

PERCEPTION MODES AND THEORIES: EFFECTS ON VISUAL, AURAL AND TEMPORAL (TIME) ELEMENTS OF THEATRE DESIGN

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ABSTRACT

This paper examines the modes and selected theories of perception that affect visual, aural and temporal experiences in stage production. The study equates the Context theory of perception, which emphasizes the strength of whole percepts over parts to the theatre experience, where numerous artistic and technical forms function together for a total effect within a cultural context. The study also examines the Discrimination theory in which, perception is tied to exposure and the state of mind, illustrating the discourse using space, light, sound and time, which are essential elements of theatrical design conception, expression and appreciation.

INTRODUCTION

The perceptive acts of seeing, hearing, touching, tasting and smelling are to many people normal everyday experiences. The co-ordination of these perceptive senses follows complex processes, which scientists are still studying. It is complex enough to study one mode of perception. However, sometimes, more than one sense is needed to mobilize a thought process and to crystallize meaning in a given situation. The total perceptive experience is a summation of experiences from all the organs. At the end, it might be difficult to say which specific perceptual organ was responsible for the total experience.

The impression an individual gets on perceiving an object is a product of both momentary and collective experiences over a period. For instance, one's momentary perception of a snake interacts with the already existing knowledge of the potential behaviour of a snake to enact an impression and a reaction from the perceiver. Similarly, the presentation of ideas on stage also taps from both the momentary and the cumulative experience of the perceiving audience. Experience acquired and filed away in the memory are useful both in the creation and in the appreciation of design. In many abstract and semi abstract expressions, the designer often relies on the senses of his audience. In rendering a landscape for stage scenery, for instance, a designer could use basic design elements in an abstract composition and would rely on the senses of the audience to fill-in the missing details mentally. In addition to this, designers rely on the actors' lines, which may give clues to design details.

Though the processes of perception are numerous and complex, man as perceiver has so perfected the usage of the sensory organs into reflex processes that are applied in everyday situations. Like in many other disciplines, one needs to possess and engage the necessary senses of perception in the arts of theatre to derive full benefits from its numerous potentialities. Theatre art both as recreation and academic discipline is largely an audio-visual art form and, therefore, taxes several perceptual organs and processes. Specifically, this paper is set to examine two theories of perception – the Context and Discrimination theories seen to be relevant to theatre design conceptualization, expression and appreciation. Moreover, the paper analyzes ways by which the theatre designer perceives and manages his workspace; how the designer manipulates the perception of sound, light and the other elements of scenery to engage the audience's aural and visual sensibilities and to achieve a successful performance.

PROCESSES OF PERCEPTION

In simple terms, perception refers to the process whereby knowledge is obtained through the human senses. Typically, sensory stimulation, in the process of perception, is translated into organized experience. In trying to explain the complex processes of perception, several theories have been developed, two of which are outstanding in this regard, namely, the Context theory, also known as the Associative theory, and the Discrimination or Exposure theory.

The Context Theory

Psychologists have categorized the perceptual experience as core percepts and the context. The sensory core of perception is explained to be that, which in familiar perception is adequate by itself for the identification of the stimulus object (Britannica 1965). Examples of core percepts are sound and light rays, which, quite often, are not sufficient to constitute the complete perception. A context is usually required for complete identification of the perceived core object. This can be illustrated again using sound, which is an auditory signal. An isolated drum sound may not make much meaning. But, if the sound of the drum is perceived together with the vision of the drummer (and possibly performers), the panoramic visual context accruing to the auditory core provides greater specificity of meaning and further completes the perceptual process. The scenario could then be described as a performance with a specific name, say, Ekpo(Ibibio) , Atilogu(Igbo) , Eyo(Yoruba) (all Nigerian cultures) or any other performance or scenarios from other cultures as the case may be. This is the context theory where the core percept is synthesized with the visual context to give a clearer meaning.

The context theory, first named by Edward B. Titchner, an American psychologist in 1909 and supported by the Gestalt theorists of the 20th Century, proposes that the whole (Gestalten) is more important and makes clearer meaning than the component parts (Britannica 1993). Runkle illustrates this theory using the apple whose shape, colour, texture, taste, fragrance and other inherent properties help reveal the object as it really is. Runkle, in his exposition of what he calls 'naïve realism' explains this theory further:

The change that occurs in our sense organs (after a multiple perceptual experience) ... take place in order that we may become aware of the external world just as it exists. Things are not perceived or affected by our perception of them; they are simply revealed as they really are" (17 – 18).

