BASIC ELEMENTS OF PRODUCTION

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The media writer must know the tools the director uses to bring the script to life, whether for a six-hour miniseries or a 30-second commercial—or even a piece of cyberspace spam. When you write for a visual or aural medium, you should be familiar with the key production techniques that can facilitate and enhance a script. You should learn what the camera can and cannot do; what sound or visual effects are possible in the control room; how microphones help create mind pictures; what terminology to use in furnishing descriptions and transitions; what a Web site consists of; and other technical and production devices and terms that are essential for effective writing.

However, keep in mind that unless you, the writer, are also the director of the given script, the determination of production elements is the prerogative of the director. It is not only unnecessary, but a nuisance to the director, for the writer to include camera movements, shots, and control room techniques when writing a script. An exception is where it is absolutely necessary to do so in order to explain or forward the purpose of the particular sequence. This chapter, therefore, is designed only as a general introductory overview of some of the key elements of production. The wannabe writer would do well to take a production course in one or more of the media areas in which she and or he intends to work.

New developments in media technology seem to be never-ending. What was standard a few years ago may be outmoded today. As this is written, digital and hard-drive technology

and computer graphics have relatively recently radically changed production approaches for film, video and audio—at production companies, networks, and local stations. Computers have increasingly taken over the work of traditional facilities and, unfortunately, personnel. For example, sound bites, or actualities, for radio are played through the hard drive rather than through tape. In newsrooms, by and large, writing and editing is now done on computers. The writer may never personally use any of this technology, but nevertheless needs to be aware of how the technology affects the creative process of writing for the media.

Viewers may regard cable and satellite television as different from the broadcast television service, but the difference is principally in the means of transmission. The medium is still television. The writing is still basically the same. But the programming can differ in some respects, requiring a different orientation by the writer. For example, many cable franchises have local origination channels, providing local, frequently live productions. The type and content of these programs usually are of semi-professional quality with dedicated subject matter aimed at and often produced by special interest groups. The writer should have an awareness of the restrictions of live production using limited and sometimes older equipment. Frequently, local origination and especially public access channels provide an opportunity for television exposure for neighborhood, ethnic, minority, and other culturally diverse groups that traditionally have been denied equal access to the media.

Because cable requires a user fee, and some channels are, in fact, "pay" television per channel or per view, cable viewers may represent a relatively affluent and culturally sophisticated audience. This sometimes means you can write on a higher level than in broadcasting's usual lowest-common-denominator orientation. Distribution systems such as **direct broadcast satellite (DBS), fiber optics, and lasers** further broaden the writer's role. The Internet's **interactive** capabilities open the door to service-oriented programming and two-way communication.

Television

Although the television writer does not have to know all the elements of production to write a script, he or she should have a basic understanding of the special mechanical and electronic devices of the medium. The writer should be familiar with (1) the studio, (2) the camera, with its movements, lenses, and shots, (3) the control room, including digital computer-driven editing techniques, (4) special video effects, and (5) sound.

The Studio

Television studios vary greatly in size and equipment. Some have extensive state-of-the-art electronic and mechanical equipment and are as large as a movie sound stage.

Others are small and cramped, with barely enough equipment to produce a broadcast-quality show. Although network studios, regional stations, and large independent production houses are likely to have the best studios, one occasionally finds a college or a school system with facilities that rival the best professional situation. The writer should know the size and facilities of the studio: Will it accommodate large sets, many sets, creative camera movement, and lighting? Are field settings necessary? Is the program produced on tape or disc or shot on film with the availability of cranes, outdoor effects, and other special studio devices? Should the script be a combination of studio shooting plus exteriors? In other words, before writing the final draft of the script (and, if possible, even the first draft), the writer should know what technical facilities will be available to produce the script, including what can and cannot be done in the studio likely to be used. Professor and former BBC director Tom Kingdom notes that, increasingly, dramas and sitcoms are being made film-style in the field or on sound-stages. Therefore, it is important for the writer to be aware of the potentials of the film camera and film production techniques. Important among the technical facilities, Kingdon states, are the graphic capabilities of the studio control room. He suggests that the writer should consult with the director to determine whether there can be vivid graphic components such as elaborate lower-thirds, moving graphics, fancy digital transitions between shots, among other techniques, or whether the graphic elements should be played down.

The Camera: Movement

Whether the show is being recorded on film, digitally, or on tape, the camera movements and the terminology are basically the same. The principal difference is the style of shooting: short, individual takes for film, longer and sometimes continuous action sequences for video. Instant digital recording and editing has brought the two approaches closer by combining elements of both. Professor Kingdon advises that production has evolved from the videotape-in-the-studio and film-in-the-field approach. "With the development of HDTV, which rivals the quality of 16mm film," he states, "more and more shows—and independent films—are being shot on video instead of film. This raises the question of what is the difference between having your show shot on film or video. Film, especially 35mm, is still the medium of choice for very high-end productions. All film has the 'film look', which is hard to categorize, but is recognizable as pleasingly soft yet containing attractive highlights. Video, comparatively, tends to have greater resolution, but looks very transparent. But as video improves and cameras allow shooting at 24 frames a second, like film, aesthetic distinctions begin to disappear."

The writer should consider the film or video camera as a moving and adjustable proscenium through which the writer and director can direct the audience's attention. Four major areas of audience attention can be changed via the camera: (1) the distance between the audience and the subject, (2) the amount of the subject the audience sees, (3) the audience position in relation to the subject, and (4) the angle at which the viewer

sees the subject. The writer must understand and be prepared to designate any and all of the following six specific movements to direct the audience's attention:

1 *Dolly-in and dolly-out.* The camera is mounted on a "dolly," a movable platform that permits smooth forward or backward movement. This movement to or away from the subject permits a change of orientation to the subject while retaining a continuity of action.

2 *Zoom-in and zoom-out.* Used to accomplish more easily the same purpose as the dolly from mid- and long-distances, the zoom can narrow the angle of view and compress depth, making people or objects appear closer. Some writers and directors believe that psychologically the dolly is more effective, moving the audience closer to or further from the subject, whereas the zoom gives the feeling of moving the subject closer to or further from the audience. In other words, as Tom Kingdom puts it, "the dolly gives the audience the sensation of actually moving through space, especially when the camera itself is moving past foreground objects, while the zoom simply alters the size the the frame without adding that special dimension of movement through space."

3 *Tilt up and tilt down.* This means pointing the camera up or down, thus changing the view from the same position to a higher or lower part of the subject.

4 *Pan right and pan left.* The camera moves right or left on its axis. This movement is used to follow a character or a particular action, or to direct the audience's attention to a particular subject.

5 *Follow right and follow left.* This is also called the **travel shot** or **truck shot.** The camera is set at a right angle to the subject and either follows alongside a moving subject or, if the subject is stationary, such as an advertising display, follows down the line of the subject. The audience, through the camera lens pointed sharply to the right or left, sees the items in the display. This shot is not used as frequently as the preceding ones. The follow left or follow right can also be a panning shot, where the camera itself does not move. In the truck shot the camera itself moves right or left on a dolly or on a wheeled pedestal, a lateral-movement version of dolly in and dolly out. The truck shot is sometimes referred to as a **crab** shot, with the terminology, "crab right" or "crab left."

6 *Boom shot.* Originally familiar equipment in Hollywood filmmaking, the camera boom has also become a standard part of television production practice. A crane, usually attached to a moving dolly, enables the camera to **boom** up or down from its basic position, at various angles—usually high up—to the subject. This is known also as a **crane shot.**

Note the use of the basic camera positions in the following scripts. The writer should not specify so many camera directions. The director would determine them and write them in the left-hand column of the script. They are included here to

indicate to the beginning writer the variety of camera and shot possibilities. This approximates a *shooting script,* with the video directions that the director, rather than the writer, would insert.

