This publication provides suggestions for school and professional level dance program production. The first chapter contains a brief history of twentieth century costumes and settings for dance. The second chapter discusses program planning, auditions, and rehearsal, costume design and construction are covered in the third and fourth chapters. In the fifth chapter, aspects of musical accompaniment are considered, and lighting and color are the subjects of the sixth chapter. Chapter Seven provides guidelines for technical production, including design, organization, scheduling, set-up, rehearsal, the performance, and striking the set after the performance. The eighth chapter deals with publicity efforts. A list of suggested music selections for dance scores is included and ranges from medieval and renaissance pieces to works of modern and jazz composers. (FG)
Errata

Elizabeth R. Hayes served as the editor and coordinator of *A Guide to Dance Production: "on with the show"*: The American Alliance for Health, Physical Education, Recreation and Dance is indeed fortunate to have prominent professionals, such as Ms. Hayes, that will serve as editors on its publications.
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About the Authors
This publication has been written to aid the novitiate teacher who is faced with the many problems involved in producing a dance program. It will also give dance students the knowledge needed to prepare a dance production, to create their dance costumes, to select and record their music, to make their own light plots, and to stage manage and business manage their shows. The material is concerned with solving problems of producing simple school program productions as well as professional productions.

The initial chapter presents, in capsule form, a historical survey of the major developments in twentieth-century dance theatre productions with particular reference to modern dance. As this chapter points out, the staging of dance, as well as the type of dances being presented, are in a constant state of flux, reflective of the changing eras they represent. The needs of dance tomorrow will not be the same as the needs of today. In spite of these constant changes, it is hoped that the information provided herein will be sufficiently basic to be of value for some time to come.

Special appreciation is expressed to Ariel Ballif, formerly of the Department of Drama at Yale University and more recently director of Theatre-138 in Salt Lake City, and to Linda Phillips, costumer for the Department of Ballet and Modern Dance at the University of Utah, for valuable suggestions in costume design and construction, to John M. Wilson, Chairman of Dance at the University of Arizona, who gave of his time to read portions of the manuscript and offer helpful comments, and to Ann Matthews, who created the illustrations for the chapters concerning costume.
Chapter I

A Brief History of 20th Century Costumes and Settings for Dance

Elizabeth R. Hayes.

On the day that Isadora Duncan turned her back upon the decadent remnants of nineteenth century ballet with its artificialities and use of elaborate scenery and costumes, she set in motion certain innovations and reforms that helped to reshape the world of dance. Isadora's preference for unshod feet and the free-moving Grecian tunic, her choice of a simple blue curtain against which to perform her dances, directed a trend toward simplicity and functionalism in both costume and setting that has continued, with minor modifications, to this day. While classical ballet persisted in its traditional use of spectacular costumes and scenery, the followers of Isadora, by preference as well as for economic reasons, chose simplicity.
Era of "Natural" Dance

"Natural" dance performances, popular in the 20's, were often staged outdoors. The romantic idea of "dancing-on-the-green", however, posed unexpected problems. An immediate discovery was that the earth was non-resilient. Instead of soaring through space, the leaping dancer found himself shockingly earthbound. Acorns, sticks, and unseen pebbles created precarious landings.

The staging of these performances was simple and unaffected. The natural setting of trees and shrubbery often provided the background. When arboreal settings were lacking, temporary fences and trellises covered with greenery provided an adequate substitute. Costumes were generally adaptations of Isadora's Grecian garb, the colors chosen to contrast and harmonize with the solid green setting. These costumes were primarily made of cheesecloth, silk, crepe, and organza, tinted in rainbow hues, sometimes in several blending tones, a few were tie-dyed to create irregular geometric patterns on the colored silk. Although legs and arms were bare, form-fitting costumes, uncovered by drapery, would have appeared indecent. Indoor lighting for evening performances consisted of glaring floodlights and overheads that were turned on when the dancing commenced and turned off when it ended. Subtleties in outdoor lighting were literally non-existent.

Indoors, the typical settings for most so-called "natural" or "interpretive" dance consisted of a plain curtain of black or neutral color and the indispensable pale blue cyclorama. Further details of setting were left to the audience's imagination. Although settings and special lighting for dance have gradually become increasingly theatrical, the velour curtains and blue cyclorama still constitute the modern dancer's basic scenic equipment.

Slightly antecedent to Isadora, but also her contemporary, was a woman by the name of Loie Fuller. Through merest accident she created a costume that launched her career as a dancer. Its most notable feature was a skirt containing countless yards of material that she billowed and swirled in moving shapes to create apparitions of butterflies, orchids, flames, or whatever the imagination might fancy. But her greatest contribution was her creative experimentation with theatre lighting which was explored to the fullest to intensify her fleeting illusions. It was ampersthat in one effect she used 1,000 amperes of electricity, enough to light a town of thirty thousand.

The harnessing of electricity made possible not only the spectacular lighting effects demanded by Loie Fuller, but it also opened the way, generally, to inventive use of colored light, area lighting, and variations in total intensity to reinforce the changing dramatic moods of the dance. Costume colors could now be modified or changed by means of colored gels.

The draped Grecian tunic eventually shared the stage with costumes that were slightly more form-fitting with straight, circular, or gathered skirts of various lengths, depending upon the needs of the dance. Costumes for men? There were none. Interpretive dancing was strictly a feminine art.

Early Modern Dance

Contemporaneously during the 20's and 30's, Ruth St. Denis and Ted Shawn were moving in a somewhat different direction. The Denishawns created elaborately exotic costumes in keeping with their oriental, Mexican, and American Indian dance themes. Miss Ruth's love for manipulating draperies to dramatic ends became a trademark of her dances. Fokine is rumored to have remarked
facetiously, “All Denishawn dancers should work at Macy’s. They handle cloth so well.” Their staging, though still quite simple, occasionally contained set pieces appropriate to the dance locale.

With the organization of Ted Shawn’s company of all-male dancers in the 30’s, attention was given to costumes for men. Although some of his costumes were abstracted versions of ethnic forms, particularly those of the American Indian, his real innovations came with the use of sportswear, bell-bottomed slacks, or even simple loin cloths to clothe the bodies of his young, athletic dancers.

In Europe, German Expressionist, Mary Wigman, showed a predilection for long-skirted costumes for herself and the members of her all-female dance group. Some of her costumes were made of shimmery metallic cloth, others were designed with capes that could cloak the body or be flourished for dramatic emphasis. Most importantly, however, she reintroduced the use of symbolic masks that depersonalized her performers and added a sense of dramatic mysticism to the dances, thus heightening the emotional impact.

Out of the Denishawn School in America there emerged three important dance figures (Martha Graham, Doris Humphrey, and Charles Weidman) each very divergent in artistic aims and temperament, yet these young artists of the 30’s shared one dream in common. Turning away from oriental exoticism and other eclectic influences, they sought to discover a movement language and expression indigenous to their own native land. Their penetrating search for what was basically American was directly reflected in their use of staging and costume.

Martha Graham, who began her independent career as a solo artist, presented her early dances with a minimal use of theatricalism in keeping with the stark, almost primitive simplicity of her movement. Her costumes, mostly long, straight, loose form-fitting jersey dresses, characterized an era of her career smilingly referred to as her “period of the long woolens.” But the wool jersey had its advantages. It not only clung to the body, smoothly revealing its outlines, but it had sufficient weight to move well when skirts were full and flowing; most of all, it could stretch and give freely with the dancer’s movement. One of Miss Graham’s most remembered early dances was “Lamentation” which she performed inside an uncut piece of wool jersey tubing, exploiting the stretch of the jersey material to extend and magnify the torsions of her own body, wracked by grief. With rare exceptions her costumes of these early days were plain and untheatrical. When she later formed her women’s company, the same type of unadorned, semi-form-fitting costume was adapted to the group. Costumes of the Humphrey-Weidman Company, though less severe and more flattering to the human body than Graham’s, were still simple and unobtrusive.

**Introduction of the Leotard**

It was in the middle 30’s that the dance leotard of cotton or rayon jersey fit made its appearance as a standard for studio attire. It was quickly adopted as the standard costume for dance classes, replacing, once and for all, the romantic drapery and drapery of the Grecian tunic. Unfortunately, the cotton jersey was bulky and heavy, while the rayon jersey (though beautiful for skirts) lacked adequate quality for leotards. The wool jersey, because of its tendency to shrink in water, was impractical.

Early leotards, long or short, which were worn with underpants of the same material, were generally made similar to form-fitting dresses with flared skirts. As the public became more accustomed to their body-revealing qualities, sleeveless
leotards grew in popularity. Tights, however, were still associated primarily with ballet with which young "modern dance reactionaries" were reluctant to become identified. For economic reasons, the leotard, transformed by the addition of overskirts, belts, collars, special sleeves, or decorative appliques, became the basic costume for a majority of high school and college dance productions.

Probably the most important invention of the 20th century in terms of its impact upon dance costume, was the creation of modern stretch fabrics made from synthetic yarns. At last both leotards and tights could be made of washable materials that would hug the body while simultaneously maintaining as much elasticity as the dancer's own skin. Henceforth, tights and leotards were adopted totally as the standard uniform for both ballet and modern dance.

As this attire has gained public acceptance, tights and leotards have gradually become more than just the basic class costume, they have had an increasing influence upon theatre-dance costume as well. For on-stage performances, tights and leotards are often theatricalized by the use of paints, special dyed effects and appliques, or sometimes by cutting and reshaping the costume line itself. "Avant-gardists" at times have even carried the color and design of the leotard over the neck and face by means of paints to give an effect of total coverage. Whatever the treatment, the end result of the use of tights and leotards is generally an uncluttered revelation of body form, emphasizing shape and color as required by proponents of modern abstraction.

Further possibilities in altering the appearance of the leotard have been made by the use of translucent slides of color patterns projected onto white costumes. By such means a leotard can be made to appear varicolored or can be magically and instantaneously transformed to a monochrome or an all-over pattern of polka dots, stripes, and so on.

Other Types of Costumes

Not all costuming for dance has been reduced to the use of tights and leotards, however. Although modern ballets are frequently costumed this way, ballet classicists have continued to embrace the traditional tutu for women, the full-sleeved blouse and jacket with tights for men, and appropriate, but extravagant costumes for character parts. Costumes for ethnic forms generally tend to suggest the cultural source of the dance movement. As for jazz dance, the accepted uniform has become the "T" skirt, stretch pants or levis and tennis shoes.

The Graham Company, no longer a strictly feminine ensemble, had departed radically from its period of early austerity to one of growing theatricalism. Hair and dress ornamentation are now given special attention. Color is generally used. Though tights and leotards are often the basic costume, skirts are frequently worn by the female dancers. One costume, unique to the Graham Company, consists of a circular skirt attached in a normal way to the bodice in back, but wrapped around the legs following the line of the leotard to create a culotte affect in front. The results, while retaining the flowing, feminine quality of a circular skirt, has the added advantage of increasing the visibility of the leg action. Graham is also fond of utilizing capes and long swatches of material. In her dances inspired by Greek mythology, the costumes, particularly those for Miss Graham herself, were designed not only to please the eye, but also to convey symbolic meanings essential to the dance content. Costumes and properties have often become interchangeable as new symbolism and new users have been assigned to them. In one dance, for instance, an impressively long length of silver material was draped about the
dancer as a piece of seductive finery and later became an illusory carrier for her seducer's severed head.

Taking a different tack away from the use of costumes for body-revealing qualities, Alwin Nikolais designs his costumes and properties to magnify and extend the dancer's movement, to create visual illusions of movement. Rather than reinforcing its outlines, he often obliterates the body shape in the process of enlarging the motion. Bodies may be encased in tents of cloth, in jersey tubing ribbed with hula hoops, skirts may be shifted from waist to shoulder to head for purposes of body distortion, or eye arresting wide striped tubular unitards may be designed to exaggerate every undulation of the dancer's body. Costumes and headdresses eliminate all sexual differentiation. The unfamiliar shapes and moving images blend with equally new patterns of light and sound to evoke the magic of his "total theatre". The resulting impact is a visual, kinesthetic, and auditory experience that appeals, not to the intellect, but directly, through the senses, to the emotions.

Development of "pop art" in dance has brought about the use of pedestrian clothing to costume pedestrian movement in non-theatrical settings. It becomes self-evident that costumes for dance will continue to change as purposes and forms of dance evolve in new directions.

Developments in Stage Designs

While these changes were occurring in costumes, new developments were also taking place in the staging of dance. As was previously indicated, the choice of setting for modern dance, generally, had already shifted from a preference for elaborate backdrops, commonly identified with the so-called classical ballets, to a bare stage dressed only with curtains or cyclorama. With the advent of the Humphrey-Weidman touring company upon the American dance scene, the use of level contrasts in dance choreography became universally popularized. The Company regularly carried with them on their tours a series of boxes of varying sizes and shapes that could be arranged in numerous ways to provide both interesting abstract settings and contrasting levels upon which to dance. What these professionals did, others tended to imitate.

Let us turn for a moment to some of the major instigators of new developments in the staging of dance that were to take place during the 30's and 40's. At the turn of the century, Swiss designer Adohe Appia, working in the area of music-drama, envisioned certain concepts that tremendously influenced not only the staging of opera and drama but also of dance. His imagination conceived of theatre design as organized space which he achieved through the use of varying elevations in place of painted backdrops or realistic settings so popular at the time. Thus, with Appia, the space organization itself became the design. For him the actor was the center of interest and it was the function of lighting rather than paint to create a sense of time, space, and locale, and to reveal and vitalize the actor's movements. Appia's concern with space was also apparent in the works of Max Reinhardt. Reinhardt's famous dramatic spectacle, "The Eternal Road," one of his last major productions, employed two series of irregularly shaped levels that led the eye backward and upward from a huge built-out apron into seeming infinity.

Although dance was indirectly affected by concepts and practices of these noted designers for theatre, it was Arch Lauterer who applied Appia's principles directly to dance. Lauterer's first and possibly most startlingly beautiful stage design for dance was created for Hanya Holm's masterpiece "Trend". Its extended apron
and immense stage depth, broken only by ramps and a series of steps across the
width of the stage, made a perfect setting for the dance movement. Miss Holm,
herself a great admirer of Appia, was also steeped in the Wigman concept of
space, not as a vacuum, but as a vital dramatic substance, or even as an invisible
adversary. For her, a stage set was not merely a design to provide contrasting
performance levels to please the eye, it was a structure that asserted its three-
dimensionality for the dancer to move across and over and up and down and
around and through.

No discussion of scene design for modern dance would be complete without
special mention of Isamu Nogouchi who has created most of the recent sets for the
Graham Company repertoire. Part of Graham's tremendous success as a choreog-
rapher must doubtlessly be attributed to the beauty and freshness of the settings
that Nogouchi had conceived. The objects that constitute his stage designs resemble
pieces of free-form sculpture, yet they have been clearly created to meet the
needs of the choreographer. Often symbolically significant in their forms, the
objects have also been designed for the dancer to sit, recline, or stand upon, to
walk through, or to move into new juxtapositions where the viewer's changed
perspective will infuse these objects with new meanings.

Quite in contrast, the sets of Alwin Nikolais, as a rule, consist of little more than
a cyclorama, curtains, legs, and scrims. His use of simple dance properties such as
stools, or metal frames, lengths of jersey tubing, or billowing tents of cloth, and
his fantastic use of light, replace the need for more elaborate settings.

Even a completely naked stage, with its blank brick wall devoid of curtains,
legs, or cyclorama has found favor with such choreographers as Anna Sokolow,
by providing the necessary atmospheric austerity for her brutal realism. Merce
Cunningham, in his early days as a soloist, lowered the light battens into the
audience's view to make these stage paraphernalia a structural part of the visual
picture. Commonplace objects such as ladders, nets, and scaffolding have served
both as settings and as inspiration for modern dance movement. Quantities of
pedestrian objects (bottles, piles of old clothing, endless sheets of newspapers or
rolls of butcher paper crumpled into heaving masses, yards of plastic sheeting or
even floating pillows of translucent plastic) have been put to appropriate uses by
modern dance artists in settings for "happenings" as well as for structured
choreography. The fact remains that there are no traditions or rules that govern
the design or use of stage settings for modern dance. In terms of the vernacular
"anything goes".

