
SOUND AND SOUND EFFECTS APPLICATION FOR THE THEATRE: A RETROSPECTIVE AND INTROSPECTIVE ANALYSIS

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ABSTRACT

Sound and sound effects, whether in the primordial nature or in the contemporary have always served the immediate and practical needs of the theatre. As a matter of fact, no production thrives without some level of auditory stimuli. Investigations have shown that the inherent and practical messages embedded in the play are communicated through the actions, inactions and vocal projection of the actors, without which meanings may be distorted and lost. The study also observed that the sophistication in sound application in the theatre, brought about by technological advancement has added another impetus and improved the quality of sound application in stage productions. It is however sad to note that some theatre houses and sound designers in Nigeria are yet to embrace this recent technological innovations. The paper therefore concludes that for these technological innovations in the area of sound and sound effects application to be tapped and harnessed, sophisticated sound and sound effects equipment should be procured and sound designers must explore the unlimited possibilities of the use of computer in sound design and application.

Key words: sound, sound effects and theatre

INTRODUCTION

Theatre is a world of sound and the use of sound and sound effects aid in stage communication. It is an auditory art. This implies that "communication and meaning can be expressed in the theatrical medium through sounds", (Charles Nwadigwe 2008: 51). It is therefore logical to say that no production thrives on stage without one form of sound or the other. Though one of the elements of technical theatre production, however, it was only recently conceived and accepted as a theatre component that is worth studying on its own.

This is captured succinctly in the words of Oscar G. Brockett (1992: 415) when he says that "sound is being increasingly acknowledged as an area worthy of separate recognition, especially since many theatres now amplify the actors' voices in every production in addition to using a complex sound score to support the other aspects of production". This implies that sound and sound effects were studied as a component part of stage property and light. Sound in the theatre has gained popularity and reliability as interpretative and communicative element that is available to the director for achieving some conceptual and thematic situations. Because of the importance attached to sound and sound effects in productions, the sound designer meets more challenges in satisfying the expectations of directors, the audience and the complexity of the theatrical situations that keep varying from one production to another, (Molinta Enendu 2004: 160). In another development, Michael Gillette (2000: 453) encapsulates in his book titled *Theatrical Design and Production* why

there is an increased use of sound (in the theatre). He says thus: One of the important reasons for the increased use of sound is the improvement in sound technology. A second reason stems from the tastes and expectations of the audience and of theatre craftspeople. Almost every member of the contemporary theatre going public, as well as those of us in the theatre, have seen a lot more television and motion pictures than theatre. Our aesthetic expectations have been strongly influenced by what we have seen and heard in these media. For years both television and motion pictures have made very effective use of music and sound effects to focus the audience's attention and reinforce the dominant emotional theme of the material being presented. Higher-quality home and auto stereo systems have raised our sound expectations, too. It seems only natural, then, that carefully designed sound and music should come to be expected in the theatre.

This paper therefore situates sound and sound effects in historical context as it tries to chronicle the application of sound and sound effects in theatre history and its contemporary application. The scope will include – what is sound and sound effect? Sound and sound effects application in the past; sound and sound effects application in the contemporary period and conclusion.

WHAT IS SOUND AND SOUND EFFECT?

Sound and sound effects have been defined in different terms by different scholars in an attempt to simplify its ubiquitous nature. To explain this ubiquitous nature, Parker and Wolf (1996: 324) says that "whether it be familiar music and talk from a radio station, the environmental sounds of an afternoon spent in the park, or background chatter from an unwatched television, we are surrounded by sound". From the above statement, one thing is quite discernable; that sound is part of human existence, and exists both in the natural as well as the artificial.

Sound, according to David Collision's definition:

Is essentially the movement of air in the form of pressure waves radiation from the source at a speed of about 1,130 feet (350 metres) per second. This waves consist of alternate regions of high and low pressure traveling in all directions like a continually sphere. Sound cannot travel in a vacuum because a medium is required on which the pressure waves can act and all solids, liquids and gasses will transmit sound to a greater or lesser degree, (1976: 1).

Put differently, sound is caused by vibrations or pressure waves carried from a source to the ear through a medium (air, liquid or solid), (Nwadiwe 2006: 82).

