, and trends. Estimates the effectiveness of the propaganda as conducted by various governments and details the various efforts that have been made to control it.

*GRUENBERG, SIDONIE M.: *Radio and Children*, The Radio Institute of the Audible Arts, New York, 1935.

Children are ardent listeners of radio programs, and an effort should be made to give them the best possible material the network can find. In this way, both parents and children are satisfied.

- *——: "The Use of Radio in Parent Education," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 19, 1939.
A study was made to disclose the needs, remediable conditions, and opportunities for extension and improvement of this type of service.
- HARRIS, CREDO F.: *Microphone Memoirs of the Horse and Buggy Days of Radio*, Bobbs-Merrill Company, Indianapolis, 1937.
An entertaining account of early days in radio by the manager of WHAS.
- †HARRISON, MARGARET: *Radio in the Classroom*, Prentice-Hall, Inc., New York, 1937.
Objectives, principles, and practices of the use of radio in the schools.
Use of teachers' guides and charts, classroom activities related to radio; supervision of the school radio; advertising, publicity, and propaganda.
- HASLETT, A. W.: *Radio 'Round the World*, University Press, Cambridge, Mass., 1934.
The story of wireless and the use that can be made of radio in weather forecasts, in medicine, at sea, and in war.
- HAWVER, SAM H.: *The Mechanics of Instantaneous Acetate Recording*, Cellutone Record Manufacturing Co., Los Angeles, 1937.
Concise, clear, and beautifully illustrated with many photomicrographs.
- HAYES, J. S., and H. F. GARDNER: *Both Sides of the Microphone*, J. B. Lippincott Company, Philadelphia, 1938.
Intended for use as a vocational guide. Contains explanations of all branches of the radio field: announcing, engineering, writing.
- HENNEY, KEITH: *Principles of Radio*, John Wiley & Sons, Inc., New York, 1929.
A textbook on radio which gives the fundamental principles of radio.
- HETTINGER, HERMAN S.: *A Decade of Radio Advertising*, University of Chicago Press, Chicago, 1933.
The rise of radio as an advertising medium is presented.
- : *Radio: The Fifth Estate*, American Academy of Political and Social Science, Philadelphia, 1935.
The latest discussion of the broadcasting field as a whole.
- and WALTER J. NEFF: *Practical Radio Advertising*, Prentice-Hall, Inc., New York, 1938.
A complete story of radio advertising is given. The following subjects are a sample of those discussed: How to plan the radio campaign, how to select the cast, how to select the station and the network, how to handle the listener response.
- HILL, EDWIN C.: *The Human Side of the News*, Walter J. Black, Inc., New York, 1934.
- *HILL, FRANK ERNEST: *Listen and Learn, Fifteen Years of Adult Education on the Air*, American Association for Adult Education, New York, 1937.
Mr. Hill, through observation, listening to broadcasts, and reading, gives his opinion of the important facts about adult education by radio.

HOFFMAN, WILLIAM G.: *Public Speaking Today*, Whittlesey House, McGraw-Hill Book Company, Inc., New York,

The technique of public speaking and the preparation of various types of speech, including radio and round table.

How to Make Good Recordings, Audio Devices, 1600 Broadway, New York, 1940.

Well-illustrated advice on choosing and using recording equipment. Simple, helpful to classroom recorders.

HULBERT, CLAUDE: *Learn to Write for Broadcasting*, D. Archer, London, 1932.

HUSING, RED: *Ten Years Before the Mike*, Farrar & Rinehart, Inc., New York, 1935.

Entertaining account of the author's radio experiences.

*HYERS, FAITH HOLMES: "The Library and the Radio," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 18, 1938.

A clear understanding of the educational possibilities of radio, the extent of its development, and the nature of problems awaiting solution are given.

JAMES, ALDEN: *Careers in Advertising*, The Macmillan Company, New York, 1932.

Chapters on radio as a medium, the networks, electrical transcriptions, program production, and similar considerations are included.

JAMES, A. LLOYD: *Broadcast English*, I-VII, British Broadcasting Corp., London, 1928-1939.

Recommendations to British Broadcasting Company announcers regarding words of doubtful pronunciation.

———: *The Broadcast Word*, Kegan Paul, Trench, Trubner & Co., London, 1935.

Discussion of pronunciation and word selection by the secretary of the Advisory Committee on Spoken English for the British Broadcasting Company.

*JANSKY, C. M., JR., R. C. HIGGY and MORSE SALISBURY: "The Problem of the Institutionally Owned Station," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 10, 1934.

A discussion of the radio station owned and operated by an institution is presented. This is a fine way to accomplish the objectives of radio in the educational field.

JONES, CARLESS: *Short Plays for Stage and Radio*, University of New Mexico Press, Albuquerque, 1939.

This volume contains ten interesting quarter- and half-hour radio plays. The book adequately fulfills its purpose of providing laboratory material for radio classes.

KALTENBORN, HANS VON: *Kaltenborn Edits the News*, Modern Age Books, Inc., New York, 1937.

Collection of news reports. The reports cover international events of the year of publication. Selection of facts discussed.

———: *I Broadcast a Crisis*, Random House, Inc., New York, 1938.

Collection of the broadcasts ad-libbed by the news commentator during the Czech-German crisis. Kaltenborn reveals the manner in which he proceeded to gather his facts and material.

KASTER, MAX, and EDWIN COLLIER: *Writing for the BBC*, Sir Isaac Pitman & Sons, Ltd., London, 1937.

Musical comedies, gags, lyrics, dialogue, and production ideas are included in this book of practical hints.

KENNISON, C. E.: "Breaking into Broadcasting," mimeographed pamphlet.

KEY, PIERRE: *Radio Annual*, Pierre Key Publication Corporation, New York, 1933.

This book gives information about sponsors, agencies, talent, stations, etc.

KINSELLA, HAZEL GERTRUDE: *Music on the Air*, Viking Press, Inc., New York, 1934.

KNIGHT, RUTH: *The Distaff Side of Radio*, Coward-McCann, Inc., New York, 1938.

This book gives an account of positions women are occupying in the radio industry.

*KOON, CLINE M.: "The Art of Teaching by Radio," U. S. Government Printing Office, Washington, *Bulletin* 4, 1933.

The essentials of: talks, directed activities, actuality broadcasts, radio conversation, debates, broadcast music, and radio plays.

*———: "Some Public Service Broadcasting," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 12, 1934.

LAWTON, SHERMAN P.: *Radio Speech*, Expression Company, Boston, 1932.

Speech textbook of radio, including both writing and presentation. Divided into five sections, including: general consideration, composition of the radio talk, delivery of the radio talk, composition of the radio play, and production of the radio play.

———: *Radio Drama*, Expression Company, Boston, 1938.

This book is predicated on the idea that the student learns by doing. The student is led from simpler forms of radio dramatizations to the more difficult 18 dramatizations.

†———: *Radio Continuity Types*, Expression Company, Boston, 1938.

An excellent book of continuity, all types. The best case book on radio.

LAZARSELD, PAUL F.: *Radio and the Printed Page*, Duell, Sloan & Pearce, New York, 1940.

An account of a Rockefeller Foundation research into the cultural influence of radio and its conflict with print. More women prefer radio news than men. The higher the cultural level of a person the more likely he is to prefer print.

———: *Radio Research*, Duell, Sloan & Pearce, New York, 1941.

LEA, GORDON: *Radio Drama and How to Write It*, George Allen & Unwin, Ltd., London, 1926.

‡LEATHERWOOD, DOWLING: *Journalism on the Air*, Burgess Publishing Co., Minneapolis, Minn., 1939.

Presentation, news selection. The best book in this specialized field. All types of news programs.

LEWIS, J. G.: *Television* (dictionary), Pitman Publishing Corporation, New York, 1936.

LOHR, LENOX R.: *Television Broadcasting*, McGraw-Hill Book Company, Inc., New York, 1940.