Development of Lighting for Dance

Arch Lauterer not only greatly influenced the design of stage structures for
dance but also, in connection with it, transformed the use of lighting. For him,
light and movement existed on the same terms . . . "they live in time, they move
through space, they vary in texture, and they arouse emotional response." Lauterer
used light as a form of time, changing its intensities according to a
planned temporal arrangement rather than using it as a mere imitation of paint. He
was fully aware of the magic of time-space and the magic of illusion. Under his
sensitive direction, light was shifted to add mobility to space by altering the
appearance of objects in space. Light, spatially conceived, was theatre-poetry, the
purpose of which was to make people see what they were supposed to see in the

\[\text{Douglas, Helen "Arch Lauterer on Dance in the Theatre" Impulse, 1959, p 39-41}\]
dancer's movement by reinforcing its visual design and dynamics. Arch Lauterer thus attempted to illuminate the dance as well as the dancers.

Such sensitivity in the use of lighting has demanded the development of a whole breed of lighting-specialists who are not merely technicians, but artists of their craft, experts such as Jean Rosenthal, who in working with Graham has endeavored to make the lighting an integral part of the dance. It was she who said that when the audience becomes aware of the lighting, the technician has failed in his task. Tom Skelton is another important figure in the world of dance lighting who, in addition to his own achievements as an artist-technician, has contributed especially to the dancer's practical understanding of how successful lighting can be achieved.

Ruth Grauert, lighting technician for the Nikolais Company, set the model for the now popular technique of using strong side-lighting to streak the floor and to give temperament and texture to the stage space. But perhaps the most imaginative and ingenious lighting expert of them all, is that exponent of total theatre, Alwin Nikolais himself. Not only does Mr. Nikolais use light to illuminate the dance movement and the dancers, but he uses it to create a world of fantasy where Linnebachs project shimmering patterns of colored light upon the cyclorama, where tiny pen flashlights hurl flickering stars and flower forms out of the cosmic depths of total darkness. With Nikolais, light is an equal partner that blends and interacts with sound and movement to create a single aesthetic experience.

Film and Dance

The development of cinema and colored photography has introduced many fascinating possibilities for the combination of film and dance. Not only have the projected images of moving abstract forms or natural phenomena been utilized for the creation of provocative dance backgrounds, but films of moving people, sometimes the dancers themselves, have been successfully combined with the movements of the live performers on stage to form a larger-than-life collage of color and living movement. The creative possibilities for such combined media have only just begun to be explored.

The Dancers and the Audience—Changes in Proximity and Perspective

As aesthetic needs have changed, the theatre buildings themselves have undergone notable transformations. Since the turn of the century intimate theatres, seating small audiences of one hundred to five hundred people, have been replating theatres of two thousand or more designed for spectacles. The practice of extending the acting or dancing area into the house by means of a built-out apron has lessened the barrier of the proscenium arch and has brought the performers and the audiences close together. Theaters-in-the-round, with the viewing audience encircling the stage, have stage entrances so placed that they create an illusion of the performers rising out to the audience. The need to make the viewing of a dance equitably satisfactory from all directions has resulted in a whole new concept of choreography. "Avant garde" groups, such as the Ann Halprin and Judson Church dancers, seeking to establish an even greater intimacy between dancers and audience than possibilities of the stage can provide, frequently include the audience area itself as a part of the performing arena.
Television, as a relatively new medium, has opened another channel through which the dancer can reach an audience. The television stage provides a different kind of "theatre" for the presentation of choreography, with its particularized benefits and problems. Such factors as the visual limitations of the camera in terms of sight lines, the absence of a front curtain, the possibilities of zoom lenses, and the special considerations for close-ups have made choreographing for television or films a unique operation which is rapidly becoming a specialized art.

Conclusion

The forms of dance choreography, costumes, and settings will eternally continue to change, for in art there is no acknowledged, unalterable goal of perfection to be sought and attained. With new technologies forever developing, the directions that these forms will take cannot even be surmised, which leaves one in a constant state of curiosity and excited anticipation. The only common bond between the arts of today and tomorrow will be that ever recurrent and universal need of artists to paint the world as they see it, through movement, sounds, shapes, and colors that speak of their own particular here and now.
Chapter II

Preparing a Dance Concert
Program Planning, Auditions and Rehearsals

Elizabeth R. Hayes

Before any dance program, student or professional, is ready for production before an audience, much preliminary planning must have transpired. Perhaps the most important essential to a successful dance event, in addition to the quality of its choreography and performance, is the attainment of a well-balanced program of optimum length.

Program Length

Although Oriental audiences are accustomed to watching theatre events literally for hours on end, Western audiences are not. A good program length lies somewhere between an hour and a half and two hours. After two hours of
attention, audience enthusiasm begins to plummet in geometric ratio to the length of the overtime. No amount of good performance can sustain it. Dance educators are often tempted to extend a program beyond an idea length to allow more student works to be seen or more students to participate; in doing so the entire program suffers.

Sometimes an over-extended program is arrived at inadvertently through miscalculations of timing. Dances that were thought to be ten minutes long are really fifteen, or the choreographer discovers that it requires more time to develop his dance idea than he had originally intended. Usually, however, dances will be improved by a tightening of the choreographic material. Unlimited use of time often leads to self-indulgence rather than increased artistry or even clarified meaning. Before any program gets too far underway, it is wise to time the music of pieces for which pre-composed music has been selected and to set tentative time limits for other uncompleted compositions. After adding the total time for all of these dances with anticipated times needed for costume changes, lighting, and scenery, and the time to be allotted for intermissions, one can decide whether or not one or two dances should be omitted. Such decisions made early are apt to be less painful than if made at the last minute after all the dances have been completed.

Selection of Program Material

Selection of dances for a given program on the basis of their content is another important consideration. Audiences crave variety. The need for humor to balance profundity and tragedy was recognized by the early Greeks who customarily followed a trilogy of tragedies with a satirical play. The Japanese have traditionally presented humorous Kyogen playlets as interludes between serious Noh dramas. Even Shakespeare introduced into his profoundest tragedies characters, such as Falstaff, for comic relief.

If one purpose of a production is to please an audience, then the varied tastes and levels of experience of that audience need to be considered. This is not to imply that one stoops to satisfy the lowest level of taste and understanding. But little is to be gained by giving a program so far beyond the reach of the majority present that no communication is possible. It is important for audiences to be exposed to new experiences—challenged by works that puzzle them. On the other hand, audiences are likely to be more receptive to strangeness if, on the same program, they are also given the security of seeing works that they know how to enjoy. Otherwise they either secretly brand themselves as hopelessly stupid or openly condemn the choreography and leave, never to return.

Arrangement of the Program

Once the dances for a program have been chosen, the matter of arranging their sequence needs to be immediately undertaken. Doing so enables one to determine whether or not there are satisfactory opening and closing numbers among the dances. If not, there may still be time to make one. Knowing the order of the program before the dances are finished also enables one to discover awkward costume changes in time to make some shifts in casting or adjustments in the choreography. Dances with difficult scene changes may need to be placed just before or after an intermission. The elimination of long waits between numbers is crucial to the success of any program.
A few suggestions in arranging the order of dances for a program are the following:

- for an opener, select a dance that is light, pleasant, and easily understood, making no demands on audience concentration;
- place long, serious, or thought-provoking dances fairly early in the program before the audience begins to tire;
- avoid placing a hilarious comedy immediately before a deeply serious dance;
- be sure that the dance immediately preceding an intermission is sufficiently intriguing and popular with the audience to make people want to return;
- if a program has only one intermission the part following the intermission should be slightly shorter than that which preceded it;
- the dance following intermission should be one that will recapture audience attention;
- remember that the closing number is the one that viewers will "take home with them"—it should be a group dance worthy of its place of honor as a finale.

Considerations in Costuming and Staging

The choice and arrangement of dance material to be included on a single program also has a bearing upon the costuming and staging of the dances. Contrast in costuming and settings is almost as important to the success of a dance production as contrast in the choreography. Once the program has been organized, the choreographer, the costumer, and the scene designer need to examine it together—first, in terms of its total content, and secondly, in terms of the juxtaposition of dances. Is there an overbalance in the use of undisguised tights and leotards? Is there an overuse of a given color or color group? Is back-lighting against a cyclorama, for example, becoming a cliché to the destruction of its dramatic value? Is there a need for increased use of levels and three-dimensional settings to relieve monotony in staging? Have two dances with similar settings or costumes in the same color been inadvertently placed together on the program? Again, an early discovery of such problems can permit time for program rearrangements, for the dance composer to remodel his choreography to encompass new scenic possibilities, or for the scene designers or the costumer to submit new designs to the choreographer.

The current trend, especially among professionals, toward presenting only three or four lengthy works separated by intermissions, eliminates some of the problems created by juxtapositions of short dances. The need remains, however, for contrast as well as unity within the substructure of long compositions, for contrast between the dance pieces themselves, and for psychological and dynamic building of the total program.

Regardless of the types of choreography being presented, a large amount of last minute grief can be avoided by careful advance planning and an early examination of the program as a whole. Along with the planning of the program, advance plans must also be got underway for its promotion, details of which will be discussed in a later chapter.

Auditions

When the dance ideas have been crystallized, it is usually desirable to hold auditions before casting the parts. No matter how certain one may be that an individual is exactly right for a role an audition for the part often discloses many
surprises. The person mentally chosen may prove to have no feeling for the part, and other talented performers, previously overlooked, may be revealed to the choreographer through the audition.

Preparation for the audition requires careful advance planning. The choreographer may wish to teach a movement sequence that contains some of the technical challenges and movement qualities intrinsic to the dance. The sequence should not be so long that it is difficult to remember, otherwise the auditioners will be concentrating upon recalling the movement rather than upon dancing the part. The movement must be carefully analyzed technically and rhythmically so that time is not wasted in confusion. For some dances the choreographer may prefer to present an improvisational problem for the dancers. While this approach may sound easier than setting a pattern, it actually requires a great deal of thought and planning on the part of the choreographer to give the essential motivation for the dancer to intelligently respond.

In selecting the dancers it is usually wise to choose one or two people to act as understudies. Not only is this experience valuable for the understudy, but it protects the choreographer in case of emergencies and provides an incentive to members of the cast to work diligently in the face of possible replacements.

Rehearsals

Once the cast has been set, the next task is to schedule rehearsals. The number of rehearsals per week depends a great deal upon the length and complexity of the work and proximity of its performance date. Usually a minimum of two rehearsals a week is required. The rehearsals need to be spaced so that too much time does not elapse between them in which the dancers can forget what they have learned, yet sufficiently separated to permit the choreographer time and perspective to plan for the next session. In order to profit from the choreographic momentum that normally develops during a rehearsal, the rehearsal time, whenever possible, should be at least an hour and a half in length.

If rehearsals are to be successful, they must be planned to use everybody's time to best advantage. Nothing is more demoralizing to members of a cast than to feel that their time is being squandered. When the choreographer is concentrating on the movement of one or two dancers the others should be given something to practice.

Some composers prefer to create every detail of the choreography themselves. When this method is used, however, it is important to clarify to the dancers the choreographic intent of the movement. Other composers like to share with their dancers the setting of choreographic details, thus permitting the dancers to discover movements that feel and look right on their own bodies. However, even when this method is used, the choreographer must always come prepared with adequate motivation for this creative discovery, with a full knowledge of what effect he is striving for, and with suggestions for movement possibilities.

While creating the dance, the composer must also envision as clearly as possible the costumes, lighting, and total setting for the choreography. The sets and costumes should be completed at the first possible moment (usually as soon as it appears that the dance will actually materialize). Meanwhile makeshift costumes and sets resembling the final product will need to be improvised for rehearsals since the dancer's movement is bound to be affected by them. The envisioned costumes may impose restrictions upon some of the dance movement or at other times magnify their effectiveness. These discoveries should be made when the
choreography is still in its formative stage so that advantage may be taken of the costume possibilities. A three-dimensional stage set with ramps, boxes, or levels, has no function unless its space potential is fully utilized in the choreography. No amount of imagining on the part of the director or the dancers can substitute for actual experimentation on the sets themselves. An early look at the stage space, an awareness of the placement of entrances and exits, a knowledge of the availability of and placement of curtains, legs, scrims, and cyclorama, and an understanding of lighting possibilities and limitations, may save much last minute frustration and disappointment.

The more clearly the choreographer can visualize his total dance concept and the possibilities for his end product before he begins to compose and the more adequately he prepares himself for his rehearsals, the greater are the chances that his work will have clarity of form and expression.

Preliminary Showings

As an experienced choreographer knows, the objective eye of a good dance critic or group of critics can be very helpful in evaluating a work-in-progress. With inexperienced choreographers the need for periodic impartial criticism from a choreographic advisor or an informed audience is particularly important. Often young choreographers are too close to their own works to be able to objectively view them. They see what they want to see and not what is actually present. They become enamored of their own movement and fail to economize and select. If allowed to proceed on their own, students usually wait until a work is nearly completed before asking for criticism. By this time the form is solidified and little more than minor changes can be made without destroying the total fabric of the piece. For this reason the first formal preliminary showing of choreography-in-progress should be scheduled about a third to halfway through the rehearsal time before the production date. If certain dances are to be chosen for actual production from the total group of works-in-progress there should be adequate time allowed between this preliminary date and the selection date to enable the choreographers to act upon the criticisms received at the first showing. No choreographer, of course, should feel obligated to make changes to suit his critics, but he must also be prepared to accept the consequences of his decisions.

Selecting dances to be used on a program and eliminating others is always painful. Student committees find it difficult to be objective when their friends are involved as choreographers or performers. If available, it is often desirable to appoint a jury of experts not directly involved with the concert to make the selection, thus minimizing subjective judgments and personal prejudices that can create problems. Although students are bound to be disappointed if their pieces are eliminated from a program, the experience can also be educationally valuable if they can understand the reasons for such decisions. The truism that we learn from our failures more than from our successes is applicable if the teacher takes the time and effort to help the student to objectively evaluate the strengths and weaknesses of his own choreography.
Although costumes for dance have undergone many transformations over the years, the criteria for good costume design remains unaltered. A dance costume can never be considered as an isolated “object d’arte”, its success is measured in terms of its support of the dance idea and the dance movement as well as in terms of its effect upon the appearance of the wearer and its relationship to the performance environment. Any costume design involves a consideration of at least three factors: the shape of the costume and the lines within it, the color or colors of the costume; the texture and fabric of the costume.

Costume Shape and Line

Anyone who has ever seen illustrations of historical costumes in silhouette can not fail to recognize the tremendous importance of costume shape or outline in defining a particular historical period. Society's attitude toward the human body
is reflected in costume. Through the ages, especially among societies that encourage affectation, or upon occasions when the wearer seeks to move the viewers to states of shock, mystery, or amusement, the shape of the natural human figure tends to be concealed or distorted by the costume silhouette. In producing theatre costumes for a given historical period or ethnic group, the designer needs to examine the silhouette of the authentic costumes as determined by the typical lines of the neck, waist, sleeves, hem, and so forth. While the costumer attempts to copy the original with little or no modification for realistic theatre, the costume designer for dance attempts rather to convey the “feeling” of the period of culture from which the dance is derived. Selecting those costume characteristics that are especially typical of the people or era being portrayed and also supportive of the dance mood and movement, the costume designer for dance emphasizes these features while minimizing or eliminating others. To convey a late medieval or early renaissance atmosphere, one designer selected from the traditional women’s Fifteenth century costumes the high waistline, the collared V-neckline, the generous train and tall conical hat, and applied them to a basic unitard. No one missed the long skirt of the traditional costume. The real essentials were present and the movement of bodies and feet of the dancers were more clearly revealed than the authentic dress would have permitted. Sometimes, however, it is important to retain the movement-restricting features of a “period” costume because those very movement restraints may be an essential characteristic of the movement of people of that era. The disproportionately tall hats of the ladies of late medieval time could not help but limit head movements and affect general carriage. In the same way, the restrictive hooped skirts of the court ladies of Marie Antoinette’s day left their mark upon court dances.

When costume shape is greatly exaggerated, the effect becomes humorous. Huge leg of mutton sleeves or exaggerated bustles provoke amusement. Any element of surprise, such as a modest turn-of-the-century bathing costume that becomes a risque bikini when viewed from the rear, invokes laughter.

A costume shape and line can do more than place a dance within a given era or ethnic group; or establish it as a humorous or serious piece. Line has many subtle implications. Experiments have shown that patterns of lines affect observers psychologically in a rather consistent fashion either for physiological reasons or as a result of experience and association. Straight lines appear strong while most curves seem gentle; horizontal lines seem quiescent (though they may also suggest speed); verticals suggest poise and equanimity; diagonals appear active and unresolved. Sharp angles are dynamic, restless, exciting; curved patterns are flowing. Furthermore, symmetrical designs present an effect of stability, formality, dignity, and tradition; asymmetrical designs are free, informal, and unpredictable. These are effects that the choreographer needs to bear in mind not only in designing the movement and floor patterns of his choreography, but also in planning the stage sets and costumes for the dancers.