In a similar definition given by Oren Parker and Craig Wolf (1996: 325), he says that:

Sound can be thought of as pressure waves moving in all directions from the source. As the sound waves move, they diminish in height (loudness or amplitude), but the wavelength itself (frequency) does not change. Sound bounces off some hard surfaces with little absorption, and, if this reflection happens several times before being absorbed, reverberation occurs. Finally, the sound may reach a receptor like our ears.

From the above two definitions, it can be inferred that sound is an elastic wave traveling through air. Ansilov (1966: 57) summarizes it thus:

... the world we live in is immersed in a huge elastic ocean. This is why it is full of sounds. When you clap your hands, a volume of air is rapidly compressed. Because of its elasticity, it expands again at once to compress an adjacent volume of air. This air also tends to expand again and so an invisible wave moves on and on. On reaching your ear, it strikes the ear drum and you feel what we call sound. In short, sound is an elastic wave traveling through air.

This view is also shared by Villchur (1962: 2) when he says that:

Sound travels as a "wave", and hence the transmission is accomplished without displacement of air. This transmission can only take place through the elastic medium, a fact which was finally demonstrated by the classical experiment in which a bell and clapper were placed in an evacuated glass jar. The bell's vibrations were made inaudible, as sound could not be transmitted through the vacuum.

The tiny differences in pressure associated with the waves are experienced as sound by the human ear. If the sound waves are regular, we hear a sound of a definable pitch or 'note', if the sound waves are random we perceive 'noise' (Scot Palmer 2000: 167). Sound is said to include all sound effects, recordings, and electrical enhancements used in the theatre – all sounds, that is, except spoken words and music which have no amplification. From the discussions so far, emphasis has been on sound. Let us therefore shift a little bit and talk about sound effects.

Sound effects can be defined, according to Edwin Wilson's account as:

As any sound produced by mechanical or human means to create for the audience a noise or sound associated with the play being produced. Aside from electronic amplification, various devices have been developed through the years to create these sounds. A wind noise, for example, can be produced by a wooden drum made from slats. The drum is usually 2 or 3 feet in diameter and covered with a muslin cloth. When the drum is turned, by means of a handle, it makes a noise like howling wind. For door slam a miniature door or even a full door in a frame can be placed just offstage and opened and shut, (1991: 386)

Sound effects can also be viewed from the angle of its artificiality since it can not be seen as natural. In the account given by Molinta Enendu (2004: 162), he says that:

These are sound that are not existent either in nature or ordinarily made by man or animal. They are created using electronic, mechanical or acoustic instruments, or, in a combination of these. These unrealistic sound and effects could be created using equalizers, filters, synthesizers, echo, and reverberation to achieve chimerical and varying worlds of fantastical sounds. The appearances of gods, the meeting of witches, the domain of the spirits and ancestors, and in most cases, sound to support abstract characters and situations like death, heaven, hell, devil, monsters, dreams, hallucinations, fantasy and chimerical worlds.

SOUND AND SOUND EFFECTS APPLICATION IN THE PAST

Historically speaking, and from the drama of savage ritual to the sound track of the modern movies, these auditory elements have lent powerful credence to the creation of atmosphere, (Ekweariri Chidiebere 2008: 23). From the study of ancient drama, history has it that the application of sound and sound effects started from the Greek theatre. However, Onookome Okome (1994: 83-83) asserts that:

In western theatres, sound as an aspect of ... reaching out to the audiences, especially of the spirit need of Greeks assembled at the acropolis, was obviously taken for granted.... There is the mention of the special mask worn by actors in this theatre which amplified sound for the benefit of the audience – the proverbial spectator at the back of the auditorium. The mask-amplification of sound, to say the least, was one aspect of the creative use of sound manifestation in Greek theatre of the 5th century B. C.