The context theory is important to the artist because it provides a mediating point between perception as a phenomenon and the arts of theatre. Like the total perceptual experience, a theatrical performance consists of component parts – performance venue, actors, props, lighting, sound, scenery and the audience. Each component may not make a coherent meaning by itself but a combination gives a greater specificity of meaning. Theatre depends on the perceptual senses of the audience to complete the communication process. The cumulative visual and audio disposition of the audience promotes understanding and articulation of meaning in a given performance.

The Discrimination Theory

This theory of perception proposes that there must be a discriminative reaction to objects or situations to show that perception is taking place. One's reaction in discrimination is tilted towards preferences and applications within a given culture. In other words, one's culture and exposure determine what one prefers or imbibes on perception (Britannica 1965). Based on this theory it could be said that perception, like culture, is a product of learned relationships. In theatre, for instance, the audience perceives non-verbal and verbal communication cues in the context of their culture(s). Percepts can imply conflicting meanings based on cultural rooting. Matsumoto aptly illustrates cultural differences in communication cues:

Suppose you are having a conversation with a person from a culture different from yours. While you are talking to this person you notice that she does not really make eye contact with you when she speaks. From your cultural background you may interpret

that she does not feel very positive about you or your interaction. But she may come from a culture where direct gazing is discouraged or is even a sign of arrogance or slight. She may actually be avoiding eye contact not because of any negative feeling, but because of politeness to you! (7).

Tubbs and Moss, quoting Cherry (1971) cite another instance to illustrate possible cultural biases or alignments: "To Westerners, 'the reds' conjures up images of blood, fire, fierceness... but the Russian translation Krasnyi has a different 'aura'... beautiful, exquisite, pure, etc." (406). Users of communication symbols must therefore organize the symbols to suit the receiving environment. This explains why theatre directors have to ensure that performances suit the cultural environment of the target audience. Through exposure, man has learnt to compare, differentiate and discriminate. These potentialities, according to Runkle (205), are signs of rationality. Having learnt the act of discrimination and differentiation, a rational human being, for instance, would prefer to live in a neat, rather than dirty environment. This discrimination in choice is evidence of perception. Through the use of senses and through learned associations, humans have become aware of what is 'good' and 'bad'. This discrimination extends to all spheres of life including the theatre experience. The audience in a theatre show can discriminate between a successful and unsuccessful show based on exposure. For instance, a theatre goer who has witnessed a Shakespearean performance by the Royal Theatre Company would probably not be satisfied if he watches a similar performance by a group of secondary school literature students. Exposure also determines the tilt of interpretation of percepts and, by extension, one's apprehension of reality. The two pictures below illustrate this idea. Plate I is titled "Ambiguous Figure Ground Illusion", while Plate II is Sigmund Freud's "What's on a Man's Mind?"



Figure I: Ambiguous Figure-Ground Illusion
(Source: Britannica 15th Edition, 1993)

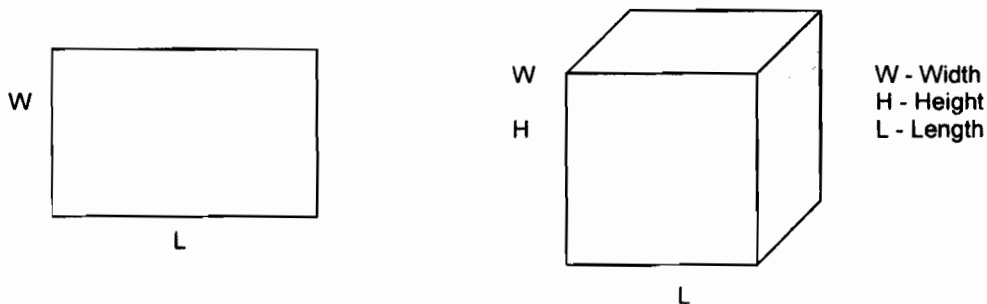


Figure II: "What's on a Man's Mind?"
(Source: <http://www.shop.com>)

While some may see a vase in the first picture, others may see two faces facing each other. Some may see a man's face in the second picture, while others may see a naked woman. The direction taken indicates one's inclination and level of exposure, among other things. This is an illustration that one's perception may be a function of exposure and the state of mind.

The context and exposure theories cannot possibly illustrate exhaustively the entire concept of perception. But, so far, it is assumed that they have sharpened the understanding of the subject of discussion. Based on this, the study of perception can now be related to theatre arts in the visual and auditory contexts. Specifically, perception is examined from the viewpoint of a theatre designer with reference to design elements such as space, form, light, sound and time.