VIDEO	AUDIO
ESTABLISHING SHOT.	DETECTIVE BYRON: (AT DESK, IN FRONT OF HIM, ON CHAIRS IN A ROW, ARE FOUR YOUNG MEN IN JEANS AND LEATHER JACKETS, WITH MOTORCYCLE HELMETS NEARBY.) All right. So a store was robbed. So all of you were seen in the store at the time of the robbery. So there was no one else in the store except the clerk. So none of you know anything about the robbery.
DOLLY IN FOR CLOSE-UP OF BYRON.	(GETTING ANGRY) You may be young punks but you're still punks, and you can stand trial whether you're seventeen or seventy. And if you're not going to cooperate now, I'll see that you get the stiffest sentence possible.
DOLLY OUT FOR LONG SHOT OF ENTIRE GROUP. CUT TO CLOSE-UP. PAN RIGHT ACROSS BOYS' FACES, FROM ONE TO THE OTHER, AS BYRON TALKS.	Now, I'm going to ask you again, each one of you. And this is your last chance. If you talk, only the guilty one will be charged with larceny. The others will have only a petty theft charge on them, and I'll see they get a suspended sentence. Otherwise I'll send you all up for five to ten.
FOLLOW SHOT ALONG LINE OF CHAIRS IN FRONT OF BOYS, GETTING FACIAL REACTIONS OF EACH ONE AS THEY RESPOND.	(OFF CAMERA) Joey?
	JOEY: (STARES STRAIGHT AHEAD, NOT ANSWERING.)
	BYRON: (OFF CAMERA) Al?
	AL: I got nothin' to say.
	BYRON: (OFF CAMERA) Bill?
	BILL: Me, too. I don't know nothin'.
	BYRON: (OFF CAMERA) OK, Johnny. It's up to you.
TILT DOWN TO JOHNNY'S BOOT AS HE REACHES FOR HANDLE OF	JOHNNY: (THERE IS NO ANSWER. THEN JOHNNY SLOWLY SHAKES HIS HEAD. IMPERCEPTIBLY.

VIDEO	AUDIO
KNIFE. PAN UP WITH HAND AS IT MOVES AWAY FROM THE BOOT INTO AN INSIDE POCKET OF HIS JACKET. CUT TO MEDIUM SHOT ON BOOM CAMERA OF JOHNNY WITHDRAWING HAND FROM POCKET, BOOM DOWN TO OBJECT IN JOHNNY'S HAND.	BYRON NOT NOTICING, HE REACHES DOWN TO HIS MOTORCYCLE BOOT FOR THE HANDLE OF A KNIFE. SUDDENLY THE HAND STOPS AND MOVES UP TO THE INSIDE POCKET OF HIS JACKET. JOHNNY TAKES AN OBJECT FROM HIS POCKET, SLOWLY OPENS HIS HAND.)

[Ordinarily, a boom shot would not be used here. A zoom lens would be easier to use and at least as effective.]

The Camera: Lenses

The principal differences in lenses are between the **zoom** lens and the **prime** lens. The latter has only one focal length, not permitting a zoom factor. Almost all TV cameras, whether in the studio or in the field, use zooms. Film cameras have traditionally used prime lenses, but are now using zooms more and more. Remote and studio zoom lenses differ in the required light levels and angle width needed. The attention-getting dramatic shots required in commercials necessitate highly sophisticated and flexible lenses. Tom Kingdon notes that "all lenses have specific effects associated with them. Narrow or telephoto lenses tend to compress space and place backgrounds out of focus, while wide-angle lenses tend to open up space in the frame and keep things in focus. For example, news camera operators use wide-angle lenses."

A good lens can save production time. For example, a prime lens requires a pause in the shooting sequence for readjustment or change; a lens that can go smoothly with perfect focus from an extreme close-up to a wide long shot and then back again facilitates continuing, efficient shooting. ENG/EFP lenses focus at a distance as close as three feet to the subject. Some lenses with micro-capability focus from just a few inches away.

The Camera: Shots

In some instances the writer needs to capture a specific subject for the logical continuity of the script or for the proper psychological effect of the moment upon the audience, and feels compelled to at least suggest to the director a specific shot that might not be immediately obvious to the director within the context of the script.

Shot designations range from the close-up to the medium shot to the long shot. Within these categories are gradations, such as the medium long shot and the extreme

close-up. The kind of shot usually indicates the specific subject to be encompassed; for example, "XCU [for extreme close-up] Joe's right hand." The terms and their meanings apply to both the television and the film format. Here are the most commonly used shots:

▶ **Close-up (CU).** "CU Harry," "CU Harry's fingers as he twists the dials of the safe," or "CU Harry's feet on the pedals of the piano." A **close-up** of a human subject usually consists of just the face, but can include some of the upper body. Unless specifically designated otherwise, the letters **XCU** or **ECU** (*extreme close-up*) usually mean the face alone. Variations of the close shot are the *shoulder shot*, which indicates the area from the shoulders to the top of the head, the *bust shot, waist shot, hip shot,* and *knee shot.*

▶ **Medium shot (MS).** In the *medium shot* (**MS**) the camera picks up a good part of the individual, group, or object, usually filling the screen (but not in its entirety), without showing too much of the physical environment.

▶ **Long shot (LS).** The *long shot* (**LS**), sometimes called the **establishing shot** or *wide shot* (**WS**), is used primarily to establish the entire setting or as much of it as is necessary to orient the audience properly. From the long shot the camera may go to the medium shot and then to the close-up, creating a dramatic movement from an overall view to the essence of the scene or situation. Conversely, the camera may move from the extreme close-up to the clarifying broadness of the *extreme long shot* (**XLS**). Both approaches are used frequently to open a sequence.

▶ **Full shot (FS).** In the *full shot* (**FS**), the subject is put on the screen in its entirety. For example, "FS Harry" means that the audience sees Harry from head to toe. "FS family at dinner table" means that the family seated around the dinner table is seen completely. Some directors use the designation **FF** for *full figure shot.*

▶ **Variations.** Many variations of these shots are used when necessary to clarify what is desired. For example, if two people in conversation are to be the focal point of the shot, the term *two-shot* (**2S**) is appropriate. If the two people are to fill the screen, *tight 2S* is the right term, as illustrated in the next script example. Similarly, *medium two-shot* (**M2S**), *three-shot* (**3S**), and other more specific shot designations may be used.

Note the use of different types of shots in the following hypothetical script example. The video directions at the beginning of this script tell the story solely with pictures. The writer usually would include a narrative description without the shot designations. The same approach would apply to the end of the segment. Most of the video directions within the example would, as well, have been omitted by the writer, leaving that job to the director. Note that in many of the actual scripts used in this book, the writers provide very few video directions.