Costume Color

Color, like music, seems to have a direct appeal to the emotions. The effect of color upon the viewer is four-fold. From a physiological point of view, certain colors absorb light waves of high vibration with increased heat value, while other colors reflect these waves. In light, the colors at the violet end of the spectrum have shorter wave lengths and consequently, faster rates of vibration with increased
heat value. Violet pigment absorbs other light rays but reflects violet rays, so violet is a cool color. On the other hand, red pigment at the other end of the spectrum, absorbs the violet rays while reflecting red rays, and so it is a warm color. Colors at the red end of the spectrum (red, orange, and yellow are warm colors, while violets, blues, and greens are cool). These temperature differences can actually be felt in the human body when such colors are worn.

Again, physiologically, when one looks at colors, certain ones appear to advance toward the viewer while others recede. This phenomenon is more than mere illusion; it is the result of the refracted wave lengths of different colors. Reds, oranges, yellows, yellow-greens, and white are the so-called advancing colors, while blue-greens, blues, violets, and blacks are all receding. This is why traffic signs are painted red or yellow rather than violet or blue. In dance, when the costumer, set designer, or lighting director wishes to give a feeling of cavernous expanses or distance, he chooses violets, blues, blue-greens or blacks, not only because they are associated with the expansiveness or distant haze as seen in nature, but also because these colors appear to recede from our vision. Opposingly, reds, yellows, oranges, and yellow-greens are colors of immediacy, demanding attention from the audience because of their advancing qualities.

Psychologically, also, the viewer is affected by color, a human reaction that is common knowledge among people working with the emotionally disturbed. Colors at the red end of the spectrum (reds, oranges, yellows, and yellow-greens) tend to excite, while blue-greens, blues, and violets except in their brightest intensities, can calm, soothe, or even depress. Brightness of color increases its stimulating qualities. Grays and blacks are somber in effect. Color-tints (colors diluted with white) and color-shades (colors diluted with black), or color intensities that have been muted by addition of their color complements have proportionately lessened excitement and emotional impact in direct ratio to the loss of brightness or intensity.

Beyond these universal reactions to color for which there are scientific explanations, there are also individual responses based upon personal experiences and cultural conditioning. Cultural mores of most occidental societies designate white for marriage as a symbol of purity, purple (originally crimson) for royalty, and black for mourning. Among some Far Eastern cultures, red is associated with weddings and yellow is a symbol of the emperor. The colors seen in nature cause us to associate blue with water and sky, green with forests or spring growth, white with snow, and so forth. Colors have certain meanings under certain conditions and the color symbolism changes according to circumstance. Each individual, depending upon his experiences, has his own particular patterns of association. It becomes obvious, then, that from the standpoint of association, no two people will react to color in exactly the same way. Yet, within a given culture, there are enough experiences with color that are sufficiently universal to guide the costume and stage designer for dance in selecting colors that will best convey the mood and meaning of the dance.

Particularly in serious dances, the designer may not want to appear obvious in his use of color symbolism at the risk of becoming banal. To avoid this pitfall he sometimes selects off-shades of the true colors, shades that will suggest rather than “shout” to the audience the concepts he has in mind. Again, a designer may deliberately choose completely unexpected colors for his sets or costumes to create an effect of fantasy or theatrical abstraction. But the total color impression must harmonize with the intended dance mood or else the designer and the choreographer will find themselves working at cross-purposes.
**Color Harmonies**

Certain color combinations are more pleasing to the eye than others. As in musical harmony, however, the exact combinations that seem particularly satisfying vary from period to period and culture to culture and are influenced to a large extent by what the eye or ear has become accustomed. Analogous color schemes, that is, a sequence of colors that are immediately adjacent on a color wheel (yellow-green, yellow, yellow-orange, and orange, or violet, blue-violet, blue, and blue-green) give both a sense of unity and variety to the color organization. Use of different tints, shades, and other variations of the same color accomplishes the same result, but with increased subtlety, giving depth to the visual impression.

Complementary colors, such as red and green, yellow and violet, or orange and blue, pigments that appear on opposite sides of the color wheel and possess opposing physical properties, may appear too obvious in their color contrasts when used full-strength, they are also difficult to light, since the light that brings out one color tends to kill the other. Split complements, that is, a given color and the two hues on either side of its complement, such as red, blue-green, and yellow-green, while still somewhat difficult to light, are more subtle in their color contrast than a choice of true complements. Unusual colors are apt to be more interesting than pure primary or secondary colors and make for increased variety when used in combination.

If more than one color is used in a costume or a group of costumes, it is usually wise to make the proportion of colors uneven so that one color appears to dominate. Dominance of color can be regulated by either adjusting the amount of the given color or its intensity relative to the others. In designing a group of costumes, a single color can be applied in large or small amounts to the different costumes as a means of tying them together, a neutral color such as gray, tan, white, or black can be incorporated in all the costumes to provide the unifying thread. Especially when bright colors are used, a large amount of neutral color is needed to produce the necessary balance.

When looking for the right combination of colors for a dance, a collection of swatches of various tints and shades of every color such as are to be found in paint catalogues, can be useful. By playing with these swatches, new color harmonies can be discovered. Colors that appear to clash at close range may prove to be exciting when viewed from a distance and under theatre lights. Color combinations found in window dressings, paintings, or magazine illustrations may also suggest effective possibilities. The next problem, which is not always easy, is to find the chosen colors in the appropriate costume fabrics.

After this has been done, these fabrics need to be tested under theatre lights, since different fabrics of the same color may change in appearance under artificial lighting as a result of differences in fabric texture. Some colors are easier to light than others. Yellows, especially, can be difficult to light. Pale creams and off-whites are usually more successfully lighted than dead-white, and also have a nicer appearance.

**Costume Texture and Fabric**

Another aspect of costume fabric with which the designer must be concerned is the texture of the material, which includes not only its surface appearance but also the way in which the fabric hangs or moves on the wearer. The surface texture of the material may be dull, shiny, rough, smooth, or velvety, the material itself may
be transparent or opaque. In its hang and movement, costume fabrics can drape gracefully on the body, stand stiffly away from it, cling to itself, fall heavily to the ground and swirl around energetically, or lazily float in the air. All of these characteristics may have their appropriate uses in costuming dances.

Materials that drape most beautifully are silk, rayon, nylon, and wool jerseys. Nylon tricot and other lingerie fabrics are very useful since they are wide, inexpensive, and come in various weights, colors, and degrees of shininess, they also dye well and seldom ravel or run. Silk, rayon, or nylon jerseys can be heavy or diaphanous depending upon the weight of the material. On the other hand, wool jerseys are heavy and skirts of this material move beautifully in response to body turns. Heavy fabrics always move with greater speed and centrifugal force than lightweight materials.

Crepes of all kinds drape beautifully. Acetate lining fabrics are lightweight, relatively inexpensive, and come in a variety of colors, they drape only moderately well and are usually dye resistant. Polyester broadcloth is somewhat stiffer than crepe and lacks its rich surface texture. One should keep in mind that polyester materials are difficult to dye. Unbleached muslin is one of the most economic fabrics, it comes in several widths and weights and can be easily dyed in almost any soft color. Lightweight muslin contains a lot of sizing and may lack body after washing. Sheets, especially king-size, if not too old and worn, are good for making costumes. The wide material is particularly advantageous for circle skirts. Denim is good when a sturdy fabric is needed and it comes in many different plain colors as well as in stripes and prints. Because of its shiny surface, satin is flashy on stage and is only appropriate for certain situations or types of dances. Crepe-backed satin, which is relatively inexpensive, has the appearance of satin but has an added advantage of moving softly, like crepe.

Taffetas are probably among the best fabrics to use when stiffness and formality are desired, though it is possible to heavy-starch or spray with “magic sizing” other kinds of material or to line them with pellon. Taffeta is relatively inexpensive and comes in a great variety of colors, however, it loses body with washing and cleaning and tends to crack when folded. Taffeta also makes a rustling sound in movement which may or may not be a desirable added dividend.

Heavy cotton flannel looks rich in texture under lights, but it does have a tendency to cling to itself. Velvet, of course, is beautiful, though expensive. Velveteen and corduroy, especially ribless corduroy, resemble velvet under lights and are far less expensive. Small patches of velvet, brocade, satin, or other rich materials added to a costume made of inexpensive fabrics can often create an illusion of total elegance. One should never combine real and fake velvet or real and fake fur, however, since the deception is immediately discernable.

Fabrics to be used for appliqueing on tights and leotards must have the same stretch capabilities as the tights and leotards themselves. Old leotards that can be cut up and used for this purpose provide the most ideal material. Nylon stretch tubing used for maternity clothes can be purchased in black and white and the white tubing can be dyed. Other non-bonded jerseys are also usable. Thanks to current fashion, stretch fabrics are available in many different colors. Leotard fabrics, especially millskin, and patterns for making leotards and tights can be obtained from fabric wholesale companies.

Lightweight materials are tulle, organdies, organzas, nets, georgettes, and chiffons. Nets and organdies have a starchy, brittle quality. Organzas, which have a delicate lustre, and nylon chiffons drape somewhat more softly than tulle and organdies but still contain a certain amount of resilience. Silk chiffons and rayon georgettes, on the other hand, hang down very softly. Silk chiffons are much
more expensive than nylon chiffons, but the difference in fabric quality may be worth the difference in cost.

A small printed pattern on the costume fabric can give the material a rich textured appearance even though the print itself is not large enough to carry as such to the audience. If a printed pattern is intended to be seen, then it must be extremely large. In selecting such a print it is wise to test it by looking at the bolt of material from the distance of the length of the store. It is often surprising how the appearance of a print can change at such a distance. Even trimmings, such as bands of sequins, need to be at least an inch or an inch and a half wide if they are to be seen from the back of a large auditorium.

Not all costume materials are found in dress fabric departments. Drapery and curtain materials and upholstery trim have been known to solve many a costume problem. Although drapery fabrics are expensive, they are so wide that it usually is unnecessary to purchase much yardage. Costume houses carry fabrics, also, but many of their materials are designed for commercial dance reviews and are too flashy for the needs of the modern dancer. Too much glitter onstage can be distracting.

Creating the Design

In designing costumes for a specific dance, there are many factors to be considered. First, and most important, is the dance concept itself. Does it belong to a particular historical period or ethnic culture? Is it a comedy or a serious dance? Is it programmatic and fairly literal in concept or is it partially or completely abstract?

Where is the movement interest focused? Is it in the feet, the arms, the legs, the hip actions, or in the body shapes? If footwork is important, then the feet must not be hidden by a floor length skirt. Important leg movement requires the freedom of action that can be provided by a flaired or a split skirt or by the total absence of a skirt. If pelvic movement is intended to show, the costume will need to be fitted closely around the hips, though it can flair below the hipline, a style characteristic of Spanish Flamenco costumes. Arm movement that must be seen with clarity normally requires the use of a simple, fitted sleeve or no sleeve at all. Leotards and tights usually provide the best costuming for dances in which body line, shape, and motion are paramount.

The movement quality of the dance is another factor that influences costume design. Most affected is probably the choice of costume fabric as discussed heretofore, the general shape and flow of the costume can also play a supportive role in underlining the movement quality. Strong, percussive movement, if clothed in anything other than leotard and tights, demands the use of stiff or weighty fabrics with lines that are strong, direct, and usually straight or angular. Lyrical movement quality, on the other hand, is best augmented by lines that curve and fabrics that flow, swirl, or float. Staccato movement that is light and brittle suggests the use of starchy, lightweight fabrics and acute angles.

Closely allied to the movement quality of a dance is its general mood. Because man is so emotionally affected by color, the importance of selecting costume colors that will support the dance feeling or mood cannot be over-estimated. No other costume element can do as much to emphasize or destroy a given mood as color itself.

A further consideration in the costume design must be the body structure of the dancers who are to be the wearers. Onstage, a dancer looks taller and larger than he appears normally. Added height is usually not undesirable, but added corpulence is quite another matter. Bodies that need to look thinner than they are can be
made so by the avoidance of all horizontal lines, particularly those that tend to cut the body in half, and by the use of vertical lines whenever possible. Costumes with dark side panels running the length of the torso or costumes sprayed or dip-dyed to be dark along one or both sides can be very slenderizing. Costumes that fit too tightly tend to emphasize overweight portions of the body.

Most good costume designs have a focal point or center of interest. One must be sure to place the color accents or decorative motifs where he wants the eye to go. When a single body area is disproportionately large, it is wise to design the costume to draw the eyes elsewhere or to use lines to give an impression of increased breadth to some other part of the body. The use of receding colors and grayish hues can also make the undesirable aspects of a figure less obvious to the eye.

Empire waistlines, while attractive on slender, small-bosomed figures if the material is sheer enough to allow the body silhouette to show through or if the costume is slightly fitted to the waist, can be a disaster on a buxom or full-busted figure. On the other hand, a drop waistline which permits the flair of a skirt to begin on the hips rather than at the waist can lengthen and slenderize a body that is short-waisted or slightly heavy in the middle, but can be devastating to a "hippy" person. The same basic principles in the use of vertical and horizontal lines can be applied to men's costumes. For men who have overly thin legs, wool tights are more flattering than nylon tights because the thickness of the wool gives added girth to the leg. The same corrective effect can be obtained by wearing a pair of flesh colored tights under the nylon tights of a costume.

The background against which the dancers are to perform will be another determining factor in costume design, particularly in the choice of costume colors. Although it has been said that light colors of low intensity show off body movement more effectively than bright or dark colors, even more important is the degree of color and value contrast between the dancers' costumes and the curtains, cyclorama, or other scenic background. While the effect of a cyclorama can be changed with lights, there is not much that one can do to transform a black curtain. For the most satisfactory effect, the costuming and staging should be planned together so that one can be made to enhance the other and the total effect of design and color harmony can be unified.

Colors of strong intensity are fatiguing to the eye. For large groups or long dances it may be wise to soften or gray the intensities slightly or to dilute the effect of the strong colors with the use of a large proportion of blacks, grays, and whites, or other neutral colors. Pure hues and strong intensities work best in folk dance costumes and dances for children. In group dances where it is intended for the dancers to be related, a unifying color or color harmony can be used to tie the dancers together. If a basic color is not used, a common costume design can serve to unify the group. For a dance of several sections, the use of basic costume throughout the dance to which different accessories can be applied not only helps to tie all the parts together but may sometimes provide a means of economizing on costume costs when finances are limited. Dominant figures in a dance need to be costumed so that they will stand out against the group either by means of the color that attracts the eye or by contrast in costume design. It is also important to remember that a costume design eminently suitable for a solo figure may have lines that are too overpowering or too decorative when applied to a large group. Large groups require rather simple, uncluttered costumes. Ideally, the costume designer should also be acquainted with the other dances, costumes, and sets to be used on the program so that his designs can be planned to contrast with the others in color and general style.
The choreographer should endeavor to formulate his costume needs as soon as possible. However, it is usually a dangerous practice to make the costumes before the dance movement has actually been determined because a dance may change many times in the process of creation. The exception, of course, is a dance in which the costume itself is intended to help determine the movement, in which case the making of at least a sample costume is needed in advance of the choreography.

Before planning a set of costumes, the designer, whether it is the choreographer or someone else appointed to this role, should carefully observe the dance with particular recognition of costume needs. Notes should be made of the movement qualities, focus of movement interest, range of movement required, important movement accents that need to be reinforced, dance mood, floor pattern and general spatial design, groupings of dancers, solo figures, and any special deviations from "the ideal dancer's figure" that may present costuming problems.

If the costume designer is someone other than the choreographer, the two will then need to meet in conference so that the designer can learn the choreographer's intent (which does not always agree with what the designer observed in movement) and there can be a mutual exchange of ideas. Usually the costumes must be well underway before the choreography is completed, in which case the designer will need to know the general plan for completion of the dance.