Music was also at the soul of Greek life and of their drama too. Oscar Brockett (1991: 25) says that "music was an integral part of Greek drama... music accompanied the passages of recitatives and was an inseparable part of the choral odes". Music, sacred, (as expressed in the Dionysian displays) and mundane, internally and externally generated, featured prominently in Greek dramas. The chorus, the classic 'commentary-box' of Greek drama, made its commentaries in sung dialogue. This chorus is found in all of Aeschylus, Sophocles and Euripides' plays. The Roman theatre, did not value music, but since their drama and theatre were patterned after the Greek theatre, sound such as musical accomplishment was also used.

During the Medieval period, music was prominent and was played until the actors were ready to go on stage. According to Oscar Brockett (1977: 28) in *History of the Theatre*, he points out that:

... during the plays, a chorus of angels (composed of choir boys and usually visible in the Heaven mansions) sang hymns. Angels played fanfares and trumpets to introduce God's proclamations, and the transmissions between scenes might be bridged with instrumental or vocal music. Most plays included a number of songs ranging from popular secular tunes sung by individual actors to religious hymns sung by groups.

The Italian renaissance period saw the simulation of sound of thunder and wind while music was played during scene shift. The Oriental world is not left out. Imaikop Orok (1994: 33) says that: In Chinese theatrical productions, music is an integral part of every performance, providing atmospheric background. Most of the passages are sung and in this way timing of movements are controlled and the whole performance welded into a rhythmic whole. The Noh performance of the Japanese depends mostly on controlled movements which are executed by orchestral music.

Sound in the traditional African theatre is not different from how it was used in other traditional European and Oriental world. Wole Soyinka's book, *Myth, Literature and the*

African World (1976) provides one of the most fecund sources of the use of sound and music in ritual/secular performance in Nigeria. He says, with emphasis on Yoruba theatre that: Tragedy in Yoruba drama is the anguish of this severance, the fragmentation of essence from self. Its music is the stricken cry of man's blind soul as he flounders in the void and clashes through a deep spirituality and cosmic reflection. Tragic music is an echo from the void: the celebrant speaks, sings and dances in authentic archetypal images from within the abyss. All understand and respond, for it is the language of the world, (145).

The use of sound effects in the theatre started during the Renaissance theatre. As a matter of fact, sound effects have always been a part of the theatre. It began in the theatre from background clapping, drumming, vocalizations, and allied lyrical arts that add meaning to the theatrical event. In the words of Milly Barranger (1995: 298): In the earliest times, music (pipes, drums, lyres), choral chanting, and actors' voices provided the chief sound effects. Until the use of disc recordings in the 1950s, all sound effects in the theatre were produced live offstage; many – such as bells, door slams, and gunfire – still are. In Elizabethan times, 'thunder machine' (a series of wooden troughs for cannonballs to rumble down) were invented to stimulate tremendous storms, such as the one required in *King Lear*; cannons were fired to convince audiences of fierce battles taking place.

In a similar view shared by Philip Hill (1971: 495), he chronicles the evolution of sound and sound effects in the theatre and their uses. He postulates that: Before the development of high fidelity electronic amplification equipment, sound in the theatre was almost entirely a function of the property crew. Every theatre had a 'thunder sheet' – a large piece of metal sheet hung in the flies – which a prop man would rattle when thunder was called for. Every theatre had rumble carts, crash boxes, door-slam devices, and numerous other special pieces of equipment for producing the sound effects which might be called for in a wide variety of plays.

Frank M. Whiting (1961: 297) has a rather vivid account of how sound and sound effects were used in their traditional form before the advent of sound reinforcement and application systems. He states thus: In the expense account of the passion play at Mons in 1501 we find items for two large sheets of bronze and two big copper tubs that were used to make thunder. Included in the script is the delightful production note: "Remind those who work the secrets (machinery) of the thunder barrels to do what is assigned to them by following their instruction slips and let them not forget to stop when God says, 'cease and let tranquility reign'...".

SOUND AND SOUND EFFECTS APPLICATION IN THE CONTEMPORARY PERIOD

Sound and sound effects in the theatre have changed substantially since the old bad days. Instead of being an afterthought, they are now frequently an integral part of the production concept. Sound however, became a theatre art with stereo equipment and related amplification: blending and turning equipment. This "may be partly because the 'state of the art' of electronic equipment necessary to provide a resonant amplified sound throughout the

theatre house with good fidelity has only recently come into being" (Hubert, Heffner 1973: 558). But a sound that could be shaped dimensionally and controlled in pure, correct tones was not possible until very recently. This is due to the sophistication in sound equipment technology.