VIDEO	AUDIO
FADE IN ON LONG SHOT OF OUTSIDE OF BAR. ESTABLISH STREET FRONT AND OUTSIDE OF BAR. DOLLY IN TO MEDIUM SHOT, THEN TO CLOSE-UP OF SIGN ON THE WINDOW: "HARRY SMITH, PROP." CUT TO INSIDE OF BAR, CLOSE-UP OF MAN'S HAND DRAWING A GLASS OF BEER FROM THE TAP. FOLLOW MAN'S HAND WITH GLASS TO TOP OF BAR WHERE HE PUTS DOWN GLASS.	
DOLLY OUT SLOWLY TO MEDIUM SHOT OF HARRY, SERVING THE BEER, AND MAC, SITTING AT BAR.	
ZOOM OUT TO WIDE SHOT, ESTABLISHING ENTIRE INSIDE OF BAR, SEVERAL PEOPLE ON STOOLS, AND SMALL TABLE AT RIGHT OF BAR WITH THREE MEN SEATED, PLAYING CARDS.	
	JOE: (AT TABLE) Harry. Bring us another deck. This one's getting too dirty for honest card players.
	HARRY: Okay. (HE REACHES UNDER THE BAR, GETS A DECK OF CARDS, GOES TO THE TABLE.)
TIGHT 2S HARRY AND JOE	JOE: (TAKING THE CARDS, WHISPERS TO HARRY.) Who's the guy at the bar? He looks familiar.
	HARRY: Name of Mac. From Jersey someplace.
CUT TO CU JOE	JOE: Keep him there. Looks like somebody we got business with. (LOOKS AROUND TABLE.)
CUT TO FS TABLE	Right, boys? (THE MEN AT THE TABLE NOD KNOWINGLY TO HARRY.)

VIDEO	AUDIO
	HARRY: Okay if I go back to the bar?
	JOE: Go ahead.
PAN WITH HARRY TO BAR. DOLLY INTO BAR, MS HARRY AND MAC AS HARRY POURS HIM ANOTHER DRINK. MCU HARRY AS HE WRITES. CUT TO CU OF WORDS ON PIECE OF PAPER.	HARRY: (WALKS BACK TO BAR, POURS DRINK FOR MAC. SCRIBBLES SOMETHING ON PIECE OF PAPER, PUTS IT ON BAR IN FRONT OF MAC.)

Control Room Techniques and Editing

The technicians in the control room have various electronic devices for modifying the picture and moving from one picture to another, giving television its ability to direct the attention and control the audience's view. The technicians in the film editing room have the same capabilities except that the modifications are done solely during the editing process. In live-type taped video, some modifications can be done as the program is being recorded, as well as during a subsequent tape-editing process. Where digital equipment is used, editing can be virtually instantaneous.

Tom Kingdon has found that "the use of digital effects in the control room greatly enhances the repertory and sophistication of available effects. Whereas in the past you might simply dissolve between two shots or do a simple transitional wipe (see below), now almost any kind of elaborate visual effect is achievable. Digital editing in the edit suite is usually referred to as **non-linear** editing and allows shows to be assembled much faster than with the old reel-to-reel videotape editing machines of the manual film-splicing method. Non-linear means that any shot can be added almost instantly to the **timeline**—the sequence of shots that an editor constructs—at any point."

▶ *Fade.* The **fade-in** brings the picture in from a black (or blank) screen. The **fade-out** takes the picture out until a black level is reached. (You've often heard the phrase "fade to black.") The fade is used primarily to indicate a passage of time, and in this function serves much like a curtain or blackout on the stage. The fade also can be used to indicate a change of place. Depending on the action sequence, the fade-in or fade-out can be fast or slow. The writer usually indicates the fade-in and fade-out on the script.

▶ *Dissolve.* While one picture is being reduced in intensity, the other picture is being raised, one picture smoothly dissolving into the next—replacing or being replaced by the other. The **dissolve** is used primarily to indicate a change of place, but sometimes to indicate a change of time. The dissolve has various

modifications. An important one is the *matched dissolve,* in which two similar or identical subjects are placed one over the other, with one fading in and the other fading out, showing a metamorphosis taking place. Dissolving from a newly lit candle to a candle burned down to indicate a passage of time is a matched dissolve. The dissolve can vary in time from a *fast dissolve* (almost a split-second movement) to a *slow dissolve* (as long as five seconds). At no point in the dissolve does the screen go to black.

▶ *Cut.* The **Cut** is the technique most commonly used and consists simply of switching instantaneously from one picture to another. Care must be taken to avoid too much cutting; make certain that the cutting is consistent with the mood, rhythm, pace, and psychological approach of the program as a whole.

▶ *Superimposition.* The **super** is the placing of one image over another. It is sometimes used in stream-of-consciousness sequences when the memory being recalled is pictured on the screen along with the person doing the recalling. To obtain necessary contrast in the superimposition, one picture must have higher light intensity than the other. The superimposition is sometimes used for nondramatic effects, such as placing a commercial name or product over a picture. Although the principles of the super continue to be used, the mechanical control room superimposition has been replaced, in almost all studios, by the more effective *key* or *matte.*

▶ *Key or matte.* A **key** is a two-source special effect where a foreground image is cut into a background image and filled back in with itself. A **matte** is a similar technique, but can add color to the foreground image. **Character generators** (**chyrons** or **vidifonts**) electronically cut letters into background pictures. Titles and commercial names of products are keyed or matted. **Chroma key** is an electronic effect that cuts a given color out of a picture and replaces it with another visual. Newscasts use this technique; the green matte background behind the newscaster is replaced with a taped, filmed, or computerized sequence.

▶ *Wipe.* One picture wiping another picture off the screen in the manner of a window shade being pulled over a window is known as a **wipe**. The wipe can be from any direction—horizontal, vertical, or diagonal. Wipes can also *blossom out* from the center of a picture or *envelope* it from all sides. Wipes often designate a change of place or time.

▶ *Split screen.* In the *split screen* the picture on the air is divided, with the shots from two or more cameras or other sources occupying adjoining places on the screen. A common use is for phone conversations, showing the persons speaking on separate halves of the screen. The screen can be split into many parts and into many shapes, as is sometimes done when news correspondents report from different parts of the world. One segment of virtually any size can be split off from the rest of the screen; in

baseball broadcasts, for example, one corner of the screen might show the runner taking a lead off first base while the rest of the screen shows the pitcher about to throw to the batter.

The following two-column script illustrates the uses of control room techniques. The *commentary* column at the left is *not* part of the shooting script, but is used here as a learning device for understanding how the appropriate terms are designated and used.ß

COMMENTARY	VIDEO	AUDIO
1. The fade-in is used for the beginning of the sequence.	FADE IN ON SHERIFF'S OFFICE. SHERIFF FEARLESS AND DEPUTY FEARFUL ARE SEATED AT THE DESK IN THE CENTER OF THE ROOM.	FEARLESS: I wonder what Bad Bart is up to. He's been in town since yesterday. I've got to figure out his plan if I'm to prevent bloodshed. FEARFUL: I've got faith in you, Fearless. I heard that he's been with Miss Susie in her room. FEARLESS: Good. We can trust her. She'll find out for us. FEARFUL: But I'm worried about her safety. FEARLESS: Yup. I wonder how she is making out. That Bad Bart is a mean one.
2. The dissolve is used here for a change of place without passage of time. This scene takes place simultaneously or immediately following the one in the sheriff's office.	DISSOLVE TO MISS SUSIE'S HOTEL ROOM. BART IS SEATED IN AN EASY CHAIR. SUSIE IS IN A STRAIGHT CHAIR AT THE OTHER END OF THE ROOM.	BART: I ain't really a killer, Miss Susie. It's only my reputation that's hurting me. Only because of one youthful indiscretion. SUSIE: What was that, Mr. Bart?