Mr. Lohr, a former president of the N.B.C., appraises the problems and possibilities that television offers to the public.

LOWELL, MAURICE: *Listen In: An American Manual of Radio*, Dodge Publishing Company, New York, 1937.

This book includes helpful suggestions for the general public and for those who have ambitions to enter the professional field of radio.

LUMLEY, F. H.: *Measurement in Radio*, Ohio State University, Columbus, 1934.

A comprehensive discussion of radio-listener research is given. It contains case information in addition to a description of current research methods.

MACLEISH, ARCHIBALD: *The Fall of the City*, Farrar & Rinehart, Inc., New York, 1938.

Mr. MacLeish has written this play in verse especially for the radio because he feels the radio is so well adapted to verse. He urges other poets to do the same.

**Making Microphone Friends*, Columbia Broadcasting System, New York, 1936. Small but good pamphlet.

MARSH, C. S.: *Educational Broadcasting*, University of Chicago Press, Chicago, 1936-1937.

These are the proceedings of the First National Conference in Educational Broadcasting held in Washington, D.C., on Dec. 10, 11, and 12, 1936, and of the Second National Conference held Nov. 29, 30, and Dec. 1, 1937, at Chicago.

MATHESON, HILDA: *Broadcasting*, T. Thornton Butterworth, Ltd., London, 1933.

†MCGILL, EARLE: *Radio Directing*, McGraw-Hill Book Company, Inc., New York, 1940.

An outstanding book on production.

McNAIR, W. A.: *Radio Advertising in Australia*, Angus & Robertson, Ltd., Sydney, 1937.

The principles of advertising, broadcasting facilities, and methods. The radio audience and the future of commercial broadcasting are all discussed. It is a good book for the student of advertising.

MOORE, ROBERT: *Forging Ahead in Radio*, Moore Publications, Detroit, Mich., 1935.

A pamphlet dealing with various departments of the radio station: writing, advertising, opportunities in radio.

MOORE, STEPHEN: *New Fields for the Writer: Television, Radio, Film, Drama*. National Library Press, 1939.

Samples showing technical construction for each of the media named in the title are given.

MORELL, PETER: *Poisons, Potions, and Profits, the Antidote to Radio Advertising*, Knell Publishers, Inc., Dial Press, Inc., New York, 1937.

Mr. Morell discusses the testimonies made by companies over the radio and he analyzes and passes judgment on patented products advertised over the air.

MORRIS, JAMES M.: *Radio Workshop Plays*, The H. W. Wilson Company, New York, 1940.

Fifteen royalty-free radio plays.

MOSELEY, SYDNEY A., and HERBERT MCKAY: *Television, A Guide for the Amateur*. Oxford University Press, London, 1936.

This book sets out to make the principles of television and their practical applications intelligible to the general reader.

NAGLER, FRANK: *Writing for Radio*, The Ronald Press Company, New York, 1937.

*National Advisory Council on Radio in Education: "Group Listening," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 8, 1934.

This is a general discussion on group listening and the advantages it has.

*———: "National Advisory Council on Radio in Education." National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 1, 1936.

This gives a general outline of the workings of the council, the purpose, requirements for membership, etc., to promote the utilization of the art of broadcasting in the field of American education.

*———: "Present and Impending Applications to Education by Radio and Allied Arts," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 5, rev. ed., 1936.

A group of engineers has prepared a concise and understandable booklet for the educator on the progress made by radio in the scientific world.

*National Association of Broadcasters: Washington, D.C. "Code Manual," "The N.A.B. Code," "Radio in the Classroom," "Broadcasters Defend America," "How to Use Radio," "Is Your Hat in the Ring," "Our Mutual Responsibilities," "Propaganda and Democracy," "The A.B.C. of Radio," "Broadcasting in the United States," "Report of the Proceedings before the F.C.C."

These and other pamphlets are distributed by the N.A.B. Those marked with an * are instructive to the student of broadcasting.

N.B.C. *Music Appreciation Hour*, Columbia University Press, New York, 1940. Student workbooks and teachers' guides.

*National Committee on Educational Broadcasting: *Proceedings of the First National Committee on Educational Broadcasting*, University of Chicago Press, Chicago, June, 1937.

Other pamphlets are "The Use of Radio in Parent Education," "Broadcasting Abroad," "Four Years of Network Broadcasting," "Psychology Today," "Industrial Psychology" (Listener's Notebook), "Listen and Learn," "What to Read about Radio" (1938), "Broadcaster and the Librarian," "Research Problems in Radio Education," "Problems of the Institutionally Owned Station," "Widening Horizons," "Some Public Service Broadcasting," "The Future of Radio and Educational Broadcasting," "Retrospect and Forecast in Radio Education," "School Broadcasting in Great Britain."

NIXON, H. K.: *Principles of Advertising*, McGraw-Hill Book Company, Inc., New York, 1937.

A chapter on radio has material on broadcasting structure, radio networks, nonnetwork broadcasting, how radio time is sold, station regulations, other network policies, sponsored programs, preparation of programs, technique of commercial announcements, facts about the radio audience, measurement of the response to broadcast advertising, and merchandising.

NILSON, A. R., and J. L. HORNUNG: *Practical Radio Communication*, McGraw-Hill Book Company, Inc., New York, 1940.

Technical discussion of radio communication.

OBOLER, ARCH: *Fourteen Radio Plays*, Random House, Inc., New York, 1941.

Scripts and an essay on The Art of Radio Writing.

O'NEILL, NEVILLE: *Advertising Agency Looks at Radio*, D. Appleton-Century Company, Inc., New York, 1932.

The important phases of broadcast advertising are discussed by agency executives.

OVERSTREET, H. A., and B. W. OVERSTREET: *Town Meeting Comes to Town*, Harper & Brothers, New York, 1938.

*PAGE, MEREDITH: *Radio Script Duplication*, Bureau of Educational Research, Ohio State University, Columbus, 1937.

Suggestions for amateur radio groups. Advice on scripts, continuities, timing, as well as on processes of duplication, paper, color, type.

*PARKER, LESTER WARD: "School Broadcasting in Great Britain," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 17, 1937.

PEAR, T. H.: *Voice and Personality as Applied to Radio Broadcasting*, John Wiley & Sons, Inc., New York, 1931.

This is a discussion of the voice in broadcasting by a British psychologist.

*REED, T. H.: *Civic Education by Radio*, The Radio Institute of the Audible Arts, New York, 1936.

This contains information about the social and economic aspects of radio, radio in education, and citizenship education in the United States.

*——: "Four Years of Network Broadcasting," Report of the Committee on Civic Education by Radio, National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 16, 1937.

The story of successful educational programs is given.

RILEY, DONALD W.: *Handbook of Radio Drama Techniques*, Edwards Bros., Inc., Ann Arbor, Mich., 1938.

In highly condensed form, techniques covering script, casting, directing, acting, rehearsals, studio arrangements, and points on voice.

ROBINSON, E. H.: *Broadcasting and a Changing Civilization*, John Lane, The Bodley Head, Ltd., London, 1935.

Broadcasting as it affects the home, music, drama, sports, religion, and propaganda.

——: *Broadcasting*, John Lane, The Bodley Head, Ltd., London, 1935.

ROGERS, RALPH: *Do's and Don'ts of Radio Writing*, Associate Radio Writers, Inc., Boston, 1937.

Selecting Radio Characters, Writing the Dramatic Script, Radio Dialogue, Serial Features, Writing for Children, Adapting Magazine Stories. Under each of these topics is a short description of the problem and then a numerical list of do's and don'ts.

RORTY, J.: *Order on the Air*, The John Day Company, New York, 1934.

Safety Rules for Radio Installations, Government Printing Office, Washington, 1939.

A publication of the National Bureau of Standards.

SAERCHINGER, CESAR: *Hello. America*, Houghton Mifflin Company, Boston, 1938.

Mr. Saerchinger's story of dashing around Europe to arrange broadcasts of great events for the American radio listeners is told.