Once the costume ideas have begun to take shape on the drawing board, it is necessary to reflect upon the fact that the final product will be three-dimensional and must be interesting or attractive in appearance from all sides. Adequate consideration must also be given to the ease with which the dancers can get in and out of their costumes in the allowed program time. As a final test of the costume designs one should ask:

- do the costumes totally support the dance concept and its resulting movement?
- do the lines of the costumes make the dancers' bodies as attractive as possible in terms of their varied structures while remaining appropriate to the choreographic idea?
- do the costumes permit the movement to convey the dance idea rather than becoming a substitute for the movement?
- do the costumes remain sufficiently simple so that they do not intrude upon the audience's attention?
- do the costumes contribute to the total unity of the theatre piece?
- does the effect justify the cost in terms of time, money, and its contribution to the whole?

Building a Basic Wardrobe

Most school budgets for costumes are not very generous. For that reason it is wise to build a basic wardrobe that can be adapted to many uses. Blouses, skirts, sets of simple dresses in various lengths and colors, slacks, turtleneck T-shirts, and old white sports shirts that can be dyed are the kinds of articles that can be modified and used over and over again. But perhaps most versatile of all are leotards and tights because of their complete simplicity. Sets of leotards in different colors and styles with matching or neutral tights can not only be used repeatedly without change for many kinds of dances, but their appearance can also be transformed by the use of dyes, paints, appliques, and scissors. The addition of accessories such as overskirts, belts, sashes, and sleeves can also do much to transform costumes already on hand. Even on a limited budget,
amazingly effective costuming can be achieved with the aid of a little creative imagination, good taste, and ingenuity. Modern dance was born for freedom and originality of expression. Beware of the obvious of traditional solution.

Additional Reading


Most dancers who are not experts in the art of dressmaking are terrified at the thought of constructing their own costumes. After one has learned some of the secrets, however, costume-making is not actually as difficult as it is time-consuming. While the costume-maker can take some shortcuts, there is really no quick way to make costumes. For this reason it is important to start costume construction at the earliest possible moment so that the dancers can become accustomed to wearing the costumes and the designer can make changes where necessary before the actual performance.

Modifying the Basic Leotard and Tights

Probably the easiest way to change the appearance of leotards and tights is to dye them. Fortunately, the stretch materials from which most of these articles are made are highly receptive to home dyes. This extreme receptivity, however, can also create problems. An article dipped in a strong dye-bath will absorb the full
strength of the color almost immediately and nothing short of the use of color remover will make it light again. For this reason it is well to start with a dye bath of no greater intensity than one wishes to obtain by repeated dippings. By immersing a sample of the material or a small portion of the garment where it will not show, one can test the effect of the dye before dipping the total article. Dye-absorbent materials are also likely to streak unless they are kept totally immersed and constantly moving in the dye bath. Further instructions for successful dyeing of materials will be discussed later in the chapter.

Decorative designs of various sorts can be applied to leotards or tights by the processes of painting or appliqueing. In either case the garment will need to be stretched as it would be on the human body while the design is being applied. Since either process is usually quite time-consuming, the acquisition of a discarded mannequin from a local department store to be used as a body substitute can be of great assistance.

It is sometimes a problem to find the kind of textile paints that will provide the desired results for a given situation. One must first decide whether he wishes to make the design indelible, to stand up under several washings or dry-cleanings, or whether he prefers a design that can later be removed from the garments after the production is over. Prang textile paints will hold up under numerous washings and dry-cleanings. Flow-Master inks, also permanent, can be applied with a paint brush to stretched fabric surfaces. This procedure creates an indistinct outline which can be sharpened, if desired, by the use of a Flow-Master felt-tipped pen around the edges.

Some felt-tipped pens are waterproof, others are not. Temporary effects can be achieved by using Whitman's Flow-tip watercolor felt pens that can be purchased in at least eight different colors. These inks will wash out of leotards without leaving any permanent after-effects. Pens made under other trade names would probably work in similar fashions but each type should be carefully tested for the particular desired results. Needless to say, since inks are similar to dyes, it is possible to create dark designs on light backgrounds, but not vice versa. The same rules that govern the application of one color over another in dyeing (to be discussed later on page 35) applies also to the use of inks.

Small designs can be created by using stencils and household enamel spray paints, which are permanent, washable, and come in a variety of high intensity colors. Since the enamel dye readily penetrates the fabric, care must be taken when applying the paint to protect the dancer's skin and underclothes with plastic sheeting or something similar, if a mannequin is not available. Enamel paints, while excellent for making small designs, are not satisfactory for large ones since they stiffen the fabric. Aniline dyes and tempera paints are other two other possible substances that can be used for creating designs, but aniline dyes will wash out and tempera tends to flake off the costume when the wearer begins to move.

As stated previously, if designs of any size are to be appliqued upon the leotard or tights, the material used for the applique must have the same stretch quality as the leotard fabric itself and must be sewn onto the garment when it is stretched to the shape of the wearer, otherwise the applique will be quickly ripped loose by the dancer's movements. The smaller the applique, the less stretchability required. If the fabric frays easily, the edges of the applique will need to be turned under. Tightly woven materials can be pinked. In any case the applique should be basted in place on the model, then machine-sewn with a loose zigzag stitch, rather than a straight stitch, to prevent the thread from breaking when the garment is stretched again. Non-stretch trims that have been glued onto a leotard are apt to loosen and fall off because of the elasticity of the base fabric. Braid and tape can be used to
decorate a leotard or tights, but they must be wide enough to be seen by the audience, and again, fastened in place using the same techniques as have been described for attaching other appliques.

In some instances, when one wishes to divide parts of a leotard and tights into several colors, leotards of different hues can be cut apart in exactly the same way and the pieces exchanged. Leotards so treated may, in some cases, need to be one size larger than normally worn to provide the extra material that will be required for the seams. The seams will need to be sewn with a tight zigzag stitch. If a zigzag machine is unavailable, the material must be fully stretched during the process of straight sewing, or the seams sewn with elastic thread. All seams should be double-stitched.

Another way to change the appearance of a leotard is to alter the neckline or backline in some fashion or to cut out certain areas in the body of the leotard or, for that matter, the tights. Because of the nature of the stretch material, the shape of the opening may tend to become distorted when the leotard is cut. Cut-outs should be drawn with chalk while the dancer is wearing the garment to make sure the spacing and size are appropriate. These openings can be secured by filling in the cut-out areas with pieces of flesh-colored net that cannot be seen from the audience. Most stretch fabrics also have a tendency to run when edges are left raw. To prevent running, the edge of the stretch material can be seared with a match flame which melts the fiber, or, if desired, the edges can be turned under with a small, but loose, running stitch, or zigzagged.

If a figure pattern is appropriate, there are generally available numerous unbonded print jerseys from which leotards can be made. Such jerseys, however, lack the degree of stretch found in most commercial leotard fabrics, so that more material will be needed than is used in a regular leotard. Two-way stretch swim suit material is another excellent resource that should not be overlooked. It is well to cut the leotard slightly too large and then fit it to the dancer's body, making sure that the dancer can get in and out of the leotard once it has been fitted.

A leotard provides an ideal bodice for costumes that need to be smooth-fitting and flattering to the torso. Overskirts can be worn, or skirts can be sewn directly onto the leotard. Collars, cuffs, or belts can be added, belled or circular sleeves can be attached at the elbow of the fitted leotard sleeves or the leotard sleeves can be removed and other sleeves substituted. The straps of a sleeveless leotard can be removed and flesh-colored elastic substituted to create a strapless effect. One of the simplest and most flattering lyrical costumes combines this so-called "strapless" bodice with a two-layered double-circle skirt of silk chiffon (four circles in all) attached to the leotard slightly below the natural waistline at the top of the pelvis bones. A touch of braid or sequins added to the leotard completes the costumes.

Pattern Making, Cutting, Fitting, and Sewing

In preparing a pattern for any dance costume one must know the movement needs of the dance for which the costume has been designed. Most commercial costume patterns are designed more for Halloween parties and masquerades than to meet a choreographer's needs. However, the acquisition of a few ordinary commercial patterns for women's bodices, sleeves, men's trousers, and so forth, that have been tested for their good-fitting qualities, can save the costumer hours of time. Because paper patterns are fragile, it is usually wise to reproduce in muslin or lightweight pellon those standard pattern pieces that will be used over and over again; they should be carefully marked as the original pattern pieces, including an indication of the pattern size.
Patterns can be adjusted to accommodate different sizes by making slight additions or subtractions along every seam as well as vertically in the center front and back. Some dressmakers prefer to make the addition or subtraction vertically about two inches in from the side seams. The pattern should be fitted to the dancer before cutting the costume material. It is inadvisable to change a pattern more than an inch in measurement to adapt it to a dancer’s body, however, the measurements of most dancers within a group will not vary more than one or two sizes. In situations where the same dancers are going to be fitted for costumes repeatedly, a bodice pattern for each dancer can be made out of good muslin and kept on file. Costumes that are likely to be worn by a number of different dancers should be made with hems that can be adjusted and seams that can be refitted if necessary.

Side seams can be made five-eighths of an inch to an inch wide, with the realization, of course, that large seams add bulk to the figure. However, in order to prevent pulling, firmly woven fabrics may need to be clipped, particularly over the hip line, if seams are wide, in which case the capability for future refitting to larger figures is diminished. Deep hems are impossible to make on circular skirts without spoiling the hang of the costumes.

The costume designer should not be timid about devising costume patterns of his own. Fortunately, newspaper is plentiful and cheap so that he can cut, shape, recut, patch and reshape to his heart’s content until he finally achieves the effect desired. Because of the stiffness of newspaper it is generally advisable to transfer the resulting pattern to a piece of muslin that can be draped on the body as the costume material is intended to do, so that minor adjustments can be made in the pattern before cutting the final costumes. Experience will eventually teach the costumer how to attain the results he envisions without much trial and error. But if all else fails, one can engage a creative dressmaker to devise a pattern from the designer’s sketch and the costumer can carry on from there.

Most dance skirts can be made without commercial patterns. The appearance of the skirt will differ greatly according to the way it is cut. A straight skirt is made on the straight of the material with darts taken at the waistline and little, if any, flair on the sides. Such skirts are usually left open along one or both seams to allow room for dancer movement. Straight skirts can also be made of narrow, overlapping, but free-hanging strips or panels of material that separate when the dancer moves, revealing the legs in motion. Gathered “folk” skirts are usually more flattering to the body if the pieces to be gathered are also slightly gored to avoid too much thickness at the waist.

There are two principal types of flared skirts, the circular skirt, the gored skirt. A circular skirt (see Figure 1) is easier to make than a gored skirt. The desired amount of fullness will determine how it is made. If only a slight flair is needed, a half circle may be sufficient for the entire skirt. If the skirt should hang fairly straight in the front, but still needs to present an effect of fullness, one can make the skirt by using a quarter circle in the front and a half circle in back. Again, depending upon the amount of fullness required, a generous circular skirt can be made of one complete circle, one and a half circles (a half circle in front and a full circle in back), or two complete circles. The greater the number of half-circle pieces that are used to make a skirt the smaller the half-circle should be that is cut out at the top of each piece to fit around the waist. For a single complete circle skirt a radius equal to 1/6 of the waist measure will produce a waist circle of the correct size. When in doubt, it is wiser to cut the half-circle too small than to find it has been cut too large so that the skirt will need to be gathered onto the bodice. Circular skirts are attractive to look at and move very well, but they do have a
tendency to hang unevenly after the costume has been finished. The looser the weave of the material the longer the costume will need to be left hanging before hemming (if hemming is needed) and the more frequently the hemline will need to be re-straightened.

Gored skirts, though more complicated to make, have less tendency to sag than circular skirts. If one is chiefly concerned with saving material and the skirts are short enough so that the gores can be cut crossways on the material, one can place the gores so that they alternate with each other—that is, the wide end of one gore is placed on one selvage, the wide end of the next gore is placed on the opposite selvage (see Figure 2). By such means very little material is wasted. This procedure could be disastrous, however, if the material had a nap. In such cases all of the pieces of a costume pattern would have to be laid in the same direction relative to the nap or the pieces would show color differences under lights.

Unfortunately the most economical way of laying out a gored skirt pattern is not the most effective if one wants the bottom of the skirt to flow gracefully away from the body rather than to hang straight down when the dancer is in repose. If each gore is cut so that the true bias of the material is directly in the center of the gore (see Figure 3) then this center part will flair outward in contrast to the seams which always hang straight down. The improvement in the skirt line may be worth the added expenditure for material. High waisted skirts, especially, should be cut in gores on the bias so that the costume can be slenderized at the waistline and then swing out.

When an expensive fabric lacks sufficient body to give a skirt the desired effect of fullness, the difficulty can often be remedied by making a full underskirt of nylon net, which is relatively inexpensive. The flair of a skirt can also be increased by sewing horse-hair braid around the bottom. Another pleasing skirt variation can be achieved by overlaying a skirt of filmy material upon a basic skirt of heavy fabric.

The length of the skirt depends upon the movement and the style of the choreography. Placement of the waistline has to do with the emotional quality of the dance. Skirt lengths for a set of costumes should be cut approximately the same distance from the floor, but short-legged dancers may need to have their skirts cut just slightly longer than long-legged dancers.

Although a low-cut neckline may at first appear to create a dilemma in terms of keeping the costume in place, the problem is not unsolvable. A narrow V-line down the center of a bodice, which is often very flattering, can be held together with flesh-colored net. A square-necked, low-cut bodice which appears to leave
the top of the sleeve completely unsupported on the shoulders may again be
achieved by filling in the entire neck front and back with flesh-colored net to
which the sleeve tops can be attached.

Long tight sleeves attached to a bodice must always be given special consid-
eration to permit the dancer to freely move her arms. Most regular dress bodice
patterns, cut on the straight of the material, to which long sleeves are to be
attached, will require the insertion of gussets of diamond-shaped pieces into the
underarm (see Figure 4) seam or along the seam of the bodice and sleeve (see
Figure 5). These gussets are not easy to insert smoothly, but are essential to the
dancer's freedom of movement. Although it seems incongruous, the higher the
armhole is cut the less need there is for a gusset. Small sideseam gussets, or
underarm panels beginning at the waist and extending to the armhole, cut from
stretch fabric and dyed to match the costume, work nicely to provide elasticity in
armhole and bodice. Some designers avoid the problem altogether by attaching
the sleeves to the bodice only at the top, cutting them out at the bottom seam to
create an interesting design (see Figure 6). Puffed sleeves can be completely
detached from the bodice, gathered onto the arm by elastic at the top and bottom.
Various other shaped sleeve “suggestions” can also be attached to the arms rather
than to the costume itself. Bodices with raglan sleeves usually create no move-
ment problems. With fabrics that stretch or drape softly, bodices cut on the true
bias with “bat-winged” sleeves have sufficient “give” to permit the dancer to
move with complete freedom.

Men, in particular, need to have freedom of movement for their arms. When
making men’s tight-fitting jackets or jerkins with long, tight-fitting sleeves, the
sleeves need to be completely free of the jacket. The jacket can be made sleeveless
(see Figure 8a) and the sleeves attached to a short-sleeved T-shirt. A 3- or 4-inch
band of the sleeve and jacket fabric should be sewn around the armhole of the
T-shirt where the sleeve is attached to keep the T-shirt material from showing
when the arms are raised (see Figure 8b). Such an arrangement not only frees the
arms for movement, but also permits the jacket or jerkin to remain smoothly on
the body at all times. This same device could be applied to some women’s
costumes. When regular men’s shirts are used as costume tops they will look
neater if they are fitted down the sides and held in place with elastic, extending
under the crotch and attached to the shirt tails.

Men’s trousers need to be cut and fitted high in the crotch to permit leg
movement. Inner seams should be sewn first and the outer seams fitted to the
bodies of the dancers. Seams should be double-stitched with a zigzag stitch and
bound with sturdy binding for added safety. Surplus ski pants or navy pants can
be successfully refitted for use as dance costumes. White cotton surplus navy
pants are relatively inexpensive and can be dyed to almost any color. Bonded
jersey is an excellent fabric for making men’s pants. Whatever material is used, it
should be heavy to prevent the knees from bagging.

Many dance costumes are not lined, but when they are, to ensure proper fit, the
lining material needs to be of the same type of material as the outside in terms of its
stretchability and hanging quality. Lining helps to control the shape, strength,
and fit of a costume; those that are to be used over and over again especially need
to be lined.

Any washable material, unless it has already been pre-shrunk, must be washed
before cutting. In laying out a pattern on the costume material, the presence or
absence of nap is of vital importance. Two-tone materials and materials with nap
tend to flatten out more when viewed from one direction than from another. It is
important to examine the material carefully to discover the direction that will give
Sleeve Treatments

Figure 4. Gusset following line of armhole.

