

AUDIO FOR TRAINING AND DEVELOPMENT: SOME NOTES ABOUT THE MEDIUM

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PROLOGUE . . .

What is audio? According to textbook definitions, it's . . . "the transmission, reception or reproduction of sound" . . . "mechanical, acoustic or electrical frequencies corresponding to normally audible sound waves" . . . "from the Latin, audire, to hear."

Audio can also apply to sounds we can't hear, such as inaudible pulses for controlling projectors; wide frequency ranges used in animal research and training; and frequencies under or over normal audible ranges used for subliminal human communications and psychological research into the effect of the sounds we don't physically hear, even though they're all around us.

The auditory channel can be a highly effective means of reaching our intended receiver, but it helps to keep in mind the inherent strengths and weaknesses of audio transmission — and the psychology of efficient presentation. Let's take a few minutes to look at those

strengths and weaknesses — and some field-tested principles which contribute to successful audio programming for education and training.

The auditory channel is a powerful one — not so much for the sounds themselves — but for the meanings they convey, most of which are essentially visual. Many of us remember the Golden Age of Radio . . . back before television had a picture tube. Each evening, the family would gather before the radio to listen and visualize for themselves the adventures of The Shadow, Fibber McGee and Molly, and the dramatic presentations of the Mercury Players and the Lux Radio Theatre.

The presentations were transmitted through vacuum tubes and large coils of wire — but the actualities of the drama were played within the auditorium of the mind of the individual listener. And that's where the magic happened.

Fred Allen's neighbor, Titus Moody, once complained that he didn't want to buy a radio because he didn't like the idea of "furniture that talked." But he grew to like it

— as did millions of Americans in the 30s, 40s up until the early 1950s. Of course, the television changed all that, when the furniture began to *show pictures* — as well as *talk*.

But the power of radio had been well-demonstrated . . . and the psychological factors which made it successful once upon a time are still very much available to today's audio programmers.

"Narrow-Casting" in the 70s

In fact, our task as practical audio programmers is easier than that faced by broadcasters — who must offer general-interest subjects for general audiences. We can "zero in" on our listeners because we have a profile of their needs. (Or should have!) Our medium is "closed-circuit" audio — with a narrower focus — and available on demand through random access, instantly available sources such as disc, reel-to-reel tape, cartridges and cassettes.

We don't need an overabundance of fancy production trappings to get the job done, either. In fact, some recent programming, which

copied early radio standards, hasn't been particularly well-received by contemporary listeners. Contrived scripts, stock music from old libraries and retreaded radio actors don't play well with modern listening audiences. Audio is a highly personal, one-to-one medium, and many of the production values which were satisfactory for mass audience *broadcasting* prove to be far less effective in the domain of *narrow-casting* to an audience of one. Our listener selects a tape or disc for information, inspiration or instruction — and wants the message briskly paced and delivered succinctly, clearly, and preferably in a personal, informal style.

Four Advantages of Audio

Highlighting a few advantages of audio:

1. The medium permits the listener to exercise visual imagination.

2. It offers programming flexibility, limited only by the inventiveness of the individual writers and producers assembling the materials.

3. When used as the audio track for either a slide-tape or filmstrip, the program can be used separately, later, for reinforcement of the message without the visuals. Listeners tend to naturally recall the visuals in their mind upon relistening, recreating a kind of supplementary audio-visual program — viewed by the mind's eye.

4. Through thoughtful and ear-oriented editing, the presentation can be molded, trimmed, and smooth-finished to create a product far superior to the simple sum of its parts.

One of the medium's greatest strengths is that audio-tape editing is relatively easy and can greatly enhance dramatic effect, and overall listenability. Skilled editors can cut out fluffs and stammers. . . . They can pull a sequence out of the middle and splice it at the end where it may better belong. . . . They can make s-l-o-w t-a-l-k-i-n-g company presidents come alive by carefully tightening pauses and gaps and pulling out the "uhs" between words. . . . They can even change the rhythm

of presentation by the way delivery is paced through cutting — or through the use of electronic speech compression. Good audio editing is generally inexpensive, undetectable and always worthwhile!