*SARNOFF, DAVID: *The Future of Radio*, The Federal Communications Commission, Washington, 1936.

SAUER, JULIA L.: *Radio Roads to Reading*, The H. W. Wilson Company, New York, 1939.

The Rochester, N.Y., Public Library has for the past five years given a weekly broadcast to children in school during school hours, as part of the Rochester School of the Air, with the purpose of increasing the reading of desirable books. It was necessary to develop a technique for this new field, a technique which would appeal to children of different groups and which would stimulate reading rather than serve as a substitute for reading. Miss Sauer has gathered 20 scripts representative of the broadcasts from the fifth through the eleventh grade.

SCHMECKBIER, LAURENCE F.: *Federal Radio Commission: Its History, Activities, and Organization*, Brookings Institution, Washington, D.C., 1932. (Service Monographs of the U.S. Government, No. 65.)

SEYMOUR, KATHARINE, and J. T. W. MARTIN: *Practical Radio Writing*, Longmans, Green & Company, New York, 1938.

This book attempts to teach the individual who can write how to write for broadcasting. It has been designed for the professional magazine writer or the dramatist who has no knowledge of the mechanics of radio writing; it has been planned, too, for the advertising copywriter who wishes to know the differences between writing for the printed page and writing for the ear.

SIEVEKING, LANCE: *The Stuff of Radio*, Cassell & Company, Ltd., London.

Interesting account of dramatic techniques in England.

SOLOW, A. WALTER: *The Law of Radio Broadcasting*, Baker, Voorhis & Co., New York, 1938.

Two volumes. Covers law governing radio broadcasting.

STEWART, IRVIN: *Local Broadcasts to Schools*, University of Chicago Press, Chicago, 1939.

Considers radio projects in public schools of Detroit, Cleveland, Rochester, Portland, Akron, and Alameda.

TERMAN, F. E.: *Fundamentals of Radio*, McGraw-Hill Book Company, Inc., New York, 1938.

This book presents the basic principles of radio communication in a form understandable to the student in an introductory radio course.

Third Copyright Law Symposium, Nathan Burkan Memorial Competition, National Association of Composers, Authors, and Publishers, New York, 1940.

THOMAS, LOWELL: *The Magic Dials*, Polygraphic Company, New York, 1939.
Story of radio and television, beautifully illustrated.

*TYLER, I. KEITH, and R. R. LOWDERMILK: "Radio as a Teaching Aid," Ohio State University, Bureau of Educational Research, *Radio Bulletin* 13, 1937.

TYLER, TRACY: *The Use of Radio as a Cultural Agency in a Democracy*, University of Chicago Press, Chicago, 1934.

The proceedings of the conference held May, 1934, by the National Committee on Radio in Education are stated.

*TYSON, LEVERING: *Radio in Education*, University of Chicago Press, Chicago, 1931-1935.

The proceedings of the annual assemblies of National Advisory Council on Radio in Education.

*———, and W. J. DONOVAN: "Retrospect and Forecast in Radio Education," National Advisory Council on Radio Education, Inc., New York, *Bulletin* 15, 1936.

Two articles based upon addresses delivered by the authors before the section on Radio in Adult Education at the American Association for Adult Education Conference are presented.

VAN LOON, H. W.: *Air-storming*, Harcourt, Brace and Company, New York, 1935.
Forty broadcasts on educational subjects.

Variety Radio Directory (annual), Variety, Inc., New York, 1937, 1938, 1939, 1940.

This is a general reference book about radio.

WALDROP, FRANK A., and JOSEPH BORKIN: *Television, A Struggle for Power*, William Morrow & Co., Inc., New York, 1938.

An interesting and understandable study of television is made by a political writer and a specialist in analyses of communication.

WATSON, HERBERT, HERBERT WELCH, and GEORGE EBY: *Understanding Radio*, McGraw-Hill Book Company, Inc., New York, 1940.

A guide to practical operation and theory of the mechanics of radio.

WEISS, E. B., F. C. KENDALL, and C. B. LARRABEE: *Handbook of Advertising*, McGraw-Hill Book Company, Inc., New York, 1938.

This contains a chapter on radio by Mr. Boice, formerly of the Columbia Broadcasting System.

WELCH, CONSTANCE, and WALTER P. EATON: *Yale Radio Plays*, Expression Company, Boston, 1941.

Five comedies, four dramas, four explorations written by students in the drama department of Yale University.

WEST, ROBERT: *SO-O-O You're Going on the Air*, Rodin Publishing Co., Inc., New York, 1934.

Radio-program technique is presented; has a good voice-audition chart.

WHIPPLE, JAMES: *How to Write for Radio*, McGraw-Hill Book Company, Inc., New York, 1934.

Various types of scripts, serials, adaptations, and sounds are described and examples of these types are given.

WHITAKER-WILSON, C.: *Writing for Broadcasting*, A. & C. Black, Ltd., London, 1935.

Writing radio drama in England. The most useful chapter is the one dealing with historical plays. Others include: High and Low Comedy, Burlesque, Biographical Plays, Writing of Talks, Broadcasting of Talks. Chapter IX on Characterization will be found very useful to the writer.

WHITE, JAMES R.: *Let's Broadcast!* Harper & Brothers, New York, 1939.

Let's Broadcast! is a collection of 12 one-act nonroyalty plays utilizing broadcast technique which vary in style and content from historical and adventure. Each of the items included is arranged as "a make-believe radio broadcast," suitable for either boys or girls.

*WILLIS, FREDERICK A.: "Widening Horizons," National Advisory Council on Radio in Education, Inc., New York, *Bulletin* 11, 1934.

This bulletin by F. A. Willis of the Columbia Broadcasting System is a discussion of radio broadcasting as an important instrument in the educational field.

†WYLLIE, MAX: *Radio Writing*, Farrar & Rinehart, Inc., New York, 1939.

The standard practices of modern broadcasting are discussed and illustrations and samples of the problems of the radio industry are given.

———: *Best Broadcasts of 1938-39*, Whittlesey House, McGraw-Hill Book Company, Inc., New York, 1939.

Practically all types are included among the 32 selected.

———: *Best Broadcasts of 1939-40*, Whittlesey House, McGraw-Hill Book Company, Inc., New York, 1940.

RADIO AND ADVERTISING PERIODICALS CONTAINING RADIO SECTIONS

The Advertiser, monthly, The Advertiser, 3557 Bogart Avenue, Cincinnati, Ohio.
Advertising Age, weekly, Advertising Publications, Inc., 100 East Ohio Street, Chicago.

Advertising & Selling, monthly, Robbins Publishing Co., Inc., 9 East 38th Street, New York.

Air Law Review, quarterly, New York University School of Law, New York.

The Billboard, weekly, The Billboard Publishing Co., Cincinnati, Ohio.

Broadcasting, semimonthly, Broadcasting Publications, Inc., 870 National Press Building, Washington, D.C. (Student rate includes Yearbook).

**Broadcast News*, monthly, RCA Manufacturing Co., Camden, N.J.

Editor & Publisher, weekly, The Editor & Publisher Co., Times Building, New York.