COMMENTARY	VIDEO	AUDIO
3. The superimposition is used here for a memory recall device.	SUPERIMPOSE, OVER CU BART, FACE OF MAN HE KILLED AS HE DESCRIBES SCENE.	BART: I can remember as well as yesterday. I was only a kid then. I thought he drew a gun on me. Maybe he did and maybe he didn't. But I shot him. And I'll remember his face as sure as I'll live—always. SUSIE: I guess you aren't really all bad, Mr. Bart.
4. Here the cut indicates a different view of the character in the same continuous time sequence.	PAN WITH BART TO THE HALL DOOR. CUT TO HALL AS HE ENTERS IT.	BART: You've convinced me, Miss Susie. I've never had a fine woman speak to me so nice before. I'm going to turn over a new leaf. (WALKS INTO THE HALL. AN EARLY MODEL TELEPHONE IS ON THE WALL.) I'm going to call the sheriff. Operator, get me the sheriff's office.
5. The wipe here moves from left to right or right to left. It designates a change of place. The use of the split screen indicates the putting of two different places before the audience at the same time.	HORIZONTAL WIPE INTO SPLIT SCREEN. BART IN ONE HALF, SHERIFF PICKING UP TELEPHONE IN OTHER HALF.	FEARLESS: Sheriff's office. BART: Sheriff. This is Bad Bart. I'm going to give myself up and confess all my crimes. I've turned over a new leaf. FEARLESS: You expect me to believe that, Bart? BART: No, I don't. But all I'm asking is a chance to prove it. FEARLESS: How do you propose to do that?
	WIPE OFF SHERIFF OFFICE SCENE. CU BART'S FACE AS HE MAKES HIS DECISION.	BART: I'm coming over to your office. And I'm not going to be wearing my guns.

COMMENTARY	VIDEO	AUDIO
6. *The fade here indicates the passage of time.*	FADE OUT. FADE IN ON MISS SUSIE SEATED ON HER BED.	SUSIE: That's all there was to it, Fearless. The more I talked to him, the more I could see that underneath it all he had a good heart.
		(SHE WALKS TO THE SMALL TABLE AT THE FOOT OF THE BED, TAKES A GLASS AND BOTTLE, THEN WALKS OVER TO THE EASY CHAIR. WE SEE SHERIFF FEARLESS IN THE EASY CHAIR.)
		Here, Fearless, have a sarsaparilla. You deserve one after what you've done today.
		FEARLESS: No, Susie. It was you who really did the work. And you deserve the drink. (AFTER A MOMENT) You know, there's only one thing I'm sorry for.
		SUSIE: What's that?
		FEARLESS: That Bart turned out to be good, deep down inside, and gave himself up.
		SUSIE: Why?
		FEARLESS: Well, there's this new gun I received this morning from the East that I haven't yet had a chance to use!
7. *Fade is used to signify the end of a sequence, a passage of time, and a change of place.*	THEME MUSIC IN AND UP STRONG. SLOW FADE OUT.	

COMMENTARY	VIDEO	AUDIO
8. *In studio show, stock film or tape and tape shot in the field may be necessary for the exterior scene, not reproducible in a studio.*	FADE IN STOCK FILM OR TAPE OF SOUTH DAKOTA BADLANDS, CUT TO FEARLESS AND SUSIE ON THEIR HORSES ON THE TRAIL WAVING GOODBYE TO BART, WHO RIDES OFF INTO THE DISTANCE.	
9. *Key or matte permits the insertion of words onto the picture.*	KEY CREDITS OVER THE SCENE AS FEARLESS AND SUSIE CONTINUE TO WAVE.	

Sound

In the technical—not the artistic—sense, video and audio use sound in essentially the same ways, except for some obvious differences. The microphone (**mic**) in the television play is not stationary, but is on a boom and dolly to follow the moving performers. Chest mics, table mics, and cordless mics are used in television, usually for the non-dramatic studio program such as news, panel, and interview shows, and sometimes for dramas in preset positions and situations. In television, the dialogue and sound on the set usually emanate from and are coordinated with the visual action. Off-screen (**OS**) sound effects can be used, but they must clearly represent something happening off-screen; if they represent an action taking place on camera, they must appear to come from that source.

The term *off-camera* (**OC**) is used in the script for the character or sound heard but not seen. Sound can be prerecorded for television or, as is frequently done with filmed productions, added after the action has been shot. Television and radio both use narration, but narration is infrequent in the visual medium. In television the *voice-over* (**VO**) can be a narrator, announcer, or the prerecorded thoughts of the character.

Television uses music as program content, background, and theme. Other uses of sound and music in radio can be adapted to television, but remember that in television the sound or music does not replace visual action but, rather, complements or heightens it.

Radio

Microphone use, sound effects, and music are the primary technical and production elements the radio writer should be aware of. The writer should further understand how the studio and control room can or cannot implement the purposes of the script. Although the most creative uses of radio's potentials can be realized in the drama, few plays are heard on radio anymore. Nevertheless, these same creative techniques can be applied to

commercials, many of which are short dramatic sequences, and to lesser degrees, to other radio formats.

The Microphone

The basic element of radio broadcasting is the microphone, usually abbreviated as *mic*, but sometimes seen in its older abbreviation, *mike*. The number of microphones used in a show is usually limited. For the standard program—a disc jockey or news program—only one is needed. A panel, discussion, or interview program may have a mic for each person or for every two people.

Not all microphones are the same. The audio engineer selects certain types of microphones for their sensitivity and specific effects uses. The writer has only one important responsibility in this area: To understand the performer's relationship to the microphone. This physical relationship determines the listener's orientation. For example, the audience might be with a character riding in a car. The car approaches the edge of a cliff. Should the sound of the character's scream and the noise of the car as it hurtles off the cliff be on mic, thus keeping the audience with the car, or should these sounds be faded into the distance, orienting the audience to a vantage point at the top of the cliff, hearing (and in their minds' eyes, seeing) the character and car going downward?

There are five basic microphone positions. **On mic** is taken for granted when no position is designated next to the line of dialogue. If the performer has been in another position and suddenly speaks from an on mic position, then "on mic" should be noted.

▶ *On mic.* The performer speaks from a position right at the microphone. The listener is oriented to the imaginary setting in the same physical spot as the performer.

▶ *Off mic.* The performer is some distance away from the microphone. This conveys to the audience the impression that the sound or voice is at a proportionate distance away from the physical orientation point of the listener, which is usually at the center of the scene. This listener orientation can be varied by removing the performer's voice but indicating through the dialogue that the performer has remained in the same physical place. The listener rather than the performer is moved from the central point of action.

▶ *Fading on.* The performer slowly moves toward the microphone. To the listener, the performer is approaching the physical center of the action.

▶ *Fading off.* The performer moves away from the microphone while speaking, thus moving away from the central orientation point.

▶ *Behind obstructions.* The performer sounds as if there were a barrier between him or her and the focal point of the audience's orientation. The writer may indicate that the performer is behind a door, outside a window, or perhaps under the bandstand. Special microphones may be needed. The filter mic, for example, creates the impression that a voice or sound is coming over a telephone. The voice at the focal point of the audience's orientation, even though speaking over a telephone, too, would be on

mic. The echo chamber, another device, creates various degrees of an echo sound, ranging from an impression that a person is locked in a closet to that of being lost in a boundless cavern. Today most studios can create sounds digitally that can place the performer in virtually any position or setting.

Note how the five basic mic positions are used in the following script example. The *commentary* column on the left is *not* a part of the script, but is used here solely as a learning device. *Note, too, that although the radio scripts in this book are single-spaced for space reasons, ALL radio scripts should be double-spaced.*

COMMENTARY	AUDIO
1. With no mention of position, the character is assumed to be ON MIC.	GEORGE: I'm bushed, Myra. Another day like the one today, and I'll just... (THE DOORBELL RINGS)
	MYRA: Stay where you are, George. I'll answer the door.
	GEORGE: Thanks, hon. (DOORBELL RINGS AGAIN)
2. The orientation of the audience stays with George as Myra leaves the focal point of the action.	MYRA: (RECEDING FOOTSTEPS, FADING) I'm coming . . . I'm coming. I wonder who it could be at this hour.
3. George must give the impression of projecting across the room to Myra who is now at the front door.	GEORGE: (CALLING) See who it is before you open the door.
	MYRA: (OFF) All right, George.
4. Myra's physical position is now clear to the audience through the distance of her voice. As soon as she comes ON MIC, the audience's physical position arbitrarily is oriented to that of Myra at the door.	(ON MIC) Who is it?
5. This is an example of the behind-an-obstruction position.	MESSENGER: (BEHIND DOOR) Telegram for Mr. George Groo.
6. The physical orientation of the audience stays with Myra. George is now OFF MIC.	MYRA: Just a minute. (CALLING) George, telegram for you.
	GEORGE: (OFF) Sign for me, will you Myra?