PERCEPTION OF SPACE IN THEATRE DESIGN



Length, width and height, (also known as horizontal, sagittal and vertical planes, respectively) all intersect at right angles and the axis of intersection is usually located within the perceptual ambience of the perceiver, otherwise it would be infinite. The three planes segment space into various sectors. This segmentation makes it possible for percepts to be placed to the right or to the left, in front or behind, above or below.

Three-Dimensional Space: Many scenes in play texts are often opened with vivid descriptions of settings of the play environment. For instance, Dangana's *The Royal Chamber* (2003) opens with a vivid description of the king's chambers; Soyinka's *The Lion and the Jewel* (1963) opens with a detailed description of the village center and Shakespeare specifies the setting of *The Tempest* (Sisson 1960) at the sea and an island. Many more examples abound. Settings may involve the use of scenery pieces, properties and the movement of actors through exists, entrances and levels within the setting. The arrangement of all these visual elements on stage is within three-dimensional space. The design of three-dimensional space involves creating an order of interaction between space and forms. The modeling and fabrication of properties and the assemblage of pieces of scenery are also exercises on the use of forms within space. Numerous units that may be used on stage during theatrical productions are visually perceived as a whole and the visual impact created by the total outlook is a product of unification of percepts. The presence of a chair for instance, does not indicate a complete setting of a living room, except in symbolic, simplistic settings. But a chair, existing with other chairs, table, floor covering, hanging wall units and other dress properties complete the outlook of a sitting room. This collection is now perceived as a living room.

Not all productions call for realistic settings. Some expressionist, non-realistic styles rely on symbolic and sometimes metaphoric use of space (Sarup 49). At such instances, a log of wood may be all that would be needed to set a living room; and actors may play the role of props like, chairs, table and other furniture pieces or scenery units like

Space, an integral element of design, is of great value to the theatre designer. Without space, there is no theatre, and no design. This is because the arts of the theatre exist in space. The architectural structure called theatre is enclosed and actually exists in space. The actors exist in space, together with the props and scenery units. Backdrop designs are also done in space. One can now see the need for a theatre designer to study and understand the space available to him for design.

Space is perceived principally through the sight organ, but it may also be felt. For instance, groping in the dark is a kind of exploration of space. Theatre space is conceived and perceived in terms of two-dimensional and three-dimensional planes. Two-dimensional space consists of length and width, while three-dimensional space consists of length, width and height.

walls, doors and levels. Post-modernists' use of space is marked with experimentations that often break conventional design rules, especially those controlling balances, unity, emphasis and other design principles.

It may sometimes be difficult to demarcate the extent of space in use on stage. At such times, the designer relies on other visual elements like colours or light. The designer may isolate the acting space using a unified colour scheme or may control the beam of lights, which may be used to frame the space in use and to demarcate such an area from darkness.

The effect of the stage setting is not complete until the actors enter the scenery to interact with the three-dimensional space created by the designer. Actors' movement within space defines the function of a given space on stage. The dynamic structure of space under this situation makes the designing and perception of three-dimensional space on stage an interesting experience. A moving actor changes position and, by so doing, alters the view presented to the audience every split second. If the changing movement is rhythmic, as found in certain dance forms, the changing flow is perceived as a unique visual experience, which may be appraised in aesthetic terms by the perceiver. After a performance, the audience may forget the units or fractions of movements, but will likely remember the space structure on which the dance was performed. The stage designer is always saddled with the responsibility of demarcating three-dimensional space areas used by ambulatory figures on stage for both utilitarian and aesthetic functions.

Two-Dimensional Space: This type of space presents different possibilities from those achievable with three-dimensional space because it consists of only length and width. The specific two-dimensional space areas available to the theatre designer are: the backdrops, the flats, the stage floor and other two-dimensional planes on scenery units, properties and costumes which may need painting or decorating to bring out the desired character. Two-dimensional spaces are often flat and plain. They may also be

curved, undulating or textured. The designer needs to create and arrange forms within the space for the desired results. Working on a picture surface that is flat and has no depth, the designer has to decide where to place his forms to create visual impact. Each time the designer makes a mark of any kind, the space is divided into segments that were not there before. This is spatial organization, which, within a two-dimensional frame, calls for two main considerations. First, is the way in which shapes, lines and other elements of design are arranged within space. Second, is the possibility of creating visual depth or the illusion of three-dimensionality on a two-dimensional surface.