- **Education by Radio*, monthly, National Committee on Education by Radio, 1 Madison Avenue, New York.
- Educational Radio and Recording*, 20 North Wacker Drive, Chicago.
- Electronics*, 330 West 42d Street, New York.
- **F.R.E.C. Service Bulletin*, U. S. Office of Education, Federal Security Agency, Washington.
- Heinl Radio Business Letter*, 2400 California Street, Washington, D.C.
- The Listener*, weekly, British Broadcasting Corporation, Broadcasting House, London. W1 (combined with *Radio Times* owing to the war; see *Radio Times*).
- London Calling*, weekly, British Broadcasting Corporation, London.
- Movie and Radio Guide*, weekly, Chicago.
- N.A.B. News Review*, National Assoc. of Broadcasters, 1626 K Street, N.W., Washington, D. C.
- **The News Letter*, monthly, Bureau of Educational Research, Ohio State University, Columbus.
- Newsweek*, 152 West 42d Street, New York.
- Personnel-list of Advertising Agencies*, monthly, Standard Rate & Data Service, 333 North Michigan Avenue, Chicago.
- Printers' Ink*, weekly, and *Printers' Ink Monthly*, Printers' Ink Publishing Co., Inc., 185 Madison Avenue, New York.
- RMA News Bulletin*, monthly or oftener, Radio Manufacturers Association, 1317 F Street, N.W., Washington, D.C.
- Radex*, monthly, The Radex Publishing Co., 362 Cedar Lane, Teaneck, N. J.
- Radio Advertising Rates and Data*, monthly, Standard Rate & Data Service, 333 North Michigan Avenue, Chicago.
- Radio and Television Mirror*, monthly, Macfadden Publications, Inc., 205 East 42d Street, New York.
- Radio and Television Retailing*, monthly, McGraw-Hill Publishing Co., Inc., 330 West 42d Street, New York.
- Radio and Television Today*, monthly, Caldwell-Clements, Inc., 480 Lexington Avenue, New York.
- The Radio and Television Weekly*, weekly, Phonograph Publications Co., Inc., 99 Hudson Street, New York.
- Radio Art*, quarterly, Broadcast Publishing Corp., 420 Lexington Avenue, New York.
- Radio Daily*, Radio Daily Corp., 1501 Broadway, New York.
- Radio Guide*, weekly, The Cecilia Co., 731 Plymouth Court, Chicago.
- Radio Markets*, title of quarterly issue of *Radio Art*.
- Radio Review*, Women's National Radio Committee, 113 West 57th Street, New York.
- Radio-television Journal*, monthly, Henderson Publications, Inc., 1270 Sixth Avenue, New York.

- Radio Times*, weekly, British Broadcasting Corporation, Broadcasting House, London, W1.
- Radio Trade-builder*, monthly, Hugh C. MacLean Publications, Ltd., 347 Adelaide Street, W., Toronto.
- Radio Today*, 480 Lexington Avenue, New York.
- Radio Weekly*, 99 Hudson Street, New York.
- Sales Management*, semimonthly, Sales Management, Inc., 420 Lexington Avenue, New York.
- *Service Bulletin of the FREC, Federal Radio Education Committee, U.S. Office of Education, Washington.
- Stand By*, monthly, American Federation of Radio Artists, 2 West 45th Street, New York.
- **Talks*, quarterly, digest of broadcasts, Columbia Broadcasting System, New York.
- Tide*, semimonthly, Tide Publishing Co., Inc., 232 Madison Avenue, New York.
- Time*, Time & Life Building, Rockefeller Center, New York.
- Variety*, weekly, Variety, Inc., 154 West 46th Street, New York.
- Washington Radio Letter*, weekly, National Press Building, Washington, D.C.
- Western Advertising*, monthly, 654 Market Street, San Francisco.

RADIO EDITIONS OF MAGAZINES IN SPECIALIZED FIELDS

- The Annals of the American Academy of Political and Social Science*, Philadelphia.
- 1935 issue; "Radio: The Fifth Estate," 29 articles under the headings: Broadcasting Systems, The Service of Broadcasting, Current Questions in Broadcasting.
- 1941 issue; "New Horizons in Radio." Chapter titles: The American Listener in 1940, Radio in Relation to Recreation and Culture, Trends in Radio Programs, Radio Entertainment since 1935, Radio As an Aid to Learning, Civic Discussion over the Air, Radio as a News Medium, Broadcasting and American Society, Radio and Propaganda, European Radio and the War, Covering a War for Radio, Self-regulation in American Radio, Radio Economics and the Public Interest, Regulation of Radio Broadcasting in the Public Interest, The Government and Radio, Open Questions in Inter-American Broadcasting, Radio Frontiers, Recent Developments in Television, The Nature of Television Programs, Possible Social Effects of Television, Frequency Modulation and Its Future Uses, Facsimile and Its Future Uses, Organizing Radio's Discoveries for Use.
- The Journal of Applied Psychology*, New York, 1940.

Among the 20 articles to appear in this number are the following: A Two-way Check on the Sales Influence of a Specific Radio Program, Do People Know Why They Buy? The Panel As an Aid in Measuring Effects of Advertising, Radio Studies by the Psychological Corporation, Who Answers Questionnaires? Who Escapes the Personal Investigator? The Program Analyzer: A New Technique in Studying Liked and Disliked Items in Radio Programs, The Use of Mailed Questionnaires in Studying the Relative Position of Radio Stations in Family Listening, The Influence of Radio Performances on Sheet Sales of Popular Songs.

INDEX

Radio slang, studio expressions, and abbreviations, unless discussed in the text, are not included in this index but are listed alphabetically in the Glossary, pages 333-338.

A

- Abbreviations, 338
- Acoustics, 3, 4, 281
- dead end, live end studios, 3, 4
 - reverberation in, 3, 4
 - studio construction for, 3, 4, 281
- Action copy, advertising, 182
- Actor, radio, 154-159
- as a career, 324, 325
 - casting of, 148-150
 - characterization by, 143, 144
 - diction of, 156
 - microphone technique of, 156, 157, 158
 - reading of lines by, 154, 155
 - salary of, 325
 - signals to, 333
 - training for, 154, 275, 276
 - vocation of, 324, 325
 - voice of, 143, 155
- Acts, radio, of, 1912, 1927, 1934, 295-297
- Actuality broadcasts, 98, 204, 213, 273
- sports, 61-66
- Adaptations, 115, 140, 306-314, 363-371
- Address, radio, 84-90, 94, 204, 213
- assignments on, 384
 - content of, 91-102
 - conversational approach of, 84, 89, 100
 - copyrights of, 314
 - diction of, 86, 89, 96
 - grammar of, 85, 87, 88
 - humor in, 90
 - intelligibility of, 88
 - introduction of speaker for, 90
 - length of, 90, 93
 - manuscript for, 90
 - medical subjects, 94
 - outline of, 84, 85
 - projection of personality in, 84, 87, 100
 - salutation in, 84
 - speed of speech for, 85
- Address, radio, style of, 89
- transitional words in, 90
 - vocabulary of, 86, 89, 96
- Advertising, radio, 179-191, 192-201
- by an agency, 180, 181, 193, 196-199
 - assignments, 387, 388
 - commercial continuity of, 179-191, 193
 - entertainment as a factor in, 185-189, 261-263
 - harmony with other media in, 183, 197
 - local, 199-200
 - sales appeal of, 179, 180, 200-202
 - by station department, 199, 200
 - time factor in, 181, 183, 189, 259-261
 - training for, 277
 - transcriptions for, 244
 - writers of, 180, 192
 - writing of, 179-191
- Advertising agencies, services of, 181, 196-199
- Advertising departments, or sales departments of the station, function of, 199
- training for, 277, 326, 327
- Advertising service of local station, 199-201
- types of programs for, 199, 264, 265
- Aids, teaching, 271-273, 274, 281-288
- Amplifier, radio frequency, 12, 282
- Anglin, Margaret, 77
- Announcements, assignments, 387
- commercial, 32, 33, 179-191, 263
 - dramatic, 185-189
 - log of, 288, 289
 - punch, 32, 33
 - school, within the, 223, 224
 - time of, 181, 183, 189
 - writers of, 179-191
- Announcer, 31-35, 316-322
- advancement by, 321-322
 - application for position as, 318-319
 - auditions for position as, 317
 - duties of, 67, 280