COMMENTARY	AUDIO
	MYRA: Yes. (SOUND OF DOOR OPENING) I'll sign for it. (SOUND OF PAPER BEING HANDED OVER AND THE SCRATCH OF PENCIL ON PAPER)
	MESSENGER: Thank you ma'am.(SOUND OF DOOR BEING CLOSED)
	MYRA: (SOUND OF TELEGRAM BEING OPENED) I'll open it and ... (SILENCE FOR A MOMENT)
7. Note the complete shift of audience orientation. The audience, at the door with Myra, initially hears George from the other end of the room; George, fading on, approaches the spot where the audience and Myra are. Finally, George is at that spot. Note the use of the term ON MIC at the end, when the character comes to that position from another position.	GEORGE: (OFF) Well, Myra, what is it? (STILL SILENCE)
	GEORGE: (FADING ON) Myra, in heaven's name, what happened? What does the telegram say? (ON MIC) Myra, let me see that telegram!

Sound Effects

There are three major categories of sound effects: recorded, manual, and digitally created. Virtually any sound effect desired can be found on disc, record, tape, or computer. For split-second incorporation of sound into the program's action, manual or live effects are sometimes more effective. Manual effects include such sounds as the opening and closing of a door (coming from a miniature door located near the microphone of the sound effects operator) and the rattling of cellophane to simulate the sound of fire. Natural effects are those emanating from their natural sources, such as the sound of walking where a microphone is held near the feet of a sound effects person. Combinations of sounds can be made from an amalgamation of digital, recorded, manual, and natural effects.

Michael Keith, author of *The Radio Station*, notes that most studios today generate sound effects with the aid of a computer and specially designed software, the common practice or method of integrating sounds into a production. Effects taken from tape or vinyl discs virtually no longer exist. Even CD effects libraries are used less and less, especially at larger stations with state-of-the-art facilities and equipment. In recent years digital devices, such as multi-effects processors, have featured comprehensive menus of sounds for use in studio mixing. Keith points out that this new generation of audio hardware, along with

computers and digital workstations, have radically transformed the production room environment and mixing experience.

Inexperienced writers occasionally overdo the use of sound. Sound effects should be used only when necessary, and then only in relation to the principles that determine the listener's orientation. Think of your own orientation to sound when listening to the radio. For example, a high pitch, high volume, or rising pitch generally suggests a climax or some disturbing element whereas a low pitch, low volume, or descending pitch usually generally suggests something soothing and calm. Combinations of these sounds and the relationship of the specific sound to the specific context of the script can alter these generalizations. For instance, a low pitch in the proper place can indicate something ominous and foreboding rather than calm; the combination of a low pitch and high volume, as in thunder or an explosion, creates anything but a soothing effect. A high or ascending pitch can, in context, indicate something happy and bright. Sound effects can be used for many purposes, such as the following:

▶ **Establish locale or setting.** The sound of marching feet, the clanging of metal doors, and the blowing of a whistle suggest a prison. Soft violin music, the occasional clatter of dishes and silverware, the clinking of glasses, and whispered talking suggest a restaurant, perhaps an old-world Hungarian or Russian restaurant.

▶ **Direct audience attention and emotion.** Emphasis on a distinctive sound can specifically orient the audience. For example, the sudden banging of a gavel in a courtroom scene will immediately orient the audience toward the judge's bench. If the audience is aware that a person alone at home is an intended murder victim, the sound of steps on a sidewalk followed by the sound of knocking on a door, or the more subtle sound of turning a doorknob, will direct the audience's attention toward the front door and orient its emotions toward suspenseful terror and expected violence.

▶ **Establish time.** A clock striking the hour or a rooster's crow are rather obvious but nevertheless accepted devices. The echo of footsteps along a pavement, with no other sounds heard, designates a quiet street very late at night or very early in the morning. If an element referred to in the program, such as a passing freight train, has been established as going by at a certain time, every time that sound effect—the passing train—is used, the audience will know the time.

▶ **Establish mood.** The sounds of laughter, loud music, and much tinkling of glasses establish a different mood for a party than would subdued whispers and the soft music of a string quartet. Sound can be used effectively as counterpoint to an individual character's mood. The attitudes and emotions of a worried, sullen, fretful character may be heightened by placing the person in the midst of sounds of a wild party.

▶ **Signify entrances and exits.** The sound of footsteps fading off and the opening and closing of a door—or the reverse, the opening and closing of a door and sound of footsteps coming on—unmistakably signify an exit or an entrance. Other sounds can be used to show a character's coming to or leaving a specific place. The departure of a

soldier from an enemy-held jungle island after a secret reconnaissance mission can be portrayed by the sounds of boat paddles, the whine of bullets, and the chatter of jungle birds and animals. If the bullet, bird, and animal sounds remain at a steady level and the paddling of the boat fades off, the audience remains on the island and sees the soldier leave. The audience leaves with the soldier if the paddling remains at an on-mic level and the island sounds fade off.

▶ *Serve as transition.* If the transition is to cover a change of place, the sounds used can be the means of transportation. The young graduate, about to leave home, says tender farewells. The farewells **cross-fade** into airplane sounds, which in turn cross-fade into the sounds of the hustle and bustle of a big city. These sounds cross-fade into a dialogue sequence in which the graduate rents an apartment. The change of place has been achieved with sound providing an effective transition.

If the transition is to cover a lapse of time, the sound may be that of a timing device, such as a clock striking three, the clock tick fading out and fading in again, and the clock striking six. The sound indicating the transition need not relate to the specific cause of the transition and can be of a general nature. For example, a **montage** of street sounds covers a change of place and a lapse of time for someone going to a store, in a commercial, to buy the advertised product. Sometimes a montage, which is a blending of a number of sounds, can be especially effective when no single sound fits the specific situation.

In a non-dramatic sequence, such as a transition between program segments, sound relating to the next segment can be used. In some situations the sounds may relate to the program as a whole rather than to a specific circumstance, such as a news ticker sound as a transition or establishing sound for a news program.

▶ *Create nonrealistic effects.* Note Norman Corwin's description in "The Plot to Overthrow Christmas" of the audience's journey to Hades, "to the regions where legions of the damned go."

CLANG ON CHINESE GONG. TWO THUNDER PEALS. OSCILLATOR IN A HIGH PITCH BEFORE THUNDER IS ENTIRELY OUT. BRING PITCH DOWN GRADUALLY AND FADE IN ECHO CHAMBER, WHILE HEAVY STATIC FADES IN. THEN OUT TO LEAVE NOTHING BUT OSCILLATOR AT A LOW OMINOUS PITCH. THEN RAISE PITCH SLOWLY, HOLD FOR A FEW SECONDS.

Courtesy of Norman Corwin

Combinations of sound and music can be used to create almost any nonrealistic effect, from the simplest to the most complex.

Sound can achieve several purposes at the same time. A classic sound effects sequence—to many the best and most famous in radio history—accompanied comedian Jack Benny's periodic visits to his private vault on his radio show. Younger people who have listened to revivals of old-time radio programs may have heard it. The sounds establish setting

and mood, orient the audience's emotions, direct its attention, signify entrances and exits, serve as transitions between places and the passage of time, and create nonrealistic effects.