Sound and sound effects which used to be ephemeral can now be recorded and reproduced using technological equipment. Recent advances in digital audio and computer-based recording and editing systems allow the creation of almost any real or imagined effect. The whole business of play production is an experience in sound as well as in sight, and a careful exploration and exploitation of the potentials of the use of sound and sound effects in play production can lead to the realization of 'total theatre' (Odiri Solomon 1994: 47).

Sound in the theatre, right from its primordial application to the present, has always been explained within a named categorization. These include the human voice, music and sound effects. The human voice is the primary source of sound in play production. It is the pivot around which all sounds and sound effects revolve in the theatre. In most cases the initiation of an on-or off stage sound effect arises from what an actor says or does. The vocal manipulation or disposition of an actor springs from out of his "characterization, motivation, and stage energy (Albright, William and Mitchell 1955: 376) or stage presence, all of which are his response to the play or production blueprint. It is the primary obligation of the actor to be vocal and able to be heard. Through the voice of the actor or dialogue, actors are able to interpret their roles the way the playwright had designed them. It is also through this means that characters met themselves during productions. Since the audience members come to see and hear the production, it is right therefore to say that without dialogue and vocal projection, the aim of educating the audience through relaxation will be defeated.

Apart from human voice and dialogue, other sounds are also used in the theatre. This agrees with Molinta Enendu's statement that: Sound, often described as a physiological sensation perceptible to the human ear, by analysis of function, is one of the (audio) elements of contemporary theatre... productions. Sound by this definition refers to all sound that is part of the theatre communication apart from the voice of the performers, (2004: 160).

Music is another important auditory stimulus used in the theatre. Its importance in theatre production is captured in the words of Derek Bowskill (1979: 315) when he opines that: ... its functional values can not be over emphasized. However, music can help an audience retain the mood, meaning and atmosphere of the play long after the last word has been spoken. It can quietly pursue their thoughts and feelings until they are outside the theatre. Its application to theatrical production can be functional, supportive or decorative. However, the use of music in a nonmusical production has historically been limited to preshow, intermission and post show instrumentals that create an aural atmosphere selected to put the audience in a proper mood for the play. The view of Eduard Hanslick (1971: 490) in relation to sound and its meaning also applies to the theatre. He recounts that there are two contesting schools of thoughts on the traditional philosophy of music, the "Autonomy" and

Heteronomy". While autonomy maintains that music is primarily sounds in motion with no possible reference to anything outside of it, heteronomy posits that music is more than mere sounds in motions, and does include ideas, emotions, stories and even philosophies of life. These two schools of thoughts contentions are also relevant in the theatre because the use of music in the theatre involves motion, expression of ideas, feelings, emotions and stories.

Music has the power to impinge on the sensitivity of the audience from the moment they arrive at the theatre to the time the performance actually begins. This type of music is meant is meant or created to put the audience in a receptive frame of mind in anticipation of the drama that will unfold later. According to Bertolt Brecht as quoted by Iji, M (1994: 10) music in the theatre can be classified under two broad categories in terms of emphasis; he refers to these: as the 'dramatic opera' (traditional theatre) and 'epic opera' (non-Aristotelian theatre). Both are utilitarian in orientation. According to his categorization, while the dramatic opera music dishes up, heightens and proclaims the text, as well as illustrates and paints psychological situations, the epic opera music communicates, sets forth, takes the text for granted, and takes a position which defines the audience attitude. However, from whichever angle one looks at music, a well articulated music in theatre production helps in defining the theme and perception of the play in totality.

Sound is also categorized in terms of sound effects. It is a kind of sound that is used to indicate the action, to establish the locale; to indicate a passage of time or transition of action, and to establish and reinforce character. It is a language of action. Sound effects are used to suggest several things in performance. In the words of Nisbett (1979: 289), he argues that:

Dramatic sound effect is synonymous with 'heightened reality' because it presents a mental but vivid picture of 'the distilled, essential quality of the location of action'. Indeed, the aim of theatrical sound is 'not to, in general, recreate actuality but to suggest it. Characteristically, background sound effects in a performance may be categorized as realistic, evocative, symbolic, conventionalized, and impressionistic depending on its usage.