- Announcer, function of, 318
 instructions to, 32, 33
 logs, forms, and reports, 288-294
 narrator, as a, 107, 119
 news, 51-60
 pay of, 320, 321
 pronunciation by, 41, 42, 43
 prospects for, 321-322
 public events, 68
 qualities of, 31, 317, 318, 319, 320
 salary of, 320, 321
 sports, 61-66
 start for, 316, 317
 teaching of, 270-274
 tests for, 317
 vocation of, 272, 273, 316-322
 voice of, 30, 320
- Antenna, 10
 directional, 16
- Appeals, sales, 179, 180, 182, 200-202, 262, 263
- Application for license, 298-299
- Articulation, 46-50
- Artists' Service Bureau, 325
- ASCAP, 304-306
- Assembly programs over public-address system, 223
- Assignments, class, 379-391
- Audible frequencies, 234
- Audience, radio, characteristics of, 103, 138, 139, 267
 daily classification of, 126, 259-261
 sales appeal to, 88, 179, 180, 182, 259-261, 265
 studio, 153
- Auditions, blank for, 293, 294
 means of obtaining, 317-319
 singer for, 251, 252
 types of tests for, 377
- Average listener, 267
- B
- Background music, 82
- Backward speech students and the public-address system, 227-229
- Band, side, 12, 16
- Bibliographies, 44-45, 140-141, 315, 371-377, 381, 393
- Blackout, 119
- "Blasting" of the microphone, 10
- B.M.I., 305, 306
- Body movement in radio speech, 25, 26, 28, 157
- Breathing, 27, 33, 48, 78
 grouping and, 27
- Broadcasters, payment of, 321, 322, 323, 324, 325, 326
 qualifications for, 270, 316-333
 training of, 269-288
- Broadcasting station, assignments, 14
- "Bull Session," 73-75
- C
- Canned program, 245
- Carrier frequency, 12, 16
- Casting of radio play, 136, 143
- Censorship, 297, 301
- Chain broadcasting (*see* Network)
- Channel, 12, 14, 16, 296, 300
- Characters in radio play, 108, 120, 136, 143
- Chicago Public Schools, Radio Council, 215-219
- Chicago Round Table, 69, 70
- Children's programs, 135-144
 assignments on, 286
 bibliography, stage plays for radio, 140, 143, 371-377
 characters, 136, 143
 condemnation of, 130, 131, 135
 diction, 36
 education, 138
 humor, 138
 listening habits, 132, 134, 138
 material for, 131-133
 period for, 260
 personality in, 143
 plays for adaptation, 140, 141, 363
 plot, 137, 138
 poetry, 141, 142, 143
 policies, 135
 preferences for, 131-133, 137, 138, 139
 preparation of, 130-134
- Children's serials, 130-134
- Choral speaking, 79-82
 director, 80
 mike position, 81
 montage, 79
 mood, 79
 multiple-voice techniques, 79
 rhythm, 80, 81
 tone color of, 79, 81
 transitions, 79
 verse choir, 80

- Circuit, talk-back, 282
- Civics, teaching of, 68, 98, 99
- Class, organization chart, 287
- Class assignments, 379-391
- Classes, school, use of radio equipment in, 224-230, 239
- Classical music, pronouncing aids for, 44
pronunciation of, 39-42
- Classification of radio stations, 296, 297, 300
clear channel, 14, 300
local, 14, 300
regional, 14, 300
- Coast-to-coast time factor, 244
- College courses, 269-281
- College stations, 269
- Color television, 117
- Columnist type of announcer, 52
- Commentator, news, 51, 52
college training for, 277
- Commercial continuity, 179-191
action copy, 182
assignments, 387
diction in, 189, 190
educational copy, 181
emphasis in, 32
length of, 183, 189
log for, 289
plugs, 179, 187
purpose of, 179, 182, 262-263
reminder copy, 181
sentence structure in, 184, 185, 186-191
style of, 35, 180, 181, 182
subject matter of, 179, 180, 182, 185, 194, 195
writers of, 192-193, 322-324
- Commercial voice, 31-35
- Common-law copyrights, 306-308
- Communications Act of 1934, 296-297
- Community programs, 91-93
- Continuities, bibliography of, 371-377
- Continuity, definition of, 311
- Continuity service, transcriptions, 243
- Contract writers, 322, 323
- Control board, 9, 281
operators of, 225
- Conversational style, 23, 24, 71, 76, 77, 89, 97, 100, 184
- Copy, reminder, educational, action, 181, 182
- Copy writers, 322-324
- Copyright regulations, 115, 118, 294, 301-304, 306-315
- Copyright release music, 294
- Copyrights, 306-316
common law, 306-308
damages for violation of, 308
duration of, 307
establishing, 308
publication effect of, 307
transfer of, 307
statutory, 308-314
cost of, 312
damages, 313, 314
duration, 309
holder, 310
ideas, 313, 314
infringement, 312
procedure to obtain, 312
radio script and continuity, 311
renewal, 309
speeches, 314
transfer, 312
treaties affecting, 311
mechanical reproductions, 315
- Courses in broadcasting, 269-288
equipment for, 281-288
- Coverage distance of stations, 13, 14, 15
- Crime stories, 104, 130, 135
- Crooning, 250
- Crystal microphone, 4-6, 254
- Cue, pick up the, 155
- Cue sheet, 291
- Cultural background for broadcasters, 270-271
- Curriculum, adapting broadcasting to, 224, 225
broadcast, 270
- "Custom-built" program, 245
- Cutting head, 234
- Cutting needle, 233
- D
- "Dawn patrol," 286
- Daybook, 288-289
- Decibels, 9, 285
- Defamation, 301-304
- Delayed broadcast, 245
- Delivery, 23-27, 100, 146, 156, 184
- Demonstrations, crowd, 99
- Department-store, advertising, 194-196
advertising department of, 194
"good-will" programs of, 194
institutional, 195
joint-network program, 195

- Dialect, regional, 42
- Dialogue, dramatic, 105-108
- Diction, 26, 86, 89, 96, 136, 156, 189
- Dictionaries and pronunciation, 44
- Directional antenna, 16
- Director, 80, 145-154
 educational, 279
- Disc, 234, 235, 237, 241, 242
 handling, 238
 life of, 237
 time of, 235
 (See also Electrical transcriptions)
- Disturbances in reception, 15
- Dramatic director of station, 145-153, 324
 assignments, 387
 background, 145-147
 duties of, 145, 147-153
 qualities of, 145
 rehearsals, 147, 150, 151, 153
 selecting the cast, 148
 studying the script, 147, 148
 timing the show, 147, 152
- Dramatic scripts, 103-117, 118-124, 125-134, 135-144, 189-191, 339-371
 assignments, 385-386
 bibliography of, 371-377
 commercial, 179-191
 editing, 147
 medical programs, 94
 political programs, 101
 serials, 125-134
 specimen of, 118-124, 178, 267, 339, 347
 verse in, 79
 writers of, 134, 274, 275, 322-324
- Dramatic staff, actors of, 154-159
 director of, 145-154, 324
 salaries of, 324, 325
 sound-effects operator, 325
- Dramatics, radio, 143, 144, 145-158, 205, 212
 actors of, 154-158
 assignments, 387
 bibliography of, 371-377
 casting of actors for, 148-150
 for children, 132, 135-141
 commercial, 179-191
 director of, 145-154
 microphone position for, 156, 157, 158
 rehearsal of, 150-153
 sound effects for, 160-178, 189
 studio audience and, 153
 voice for, 146
- Dramatization of health topics, 94, 333
- Dramatized educational broadcasts, 212, 214
- Duffy Copyright Law, 305
- Dynamic microphone, 7, 8, 254
- E
- Echo in the studio, 4
- Editing, of medical talk, 94
 of news, 51
- Education by radio, 203-222
- Educational copy, advertising, 181
- Educational director, 279, 280
- Educational program, definition, 221
 test, 203, 221
- Effects, sound, 160-178, 189
- "Eight-ball" microphone, 7, 8, 254
- Electrical disturbances of broadcasting and reception, 15
- Electrical pickups and turntables, 230-234, 241
 functions of, 241
 structure of, 230-234
- Electrical transcriptions, 241-246
 advantages of, 243-245
 assignments, 390
 cue sheet for, 290
 dramatic, for analysis, 376
- Federal Communications Commission, regulations concerning, 242
- horizontal and vertical cutting of, 242
- libraries of, 242, 274
- "spot" broadcasting with, 244
- time of, 235, 244
- types of continuity service of, 243
- vertical cut, 242
- Enunciation, 46-50
- Episodic serial, 128
- Equipment, for broadcasting classes, 281-288
 standard of station by Federal Communications Commission, 298
- Ewbank, H. L., 225
- Examination by radio, 219
 specimen, 220, 221
- Expressions, radio, 334-337
- Extempore speech, teaching of, 273
- Extempore-speech programs, 67-75
 libel in, 303