SOUND: FOOTSTEPS . . . DOOR OPENS . . . FOOTSTEPS GOING DOWN . . . TAKING ON HOLLOW SOUND . . . HEAVY IRON DOOR HANDLE TURNING . . . CHAINS CLANKING . . . DOOR CREAKS OPEN . . . SIX MORE HOLLOW FOOTSTEPS . . . SECOND CLANKING OF CHAINS . . . HANDLE TURNS . . . HEAVY IRON DOOR OPENS CREAKING . . . TWO MORE FOOTSTEPS (DIALOGUE BETWEEN THE GUARD AND JACK) . . . LIGHT TURNING SOUND OF VAULT COMBINATION . . . LIGHT TURNING SOUND . . . LIGHT TURNING SOUND . . . LIGHT TURNING SOUND . . . HANDLE TURNS . . . USUAL ALARMS WITH BELLS, AUTO HORNS, WHISTLES, THINGS FALLING . . . ENDING WITH B.O. FOGHORN . . .

Courtesy of J & M Productions, Inc.

Keep in mind that many sounds, no matter how well or accurately done, sometimes are not immediately identifiable to the audience, and often can be confused with similar sounds. The writer may have to identify the sounds through the dialogue. For example, the rattling of paper can sound like fire, and the opening and closing of a desk drawer can sound like the opening and closing of almost anything else. The following sequence attempts to make the sounds clear as a natural part of the dialogue.

DICK:　(RUFFLING THE PAGES OF A MANUSCRIPT) Just about the worst piece of junk I've ever written in my life.

ANNE:　Well, even if you don't like it, I think it can become a bestseller.

DICK:　(RUFFLING PAGES AGAIN) Three hundred and forty-two pages of pure unadulterated mediocrity. Listen to them. They even sound off-key. (SOUND OF A DESK DRAWER OPENING) There. That's where it belongs. (SOUND OF MANUSCRIPT BEING THROWN INTO THE DRAWER)

ANNE:　Don't lock it up in your desk. I think it's good.

DICK:　Nope! That drawer is the place where all bad, dead manuscripts belong. (SOUND OF DESK DRAWER CLOSING) Amen!

Music

Music is radio's principal programming today, but music goes beyond content alone. The writer should also understand how to use music as a bed, program theme, bridge, or sound effect, and for background or mood.

▶ *Content.* Recorded (on record, tape, cartridge, compact disc, and CD-ROM) music, played by disc jockeys, dominates radio programming.

▶ **Bed.** *Bedding* is the generic term used to describe music used under or as backup of an announcer's sound tracks.

▶ **Theme.** From the earliest days of radio, star performers used theme music for personal identification. Listeners who heard the beginning of the song "The Make Believe Ballroom" knew immediately that it was time for Martin Block, one of radio's first and premiere disc jockeys. The first few bars of "Love in Bloom" meant that Jack Benny was about to make his entrance. "A Hard Day's Night" signaled the appearance of the Beatles. "Hello Love" is identified with the American Public Radio Network's *A Prairie Home Companion* show. "Born in the USA" is Bruce Springsteen. "The Material Girl" introduces Madonna. "Billie Jean" means Michael Jackson, "A Beautiful Day" means U2, and "Mo Money, Mo Problems" means rapper Notorious B.I.G. Music can be used as a program theme or to peg a specific event or particular personality. The action or performer is identifiable as soon as the theme music is heard. A theme can be used for the opening, closing, and commercial break transitions in a show. The following script is an example.

MUSIC:	THEME, "ROCK AROUND THE CLOCK," IN, UP, AND UNDER.
DEEJAY:	Welcome to another afternoon session of "The Best of America's Rock Stars," with music, gossip, information, and a special guest, live, interviewed by yours truly, your rocking host, Joe J. Deejay.
MUSIC:	THEME UP AND OUT.
CART:	60 COMMERCIAL
DEEJAY:	First on our agenda is our special guest. One of the greatest stars of all time, in this country and internationally.
MUSIC:	"BORN IN THE USA" IN, UP, AND UNDER.
DEEJAY:	Welcome, Bruce Springsteen, to "The Best of America's Rock Stars."
MUSIC:	OUT
DEEJAY:	Bruce, what brings you to our city . . . ?

After the final commercial and Deejay's outro (the announcer's final comments, as differentiated from intro, or introduction), the theme is brought in, up, and out to close the show.

▶ **Bridge.** The musical bridge is the most commonly used device to create transitions. Music lasting only a few notes or a few bars can be used to indicate the breaks between segments of the program. The music bridge can also be used to distinguish the commercial inserts from the rest of the programs.

In a dramatic sequence (in a commercial, for example), the music bridge frequently indicates a change of place or a passage of time. Care must be taken that the bridge represents the mood and content of the particular moment. The bridge is usually only a few seconds long. When it is very short, only a second or two, it is called a *stab*. Note the bridge in the next script example.

SOUND:	WATER RUNNING, ECHO IN BATHROOM
MARY:	I hate to say this, John, but if you want to make a good impression to your boss today, you ought to change your brand of toothpaste.
JOHN:	This one tastes good.
MARY:	But it doesn't give you the fresh breath of Angelmint.
JOHN:	I'm glad you told me. I do want that promotion.
MUSIC:	BRIDGE
SOUND:	DRUG STORE NOISES
JOHN:	A tube of Angelmint, please.
CLERK:	Yes, sir. It's our best-selling toothpaste.
SOUND:	CASH REGISTER
MUSIC:	BRIDGE
JOHN:	Mary, Mary, I got the promotion, thanks to you.
MARY:	Thanks to Angelmint, John.
MUSIC:	STAB AND OUT

▶ **Sound effect.** Brass and percussion instruments can convey or heighten the feeling of a storm better than sound effects alone. Some effects cannot be presented effectively except through music. How better to convey on radio the sound of a person falling from the top of a tall building than through music moving in a spiral rhythm from a high to a low pitch and ending in a crash?

SOUND:	THUNDER, HEAVY RAIN POUNDING ON CAR ROOF EMPHASIZED AND PUNCTUATED BY MUSIC STABS, CONTINUING UNDER DIALOGUE
ALICE:	Ralph, please pull the car over and stop. It's raining so hard you can't see five feet in front of you.
RALPH:	Aw, Alice, I'm a good driver.

ALICE:	But, Ralph, we're in a whiteout. I'm afraid we'll have an accident.
RALPH:	I know this road. Stop nagging.
ALICE:	If we don't see the turnoff by the bridge, we'll go right off the cliff . . .
SOUND:	SCREECHING OF BRAKES, EMPHASIZED WITH MUSIC SCREECH (e.g. VIOLIN), SPIRALLING MUSIC SOUND FADING FROM HIGH TO LOW PITCH ENDING IN A CRASH COMBINING SOUND EFFECTS AND MUSIC (e.g. CYMBALS, DRUMS,

▶ *Background or mood.* Music can heighten the content and mood of a sequence. The music must serve as a subtle aid, however; it must not be obvious or, sometimes, even evident.

The listener who is aware of the background music during a commercial sequence has been distracted from the primary purpose of the production. The music should have its effect without the audience consciously realizing it. Background and mood music should not be overdone or used excessively. Well-known compositions should be avoided because they can distract the audience with their familiarity.

If you plan to include music in the script, either as principal content or as incidental or effects background, remember to consult with the producer about what you have in mind. You cannot use any music without the permission of the copyright holder. The producer will have to negotiate with ASCAP (American Society of Composers, Authors and Publishers) or with BMI (Broadcast Music Incorporated) for the rights. If the use is for a network or station, it likely already falls under an agreement between these organizations and the NAB (National Association of Broadcasters).