Figure 5. Gusset following seam of bodice and sleeve.

Figure 6. Open underarm treatment.

Figure 7. Bat sleeve bodice.
the greatest richness of texture and color to the fabric. If the costume is to appear all one color then all of the pieces of the pattern must be laid out in the same direction. Materials without nap present no problem and pattern pieces can sometimes be cut crosswise on the fabric to economize on material. Crosscut pieces will hang slightly more stiffly than those cut lengthwise. With careful planning much yardage can be saved when several costumes are to be cut from the same fabric. In order to be flattering to the body, costumes should be fitted neither too tightly nor too loosely. Dress, skirt, and even pants openings are less conspicuous and costumes are smoother fitting and easier to get into when zippers are placed in the back of the garment instead of in front or at the sides. "Hidden" zippers, made so that no metal is permitted to show, can be used when practicable. Such zippers, however, are more fragile than regular zippers and a special sewing machine zipper foot is needed to insert them. A simple way to put in a zipper is to sew up the seam where it is to be inserted, press the seam flat, then rip out the seam to the length of the zipper, place it (right side out) directly over the zipper teeth with seam edges overlapping slightly, pin in place, baste (optional), and sew.

Some skirts hang best without hemming. Jerseys, especially, need no hemming. Chiffon may appear more diaphanous if left unhemmed, although its tendency to ravel may necessitate frequent trimming. The use of pinking shears can help to minimize this problem. When hemming is required, tape should be sewn with a zigzag stitch to the bottom of the material, which is then hemmed by hand, sheer fabrics, such as chiffon, can be hemmed by overcasting with a wide, tight zigzag stitch in matching thread. Many machines today also have a blind hemstitch. In sewing, one should endeavor not to stretch the hem.

Where portions of a costume need to be stiffened, the fabric can be reinforced with press-on pellon, press-on canvass, or other products such as "Stitch-Witchery" before the segment of the costume is cut. These products, however, tend to come loose with washing or dry-cleaning.

If an effect of massive embroidery is needed for folk or ethnic costumes, one can create the illusion by selecting printed fabrics out of which designs or borders can be cut for appliqueing onto the costumes. Old costume jewelry can also serve to add sparkle and decorativeness to a costume where such an effect is appropriate.
Costume Dyeing

Often, to utilize inexpensive materials for costumes, such as unbleached muslin, or to obtain the right color combinations in the costumes, it is necessary to dye them. Whenever possible, one should dye the materials before cutting and making the costumes in case of fabric shrinkage. Some fabrics, such as acrylics and polyesters, are extremely dye-resistant, so it is always wise to test-dye a sample of the material before proceeding too far.

It seems unnecessary to state that dark colors cannot be changed into light ones or colors changed into their color complements. The following chart indicates the general effect that certain colored dyes will have upon colored fabrics. The exact result depends upon the intensity and purity of the fabric color relative to the intensity of the dye. Further guidance in covering old color with new can be found in a color chart for Instant Rit Liquid Dye.

If it is impossible to dye over an old color to achieve a desired effect, it may be possible to remove the original color and begin again. One must remember, however, that it is sometimes virtually impossible to remove the color from some commercially dyed fabrics. While liquid dyes are easier to work with than powdered dyes, they are hard to find in many colors. No home-dyed fabrics will be as brilliant as those commercially dyed. One can obtain reasonable intense reds, yellows, and oranges, but brilliant purples and royal blues are much more difficult to achieve. A satisfactory royal blue may be obtained by combining cobalt blue dye with a bit of royal blue. For some reason, purple dye is also difficult to dissolve and needs to be strained through a cloth to eliminate undissolved particles. A pleasing violet color of moderate intensity can be obtained by using numerous packages of orchid dye, rather than the powdered purple dye, which produces a rather dull, grayed color. All pastel tints can be achieved rather easily. No matter how simple the dye process may appear to be, it is always wise to test-dye a sample of material before dyeing the costume. Although one usually aims to obtain an even dye effect where clothing is concerned, it is consoling to the novice to know that fabric unevenly dyed looks richer under stage lights than evenly dyed material. It is also well to remember that color intensities and contrasts of light and dark tend to fade under theatre lights so that in dyeing costume fabrics one should aim for colors slightly stronger than one expects to see from the audience.

Tie-dyeing is another process that can add decorative interest to a costume. By pleating or gathering portions of the costume and tying them tightly with heavy cord or string, then dipping the garment in the dye bath, decorative patterns can be made since the dye is unable to reach those portions of material held by the cord. Practice on scrap materials may be needed to determine exactly how to achieve a desired effect. Dye companies have free pamphlets with suggestions of tie-dyeing techniques that may be helpful to the uninitiated.

When one is dyeing large quantities of material and no special problems are involved, such as that of matching a particular color or obtaining an exact intensity, an automatic washer can be used to achieve an efficient and even dye job. But when one is dyeing in small quantities or when one needs to control the exact hue or intensity of a color, the dyeing must be done by hand.

To obtain an even dye result, the material must be thoroughly soaked in hot water and washed free of any soil or fabric sizing. If powdered dye is used, it must be completely dissolved in hot water, preferably in a vessel other than the one to be used for dyeing the fabric. Special care must be taken to see that there are no undissolved granules in the bottom of the pan or around the edges of the vessel. If necessary, the dye can be strained through a piece of nylon hose. The dye can then
be diluted with water to the desired degree. The hotter the water the more readily the fabric will absorb the dye.

If possible, all of the material, loosely crumpled, should be immersed in the water at the same time in order for it to be subjected to the same concentration of dye. Once the material is placed in the dye bath it must be constantly stirred. A long wooden spoon and a pair of rubber gloves will enable the operator to perform these tasks easily without dyeing or scalding his hands in the process. When fabrics are slow to absorb the dye, their resistance sometimes can be reduced by heating the water on the stove. In so doing, however, it is especially important to keep the fabric in motion since the material nearest the heat will be most receptive to the dye.

When one is attempting to match the color of some fabric, a sample of that fabric should be wet and used as a color guide, since cloth, when wet, is much darker than when it is dry. Or, a small swatch of the material being dyed can be dipped in the dye and pressed dry to compare with the original color sample.

When colors are to be mixed, a process of top dyeing one color over another can give the cloth an enriched appearance under lights, this is done by dipping the fabric in another dye bath after it has been once dyed. The material can still be wet, or dry. An especially rich textured effect can be achieved by twisting or crumpling the material when putting it in the second dye bath to give it a mottled appearance. A similar result can be obtained by unevenly spray-dyeing or spatter-painting one color over another. Scene paint mixed with water and dissolved ground glue is particularly effective since it will stay on the surface of the cloth. A sponge can be useful in applying the surface cost unevenly to add depth to the textural appearance. One way of obtaining a rich brocade effect is to spray gold paint, through open lace, onto the costume material. The lace, now gold, can be saved and used later when needed for a costume.

Once the material has been dyed to the desired hue and intensity it should be removed from the dye bath and thoroughly rinsed in warm water until no further dye bleeds out. When a fabric is wrung out forcibly, the excess dye tends to accumulate in the creases. For a smooth dye job the excess moisture should be squeezed gently out of the fabric without wringing.

When dyeing muslin, if the material is carefully straightened and stretched when it is hung up to dry, the costume can be cut and made from the unpressed material. The final effect of this slightly crinkly surface under lights will be one of enriched texture.
Costumes that require one color to blend into another should always be dipped in the lighter color first. The portions of the costume that are to receive the other color are then dipped into a second dye bath while the fabric is still wet so that there will be no sharp line of demarcation. The same rules for dyeing one color over another apply to this situation. Costumes dyed in such a fashion cannot be rinsed or washed and must be hung up to dry carefully so that the darker color does not continue to run or bleed onto the lighter one.

Spray-dyes can be used for materials that cannot be immersed in water. "Fab-spray" or florist spray paints are commercial products that work well for this purpose. To soften or change the tone of a fabric one can dust the surface with a spray lacquer such as Krylon that will not make the fabric too stiff.

Making Masks and Headdresses

Some dances require the use of masks and headdresses. When masks are used, the most important thing to remember is that the dancer must be able to see and to breathe. Half-masks, such as those used for masquerade parties, create no problems and can be bought commercially. Most costume houses also carry full face translucent plastic masks with regular features that give to the fact the impersonal look of a mannequin. These plastic masks can also be used as a base upon which to build more grotesque or stylized effects with the aid of paper máché, consisting of strips of newspaper coated with flour paste of small pieces of lightweight sticky tape, or strips of muslin dipped in glue, applied in layers to the foundation. Each layer must be thoroughly dried before the next is applied. The drying process can be speeded by placing the object in an oven on low heat. It must be remembered, however, that plastic tends to melt even at moderately hot temperatures. Paper máché can also be applied over modeled clay forms. Prepared paper máché is obtainable in pulp form with glue in it, forming a clay-like substance that can be used for filling out the shape of the mask. A flour paste with paint in it can be used to make the final coat, or a coat of plastic wood can be applied, sanded, and painted.

Some masks, such as animal masks and grotesque faces of numerous sorts, can also be bought commercially, but some of these may obstruct the dancer’s vision. When one wishes to blot out the features of the face entirely, a hood can be made of fabric and the face part covered with chiffon or netting which provides a transparent "window" for the dancer, while concealing his face from the audience.

The important thing to remember in making headdresses is that they must fit the head and be sufficiently anchored so that the dancer is not afraid to move. Various shaped buckram hat forms can be purchased from costume houses, these may or may not provide sufficiently strong and well-fitting bases upon which to structure headdresses, depending, to a degree, upon the height and weight of the headdresses to be fashioned. A very small, lightweight headdress may sometimes be secured with just a headband or combs.

When suitable ready-made forms are unavailable, a basic head form can be made of Celastic, a commercial, plastic-coated, leathery fabric that is cut into strips or shaped and dipped in acetone or a similar solvent, and applied over a clay model of the head. The ensuing Celastic form is then lined with sponge rubber. One can buy from hat or wig supply houses solid wooden head forms that can be used in place of clay head models. Styrofoam head forms are not as satisfactory as wooden ones. The Celastic form, when finished, provides a sturdy base upon which to build most any headdress.
If the Celastic head forms are to fit securely when they are completed, individual head measurements of each headdress wearer must be taken so that the clay head model can be made to the correct size or so that the appropriate size wooden head model can be selected. It is important to spend time to fit the head form carefully. Measurements are taken completely around the head from above the middle of the forehead to the base of the skull and also over the top of the head from ear to ear.

The Celastic or buckram head form can be extended and decorated in innumerable ways depending upon the customer’s personal ingenuity. Many different kinds of wire can be used to form variously shaped frames for further decoration. Piano wire is especially good. Heavy aluminum wire is also useful. Willow reed is lightweight and can be used for the same purposes. Chicken wire can be bent into various forms and covered with paper maché. Headdress shapes can also be made of styrofoam. Spray styrofoam can be made in any shape desired. Special paints are available to color the styrofoam, regular paints will not work for this purpose.

It is possible to create headdress decorations from all sorts of material (crepe paper, netting, nylon chiffon, feathers) or products to be found at costume and novelty houses, milliner supplies, magician’s supplies, or window display houses. Large feathers that are sometimes too expensive to purchase can be simulated by wiring and fraying rayon cut in the shape of the feather. A little imagination will reveal many possibilities for creating illusions with very little cost.

Foot Gear

Many modern dances do not call for any special costume treatment for the feet. Bare feet or simple soft-soled ballet slippers may suffice. But there are occasions when ballet slippers are not the answer, yet the costume is not complete without some sort of feet dressing. If many pivot turns are required of the dancer he may need some covering for the balls of the feet to enable him to easily turn. The sandasol, or half-sandal, created by Capezio, provides a sole covering while leaving the heel and toes free to grip the floor. The illusion of sandal with laeings up the leg can be created by crisscrossing wide, black elastic around the leg and anchoring it under the instep. For folk costumes a high sock or stockings may be worn underneath the laeings. Socks without shoes are slippery on some floors and must be thoroughly tested for safety before the performance. An effect of a medieval shoe can also be achieved by using long, heavy socks, rolled down at the top and purchased too long so that the ends of the feet can be sewn into upturned, pointed toes, stuffed to maintain their shapes.

Where an effect of a low sandal is desired, yet the dancer needs the freedom and security of bare feet, bands of wide, black elastic encircling the ankle, the instep, and the ball of the foot, and fastened together with an elastic T-strap, can be made to simulate the straps of the sandal. Inexpensive boots can be made out of oil cloth to be worn over ballet slippers. A dart is sewn horizontally across the front of the boot where the ankle bends and the boot is secured under the ball of the foot with elastic.

Costume Organization and Final Check

And, now, assuming the costumes have been finished, the name of the wearer should be fastened inside each costume in a place that is easy to find, such as the back of the neck or a shoulder seam. Adhesive tape can be used in place of name
tape in instances where the tape can be attached to the lining or an inner seam. It is important to caution each dancer to double check to see that all costume parts are together before each performance. A card for each dancer listing all of his/her costumes and accessories can be of great assistance.

As soon as the costumes are completed the dancers should try moving in them and the costumer should check to see that they are completely satisfactory, both in movement and under stage lights. Even expert costume designers are not infallible, some last minute modifications will almost always need to be made. It is psychologically important for the dancer to feel right in the costumes to give the best possible performance. Skirts may have to be shortened or lengthened, waistlines raised or lowered, seams further reinforced, bodices refitted, trimmings altered, or colors redyed. The right costumes will add much to the beauty of a dance, but in the long run it is often the simplest costumes, well-made and fitted, that are the most effective.

Hair Styling and Makeup

The dancer's visual appearance on stage includes not only the costume, but hairstyle and makeup as well. Dressing the hair in a way that is appropriate to the dance is every bit as important as costuming the feet. Period pieces should have at least a suggestion of the hairstyling of that period whenever possible. Long hair, of course, is much more versatile for these purposes than short hair. The complexity of the styling is another important consideration, keeping in mind the amount of time the dancer will have between dances to dress the hair. Wigs are always a possibility, but these are expensive to rent and one may not wish to be so totally realistic in the representation of period dress.

Usually a simple, unobtrusive hairstyle is best. If a group of dancers are dressed alike, uniform hair styling adds to the uniformity of the effect. In lyrical dances, wearing long hair down so that the hair movement adds to the flowing quality of the dance may be desirable. But in all cases, one must be sure that the hair can be controlled so that it does not fall in the face at inappropriate moments. If hair is worn up, it must be properly secured so that it will withstand any violent movement of the head or action of the body.

Makeup can be as simple as the mere exaggeration of the makeup normally worn in daily life or so complex that it literally becomes an extension of the costume itself. For most dances, the former kind of makeup is sufficient and this discussion deals with the application of this type of makeup. In general the purpose of the makeup is to make the dancer as attractive as possible to the audience and to exaggerate features and coloring of the dancer that tend to disappear with distance or fade under colored lights. Unless the dancer's features are perfect, which is a rarity, he or she needs to become acquainted with those facial characteristics that need to be emphasized or even exaggerated and those that need to be minimized. Is the face too square, too broad, or too long? Are the eyes too small or too close together? Is the nose too insignificant or too long? Is the mouth too large or too thin? With this understanding in mind, the dancer can make the most of with what he has to work.

A smooth foundation base is first applied to the face and neck, blending it down below the neckline of the costume or leotard. This foundation base can be either in the form of grease paint or liquid foundation cream. Liquid cream is usually easier and less messy to apply than grease paint and because of its greaseless nature is apt to be less damaging to costumes. For women, except those with very dark
coloring, the foundation color should be a shade or two darker than the person's natural skin color. A standard color used by all the dancers helps to give them a look of uniformity. For men, the base makeup, if used, should be a couple of shades darker than the makeup used by women.

Before the rest of the facial makeup is applied, one must consider the need to remedy facial defects by placing darker or lighter makeup upon the critical areas. A face that is too square can be made to appear less so by darkening the foundation makeup around the outside corners of the jawbone. A broad face can be narrowed by bringing the dark makeup around the outer edges of the cheeks. A small nose can be made to look more prominent by blending a line of light makeup down the center of the nose, and a long nose can be shortened by darkening the makeup at the tip of the nose. The same can be done for a chin that is too long.

Color on the cheeks is usually applied on the cheekbone slightly outside the center of the cheek and blended outward in all directions. If the face is narrow, the color is applied slightly farther outside the normal placement and if broad, slightly inside. Men usually do not use cheek coloring.