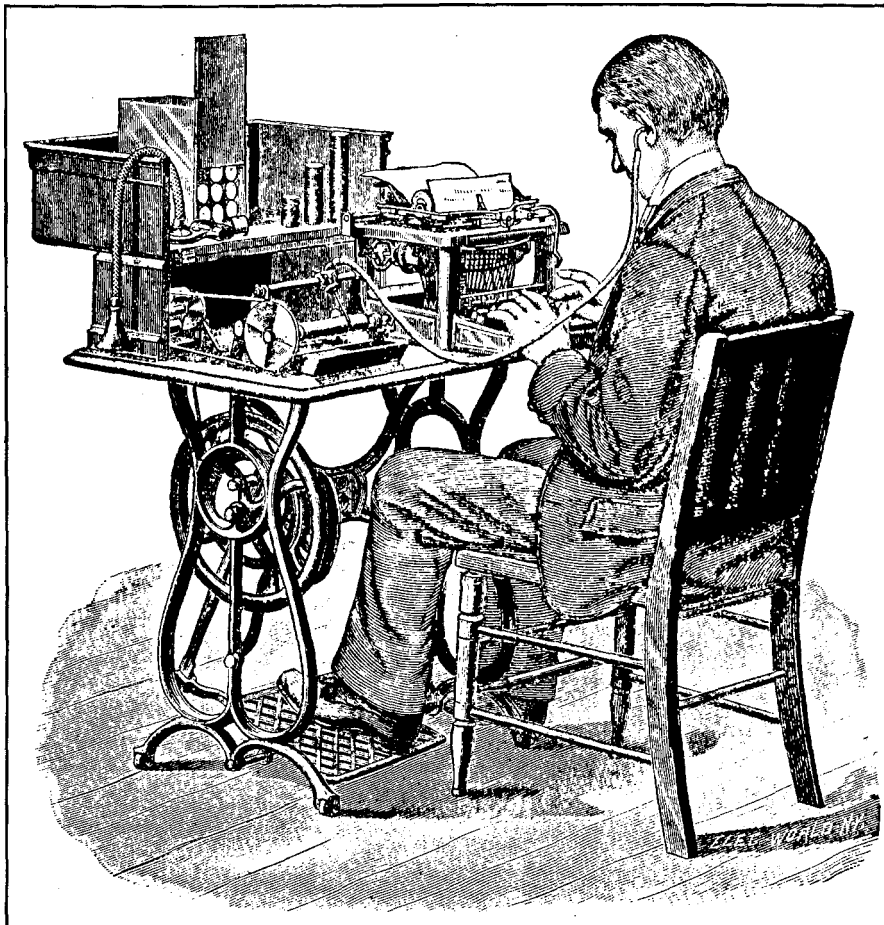
Primary Disadvantage

Now that we've covered some advantages of audio, let's shift gears and examine a primary disadvantage that's directly tied to a general characteristic of our listener audience. The fact is, they don't listen very well! There are all kinds of research studies to verify what we all know from our own experience: it's hard work concentrating on a solitary audio message for very long. We have to fight our minds from wandering. And once that wandering begins, comprehension and retention rates drift proportionately downward.

The textbook explanation is that the normal speech rate for most Americans is 125 words per minute — and our brain, with billions of cells and circuits, can process information at a much higher rate of speed. And because pure listening isn't very challenging, the mind will often wander away, looking for more interesting things to do, like synthesizing daydreams.

According to research studies, solo audio transmission gets consistently low marks in message retention. A paper in the *Journal of Communication* reported that: "Two months after listening to a talk, the average listener will remember only about 25 per cent of what is said. In fact, after we have barely learned something, we tend to forget from one-half to one-third of it within eight hours. It is startling to realize that frequently we forget more in the first short interval than we do in the next six months."¹

There's also a special problem with *group* listening. Because our minds process the slow flow of audio information so readily, we have ample time left over for other mental tasks . . . and with *nothing else to do but listen*, a group soon begins to fidget and grow restless. After about four to six minutes, you'll see the signs: doodling, side



glances, chair shifting, whispering and other indications of individual and group tension. The longer the tape goes on, the more pronounced the stress may become, unless the narrative is especially dramatic or compelling. A two-part antidote to the "group-fidget" syndrome is to (1) keep each pure audio segment mercifully brief and as interesting as possible; and (2) for longer segments, give your group something to do with their eyes and hands. (Note-taking outlines; booklet of reinforcing visuals to fan through; opportunity to walk around the room looking at related wall charts or displays; etc.)

And so that's the problem. If our message is important enough to transmit in the first place, and we want it to be remembered, then we've got to overcome the basic inadequacy of the audio medium — or more accurately — the inadequacy of our listener's skill to catch and hold the message.