Sound and Music Techniques and Terms

Several important terms are used by the writer to designate the techniques that manipulate music and sound. These techniques are applied at the control board.

▶ *Segue.* Segue (pronounced seg-way) is the smooth transition from one sound into the next. This particularly applies to the transitions between musical numbers, when one number is faded out as the next number is faded in. Segues are used in dramatic sequences as well as in music, but in the former the overlapping of sounds makes the technique a cross-fade rather than a segue—as seen in the following music program:

ANNOUNCER:	Our program continues with excerpts from famous musical compositions dealing with the Romeo and Juliet theme. First we hear from Tchaikovsky's <u>Romeo and Juliet</u> overture, followed by Prokofiev's <u>Romeo and Juliet</u> ballet, and finally Gounod's opera <u>Romeo et Juliette</u>.
MUSIC:	TCHAIKOVSKY'S "<u>ROMEO AND JULIET</u>."
	SEGUE TO PROKOFIEV'S "<u>ROMEO AND JULIET</u>."
	SEGUE TO GOUNOD'S "<u>ROMEO ET JULIETTE</u>."
ANNOUNCER:	You have heard . . .

and in this dramatic sequence:

ANNOUNCER:	And now, a word from Millweiser's Light Beer.
MUSIC:	IN AND UP, HOLD FOR FIVE SECONDS AND OUT. SEGUE INTO
SOUND:	TINKLING OF GLASSES, VOICES IN BACKGROUND IN CONVERSATION, MUSIC PLAYING.

▶ *Cross-fade.* The *dissolving* from one sound into another, *cross-fade* sometimes is used interchangeably with *segue*. But cross-fade is the crossing of sounds as one fades in and the other fades out, whereas the segue is simply the immediate following of one sound by another. In the following example, the telephone ringing becomes blended for a second or two with the music before the music is entirely faded out, and then only the telephone ringing remains.

MUSIC:	IN AND UP, HOLD FOR FIVE SECONDS. CROSS-FADE INTO THE RINGING OF A TELEPHONE.

▶ *Blending.* **Blending** refers to two or more different sounds combined and going out over the air simultaneously. Blending can include combinations of dialogue and music, dialogue and sound effects, sound effects and music, or all three. The example of the tinkling glasses, background voices, and music illustrates the latter.

▶ *Cutting or switching.* **Cutting** or **switching,** the sudden cutting off of one sound and the immediate intrusion of another, is a jarring break, sometimes used for a special effect. Cutting can simply designate a sharp change from one microphone to another or to a different sound source. It also can be used for remotes.

ANNOUNCER: We now switch you to Times Square where Tom Rogers is ready with his
             "Probing Microphone."

CUT TO ROGERS AT TIMES SQUARE

ROGERS: Good afternoon. For our first interview, we have over here . . .

▶ **Fade-in and fade-out.** Bringing up the volume or turning it down is a relatively simple operation that is frequently used to fade the music under dialogue, as well as to bring music into and out of the program. Music can *fade in, up* (higher in volume), *under* (lower in volume), or *out*. The following example illustrates fade-in and fade-out on the disc jockey show.

MUSIC: THEME, "YOU RAPPED MY RAPPER WITH A RAP." (FADE) IN, UP AND UNDER.

ANNOUNCER: Welcome to the Rappin' Robert Rap Repertory.

MUSIC: THEME UP, HOLD FOR FIVE SECONDS, THEN UNDER AND (FADE) OUT

ANNOUNCER: This is Rappin' Robert ready to bring you the next full hour right from the top of
             the charts. And starting with number one on the rack, Kitchen Sink and his new
             hit ...

MUSIC: SNEAK IN AND HOLD UNDER

ANNOUNCER: . . . that's right, you know it, Kitchen Sink with "Dirty Dishes."

MUSIC: UP FAST, HOLD TO FINISH, AND OUT.

The Studio

The physical limitations of a radio studio can affect the writer's purposes. Try to determine if the studio is large enough and has the equipment necessary to perform your script properly. Most professional studios are acoustically satisfactory, but some are not, and you need to know whether it is possible to achieve the sensitivity of sound required by your script. Although many music stations do not have a separate studio, performing all of their air work in the control room, some stations have separate studios for panel, interview, and other shows. The studio will contain microphones and other equipment necessary for both recorded and live production.

The Control Room

The control room is the center of operations, where all of the sound—talk, music, effects—are coordinated. All the inputs are carefully mixed by the engineer at the control board

and sent out to the listener. The control board regulates the volume of output from all sources and can fade or blend the sound or any one or combination of inputs. The control room usually contains CD, tape, cartridge machines, and, still in some, turntables for playing prerecorded material, and microphones for the deejays and announcers. Computers have become an integral component of most control rooms. They access and broadcast an array of programming material, such as jingles, promos, IDs, commercials, and PSAs. Many stations have computerized music libraries where an operator calls up a scheduled song on the computer monitor and broadcasts it when ready. Other programming elements such as commercial logs and format clocks may also be made readily available to deejays and announcers through a control room computer. The control room also contains equipment for recording material, sometimes an entire program, for later broadcast.

More Radio Terminology

Some key terms the writer should know that frequently appear in the production script (several of those below have been noted earlier): **bed** (a music base), **SFX** (sound effects), **cart** (cartridge, containing the prerecorded material to be played), **ATR** (audio tape recorder, serving the same function as the cart, but less often), **fade** (slowly lower or raise volume), **crossfade** (fade out of one element while introducing another), **ET** (electrical transcription), **live tag** (postscript to recorded music), **out cue** (last words in a line of recorded copy), **punch** (emphasis or stress), **segue** (uninterrupted flow from one element to another), **stinger/button** (music or sound effect finale), **voiceover** (talk over sound), **RT** (reel type), **CD** (compact audio disc), and **mic** (microphone).

Producer, professor, and author of *The Radio Station*, Michael Keith, offers the following advice to radio writers from the vantage point of the production team:

▶ understand the unique nature of the medium to create pictures with the mind.

▶ be familiar (or get familiar) with the audience you are attempting to address.

▶ know, too, what you are talking about: the product.

▶ reflect the established mechanics and criteria or copy layout and format.

▶ observe proper punctuation, grammar, and spelling.

▶ time the copy to fit the production elements.

▶ write in plain English and avoid elaborate sentence construction.

▶ use phonetic spelling where necessary.

▶ avoid excessive numbers and complex directions.

▶ be creative.

Internet Interactive Technique

A key addition of the Internet to the media mix is its ability to be interactive—between the presenter (writer) and the receptor (the audience). Interactivity suggests an exploitation of the Internet's multimedia potentials: not only a mix of audio and video, but also live action, controlled sound, still photographs, charts and graphs, text, and animation. For the first time, the writer can combine virtually all media techniques in an interactive way for a mass audience. This not only permits but also requires a new set of writing concepts, approaches, and techniques. Interactivity requires a larger number of variables in writing. The writer presents information, ideas, and emotional stimulation in the form of links; one item is linked to the next according to the desire of the individual members of the audience on an individual basis, but not in a point-by-point logical or, as in previous media, linear fashion.

The writer has to prepare a virtually unlimited series of options for the audience, specific choices that the audience might make that will, in turn, affect the next item in the chain. More than in other media, the writer must both anticipate what individual audience members' reactions and counter reactions will be and design a writing product that will guide the audience toward those choices that the writer thinks will achieve the purpose of the program or script.

Instead of presenting material in the traditional manner of step-by-step logical linear progression, the writer for cyberspace is in the center of a creative universe, able to reach out into an infinity of space and time to integrate a limitless number and variety of ideas, concepts, impressions, information, aural and visual materials, and emotional and intellectual stimuli in any form, placement, and mixture, in an interactive or non-interactive mode.