The eyes are of special importance. For theater performance, the eyes need to be given clear definition and sometimes enlargement. The amount of eye makeup depends to a great extent on the amount of distance between the performers and the audience and the amount of artificial lighting to be used. The closer the audience, the less makeup is needed. Makeup should create an illusion but should never call attention to itself.

Some dancers prefer to begin the eye makeup by covering the lid and area beneath the eyebrow with a thin coat of clown white to which eye shadow is then applied. The color of eye shadow will depend to a large degree upon the dancer's hair and eye coloring. Each individual should experiment to discover the color that is most effective. It is important to examine the eyes carefully to see what improvements can be made through illusion. When the eyes are large and widely spaced, eye shadow can be applied over the entire eyelid and continued out horizontally slightly beyond the outer corners of the eyes. If the eyes are too close together, very little if any shadow should be used on the inside portion of the eyelid but should be begun about the middle of the eyelid and extended horizontally well beyond the outer corners of the eyes. If eyes are deep set, leaving the lids uncolored and concentrating the color at the crease above the eye, blending it upward and outward will bring them forward. Although some people prefer to add false eyelashes next, others add the eyeliner and then the lashes.

Large, widely spaced eyes can simply be outlined as they are, but eyes that are too small or too close together need special treatment. To enlarge the eye one can draw the outline of the eye slightly above the edge of the upper eyelid and below the edge of the lower lid, whitening the space between this line and the edge of the lid. For all eyes, it is flattering to leave the upper and lower lines open at the outside corners of the eyes (rather than bringing them together), extending them slightly and placing a line of clown white between them. If the eyes are close together, the outline of the lower lid should not be drawn from the inside corner of the eye, but only from the middle of the eye outward.

Eyebrows, neatly shaped, may need to be further delineated with eyebrow pencil, using light feathery strokes along the upper edges. Eyelashes can be treated with mascara, for intimate theatre spaces, or with false eyelashes. Most people use false eyelashes on the upper lids only, but some may wish to apply them to the lower lids as well. For small eyes, the lashes can be placed slightly outside the natural lash line as is done with eyeliner. In all instances, the lashes
should be shaped to flatter the eye and to look as natural as possible from a
distance. Eye makeup for men is less complicated than for women, consisting
mostly of outlining the eye with eyeliner.

The mouth is the final consideration. A warm, rich color that blends with the
rest of the makeup is advisable. Too light a color will fade under lights. Too dark a
color and lavender hues tend to make the mouth look black under lights. Most
men prefer to use a brownish lipstick. Thin lips need to be filled out slightly and all
lips attractively shaped. Full lips can be effectively treated by using a slightly
darker lipstick around the outer edges than that used to paint the rest of the lips.
The lips should be neatly outlined with a lipstick brush, or if preferred, very
lightly outlined with an eyebrow pencil.

When the makeup is completed, the performer may wish to powder it lightly to
keep the makeup from smudging and rubbing off on costumes, though some
people prefer to keep the "glossy" look. Powder, which should be at least as dark
as the foundation cream, is best applied with a brush, stroking gently in all
directions, using as little powder as possible.

Makeup is very much an individual matter. No rules apply to everyone. The
only true test for each performer is to examine, critically, the result of his or her
efforts, standing at some distance from the mirror to see that the final effect is to
his liking. Experimentation is the only real means of arriving at a successful
formula.

Working with a Costumer

Some departments are lucky enough to have a specialist in costuming to design
and construct their costumes. If the relationship between choreographer and
costumer is to be a happy and productive one, there are several considerations to
be borne in mind. Communication and mutual respect are the key. The following
suggestions to the choreographer are useful in establishing a good working
relationship:

1. Remember the costumer is an artist, too. Respect this person's desire to
create and have pride in his/her work. If changes must be made in a design you
previously approved, don't blame the costumer. Calmly explain what the prob-
lem is and ask for suggestions on solving the difficulty. Don't rule out changing
something besides the costume.

2. When preparing for a theatrical production, a costumer can read the script,
study the author's notes, look at pictures of past productions, and research the
period. In dance, often the only source of information is the choreographer. If you
aren't clear, concise, and detailed in expressing your concept you cannot expect
the costumer to reproduce the vision of the dance as you see it in your mind. This
means doing your homework. Clarify how many dancers, the kind of
movement, quality of movement, moods, colors, every detail you can before talking to the
costumer.

3. Invite the costumer to rehearsals often and early. However, you must
respect his/her valuable time. Make sure the rehearsal involves those things the
costumer needs to use. Don't stop to work on movement details that don't involve
the costumer, but do emphasize points in which the costume is especially impor-
tant. Send the dancers for fittings promptly and make sure your dancers come to
their appointments on time, properly dressed, and with plenty of time to do what
is needed.

4. Keep communications open. Be sure the costumer is aware of changes in
choreography or dancers. Look at costumes in progress, not in an attempt to spy
or put pressure upon the costumer, but to show your interest and endeavor to head off problems.

5. Establish a realistic but firm time schedule with the costumer. If meetings, deadlines, or rehearsals must be changed, notify the costumer as soon as you know about the change.

6. Have a dress rehearsal as soon as possible. If the costumes are very complex, don’t plan on accomplishing much else in that rehearsal. Let the costumer use the time to work out problems concerning how to wear intricate pieces, manage quick changes, stabilize head pieces, and so forth. Stop rehearsal, if necessary, it can save time, confusion, and frazzled nerves in the long run.

7. If you are resetting a previously choreographed work, don’t rule out the possibility of a new costume design. There is usually more than one way to design a piece and just possibly this new insight is what the piece needs. If you feel that only a repeat of the original costumes will do, try to get one of these costumes for the costumer to work from. If this isn’t possible, or even if it is, still photographs showing the costume full length from every angle are very helpful. Any time your mind is made up, don’t pretend you want a creative design from the costumer. Tell him/her exactly what you have in mind. Remember that reproducing costumes is the most boring and unrewarding work the costumer has to do this side of laundry. No artist enjoys being a xerox machine.

8. Don’t demand the impossible of the costumer such as asking that new costumes be made after the last dress rehearsal. Some mistakes must be lived with and learned from.

9. When the production is presented, be sure to express your appreciation, both verbally and in program notes, to the costumer. If the costumes have been well-done, no one will applaud the costumes, only the dancers and choreography they have enhanced. The costumer’s only positive feedback may be your thank-you.
Selecting the right music for choreography is almost as difficult as selecting the right steps for the dance. At various times a choreographer will make a dance with a particular piece of music in mind and with the steps and the length of the piece built around the music. In this instance, of course, music selection is no problem. But often dances may start as a short study without music and it isn’t until the dance is well underway or nearing completion that the choreographer begins to think about a score for the piece. Some choreographers, in fact, prefer to work without the constraints of music. But if the dance is highly structured and the steps are carefully counted, it may be difficult or impossible to find the perfect piece of music for the dance. Modern and electronic music sometimes can be useful in these situations since they may convey the right atmosphere for the dance without imposing too severe rhythmic or structural restrictions on the choreography.

Ideally, the choice is to work with a composer who has experience in writing for dance and who can provide the choreographer with music that is truly appropriate for the piece, and even more ideally, can provide the music well enough in
advance of the performance that the choreographer has sufficient time to rehearse the dancers to the music and make any changes in the choreography or the music that are necessary. This ideal situation, of course, rarely occurs and even when it does, it brings other problems along with it. Will the music be performed live? If so, will the musicians need microphones? When will they rehearse? Will they need to be paid? Will the choreographer have a tape of the music that is of sufficient quality that the dance may be performed at a later date without needing live musicians?

If the choice is made to work with live music and one is working with a limited budget, an option is to check with a music department to see if any composition major is interested in trying his hands at composing for dance. In this instance, one should make sure the composer has more than adequate time to prepare and rehearse the score since inexperience will probably mean several revisions before both choreographer and composer are satisfied. Also, one should try to have the piece recorded well in advance so that there is both a work tape for rehearsals and a master for future performances. Recording live music is a highly technical skill and requires good equipment, an understanding of selection and placement of microphones, and the accumulation of past experience so that the recording session is completed with a minimum number of "takes". If the choreographer has finished the dance before the music is set to it, there are several aids that will help the composer in his task. Have accurate metronome settings for each section of the dance. Make a list of the counts of the steps and the quality of the movement: for example, 16 measures of 4/4 at a tempo of 60 m.m (metronome setting)—lyrical quality. Also helpful are whatever metaphors or images that the choreographer has about the dance which can be shared with the composer to help him understand the intention of the piece. One should try to be flexible. On occasion, the composer may want to insert or delete a measure or two of music to give the piece more continuity and one should be prepared to allow this to happen, if it does not seriously jeopardize the choreographic concept. It is sometimes helpful to listen to the music that other composers such as Stravinsky and Copland have made for dances and try to understand why it is so effective and then apply those understandings to one's own needs as a choreographer.

Working collaboratively with a composer is a challenging and often gratifying experience. More typically, however, the choreographer ends up using pre-recorded music, and in this instance, there is a different set of considerations. Is the music too long or not long enough? Should a section be repeated? Is there an inappropriate section which must be removed? The solution to these problems is a working knowledge of editing and splicing. There are fairly detailed explanations of splicing in How to Make Electronic Music by Drake, Herder, and Moduguo, and in the Winter 1975 edition of Tape Deck Quarterly. But if one has never had splicing experience, learning from a book is a hazardous proposition at best, and may well be disastrous. It is much better to find someone who has done it and who can give you "hands on" training in the various procedures. Or, one may take a recording to a professional studio with careful and complete instructions as to what changes and editing need to be done. This can be expensive, so it is recommended that one learn to splice and save production budget monies for such necessities as costumes, and so forth. Splicing is useful not only in making the music the right length for the dance, but in adding leader to master tapes, creating silences where necessary, and in some instances, removing pops and the sound of record scratches.
Other considerations in working with pre-recorded music follow. If the dance is a solo, duet, or trio, be careful not to overwhelm the dancers by selecting a large orchestral piece of music. Generally, one should avoid using music that is so associated with a ballet or movie that the audience already has preconceptions about what kind of dance should go with that particular piece of music. There are, of course, exceptions to this rule, one of which is using very familiar music as commentary, satire, or for its comic value.

Music which has a strong rhythmic underpinning and yet is still legato in its melodic structure will allow the choreographer to go in either direction in choosing movement qualities. Stravinsky is a good example of a composer who created music that was both lyrical and highly rhythmic. The contemporary groups Oregon and Weather Report are also effective in this area.

Electronic music has considerable appeal to many choreographers. The unusual timbre of the sounds and the spatial quality which is possible with synthesizers and echo devices can make the theater seem larger than it actually is. Also, the very unfamiliarity of such music helps to suspend the audience's disbelief and allows the choreographer to work with very abstract and unusual movement forms if that is his choice.

Electronic music can also be grating, abrasive, and cause aural fatigue in much the same fashion that too many lighting effects can exhaust an audience and diminish their concentration during the course of a performance. In programming a concert, it is usually desirable to intersperse dances which use electronic music with dances which use more conventional musical forms.

Popular music is tricky to work with. No matter how much the music means to the choreographer, if it is "popular" it probably has considerable meaning to many in the audience. Thus, the choreographer's vision of the music may not be that of the audience. In addition, the music may soon no longer be "popular" and in this manner, date the piece faster than the choreographer might wish. Twyla Tharp's Deuce Coupe to music by the Beach Boys has a nostalgia factor built into the piece just by virtue of the fact that the music is no longer current. It is already reminiscent of another era.

Editing, splicing or otherwise rearranging a piece of recorded music to suit one's purposes is not the way to win the affections of the person who wrote the music or of musicians who are familiar with the piece. However, often the composer is no longer alive, or lives in some distant land like Berlin, or the Bronx, or Barstow so that it may be difficult to contact him regarding liberties which need to be taken with the music. It is best, of course, to leave the music as it is, but if one must edit at all, one should try to do so in a way that is not offensive to the spirit of the piece. For example, doubling a section or repeating the whole piece, if it is too short, is not as damaging to the composer's intention as is arbitrarily splicing out bits of the music which don't suit the choreographer's purpose. But if one absolutely must remove these passages, one should try to preserve the integrity of the music by removing only specific sections, for instance, the adagio from a Vivaldi concerto leaving the allegro and presto sections intact. Try to leave in openings and finales. If one has questions regarding editorial decisions, it is usually wise to consult a composer or musician for his opinion. As a final test, put yourself in the composer's shoes. What parts of your dance would you be willing to remove and still feel that the integrity of the choreography had been maintained?

Joining several pieces of music together to make a collage has its own set of virtues and difficulties. Collages permit a choreographer to make rapid and often
dramatic shifts in texture and movement quality. They can also permit the simultaneous overlay of different “voices” or moods to create a kind of fugue. But putting together a collage usually requires splicing techniques and/or skill in operating a mixer so that sound fades in and out and is overlaid with sensitivity and smoothness. One must be aware of the aesthetic choices involved in juxtaposing one piece of music with another. In addition, music collages as well as pictorial collages run the danger of being too busy and imposing a nervous, somewhat frenetic quality on a dance which may or may not be the choreographer’s intention. So in making a collage, one must choose with care both the music and the places where they will be spliced or faded together.

One other important aspect of working with pre-recorded music is that the use of such may be in violation of copyright laws. If there is any question about this, it may be wise to contact the local office of such music publishing companies as ASCAP or BMI for a correct interpretation of how the laws apply.

A final musical option open to the choreographer is to create the sound score for the dance. It can be an immensely satisfying effort. It can also be very time-consuming and take energy and hours away from the choreographic process. However, with that reservation in mind, the choreographer may try making a score expressly designed for the dance. Some of the raw materials may be conventional instruments used in unconventional ways, pedestrian and ordinary street sounds, supermarket or cafeteria sounds, and so forth, excerpts from television or radio shows, music from homemade instruments, spoken pieces from poetry, prose, or speech fragments, tape manipulations of “ordinary” sounds. All of these can be the basis for provocative scores. The book, How to Make Electronic Music, is particularly useful in this area, though it would also be helpful to have the collaborative experience of working with a musician or dancer who is familiar with taping and tape manipulation techniques.

After the music has been chosen, it is important that it be recorded and played back properly. If the quality of sound which comes out of the speakers during the performance is inferior, it will distract from the dance no matter how eloquent the music is. There are few exercises of concentration more difficult than trying to view a dance and not hear that pop from a tape of a cracked record as it comes around again and again and again.

There are ways to avoid some of these sonic curses. Hopefully, the music will have been selected in advance and a fresh copy of the recording will have been obtained. If the music has to be ordered from a record company, it may take anywhere from two to six weeks to arrive, so one must plan accordingly.

Once the new disc is in hand, it should be recorded right away in stereo on the best machine available, using the highest quality tape one can afford. Avoid re-using tape which has already had something recorded on it. Also avoid recordings on both sides of a master tape. After the initial tape has been made, a second copy should be immediately recorded which can be used in case of loss or damage to the master. It also might be well to consider recording a cassette copy to be used as a work tape.

One should make sure the master tape has sufficient leader at both the beginning and the end of the tape and that it is stored “tails out.” This is a procedure whereby the tape is played through and then not rewound until just before it is to be played again. This process helps to avoid “print through,” an annoying characteristic of tape whereby the sound on one part of the tape is transferred magnetically to the next layer and is often heard as a faint ghost or pre-echo of the music before it actually begins. Also, storing tape after it has been fast-forwarded
or fast-reversed tends to store it under tension and increases the possibility of both "print through" and tape stretching.

It is important to keep the master tape in a relatively cool and dry place away from such magnetic fields as electronic motors, hi-fi speakers, or amplifiers. Storing it in an aluminum film can well help to preserve the tape should it accidentally pass near a magnetic field or be left in direct sunlight.

One should also be careful that the turntable from which the master tape is recorded does not have rumble—a low bass tone which is the sound of the motor in the turntable that can severely diminish the clarity of the recording. Also, the needle should be free from dust. If one has never made a transcription from a record to a tape, it is very helpful to work with someone who has.

Should the new record have manufacturing defects such as pops or crackles, there are several options available. First is to take it back to the record store and exchange it. If it has to be re-ordered, it may take longer than one can wait. If so, it may be possible to find someone who has a noise-eliminating device, a relatively recent addition to the hi-fi field. These machines have the ability to separate musical from non-musical material on a record and pass through only the pure musical information on to the tape recorder or sound system. However, such devices are not cheap and finding someone who has one may be a difficult process. The local FM station is a possibility. There are usually stereo buffs working there who have or know the whereabouts of all the latest state-of-the-art devices. The station may also just happen to have a clean copy of the record. It's always worth a try.