Good audio scriptwriting is a talent developed through practice

and an understanding of the *conversational* tone required to effectively transmit your message through the auditory channel of your listener. The subject deserves careful study, because the success of any program will hinge largely on the crucial transition from the writer's idea to paper to sound. Some thoughts:

1. Most copy written for the eye (silent reading) does not convert well to audio, unless the writer is especially gifted in speaking through print conversationally and colorfully. Printed prose usually follows rigid construction rules of grammar, semantics, syntax and convention (technical precision, jargon and "textbook tone"). When read aloud, such prose is usually too complicated (or lengthy) for the ear to stay in touch with for long periods of time. We are conditioned to hear the flow of sounds in the world around us — words and noises which seldom follow any particular order and discipline — and "formal" writing read aloud is

often a more complex and less interesting departure from the spontaneous transmission we're used to hearing. As a result, our ears will often turn off unless the message is especially fascinating and well-presented.

The converse is equally true. Spoken dialogue by an individual or panel may be fully comprehensible when presented "live" and off-the-cuff; but when reduced to an exact transcript afterward, the written words suddenly seem to be disjointed, garbled and generally lacking in power and precision.


Effective audio scriptwriting bridges the gap between the formal, strict construction of printed prose and the informal, loose construction of normal speech. To do it well requires both discipline and a natural sense for phrases and rhythm which will catch and hold a listener's attention.

2. Audio scriptwriting is fun. It's a relatively free form which often allows you to break strict grammatical rules without penalty. You can split infinitives or end sentences with prepositions: to effectively echo the idea you started with. You can throw in pauses when you want to . . . using ellipses (. . .). You can — when it fits — chop your copy — for rhythm change — or emphasis — using dashes (—). Sentences can be short. Or incomplete grammatically. There's only one test. Does the message come across? With interest and audio power. . . .

3. Most audio scriptwriters practice writing quickly. They get their ideas down on paper, as rapidly as they can . . . then they edit. Tightening. Adding color words, anecdotes, simplified construction. They *read their copy aloud* (a must), listening for tongue twisters, run-together words, and lapses in continuity. And then, often in the studio, they'll edit again. Their medium is not written words — but the sounds and mental images of words and phrases transmitted verbally. And their end product is a continuous flow of copy which must be clean, clear and totally comprehensible for the ear.

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Many audio specialists are convinced that the "compact cassette" represents the most important new development in audio-visual communications since the advent of the 16mm motion picture five decades ago. The reasons lie largely in the advantages we've already covered . . . plus the portability, low cost and sheer convenience of the playback machines — not to mention the great range of titles available from various libraries, growing at the rate of several thousand each year.

In historical perspective, the audio cassette is a new medium: In fact it's the first (a) fully portable, (b) mass available, (c) standardized, (d) relatively inexpensive, (e) instant-access storage and retrieval personal information system developed since Gutenberg put ink on paper in 1457. With all that going for it, the cassette's popular acceptance nonetheless remains fixed in direct proportion to the quality of its programming. That acceptance is destined to grow in scope in the years to come — through the work of professionals who understand the cassette's potential — and uniqueness. Then, as now, the best programs will be those which touch the harmonics of our imagination — and effectively reach the inner listening center which visualizes and records the sounds we hear.

Windshield Time

A particularly efficient use of audio communication can occur while a person is in transit, whether by train, plane, bus or car. Many people quickly develop the "cassette habit" — and greatly appreciate having worthwhile material to listen to during normally unproductive travel time.

When programming for "windshield time," particularly for automobile travel, these tips may be useful:

1. Your listener will be continually distracted by the passing scene, so keep all your segments short and to the point. Make sure the organization and logic of your program outline is clearly understood at all times. ("Tell 'em what you're going to tell 'em . . . tell

'em . . . tell 'em what you told 'em.") Without clear continuity, you may well lose or confuse the listener who must turn off attention occasionally to concentrate on external distractions.

2. Whenever possible, your program should run the full length of your cassette tape — to avoid bothersome fast-forwarding to the "stops" before playing the reverse side. (Most studios load their cassettes from large "pancake" rolls of tape, measured to the exact length of the program, thereby eliminating this inconvenience.)

3. Avoid any overtones in your script or narration which might seem strident, irritating or didactic. The in-car listener (especially), because of transit distractions and the normal stress of driving, tends to have a low tolerance for unpleasant or nagging audio — and is likely to switch the program off and keep it off. (We call it the "back-seat-drive syndrome" of audio programming.)

4. Consider using a format similar to the original "NBC Radio Monitor" series, which interspersed news, interviews, on-location coverage of special events, and music. (Limit each sequence to three-six minutes, or less, when you can.) Listener feedback indicates the structure works well — and the music breaks are especially appreciated — offering time to relax and think back over what was said. Music service companies such as Muzak are generally pleased to work out an inexpensive license arrangement to use their libraries for such a series.