F

- Facsimile, 19, 20
 Fadein, 7
 Fadeout, 7
 Fading, 13
 Farm programs, 95, 96
 Federal Communications Commission, 13,
 15, 16, 19, 20, 242
 acts of, 295-300
 Federal Trade Commission, 182, 300
 "Fickle Widow," A (script), 363
 Filler, for sports broadcasts, 63
 Follow-up work for broadcast lessons, 216-
 219
 Foreign names, pronunciation of, 40, 42, 317
 Foreign stations, 300
 Foreign-language programs, 264
 Forms, 116, 288-294, 318, 319
 Free time for politicians, 101
 Free-lance writers, 192, 193, 322, 333
 opportunities for, 134, 192, 193
 pay of, 333
 submission of work of, 116, 129, 192, 193
 Frequency assignment, classification of, 14,
 296, 300
 clear channel, 14, 296, 300
 local, 14, 296, 300
 regional, 14, 296, 300
 station, 5, 12
 Frequency modulation, 18, 280
 Full-day broadcasting, 276, 277

G

- Gag writers, 323
 "Game of the Week" (script), 356
 Geography, teaching of, 214
 Good will, in advertising, 194
 and the station, 91
 Government programs, 98-101
 Grammar over the air, 85, 87, 88, 131, 190,
 191
 Gramophone records, 241-242
 (See also Electrical transcriptions)
 "Grey-eyed Man of Destiny" (script), 347
 Ground wave, 12
 Guest, Edgar, 77
 Guides, teacher, 215-219, 235

H

- Havana Conference, 299, 300
 Health problems over the air, 93-95

- Hillman, Philmour B., 339
 Historical dramatization, 347
 History, teaching of, 212, 213
 Humor over the air, 90, 138, 323
 "Hush Money" (script), 118-124

I

- Impersonation in children's programs, 143,
 144
 Impromptu-speech programs, 67-75
 assignments, 383
 "Bull Session," 73-75
 interviews, 71
 public events, 68
 repetition in, 68, 72
 round table, 69
 special features, 68
 timing of, 67
 types of, 67
 Index of sound effects, 164-176
 Inflection, 26
 Informal style in radio speaking, 23, 24, 68,
 72, 76, 77, 89, 273
 Insincerity and broadcasting, 33, 34
 Interest-getting devices of programs, 67,
 118, 185, 261, 262
 Interference in reception, 14
 Interview, radio, 71, 72
 interest value of, 72
 repetition in, 72
 style of, 72
 Intonation, 49
 Intraschool communication by public-
 address system, 223
 Introduction of speaker, 90
 Introductory course in broadcasting, 271

J

- Jazz and the radio, 251
 Juvenile listener, 132, 134, 260

K

- Kennelly-Heaviside layer, 12
 Kent, Harold W., 215
 Kern, Esther A., 363
 Kilocycle, 12
 Kinsella, Michael, 358

L

- Law of radio, 295-300, 301-315
 books on, 315
 copyrights, 304-314
 courses in, 278
 and the Federal Communications Commission, 295-300
 libel, 301-304
 obscenity, 299
- Law-enforcement programs, 101, 102
- Length of broadcasts, 90, 93, 119, 262
- Libel, 301-304
 statutory, 304
- Librarian, music, of station, 325
 transcription, 242, 243
- License of station, 16, 297-300
 qualifications for, 298-300
 renewal of, 297
- "Licking" of songs, 251
- Listener, average type of, 267
- Listening group, 98
- Literature, teaching of, by radio, 216, 217
- Live studio, 3, 4
- Local broadcasts, commercial, 199, 200
 daylight, 264-265
 foreign appeal, 264
- Local community-service programs, 91-102
 civic interest, 91, 92
 farmer, for the, 95, 96
 health, on, 93-95
 law enforcement, on, 101-102
 necessity, 91-92
 parent-teacher programs, 98
 politics and government, 98-101
 religious, 96-98
 for the shut-in, 91
 weather, 91
- Local program, 10
- Local station, advertising service of, 199-200
 classification of, 14
- Logs, radio, 225, 288-294
- Loud-speaker, 16, 281
- Lyric drama, 79
- Medical programs by radio, 93-95
 dramatization, sample script, 339-347
 methods of presentation, 94
 time of broadcast, 94
- Meter of speech, 284-285
- "Michigan's March of Science" (script), 339-347
- Microphone technique, 7, 27, 28, 81, 156, 157, 163, 168, 170, 171, 173, 247-248, 249, 253-257, 284
- Microphones, bidirectional, 6
 cardioid, 7, 8, 9
 crystal, 4, 5, 6
 distance from, 27
 dynamic, 7, 8
 eight ball, 7, 8
 machine-gun attachment, 8, 11
 multimike, 9
 nondirectional, 7
 parabolic attachment, 8, 9, 11
 salt shaker, 7, 8
 talk-back, 282-283
 velocity, or ribbon, 6, 7, 27, 158
- Mike fright, 72, 226
- Milhaus, Phil, 347
- Modulator, 12
- Montage, 79, 111, 339
- Mood words, 79, 111
- Multiple-voice technique, 79
- Music, assignments, 390
 as background, 82
 copyrights of, 252, 304-306
 instruction of, 207, 215
 interludes, 78
 as introduction, 119
 libraries of, 242, 243
 log, 291, 292
 microphone position for, 247, 248, 253, 254-257
 orchestral placement for, 4, 253-257
 release, 294
 selections, 252, 253
 singer, 248-252, 325
 special arrangements, 82
 transitions, 146
- Musical bridge, 146
- Musical librarian, 325

M

- Magnetic-tape recording, 50, 231, 238, 273
- Malone, Ted, 76
- Manners, Lucile, 251, 252
- Manuscripts, construction of, 30, 90, 113
- Measuring audience reaction, 263-264