If there are only a few pops in the recording, it is possible to splice them out from the tape. This is delicate work and requires some previous experience in splicing, but it definitely can be done.

A last option, should all else fail, is to play the tape during the concert with the treble on the amplifier turned all the way down. This will diminish the clarity of the high sounds in the music, but it will also diminish the irritability factor of the pops and scratches.

Some music, like recordings of jazz from the 30s or 40s, actually can be enhanced by surface noise. The crackles and pops may give the proper ambiance for period pieces. However, most other music suffers greatly from anything less than crystalline sound, so whatever one can do to present the music in that form will be of benefit to the dance itself.

In most cases the tape should be recorded at 7-1/2 inches per second in quarter-track stereo. Check with the stage manager of the theater in which the piece will be performed to make sure that this format is compatible with whatever playback machinery is on hand.

The next concern is the sound test. After all the pains which hopefully have been taken to assure that the master tape is of the highest quality, it would be a shame not to see to it that the final sound coming out of the speakers is the right volume level and the right balance of bass and treble.

First one must decide whether to play back the music in mono or stereo. A stereo image usually has greater presence than mono. But in those theaters which are exceptionally wide, the audience sitting on the side may hear only the left or right channel as the case may be. Mono playback assures that everyone hears the entire sound though with some loss of transparency.

Next, the volume level should be set by standing in several areas of the theater. Try to find a compromised setting if there is a wide disparity in levels. An audience will absorb a certain amount of sound unless the theater seats are padded on the
underside so as to stimulate the acoustic properties of a full house. It is important to make sure there is a monitor system off stage so that the dancers can hear the music clearly and volume levels should be set for these speakers at this time.

One should determine whether the treble and bass are properly set so that the sound is neither too boomy nor too tinny. It is quite possible that these tone controls will have to be re-positioned for each piece along with the volume levels. Know that the apparent volume of sound can change with dancers on a lit stage, so try to re-check the sound levels during dress rehearsals.

One final consideration: the dancers may have been rehearsing with a work tape on a cassette machine which has a speed quite different from that of the theater tape recorder. It is important to make sure that all choreographers or directors have enough time to check the tempos of the accompaniment during the run-throughs so that there are no unfortunate surprises on opening night.

If all goes well, and the sound system doesn’t fail (back-up systems are an added expense but a good precautionary measure), then the music should appear to be transparent to the dance. Without drawing undue attention to itself, the accompaniment will work to reveal the inner logic of the choreography and give added presence to the dancers.

Additional Readings

A book designed to enable dance teachers and composers for dance to assemble instruments particularly suitable for accompaniment and sound scores.

A clear explanation of how to work with tape recorders, manipulate sound, splice, edit, and make one’s own sound scores
Light is an essential element of dance. The concept of dancing in darkness may interest the dancer subjectively but has no relevance to theater performances. Since dance is, in large part, a visual experience, the first duty of the lighting designer is obvious: to make the dance visible. Beyond this basic requirement, though, lies the fascinating and challenging realm of lighting design. To the newcomer, it is a world filled with strange jargon, odd and uncooperative equipment, and hard physical and mental work. More often than not, it is a world full of limitations in time, equipment, facility, personnel, and budget. The lighting designer venturing into this world can arm himself with a number of weapons which will see him successfully through nearly any difficulty, namely knowledge, experience, and creativity. This chapter seeks to convey some of the first, a little of the second, and if any of the third is stimulated, it is probably incidental.

**Light and Color**

A basic understanding of the nature and properties of light and color can permit even an inexperienced lighting designer to go beyond the limits of his direct
experience in terms of predicting additive color effects, understanding the design and operation of lighting instruments, choosing proper gel colors, and so on. Thus, while discussion of basic optics and color theory may seem inappropriate in a production text, this information may be more useful than an equal volume of practical or experiential information. Questions such as "what happens when I light a blue costume with red light?" or "what's the purpose of the lens in this instrument?" can be answered quickly and with confidence when the fundamentals are understood, even if one hasn't specifically experimented with or read about these things.

We can break the process of illumination and observation of an object into three portions: the light source; the path of the light; observation or reception of the light by the eye.

Light is emitted from a source, whether it be the sun, an electric lamp, or a flame. Sources may be characterized as to their brightness or intensity and their color makeup. This latter factor becomes important in stage lighting because it happens that the light produced by the tungsten-filament lamps in common use in stage lighting is far from ideal in terms of color makeup. When compared to sunlight, tungsten bulbs are seen to be quite yellow, that is, they contain a higher proportion of red light and a relatively small proportion of blue light. Experienced lighting designers know that it is difficult to get a good, strong wash of deep or primary blue light on stage. This is not because the primary blue gels are so much deeper or more saturated than primary red gels, but that there is so little blue light being emitted by the lamp in the first place!

The path of light deals with the processes which take place once the light has left the source until it reaches the observer. The emitted light may be reflected, refracted, or absorbed. If it is not absorbed, then it must be reflected or transmitted. Reflections may be specular as from a shiny or mirrored surface or diffuse as from a matte or non-shiny surface. When light is absorbed by a surface, the light energy is degraded to heat which may in turn be radiated to the surroundings of the object. Colored objects selectively absorb certain wave lengths and reflect or transmit others. This process is described in more detail below. Light rays may also be refracted or bent when passing through various transparent media such as glass or water. The purpose of a lens is to refract light rays permitting them to be focused and directed efficiently.

Finally, after a number of reflections, refractions, and transmissions, light which is not absorbed reaches the eye of the beholder where perception takes place. This final step has important psychological aspects and is perhaps the most unpredictable part of the process.

Light, Color, and Vision

Light is defined as that portion of the spectrum of electromagnetic radiation detectable by the eye. This is a very narrow portion of the entire spectrum which ranges from radio waves and microwaves up to X-rays and gamma rays. The distinction between the various portions of the spectrum is made on the basis of wavelength, and perceived color is also determined by wavelength. A useful definition of color is a psychological response to stimuli received by the human eye. Thus we see that color has an important psychological aspect. Careful scientific measurements of wavelength may or may not correlate with what people perceive, which is perhaps just another way of saying that we all see things differently. It is often observed that after any given performance there will be those who thought the colors and effects used in the lighting were beautiful, while
others will attest; they're horrible. While unpredictable, these differences in color preference are to be expected. In fact, about 8% of the population has some form of inherited color vision deficiency and, as such, see the colors of the spectrum differently than the remaining population. The lighting designer should therefore react to criticism of his color schemes with some tolerance. It may also be of interest to consider a potential situation in which the lighting designer (or the choreographer or artistic director) is himself afflicted with a color deficiency.

The important point to bear in mind concerning color is that response to it is highly personal and variable. There are, nevertheless, certain general principles and rules which can be relied upon. One of the most useful principles of color vision is the observation that essentially any color response can be elicited by mixtures of primary blue, green, and red beams of light. This is generally referred to as the principle of color addition. Anyone having the slightest doubt about this principle can verify it quickly by looking at a color television screen up close. A triangle diagram is often used to illustrate this concept. The primary colors (blue, green, and red) are at each corner of the triangle. The secondary colors (cyan, amber, and magenta, produced by addition of any two of the primaries) lie at the midpoint between the primaries. Addition of all three primaries in equal proportion will result in white light.

The principle of color subtraction is similar. If we begin with a beam of white light (which can be represented for all purposes as three separate beams of red, blue, and green mixed together) and pass it through, say, a blue filter, the red and green beams will be blocked from passage while the blue beam will continue through the filter. By “blocked” we really mean that red and green are absorbed by the blue dye of the filter and reduced to heat which is then dissipated from the surface of the filter.

These same principles apply to light impinging on the surface of a colored object. Imagine a beam of white light striking a blue box. The red and green components of the light are absorbed by the blue pigment on the surface of the box and only the blue rays are reflected back to the observer. If we shine only a beam of red light on this blue box, all of the red light is absorbed and no light reaches the observer. The box thus appears black. A simple rule of thumb reveals itself (“like begets like”). If we want a colored object to reveal its true color, we must illuminate it with light which is close in color to the object. This can be accomplished by using light of the same color as the object or by using white light which contains this same color (and all others).

It might be noted that these concepts of color addition and subtraction seem backwards to many people. This results, perhaps, from childhood experiences such as adding green food coloring to a bowl of white frosting. Intuitively, it seems we have added something, that we have “added green” to the white which was there before. And it also seems when we place a green filter in front of a white beam of light that we are “adding green” or adding tint to the light. In both cases, however, the green we see results from the absorption of red and blue by the green dye and we are, in fact, subtracting the colors red and blue from the white frosting or beam of light. It is important that these basic concepts be understood when one begins to choose colors in lighting design.

Thus far we have dealt only with primary and secondary colors, and these are sometimes used in stage lighting. But more often, much “lighter” colors, or more “pastel” tints are employed. To speak accurately about the differences between colors we need some additional terminology. A much-used system of color classification employs three terms (brightness, hue, and saturation). Brightness refers to the amount of light which is reflected or which emanates from an object.
Hue is what we normally mean when we say color or tint. It is that property which permits the observer to judge that one hue or color is different from another. Blue and greenish-blue are different in hue. Saturation may be described by a simple example (if we have some green dye and two bottles of clear water and add one drop of dye to the first bottle and ten drops to the second bottle, the resulting appearances differ not in hue, but in saturation). The more diluted solution could be said to pass more white light, it is "lighter" or less saturated, but still the same hue as the more concentrated solution.

Gel or color media can be thought of in analogous fashion to the water bottles with added dye. More or less of a given dye may be added to the plastic acetate or mylar which comprises the color media. In general, relatively unsaturated color media are used in dance lighting for at least two reasons. First, strong, saturated colors look very unnatural on skin and are generally used only for strong dramatic effect. And second, much less light passes through the saturated gel. Only 5 to 10 percent of the light from an instrument will pass through a saturated blue filter, while 20 to 30 percent of the light energy will pass through a relatively unsaturated blue filter. When it is desired to produce natural skin tones by mixing warm (pink or amber) and cool (light blue) washes of light, it is unwise to "waste" more of the output of the lighting instruments than is necessary. Indeed, when the number of instruments available is limited and the resulting stage lighting is at best dim, one should use very lightly tinted gel or even no gel at all.

The basic "palette" of color media used for general illumination in dance normally includes light blue overhead wash, side lighting, and front of house, and either a light pink or amber also from these same positions. A third set of light lavender side lights can also be used to add some additional intensity and sparkle. It is generally best to steer clear of greenish-blues and stay with "stgel" or daylight blue. In producing natural skin tones, there is little need for any green component in the illumination (since there is very little green component in human skin). If it is desired to light a dancer wearing a bright green costume such that both skin and costume appear natural and vivid, white light would be an obvious choice. Use of ungelled instruments to produce white light can result in a rather stark appearance onstage, however. In this instance, the designer may find that the addition of a set of side lights gelled with slightly greenish or cyan color to the basic palette will enhance the green without seriously affecting the skin tones.

In many cases some experimentation with both intensity settings and gel color will permit the desired effect to be achieved, but a little knowledge of the basic theory of color addition will speed up the process and can help the designer avoid totally incorrect choices.

Stage Lighting Instruments

Ellipsoidal Reflector Spotlight

Ellipsoidal reflector spotlights, often referred to as "lekos" or "Klieglites", are undoubtedly the most versatile and widely used type of lighting instruments. They produce a bright, sharply defined beam, with a smooth, flat field. The beam can be shaped by use of built-in shutters or by placing an iris in the gate of the instrument. The beam can be patterned by use of metal plates in which designs known as gobos have been cut. These instruments are classified according to lens size, two numbers are given as in 6 x 9 (six by nine). The first number specifies the lens diameter in inches, the second number the lens focal length. Common lens sizes are 3-1/2, 6, 8, and 10 inches and as the size increases so does the wattage of...
the lamp employed. As the focal length increases, the angle of spread of the light beam decreases. Thus a 6 × 12 instrument throws a narrower beam of light than does a 6 × 9.

In dance lighting, 6 × 9 lekos are commonly used for side lighting and may be used overhead to produce special pools. The larger lekos are used from "ante-pro" positions (that is, from positions on the house side of the proscenium). They are designed for long-throw applications.

**Fresnels**

Fresnel instruments take their name from the type of lens they employ (that is, a step-lens). The beam of light produced by a Fresnel differs from the leko beam in important respects, the beam does not have a sharp, focused edge and the beam normally appears brighter in the center, feathering out toward the edges. This feature of the beam makes it possible to blend the beams from a number of Fresnels into a smooth wash of light over the entire stage. Also the size of the beam thrown by the instrument can be quickly changed from "spot" to "flood". Fresnels are thus very useful when hung from overhead onstage battens. They are not useful from ante-pro positions because they spill a good deal more light than do lekos. Also the beam cannot be shaped effectively, barn-door shutters which are fitted into the color frame slot can be used to control spill. (Barn-doors are often necessary on Fresnels used on the upstage lights to diminish spill of light onto the cyclorama.)

**Floodlight**

The floodlight, or "scoop" as it is commonly called, is perhaps the simplest lighting instrument used onstage. It consists simply of an ellipsoidal reflector, a lamp, a yoke and clamp, and color frame brackets. It has no lens and the position of the lamp is not adjustable. It is used most often in dance lighting to produce an even wash on the cyclorama. Scoops range in size from about 10 up to about 16 inches in diameter and lamp wattage ranges from about 250 up to 2000 watts.

**Striplight**

The striplight (or border light or "X-ray") consists of a number of lamps housed in a single long, narrow housing. The lamps are physically separated, each having its own reflector, but the lamps are circuited not individually but in groups of three or four. Lamps ganged together are gelled the same, some striplights utilize standard color media while others make use of glass roundels which are usually quite saturated blue, green, red, or amber. Striplights are best used for general overhead washes or for washing the cyclorama. In some theaters, striplights are mounted in the footlight positions in the far downstage area or apron.

**Use of Lighting Instruments**

The most important principle of dance lighting is that it must be designed so that the entire body will be lit as it travels throughout the entire stage area. Further, the dancer should be lit in such a way that the body appears three-dimensional. Both of these considerations are best achieved by extensive use of side lighting coupled with even, general illumination from overhead instruments. Strong side lighting gives the body fullness and causes the dancer to stand out nicely from the background. The highlights and shadows on the trunk and extremities which result from side lighting produce this three-dimensional effect.
Lighting which is strongest from the front or from overhead produces a flat, two-dimensional appearance since shadows and highlights are washed out and the "molding" of the figure is lost.

The best instrument to use for side lighting is the 6x9 ellipsoidal. Ideally, as many as three or four 6x9s would be hung on boom stands in each of as many as five wings. They would usually be gelled a variety of colors to allow latitude in color effects, tone, and mood. These instruments should be mounted low, ranging from those mounted very near the floor ("shinbusters") up to about eight feet in height. When instruments are mounted much higher much of their "punch" is lost and their effectiveness diminished in producing the desired effect. Smaller instruments such as 3-1/2-inch ellipsoidals ("baby lekos") can also be used effectively as side lighting instruments and are particularly convenient for touring groups. Large instruments such as 8- or 10-inch ellipsoidals are of little use as side lighting instruments as their light beam is generally much too narrow for onstage use. Inexperienced lighting technicians are cautioned against the temptation to obtain extra side lighting by pulling these large instruments down from their front-of-house position in hopes of using them onstage. This will simply result in wasted time and effort.

The need for side lighting often presents problems, especially at small facilities which seldom or never have hosted dance concerts. The major problem is usually that circuits are not readily available in the wing positions. Some theaters have floor pocket circuits in the wings, but it is not uncommon to find that these are limited in number, are not discrete circuits but are paired with other outlets, or no longer work because of disuse and neglect. (Floor pockets seem to be favored receptacles for floor sweepings.) This problem will often be compounded by a lack of spare electrical cable. Circuits may be available on the overhead electrics, in floor pockets, or on sidewalls, but if cable is not available, they are of no use for side lighting instruments. Plan at a minimum that every side instrument used will need its own 10- to 20-foot cable.