Both the writer and the receptor must have complete flexibility. The computer permits the receptor to mix and match, in effect making choices, even at random, from the totality of what has been presented, from any bit of material no matter where and when and how presented. Thus, because the Internet process itself dominates the content, Marshall McLuhan's dictum that "the medium is the message" takes on added meaning.

Approach

The word "hypertext" is frequently associated with creating material—writing—for the Internet. In simple terms, hypertext refers to the ability to convey our thoughts closer to the way we think—many ideas, many viewpoints rushing through our minds almost simultaneously, rather than in the logical linear fashion that we put them down on paper after we have properly organized them to make them understandable through the linear mode of communication. The Internet's hypertext, or interactive, ability means we can present a conglomeration of stimuli virtually at once, with a variety of multimedia providing the receptor—the audience—with a multitude of information and ideas about any and all things. In this respect, the Internet does for audio-visual-print communication what Picasso's cubism did for painting. As some Picasso interpreters have stated, the early

twentieth century developments in communication and transportation no longer restricted the view of an object to a single plane, but the transcending of space and time made it possible to see an object from many viewpoints virtually at the same time. This is what the Internet has done for communication: Hypertext interactivity enables the receptor to receive and also to originate many varied stimuli from a virtually unrestricted space-time continuum with many varied sources virtually at the same time.

The writer of the drama, for example, can provide the receptor with the opportunity to see the unfolding of the plot through the eyes of any or all characters, with the plot concomitantly developing by virtue of the characters' own psyches, backgrounds, and motivations. The audience can pick and choose in any combination. For example, in a program on the 2001 terrorist attacks on the World Trade Center and the Pentagon, the Internet audience could branch off from the linear narrative at any time to obtain information on the al Qaeda papers warning of an attack that the Clinton administration turned over to the Bush administration, photos and narration about the known attackers, including their families and homes, documents revealing what the CIA, FBI, and National Security Agency knew and didn't know, background on Osama bin Laden and his Afghanistan headquarters—in other words, selecting at any moment additional in-depth information on any of the principals, events, or sites, visual information about any of the subjects, explanations of any legal term or procedure, and on and on. The receptor is also the creator, in the center of a universe of available stimuli—or to use an Internet term, in the center of a giant, unending Web—who can reach out anywhere in that Web, either specifically or at random, for whatever stimuli may be desired or available.

Process

This book does not intend to present information on writing a software program, which is essentially what the writer of basic material for the computer does, or for creating a web site. Our concern is essentially the adapting of one's writing techniques for traditional television, radio and film to writing those formats for cyberspace. Some media experts believe that in another decade, if not sooner, many if not most of the programs now delivered through receivers of audio and video (whether a radio or television set) will be received through one's computer (or a computerized mini-receiver such as a blueberry, blackberry or boysenberry).

Although different writers use different processes to prepare material for the Internet, one frequently used approach is to create a chart of sequence boxes, like the outline for a term paper. But instead of moving from box to box or step one to step two in a logical linear fashion, as soon as one item is put in a box, all possible links to material pertaining to that item are linked by arrows from that box to appropriate additional boxes. In turn, further possible links are then designated. What develops is a gigantic web, with arrows crisscrossing each other, designating the links (and information or stimuli) needed to create the whole. Each link can be of any combination of traditional media, including print, charts and graphs, visual movement, audio, photographs, talking heads, and drawings. For most writers, these options loom like a large burden, especially for those of us who can

create words, but can't create pictures. But available software permits you to insert any kind of visual materials, music, drawings, audio, and other non-print stimuli, in monochrome or color, at any place in any form. Further, you can provide instructions to the receptor at any stage—go forward, go back, click here for a link, click for a visual, and so on.

Although the creative writer interested in the content of a given format might have difficulty determining the mechanical requirements for full receptor interactivity—that is, directions for using the mouse for clicking or pointing at designated icons to recall material, pop-up boxes, or sidebars, scroll, rollover items, and other procedures—it is necessary to learn how to incorporate the technical directions as part of the interactive writer-receptor process. This will help you present the different levels of stimuli to the receptor. First, most obviously, is the material that appears forthrightly on the computer screen. A second level of stimuli appears as the receptor moves the mouse at random or follows your directions to move the mouse over the so-called "hot" areas of the screen that reveal additional stimuli. The third level is reached when the receptor makes a conscious choice of the alternatives you provide, by clicking the mouse on a specific icon to deliberately seek out interactive stimuli. The writer, by understanding this process, retains control of the receptor's experience, even while providing the receptor with the flexibility of going beyond what appears to be obvious on the screen to seek out stimuli that is of personal interest and importance.

Technique

The special considerations that went into writing for the new television medium over a half century ago, compared with writing for the cinema at that time, are almost the same as those of writing for the new cyberspace medium today. Foremost is the limited viewing area of the computer monitor compared with the average TV screen. The viewing area is small, usually only a part of the monitor screen. The term "streaming video" is applied to the carriage of the moving visual images. Lack of bandwidth—and therefore lack of definition—is another key factor. Poor resolution requires an avoidance of wide shots with a number of characters, and of night scenes or scenes in dark or dimly lit settings. Sometimes additional light sources will provide better definition, and electronic adjustment sometimes helps. The still limited bandwidth and the frame rate for Internet transmission suggests a limiting of movement, of the number of people shown, and of the number of sound sources used. A further consideration is the attention span of the person sitting at the computer screen. It generally is much shorter than that of a person sitting in an easy chair in front of a large-screen TV set. Therefore, scenes and the program as a whole should be shorter than what one would write for television and, most certainly, for films. Conversely, the "do's" as differentiated from the "don'ts" suggest that you should concentrate on close-ups where possible, on sharp, crisp dialogue, on minimal movement of the performers, on a slow pace of the script, on conciseness, and on a clear beginning and end.

Video compression causes text with moving images in the background to lose detail. This lack of detail or, as it appears, lack of depth on the computer screen limits the kinds of

background action or information and transitions that have become accepted on television. For example, you may have a dramatic scene with a bank guard in the foreground and a bank robber waving a gun at a teller in the background. In films and on television that would easily work. But on the Internet the background figures would appear to be somewhat fuzzy. Technology is slowly improving this situation. Further, the Internet does not yet adapt well to standard TV special effects, such as wipes and dissolves. Therefore, using them to create a transition from one place to another or for a passage of time sometimes may leave the viewer wondering where they are and what the sequence of events is. The small video frame may also give an impression of jerkiness of motion. But these are technical problems, and by the time you are reading this, many of them may have already been solved, given the rapid advances in computer technology. Just as writers did for early television, focus on the positive aspects of the Internet, principally its interactive ability.

Application and Review

Television

1   Write a short sequence in which you use the following camera movements: dolly-in and dolly-out, pan, follow, boom, and zoom.

2   Write a short sequence in which you indicate the following shots: CU, M2S, LS, FS, XLS, XCU.

3   Write a short sequence in which you designate the following effects: fade-in and fade-out, dissolve, wipe, and key.

Radio

1   Write a short sequence in which you use all five microphone positions: on mic, off mic, fading on, fading off, and behind obstructions.

2   Write one or more short sequences in which you use sound effects to establish locale or setting, direct the audience's attention by emphasizing a particular sound, establish time, establish mood, show an entrance or exit, and create a transition.

3   Write one or more short sequences in which you use music as a bridge, as a sound effect, and to establish background and mood.

4   Write a short script in which you use the following techniques: segue, cross-fade, blending, cutting or switching, and fade-in or fade-out.

Internet

Take one of the sequences you wrote for the exercises above and adapt it for the Internet by including at least one link.

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TO

Marlowe

who will soon carry the torch