N

- Narrator, 119
- National emergency, radio in, 297

- Needles, 233, 236, 237
- Networks, definition of, 10
 disadvantages of, 91
 liability of, for copyright violation, 303, 305
 for libel, 302
 program of, 258
 relations with agency, 197
 "tailor-made," 201
 transcription, 245
- News programs, 51-60
 assignments, 383
 columnists, 52
 commenting, 51, 52
 commercial copy in, 52
 delivery in, 58
 in education, 218, 219
 items, length of, 57
 news services, 51
 police news and, 101
 policies regarding, 59, 60
 preparation of material for, 54-58
 processing, 57
 salutation in, 58
 selection of news, 53
 sentences, 57
 speed of delivery in, 58
 taboos, 53, 54, 55, 59, 60
 tense, 56
 training for, 277
 transitions, 56, 58
 trite expressions in, 55, 56
- North American Regional Agreement, 14, 300
- O
- Obscenity and the radio, 183, 299
- Opening of radio play, 108, 118, 119
- Oral interpretation, 77
 familiarity and understanding in, 77
 musical background of, 82
 rhythm in, 81
 voice in, 81, 82, 83
- Orchestra, pay of, 324
 placement of, 253-257
- Orchestral placement, 253-257
 position of microphone, 4, 253-257
- Organization chart for broadcasting classes, 287
- Oscillation, rate of, 12
- Oscillator, 10
- Overlapping of stations, 13
- P
- Parent-teacher programs, 223
- Pauses, 78, 82, 152, 209, 219
- Personages on programs, 71, 261
- Personal interview, 71
- Personality, radio, 24, 89, 97, 100, 143, 184, 250
- Persuasion in advertising, 182
- Photoelectric pickup, 237
- Piano solos, 254
- Pickup, 9, 237, 241
- "Pilgrimage of Poetry," 76
- Pitch of voice, 28, 47, 249
 best for men, 29
 best for women, 29
 conversational level of, 24
- Place names, pronunciation of, 42
- Platter (*see* Disc)
- Play (*see* Radio play)
- Playback, 237
- Plots, radio, 104-107, 125-127, 131, 132, 137
- Plugs, 179, 187
- Poetry programs, 76-83, 141, 142, 143
- Police blotter program, 101
- Policies, 135, 183
- Political discussion over the radio, 98-101
- Popular music, 252, 253
- Popularity gauge of program, 199, 263, 264, 265
- Portable school equipment, 225
- Position before microphone, 27, 28, 81, 156, 247-249, 253-257, 284
 coughing and sneezing, 28
 drama, for, 156, 158
 extraneous noises and, 26
 for orchestra, 253-257
 rules for, 7, 27, 28, 81, 156, 158, 247-249, 253-257
 for singer, 247-249
 for sound effects, 163, 168, 170, 171, 173
- Power, Leonard, 270
- Power of station, 15, 296
- Price mentions, 183
- Privilege and fair comment, 303
- Production, log of, 291, 292
- Profanity, 104, 183
- Program, route of, 17
 sponsored, 179-191

- Program building, 258-268
 assignments, 390
 local features, 91-102
 problem of director, 145-153
- Program director, 321
- Program popularity, gauge of, 265
- Program production, 145-153
- Programs, afternoon, 259-260
 children's, 126, 130-134, 135-144, 260
 civic interest, 91-102
 department store, 194
 dramatic, 103-117, 118-124, 125-134, 136-140, 145-159, 260
 evening, 260
 extempore speech, 67-75
 farmer, 95-96
 foreign language, 264
 general requirements of, 261-263
 health, 93-95
 interview, 71
 law enforcement, 101-102
 local features, 68, 91-102, 264, 265
 morning, 259
 multiple voice, 79-82
 news, 51-60, 218, 219
 parent teacher, 98, 223
 poetry, 76-83, 141-143
 politics, 98-101
 public events, 68
 religious, 96-98
 round-table, 69
 school, 203-222
 serials, 125-134
 for special day, 265-267
 sports, 61-66
 surveys of, 263-264
 variety in, 261, 262
- Pronunciation, radio, 36-45
 assignments, 36, 37, 38, 39, 40, 381, 382
 of classical music, 39, 40, 41, 42
 drill in, 36, 37, 38, 39, 40
 of foreign names, 42
 principles and rules for, 40, 41
 reference books for, 44
- Public events, extempore speech in, 68
- Public service by radio, 91-102, 299
 assignments, 385
 community, service to, 91-93
 farm programs, 95-96
 government in, 98-101, 213
- Public service by radio, health, on, 93-95
 law-enforcement programs, 101-102
 parent-teacher programs, 98
 political programs, 98-101
 religious programs, 96-98
- Public-address system, 223-230, 281
 administration of, 223-225
 assignments, 389
 cost of operation, 230
 information available concerning, 240
 mechanical structure of, 230
 portable equipment, 225
 use of, in schools, 223-230
 value to administration, 223, 224
 value to students, 225-236, 276
- Q
- Questionable statements in advertising, 182
- Quiz, medical, 95
- Quiz program (script), 356
- R
- Radiator, 10
- Radio as a vocation, 316-331
 advertising staff, 326-327
 announcers, 316-322
 dramatic staff, 324, 325
 free-lance writer, 192, 193
 musical staff, 324
 program director, 321
 salaries in, 320, 321, 322, 323, 324, 325, 326, 327
 technical staff, 280, 325, 326
 traffic director, 322
 women, 192, 328-331
 writers, 322-324
- Radio Act of 1927, 295, 296
- Radio and political campaigns, 98-101
- Radio equipment in schools, 223-240
 assignments, 389
 bibliography, 240
 operator of, 225, 233-237
 public-address system, 223-230, 281
 sound-recording equipment, 50, 230-240
- Radio lessons, arithmetic, 215
 assignments, 388
 civics, 98-99, 213
 elementary science, 209-212, 219-221
 examinations, 219-221
 geography, 214

- Radio lessons, history, **212**
 literature, **216-218**
 music appreciation, **215**
 music instruction, **207**
 news, **218, 219**
 reception of, **206**
 speech, **214**
 test of educational program, **203**
 vocational guidance, **208**
- Radio operator, education of, **270, 271**
 salary of, **326**
 vocation of, **325, 326**
- Radio play, **103-117, 118-124, 135-144, 339-371**
 adaptations, **114, 140, 141, 363**
 announcer or narrator of, **107**
 assignments, **385, 386**
 beginning of, **107, 118, 119, 128**
 bibliography, **371-377**
 casting of, **148-150**
 characters of, **108, 120, 127, 132, 143**
 closing, **123**
 copyright of, **115, 116, 118, 306-314**
 courses in, **274, 275**
 dialogue of, **105, 108, 109, 110, 136**
 educational, **205, 209, 212, 214**
 excerpts from original manuscripts, **339-371**
 length of, **111, 119, 125**
 manuscript requirements of, **113**
 manuscripts, submitting, **115, 116, 129**
 plot of, **104, 105, 106, 123, 137**
 sample plays, **339, 347**
 scenes, **106, 107, 119**
 serial, **125-134**
 sound effects for, **111, 114, 160-178**
 suspense, **121, 125, 128, 130**
 taboos for, **112**
 televised drama, **116-117**
 tempo, **111, 118, 123**
 writer of, **103**
- Radio speaking, **21-35**
 assignments, **380-381**
 basic principles of, **21-23**
 breathing and, **27, 33, 78**
 impromptu and extempore, **67-75**
 manuscript for, **30, 31**
 pitch and volume of, **28, 80, 81, 82, 83**
 position before microphone, **27, 28, 81, 156**
 pronunciation and, **36-45**
 requirements of, **31**
- Radio speaking, speed and delivery of, **29, 30, 32, 78**
 style and delivery of, **23-27, 33-35**
 teaching, **272-274**
- Radio surveys, types of, **199, 263, 264**
- Radio waves, **16**
- Rate of speaking, **29, 30, 32, 78**
- Reading of lines, **24, 25, 149**
- Reception interference, **13**
- Recorded sound effects, **160-162**
- Recording, **50, 230, 240, 241, 242, 250**
- Recording equipment in the school, **230-240**
- Recording copyright, **315**
- Records, station, **288-294**
- Regional dialect, **42, 43**
- Rehearsals for radio presentation, **80, 147, 150-153**
- Release, music copyright, **294**
- Religious programs, **96-98**
- Reminder copy, advertising, **181**
- Remote-control pickup, **33, 68**
- Repetition, **68, 72**
- Reports, **288-294**
- Reverberation of sound in studio, **3, 4**
- Rhetoric and radio speech, **190, 191**
- Rhythm, of poetry, **80, 81**
 and speech, **46-50**
 "Robinson Crusoe," **217**
- Round-table programs, **69, 205**
 assignments, **383**
 naturalness in, **69**
 signals used in, **71**
- Rural listener, **95-96**

S

- Sales appeal of radio advertising, **179, 180, 182, 200-202**
- Salesman, radio, **326, 327**
- Salutation, **58, 84**
- "Saw-tooth" wall, **3**
- Scanner, **20**
- Scenes in radio play, **106**
- Science, teaching of, **209**
 specimen broadcast, **210-212**
- School broadcasts, **203-222**
 assignments, **388-389**
 in civics, **68, 98, 213, 218, 219**
 in geography, **214**
 in history, **212, 213**
 listener participation in, **206**
 in literature, **216, 217**