Sound effect in the theatre can be made by recording the real sound from the source, or by recording a noise effect which sounds like the real thing and finally, by taping the sound from a record of the effect. However, it is pertinent to state at this juncture that sound effects, though predominantly used in recorded form, there are some that are more realistic when produced live. David Collison (89) captures it thus: Certain sounds will always be more convincingly produced 'live' or manually. For various reasons either the microphone is unable to capture the essence of the sound, or the loudspeaker is incapable of reproducing it. For example, a pistol shot is always much more effective with a blank cartridge in a real gun. Even a good thwack on a leather chair seat with a cane can have more immediacy than a recorded gun shot. And door bells, phone bells, door chimes and door knockers are usually more easily done live. Glass and crockery crashes are also better with the real thing.

Sound and sound effects can be recorded with tapes, reel-to-reel systems, disc player, turntable, memory cards in mobile phones, CD plates, and recently the introduction of digital recording.

In the contemporary theatre practice, the use of sound and sound effects has been revolutionized. Hi-tech and digital equipment are becoming of the increase. The advantages of digital recording are significant increase in the accuracy or fidelity of the recording and a reduction in the background noise and tape hiss. According to Scott, Palmer (171): Digital sound therefore, offers many advantages over analogue signals. It has a better signal-to-noise ratio, can offer a greater dynamic range and does not suffer from the same amount of distortion or deterioration in replay or when copied. Digital sound may also be accessed more quickly and with greater precision.

This new technology has offered a limitless dimension to the application of sound and sound effects in the theatre. Generation and regeneration of sound and music is now a feature of sampler systems and digital audio systems; and digital audio workstations, based on IBM – compatible or Macintosh computer platforms, which allows for sophisticated editing. This has helped to sharpen the creative ingenuity of the sound designer, who has finally being accepted a member of a theatre team. These are the product and marvels of sound technology, which is within this century, one of the fastest growth areas in contemporary theatre technology. Of particular reference is where digital and disc recording and replay systems have the signals converted to discrete numbers that are stored as binary information. However, the advent of this digital technology has not made the other recording devices redundant. That is exactly what Michael Gillette meant when he states that:

The development of CD technology in the early 1980s, with its digital signal, offered significantly improved sound quality. The advent and continuing evolution of inexpensive and highly effective computer-based sound editing programs provided sound designers with digital recording, editing, and playback capabilities. Together they signal the end of the tape deck's reign. However, not everyone has jumped on the digital bandwagon. Tape is still a viable technology for theatrical sound production. Some sound designers prefer what they refer to as the 'softer' sound produced by tape. Some like the 'hand on' editing style that is required by recording tape. Some production organizations simply haven't had the money required to 'make the switch'. For whatever reasons, tape is still used in many theatres.

CONCLUSION

Sound and sound effects, whether in the primordial nature or in the contemporary have always served the immediate and practical needs of the theatre. Productions can only be meaningful when actions are heard and seen. This implies that audience members not only come to see the performance, they also come to hear the show. Sound, either as the voice of the performer, music playing in the background or as sound effects, help in this audibility function. The improvement and sophistication in recording and editing equipment has also improved the quality of sound and sound effects applications in the theatre. With this latest development, every conceivable sound and sound effect is now available in any format;

either on tape, disc player, CD plates etc. Moreover, the burden of having to carry so many tapes and CD plates during productions has been made simpler with the introduction of flash drive. With this device, sound and sound effects of different dimensions and categories can be stored and played at will with the computer. In most western countries, theatres have been computerized, and most sound effects are generated from the computer. But ironically, the case is different in our Nigerian theatres. The computerization of our theatres has become necessary, especially, now that the world has become a global village. This will help to improve the quality of sound and sound effects applications in our theatres. It is a known fact that sound designers are creative and imaginative, but if they must improve in their creative imagination, they must explore the unlimited possibilities of the use of computer in sound design and application.

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