Incidentally, be sure to familiarize yourself with copyright restrictions on any music you may choose for your programs. Nonlibrary commercial recordings are generally not reproducible without substantial expense and special clearance. As a fixed rule, you're on safest ground to access a stock music library and pay the publisher's fee for each individual sequence you choose (called a "needle-drop" charge). The rights to record printed materials are usually easy to obtain; but ensure you have received written authorization from the publisher before

proceeding.

5. If you're producing a series of several cassettes to be used for in-car listening, you might consider providing a storage case or file which can be kept in the automobile for easy access of individual titles. Otherwise, cassettes seem to have a way of falling between the seats, being left in the sun, and encountering other misfortunes which limit their usefulness.

6. A note on safety: There was an early concern that cassettes in the car might create a potential hazard by distracting driver attention. As experience has proven, cassette programming is no more a hindrance to driving safety than the presence of a radio. A potential danger is created by fumbling with the cassette in traffic, though, and you may wish to convey some words of caution to new listeners/drivers joining your audio network.

Maximizing Audio's Impact

In conclusion, let's look at some tips offered by successful audio

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producers — on ways to maximize the power and impact of audio programming:

- Listener acceptance and positive motivation begin with the external packaging of the program. An attractive cover and benefit-oriented headlines plus “teaser” copy are invaluable in convincing the listener that the content inside is worth hearing. You can’t scan the contents by looking at a tape reel; the “pull-through” headlines and text must accomplish the task for the unseen audio.

- Because random-access of specific audio content is often time-consuming and troublesome, every presentation should include a complete set of program notes and highlight quotes for reinforcement. One effective way to solve the search-and-find problem with audio cassettes is to record successive spoken numbers on the “B” side of the tape at two-second intervals: “1-2-3-4”, etc., throughout the length of the cassette’s running time. The program elements on

the “A” side of the tape can then be indexed according to the corresponding number which occurs at the same point in time on the flip side. In random-accessing the program, the listener simply fast-forwards the “B” side track to the designated spoken number . . . flips the cassette over . . . and hears the specific audio sequence desired.

- The programming itself must be professional and as listenable as the producer can make it. Observe the “30-second” rule whenever possible. To stop mind drift, the audio message should change in texture, rhythm or construction every 30 seconds. (Introduction of anecdote, question, audience reaction, music break, change-of-voice, summary and topic shift, sound effects, stingers, etc.) Most programmers agree that five or six minutes is maximum length for the presentation of a single subtopic or teaching point. By then the listener is ready for a review or rest break or opportunity to scan back and replay the preceding content. (Employ music fillers and encourage the listener to use the breaks specifically for replay and review.)

- Use interest-heightening techniques such as (1) introduction of a narrator / interlocutor, who smoothes topic transitions and reinforces key points of content; (2) variation of voices, sharing an informal, uncanned, “unpreachy” approach to the topic; (3) frequent shifts to different localities and actualities to create a mix of presentation texture and rhythm — with tight editing to eliminate extraneous material.

- When practicable, provide your audience with listening skills training. A handful of excellent courses are now on the market, and each demonstrates that listening is indeed a facility which can be improved by disciplined practice and the observation of basic precepts related to concentration and memory development.

- In an instructional setting, make the audio programs available at the time of day when individual listeners are at their sharpest, mentally. This “time clock of best reception” will vary widely, de-

pending on the personal habits of each individual (morning person vs. night person, etc.).

- When it fits your communications purposes, always include some form of printed text to accompany and reinforce the audio presentation. Among tools used successfully: postlistening review questions, programmed instruction frames integrated with separate audio segments and highlight reminder cards and posters.

- Much of our knowledge is incomplete about retention-curve analysis and a listener’s individual patterns of forgetfulness based on content, interest, complexity and a myriad of other factors. But we do know that the slope of the memory-loss curve can be substantially reduced by a series of replays and review exercises at spaced intervals. Such a reinforcement strategy should be built into every audio instructional system whenever appropriate. Some programmers use electronic “speech-compression” techniques to shorten the time required for relistening and review. Several devices are now available which speed up the recorded audio message and automatically compensate for the “Donald Duck” effect normally heard when a tape is played at faster speeds. The result is a recording which sounds like normal speech — only quicker. Programs can be recorded in “real time” on Side A of the tape — with the compressed version on Side B, permitting a potential saving of 40 per cent and more in review time.

There are, of course, many other strategies for improving the comprehension and retention ratios for audio programming. Hopefully, in reviewing this short list, you’ll supply and apply several additions of your own. It’s a task well worth accomplishing.

REFERENCES

1. Kramer, E.J. and Thomas R. Lewis, “Comparison of Visual and Nonvisual Listening,” *Journal of Communication*, November 1951.

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