In an instance where the designer needs to create, say landscape scenery on a backdrop, it is imperative to have a firm grasp of the methods of indicating the illusion of depth or

perspective required in such landscapes. Such methods of spatial indication include overlapping and positioning, which could be high or low. The designer must also understand linear and atmospheric perspectives. Linear perspective is guided by two phenomena – the first being that forms that are far away from the viewer seem smaller than those that are close-up and the second is that parallel lines receding into a distance seem to converge, until they meet at a point on the horizon where they disappear – a point known as the vanishing point. The laws of atmospheric perspective also hold that forms perceived at a distance are blurred, indistinct and misty. The devices for indicating the illusion of three-dimensional depth on two-dimensional space are summarized by Gilbert and McCarter (1988) as follows:

Seen as Foreground	Seen as Background
Large size	Small size
Set low in the picture	Set high in the picture
Parallel lines far apart	Parallel lines converging
Overlapping other forms	Overlapped by other forms
Sharply defined forms	Blurred forms
Intense colours	Grayed colours
Rough textures	Smooth textures

As indicated earlier, it is not in every case that the designer desires to 'fool the eye' with naturalism and the illusion of three-dimensional space on a two-dimensional surface. Sometimes, the elements could be arranged in an abstract, non-naturalistic style. In a non-representational style, the designer relies on the effects of lines, forms, light and colour in the expression of his ideas and in creating the desired sensation that would make meaning in the context of production.

PERCEPTION OF LIGHT

Even though light exists in space, it could be difficult to explain its existence as a space element because of its non-tangible qualities. Light is a visual element, perceived primarily as a luminary, which makes seeing possible. In other words, light is necessary for vision; no action can take place in the dark. In theatre, lighting is an art, which "consists of putting light where you want and taking it away from where you do not want it" (Woodruff 116). If it is so possible to maneuver vision through light, then it is also possible to achieve a wide range of other illusions. Woodruff further asserts that "light, even more than scenery shapes the action and exerts an hypnotic control over the interest and the emotions of the audience" (116). Wilson, quoting Geddes agrees that "light adds space, depth, mood, mystery, parody, contrast, change of emotion, intimacy and fear to a production" (375). All these functions compliment the central role of lighting, which is to provide visibility.

The maneuverability of light is probably enhanced by its relationship with colour. Light can either introduce colours inherent in its rays to a given area or illuminate a given area to reveal existing colours. Colour is a potent visual stimulus, which may exist within the cool or the warm ranges. The reds and the yellows connote warmth and passion, while the greens and the blues may suggest coolness and restraint. With reference to colour stimulus, Brockett posits: "The actual response that will be elicited by any given colour is difficult to predict for much depends upon the context in which it appears" (558). It is true that colour does affect audiences emotionally, depending on the context of application. The designer should therefore be aware of such potential and should study and understand the cultural context for which a design is meant. The audience's perception of light and its effects on stage based on the context of usage brings to mind the Context Theory of perception. A dim light on stage, for instance, is best

understood either within nighttime context, a romantic scene or any other scenery that calls for serenity. It would be harsh, contrasting and perhaps unrelated to use warm colours/lighting for cool and serene situations. Similarly, the designer who uses dark colours in festive scenes would be violating established norms in many cultures. Dark colours are reminiscent of darkness and mourning circumstances in many cultures. Designers must therefore understand the perceptual context of light and colour before applying this visual core. In addition to all the stage units and production elements that are used within the two and three-dimensional space frame, the theatre designer also relies on the auditory perceptive faculties in design articulation.

SOUND PERCEPTION

Sound, like light, is a non-tangible percept. Collison's definition of sound as "the movement of air in the form of pressure waves radiating from the source..." seems to underline, deliberately the intangible nature of sound (10). Wilson categorizes sound in theatre 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". Note that Wilson, in his definition, uses the term 'sound effects' which he further explains to mean "any sound produced by mechanical or human means to create for the audience a noise or sound associated with the play being produced" (386). Parrot, in his study of theatrical production elements, classifies sound under two broad classes - the simple and the complex. The simple being "the natural voice of the actor or singer" and the complex, consisting of "a delicately blended mixture of the human voice, given added reverberations or other reinforcements and 'naturally' produced effects, taped effects, orchestral instruments, electronic music, or whatever device that money and skill can provide" (97). The above definitions and categorizations indicate that sound in theatre falls into three main categories - the actor's voice, abstract sounds (music included) and realistic noises.