- School broadcasts, in music, 207
 preparation of programs for, 205, 206, 215-221
 program types for, 204, 205
 radio examination, 219-221
 reception of, 222
 in science, 209-212, 219-221
 in speech, 214
 teacher's guides, 215-222, 225
 in teacher training, 221, 222
 test of program worth, 203, 204
 in vocational guidance, 208, 209
- School use of radio equipment, 233-240
- Schoolroom reception, preparation for, 203, 204, 205, 206, 215-222
- Selection of programs, 222, 225, 258-268
- Semitechnical course, 280
- Sentence structure, 85, 87, 88, 110
- Serial, radio, adult, 125-130
 assignments, 386
 audiences, 125, 126
 characters, numbers of, 127
 types of, 127
 dialect in, 128
 episodic, 128
 lead-in, 128
 plots of, 125, 126, 127
 popularity of, 125
 setting of, 128
 style of, 129
 submitting to agency, 129
 suspense in, 125, 128, 130
 time, 125, 129
- children's, 130-134
 characters, 132
 condemnation, 130, 131
 grammar in, 131
 plots of, 131
 policies concerning, 131
 realism in, 132
- Service to sponsor, 192-202
- "Shut-in" listener, 91
- Side band, 12
- Signs used in radio, 71, 333
- Singer, radio, 247-252
 advice to, 251-252
 expression for, 249
 group singing, 248, 249
 microphone position for, 247-248
 pay of, 325
 qualities of, 249, 250
 training of, 250
- Singer, radio, volume control by, 249
- Sky wave, 12
- Slander and libel over the air, 301-304
- Slang, radio, 334-337
- Smith, Carney C., 227-229
- Soap opera, 35
- Song selection, rules governing, 253
- Sound, deadening, 3, 4, 281
- Sound effects, 111, 118, 119, 120, 160-178, 189
 assignments, 387
 catalogue of manual effects, 163-177
 for drama, 178
 equipment for, 163-177
 manual effects, 163-177
 manufacturers of recorded, 160
 recorded, 160-162
 table, sound, 161, 286, 288
- Sound Mirror, 238
- Sound waves, 4
- Sound-absorbing methods, 3, 4
- Sources of scripts, 373-376
- Speaking, radio, 21-35, 67-75
 (*See also* Speech)
- Special-day programs, 265, 266
- Special features, 68
- Speech, commercial, 31-35, 184
 radio, 21-35, 67-75, 84
 assignments, 380
 basic problems of, 21, 22, 23, 24
 teaching of, 272-274
- Speech defects and radio, 46, 227-230
- Speed of delivery, 29, 30, 78
 desirable rate of, 30
 emotional tension and, 30
 timing of, 30
- Sponsor assignments, 388
 department store as, 194-196
 free-lance opportunities and, 192, 193
 liability of, 303
 service of agency to, 196-199
 service of local station to, 199, 200
- Sports programs, 61-66
 assignments, 383
 bias in, 65
 filler material for, 63
 forecasting in, 64
 knowledge of sport and its language, 62
 mike position in, 65
 preparation for broadcast, 62, 63
 restraint in, 65
 spotters for, 63

Sports programs, tense used in, 64
 Staff turnover of the station, 328
 Staff writers, 322, 323
 Stage diction and radio speech, 156, 157
 Stand-by, 179
 Station, antenna of, 10
 frequency allotment of, 12-14, 296, 300
 liability for copyright violation, 304
 for libel, 303
 license of, 297-300
 staff of, 331
 Station break, 179
 Statutory copyright, 308
 Stroboscope, 162
 Studio, audience in, 153
 expression of, 334-337
 means of deadening sound in, 3, 4, 281
 reverberation of sound in, 3, 4
 signals used in, 69, 333
 types of, 281
 Style of delivery, 23, 76, 77, 84, 156, 184
 animation, 25
 body movement in, 26, 28, 157
 conversational tone, 24, 69, 71, 76, 77, 80, 184
 mental attitude and, 24, 83
 projection of personality in, 24, 33, 77, 97, 100, 184
 sincerity in, 33, 155
 Subject matter of programs, determination of, 69, 91-102, 104-108, 181, 258-268
 Subplots in radio drama, 106
 Surveys, radio, 199, 263-264, 269
 Suspense in radio drama, 107, 121
 Sustaining programs, 91-102

T

Table, sound, 161, 286, 288
 Taboos, 112, 183
 Tailor-made networks, 201
 Talk-back circuit, 282
 Talk-back mike, 282-283
 Talks, radio, 84-90
 Teacher's part in school broadcasts, 215-222
 Teacher-training courses in radio, 221, 222
 Teacher's aids and manuals, 215-221, 225
 Teaching aids for teaching broadcasting, 271, 272, 273, 274, 281-288

Teaching the broadcaster, 269-294
 assignments, 391
 background courses for, 270
 dramatic courses, 275, 276
 educational director, for, 280
 equipment for, 270, 271, 272, 273, 274, 281-288
 introductory course, 271, 272
 journalism course, 277
 law course, 278
 production course, 276
 reading courses, 275
 semitechnical course, 280
 speech course, 272-274
 teacher-training course, 278
 technical course, 280
 where courses are taught, 269
 workshop, 270, 276
 writing course, 274, 275
 Technical staff of station, 325, 326
 salary of, 326
 Telephone transmission, 10
 Television, color, 117
 dramatics, 116
 Ten radio commandments for religious broadcasts, 97
 Testimonials in advertising, 183
 Ticker news service, 51
 Time, of broadcasts, 94, 119, 125, 259, 260
 of discs, 235, 241
 taking liberties with, 118
 Time designation of stations, 16, 296
 Timing of programs, 67, 262
 Traffic director, 321, 322
 Training the broadcaster, 269-294
 Transcription cue sheet, 290
 Transcriptions, 241-246
 Transitions, 56, 58, 79, 106
 Transmitter, 10, 12
 Turntable, 233, 281, 286
 Tyler, I. Keith, 227

U

Unity in radio plays, 104
 Universities, surveys of radio in, 269
 University courses in broadcasting, 269-288
 University stations, 269
 "Unknown Soldier" (script), 266

V

- Variable-speed turntable, 286
- Velocity microphone, 6, 7, 15, 158, 163
- Verse choir, 80
- Vocabulary, 26, 86, 89, 189
- Vocations of radio, advertising department, 326, 327
 - announcer, 272, 273, 316-322
 - auditions for position, 317
 - dramatic staff, 324, 325
 - musical staff, 324
 - producer, 324
 - program director, 321
 - publicity director, 327
 - staff turnover, 328
 - technical staff, 325, 326
 - traffic director, 321
 - women in radio, 192, 328-330
 - writers, 103, 134, 179-191, 192, 193, 322-324
- Vocational guidance by radio, 208, 209
- Voice, "blasting," 29
 - qualities of, 148, 149, 155
 - recording of, 50, 230-240
 - volume of, 28, 284
- Volume before microphone, 28, 82, 284
- Volume indicator, visible, 284, 285
- Volume unit, 9

W

- Wagon, sound, 288
- Wave length, 11-14
 - apportionment of, 13
 - interference of, 12
- Waves, radio, 12
- "Whodunit" (script), 178
- Wilde, Percival, 118-124
- Women in radio, 328-330
 - in advertising, 192
 - means of breaking in, 329
 - plays for all-women casts, 376-377
 - as writers, 329, 330
- Word grouping, 27
- Workshop, radio, 270, 276
- World Broadcasting System, 245, 265, 274
- Writers for radio, 103, 134, 192, 193, 322-324
 - salary of, 322, 323
 - training of, 274, 275
- Writing, address, 84-90
 - children's programs, 135-144
 - commercial continuity, 179-191
 - drama for radio, 103-124
 - news, 54-58
 - play, 103-124
 - serial, adult, 125-134
 - juvenile, 130-134
 - sports filler, 63