Whichever category theatre sound falls or whatever forms it takes does not alter the primary aims of sound in theatre, which, according to Brockett, are to fulfill two basic functions: to establish mood and style, and to serve as exposition (650). Using musical compositions to establish the mood for a production is common practice. Music is

categorized and qualified as slow, mid-tempo and fast, depending on the perception of the listening audience. These categories are suitable for different moods and, to enhance such moods, the applicable tempo could be played. The use of music to enhance moods has engaged not only artists (Brockett 47), but also scientists who, so far, have spent a lot of energy and time in research trying to establish relationships between music, mood and the mind. Among such scientists is Georgi Lazanov, a Bulgarian psychiatrist who introduced amazing new insights on the use of certain types of classical music for super memory, productivity and relaxation. His compatriot Ivan Barzakov, updated and expanded these techniques of musical perception after emigrating to the United States, incorporating brain research into his optimal learning/relaxation system (Baroque Music for Learning and Relaxation, Vol. 1, 1994). The relationship between music, learning and relaxation of body and mind informs the choice of sequences of musical compositions, tempos, keys and themes for performances in theatres to achieve the desired aural benefit, during and after productions. In scenes portraying festivities, appropriate fast rhythms are usually selected to condition the audience psyche to an "upbeat" mood. Similarly, scenes portraying melancholy are usually preceded and accompanied by slow rhythmic somber sequences that are appropriate for such scenarios.

In each of these experiences, the sound designer relies on both the momentary sound experience from which ever sources, and the accumulation of previous experiences in the memory of the audience. So, in simulating the sound of thunder, the designer, using the thunder sheets or any other device relies on the audiences' cumulative experiences of real life thunder, its effects and significance, to enact the right mood and atmosphere. The sound designer, harnessing the context theory of perception, ensures that the context of usage of sound provides broader clarity to the core percept. The setting, being the context, has to relate with the sound to achieve a strong illusion of reality in the minds of the audience. It follows therefore that there would not be much sense creating the sounds of forest birds outside a forest or pastoral scenery. Ideally, the core sound and the context, being the environment in this case, should be combined for greater specificity of meaning.

Where sound is meant to serve expository functions, the designer must synthesize the sound and the action. Gunshots, broken glass, doorbells, phone call and other expository sounds are supposed to be cued into the proper time scheme and played at the appropriate period in the right pitch, quality, volume and span. The associative theory of perception applies here again because the soundman depends on the co-operation of the audience in relating the sound experience on stage to a real life experience. The volume and suddenness in the perception of sounds like gun shots may momentarily startle but the perceiver derives the meaning (which may be that of fear) from already acquired knowledge of what guns could be used for.

It has already been established that theatre sound consists of different qualities, which must be related to the context of production. In determining the quality and other properties of sound to adopt for a context, one is exercising axiological judgments, thereby applying the discrimination theory of perception whereby qualities are determined based on comparative judgment. The soundman's judgment is crucial because it is expected to appease, at least to a fair degree, the audience's sensibilities. The soundman needs to be sufficiently exposed within given cultural ambiances to be able, on behalf of all concerned, to successfully integrate all the variables of production related to sound to achieve desired effects.

PERCEPTION OF TIME

The perception of space, light and sound cannot be discussed without references to time because forms exist and move in space and time. Time, according to Krapvin, means "a

succession of states and occurrences, the order in which some phenomena follow others and the duration of the processes in which they are involved" (108). In contrast to space, which exists in different dimensions, time in real life exists in one direction: forward, which is from the past to the present and then on to the future. Time is infinite and is irreversible. It cannot flow in an opposite direction except in performative contexts like film and stage production where reverse or alternate time-line can be applied in narratives.

The perception and usage of time in theatre is as essential as in everyday life. As much as time is needed for investments in daily business activities, it is also needed in the articulation of percepts by designers and by audience members in theatrical productions. Timing is of essence in the application of elements like light, sound and movement. For instance, a flash of lightening simulated in theatre is executed within a split second. The application of the accompanying sounds of thunder need occur within a realistic time frame. The sequence of a script or play text, for instance, builds up in one direction, typical of the nature of time, accumulating meaning as the panorama unveils over a period of time. The designer's understanding and interpretation of the temporal demands and details of a play are beneficial to the rendition of a suitable, convincing and acceptable design form.

CONCLUSION

Many designers understand the theatre as a world of aural and visual components, which need to be coordinated for successful productions (Enendu 17). This coordination starts with understanding the dimensions and values of the percepts at the disposal of the designer and the conscious application of these percepts in designs to elicit the right or desired response from audiences in a given cultural environment. Two theories of perception – the Contexts and Discrimination theories have been examined and seen to be relevant to theatre design conceptualization, expression and appreciation. An attempt has been made to relate these theories to the audio, visual and temporal phenomena of space, light, sound and time in theatre production.

The aim of achieving a successful performance must be preceded by practical experimentations in studying and understanding these phenomenal components in their various ramifications. The phenomena of space, sound and time may be constant but the perceptual standpoints informing the application of these phenomena in theatre or any other discipline are dynamic. In this dynamism lies the challenge for the theatre designer, who must explore new dimensions and approaches towards solving design problems.

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