Another problem often encountered is that boom stands (or light "trees" or "ladders") are not available in sufficient number for mounting the side instruments. The technical director must then use some ingenuity in obtaining suitable devices for mounting the instruments. At schools, it is often possible to find portable volleyball net poles or tetherball poles, the kind made from a pipe, an old tire, and concrete are quite suitable because the base is so heavy that several instruments can be hung on them without danger of their tipping. A shinbuster base can be made with a piece of plywood measuring about 1 x 2 feet. Drill a hole in the center of the board, remove the C-clamp from the instrument and rotate the yoke down straight, underneath the instrument. Then bolt the baseboard to the yoke. Add some runner boards to the bottom of the plywood so that the protruding bolt and nut will not touch the floor, and you have an inexpensive, very stable stand.

Second in importance to side lighting is the overhead wash. The wash is an even illumination of uniform color covering the entire stage area. It is produced by using four or more Fresnel instruments on each overhead electrical batten. Since these instruments nearly always work together, they may be patched into the same dimmer in groups which do not exceed the capacity of the dimmer. The usual practice is to hang two or more separate washes, one in cool gel (normally blue tint), one using warm color (amber or pink), and a third wash might be in a relatively neutral tone such as lavender or it could even be left ungelled. By using both cool and warm wash together, a quite natural illumination (that is, neutral or "white") can be achieved.
Borderlights (or strip lights, or “x-rays”) are also quite satisfactory for producing washes. They are normally colored using glass roundels which are quite saturated in color. Blue, red, green, and amber are the usual colors available in striplights and combinations of these colors can be used to produce a wide array of color effects. Some striplights use gel and may thus be made any color desired.

The front of house or beam lights are used mainly to add fill to the dancer’s face and to provide adequate lighting in the downstage area. Scoops normally are used to wash the cyclorama with color, these instruments are focused to produce a smooth illumination on the cyclorama and are usually gelled in primary blue, red, and green or secondaries such as amber. Borderlights also can be used for cyclorama washes.

**Lighting Control**

The large number of lighting instruments used in dance lighting and the physical separation of these instruments necessitates a central control system from which the intensity of any given lamp may be controlled. In well-designed systems, all electrical circuits originate from a patch or cross-connection panel. This panel allows the electrical connection of any circuit to any dimmer channel. A number of different designs are encountered in patch panels. Common designs are the buss-bar sliding contactors and the “plug and jack” type. The patch panel permits the lighting designer to set up the dimmer board in a logical manner. For example, dimmers 1-4 might control the front of house instruments, dimmers 5-10 might control the cool overhead wash, 11-15 the pink side lights, and so on. Lighting designers often like to set up the boards from one theater to the next in much the same way. This allows them to call quickly for the instruments they want brought up from memory, obviating the need to consult a switch list (which can be bothersome in a darkened theater). It should be remembered, however, that a patch panel is a convenience and not a necessity. On many stages, dimmers are permanently wired to circuits. This makes circuiting a bit difficult and may also demand agility from the board crew since dimmers which operate a given set of instruments (such as the cool overhead wash) may be scattered up and down the dimmer board. On sophisticated dimmer boards, this makes little difference, however.

Dimmer boards come in a great variety of designs and vary greatly in terms of the type of hardware used, the “memory” system employed, and in terms of the number of board operators required and the difficulty of their task. When a new board is encountered by the touring stage manager or lighting designer, his concern should not be for understanding the intricacies of how the board works, but rather how it is operated. How many crew members are needed on the board and how complicated may the cues be before the operators are overwhelmed? Taking this pragmatic point of view, the stage manager will want to know: how are cues recorded? how many board operators are required? can complex cue changes be carried out or must they be simplified?

Dimmer systems range from completely manually operated systems to those in which nearly all operations are carried out by microprocessors or small computers. Somewhere in between these extremes is the multiscene preset board. Each of these three basic systems deserves some discussion since most boards encountered will fall roughly into one of these categories.

**Manual systems.** In manual dimming systems, every dimmer channel has a lever or handle which must be physically moved to effect a change in that dimmer’s output. This means quite simply that a good many hands are required to
operate the board. The dimmers employed are usually auto-transformers and may be controlled by a linear slider or a radial handle. These boards have been the workhorse of theaters throughout the world for many years, but they are now being rapidly replaced by electronic boards. While they are extremely reliable, they are very cumbersome to operate. Complicated cue changes are difficult, especially if rapid changes are desired. A radical cue change may have to be "choreographed" nearly as carefully for the crew members operating the board as is the dance onstage. In manual systems, dimmer settings are recorded with pencil and paper for each cue, as the cue number is called, each operator must move his assigned levers to the recorded value.

A great improvement in dimmer boards came with the advent of the electronic, solid state dimmer. Since these dimmers are controlled electronically by potentiometers, it became possible to devise circuitry which would permit more sophisticated control. In the multi-scene preset board, there are multiple sets of levers (potentiometers, really) for each dimmer. Control is transferred from one set of potentiometers to another by use of a master fader. In a sense, these sets of potentiometers (referred to as "scenes") comprise a memory system since all information necessary to a given scene is recorded in the position of the levers. In practice, one person operates the faders while a second person sets up the scenes (that is, adjusts the levers to the pre-recorded levels). Cue settings must still be recorded using pencil and paper, but in this case, only a single "lever-mover" is required and much more complicated and rapid changes may be carried out than with the manual system.

In recent years, computer technology has begun to have impact upon stage lighting systems, as well as upon other facets of our lives. The beauty of "computer" systems is that they "remember" cue settings, cue transition times, and so on, with complete accuracy. Operation of these boards becomes a one-man job. The operator need only initiate cues, the computer does the rest. While most people seem to have heard horror stories about computer boards which have "forgotten" cues, blacked out the stage at uncalled for and inopportune times, or simply "blown up", when the veracity of such stories is questioned, it is often found that the fault was with the operator and not the system. While first-generation boards may have suffered some reliability problems, great improvements have been made in memory reliability, sophistication of control, and ease of "programming". On proven systems, cues need no longer be recorded using pencil and paper, since they are redundantly copied by the machine, both in "volatile" memory and on magnetic tape or disc. Persons who plan to pursue technical theater careers should get used to such boards and learn to enjoy them, they are here to stay.

Désigning the Lighting

As in many artistic endeavors, the general problem of designing lighting for dance is two-fold. first, comes development of the concept— "what do I wish to see in the finished production?", secondly, comes execution— "how do I translate what I see in my mind's eye into reality?" It may well be impossible to develop a set of instructions which will lead to success in the first problem. The concept of teaching creativity is almost self-contradictory. More help can be offered to those wishing to learn the craft of approximating their mental designs by proper use of stage lighting equipment.

As the designer gains experience, his initial concepts about how to light a piece should begin to be tempered by the reality of what is possible within the
framework of the physical limitations which present themselves. It is naive to formulate designs that cannot be carried out with the available stage equipment. The challenge in design is to use what is available to the fullest extent, to develop new methods and new configurations to produce those heretofore "impossible" design ideas. Also, as the beginning designer becomes familiar with the full range of capabilities of lighting instruments, control systems, gel colors, and so forth, ideas are bound to arise from the experience itself. Eventually, the design process comes to include the production process and the difficulty encountered initially diminishes. The experienced designer comes to think, design, and create in terms of what is real and what is practicable and this ultimately allows the highest degree of expression in stage lighting.

The Light Plot

The main purpose of the light plot and accompanying switch list is to convey all information necessary so that a stage crew with no prior knowledge of a production can hang, focus, connect, and gel instruments used to light the production. This is especially important to touring companies, and under ideal conditions, the plot is hung before the company arrives and only minor adjustment is necessary before lighting rehearsals can begin.

The light plot is a carefully drafted top view of the stage and front of house area which is drawn more or less to architectural scale. In most dance concerts where major set pieces or scenery are not used, precision in measurements is not essential and in practice, a single drawing may be sent to a number of different theaters. The light plot is accompanied by a switch list which contains most of the information on the light plot in written form and any additional information that does not conveniently fit on the drawing. It is also a good idea to include redundant information on the switch list. Because no standard form for light plots seems to exist in the profession, it is essential that a key be included on the drawing which identifies symbols, numbers, and notation. Do not hesitate to write a few paragraphs explaining any unusual requirements or unorthodox set-up. The information included on the light plot should be:

- type and size of instrument;
- hanging position (location) of instrument;
- gel color used in the instrument;
- a number must be assigned to each instrument for reference to the switch list;
- position of set pieces, drops, curtains, cyclorama, special effects devices, and so on;
- general dimensions of stage — depth, width, wing space, proscenium opening, etc.;
- lighting areas of the stage defined, using outlines and number or letter assignation.

On the switch list should be:

- the instrument number;
- approximate hanging position (e.g., "first electric");
- area to which the instrument is aimed and focused (may be the area assignation, if drawn on plot, or may be a description such as "downstage left");
- type of instrument, lens size, and focal length, and wattage of lamp;
- dimmer assignment of each instrument;
- color number, manufacturer, and description (e.g., Rosco 851, "daylight blue");
- comments, special instructions ("even wash", "keep off cyc").
<table>
<thead>
<tr>
<th>Dimmer</th>
<th>Position</th>
<th>Unit No.</th>
<th>Focus</th>
<th>Type</th>
<th>Cinenoid Color No.</th>
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<tbody>
<tr>
<td>1</td>
<td>side booms #1, 13</td>
<td></td>
<td>across stage</td>
<td>6 x 9 ellip. spot 500-750 W</td>
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</tr>
<tr>
<td>2</td>
<td></td>
<td>#4, 16</td>
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<td></td>
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<td>#8, 20</td>
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<td>13, 14</td>
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<td>Downstage, evenly distributed</td>
<td>8’ or 10’ ellip. spot 750-1000 W</td>
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<tr>
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<td>balcony rail #2, 4, 6, 8, 10</td>
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<tr>
<td>17</td>
<td>1st pipe #1, 3, 5, 7</td>
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<td>even wash</td>
<td>6’ or 8’ Fresnel 500-750 W</td>
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<tr>
<td>18</td>
<td>2nd pipe</td>
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<tr>
<td>19</td>
<td>3rd pipe</td>
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<tr>
<td>20</td>
<td>1st pipe</td>
<td>#2, 4, 6, 8</td>
<td>even wash</td>
<td>6’ or 8’ Fresnel 500-750 W</td>
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</tr>
<tr>
<td>21</td>
<td>2nd pipe</td>
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<td>4th pipe</td>
<td>#1, 4, 7, 10, 13</td>
<td>cyclorama 14’-16’ scoop 500 W</td>
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<td>25, 26</td>
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<td>#2, 5, 8, 11, 14</td>
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<td>27, 28</td>
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<td>#3, 6, 9, 12, 15</td>
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<td>#28</td>
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<td>33</td>
<td>downstage left side boom #29</td>
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<td>(Square edges) diagonal</td>
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<tr>
<td>34</td>
<td>2nd pipe</td>
<td>#30</td>
<td>Area 4</td>
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<td>61</td>
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<tr>
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<td>#32</td>
<td>Area 5</td>
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<td>37</td>
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<td>#33</td>
<td>Area 5</td>
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<td>38</td>
<td></td>
<td>#34</td>
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<td>#35</td>
<td>Area 6</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>40</td>
<td>stage left booms #2, #3 #36 #42 Across stage</td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>41</td>
<td>3rd pipe</td>
<td>#37</td>
<td>Area 7</td>
<td>6 x 9 ellip. 61</td>
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<td>#41</td>
<td>Area 9</td>
<td></td>
<td>61</td>
</tr>
<tr>
<td>46</td>
<td>Upstage right side boom #43</td>
<td></td>
<td>diagonal</td>
<td></td>
<td>36</td>
</tr>
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</table>
circuit numbers may in some cases be listed for each instrument, but the designer usually does not have this detailed information prior to drawing the plot, nor is it generally necessary.

A sample light plot is included on page 58. This is a general purpose plot which was used on a tour of a number of theaters in Great Britain by the University of Utah Performing Danscompany. Detailed information on the stages was not received in advance, so a simplified plot was sent to each theater along with a letter which explained what to do when less equipment was available than that listed in the plot. The resident stage managers were instructed to approximate the plot as best they could at their facilities, and not to take anything on the plot too literally. It must be confessed that in spite of these advance instructions, only one theater on the tour had any set-up work done prior to the arrival of the company and even then the work was incorrectly done and held to be totally reestablished. One should not expect much better response from small or medium-sized theaters in the United States. So why bother with sending light plots at all? There are some good reasons. occasionally, the plot will be hung correctly by the stage crew, even where work has not been done, the resident stage manager may have done some thinking about how to carry out the work, and at least he is forewarned of what to expect when the company arrives, sadly, it may be the only warning the resident manager has that the company is coming to his theater! In any case, the company technical director should not assume that he will arrive to find the plot hung, gelled, and focused and an eager crew awaiting his first command. Chapter VII gives advice on proper scheduling of time in the theater.

Safety during Set-up

Set-up and strike are certainly the most dangerous parts of production and they involve many different safety hazards. falls by individuals from high ladders, scaffolds, catwalks, and grids, falling objects—battens being dropped too rapidly, dropped instruments and tools, danger of electric shock from malfunctioning instruments, improperly wired cables and connectors, danger of burns from hot instruments, bulbs, cuts and scrapes from working with sharp tools, bruises and bumps from working in often poorly lit areas which are cluttered at times. All of these dangers are further compounded when inexperienced crew members are used. All members of the production staff and in particular the stage manager must insist upon safe work practices and be diligent in looking for unsafe conditions.

Safety Rules Which Should Be Enforced

1. Use safety straps on tools used overhead.
2. Do not allow inexperienced individuals to operate a fly system without direct supervision.
3. If people feel uncomfortable working on high ladders, do not urge them to do so.
4. Never disconnect or defeat ground wires on instruments or cables.
5. If connectors are interchanged on instruments or cables (this often is required when instruments are loaned to other theaters), double check electrical hookups before plugging the instrument into power.
6. When working on ladders or scaffolds, use safety rails or chains. Never lean out away from the ladder or scaffold.
7. Never "hot-patch" instruments or cables. If, when power is applied to an instrument and blown fuse or circuit breaker trip results, find the cause before replugging the instrument or cable which caused the fault.

8. Securely clamp instruments hung over the audience and attached to the batten by a safety chain or cable. Barndoors or snoots should be chained to instruments.

9. Securely tape down cables on floors or cover with pieces of carpet which are then taped or stapled at the edges.

10. Remember that dancers must often move rapidly through dark wing spaces and behind the cyclorama or back traveler. Be sure to keep these areas clear of props, sets, or items which could be run into or tripped over.

11. In modern dance, dancers usually perform barefooted. Check the entire stage carefully, sweep thoroughly, repair or tape splinters, watch for protruding nail heads, staples, and so on.

12. Never permit open flames or cigarettes on stage.

13. Supply and maintain first aid kits, fire extinguishers, and stretcher. Know where these items are kept.

Additional Reading


While lighting design and execution is the most important element of technical production for dance, additional knowledge and skills are required to produce a high quality dance concert. Adequate technical organization and scheduling are prerequisite to properly doing the job and they must be done by a technical director who understands all aspects of the work. All too often, inexperienced performing groups do not provide for adequate time and personnel to carry out the technical end of production and the quality of the final product suffers greatly in spite of all the hard work which has gone into choreography and rehearsal.

This chapter is a step-by-step guideline for technical production, beginning with design, organization, and scheduling, moving through set-up and rehearsals, and concluding with performance and strike. Those new to technical theater will likely find terms, concepts, and reference to procedures with which they are not familiar, and Chapter VII has been written to fill in these gaps. It is essentially a primer of dance lighting and technical production, containing specific and detailed information on design of dance lighting, lighting equipment, stage terminology, and so forth. It is by no means a complete discourse on the subject and
the reader desiring additional information is referred to other texts on these subjects.

The discussions and suggestions given here are geared toward those persons relatively inexperienced in technical production and lighting for dance, and to those who work most often in small, moderately-equipped facilities. Persons blessed with access to large, well-equipped theaters likely have access to well-trained and competent technicians and designers as well. But even those fortunate few will likely have occasion to tour to smaller facilities and may find useful information herein.

The design and production of an evening of dance is a complex task involving the participation of many people and the coordination of many different elements. The sequence of events leading up to the night of performance and the timely completion of certain tasks can have as great an influence on the success or failure of the performance as what takes place on stage once the curtain is up. This section will provide a chronological guideline for coordination of stage lighting and related technical production requirements. The sequence offered here has proven useful in practice but is certainly not the only plan which might be used to assure success.

The work involved divides itself quite nicely into work done prior to entering the theater (organization and design) and that done in the theater (stage work).

**Organization and Design**

*Organizing technical personnel.* The first identifiable step in the technical production process is the choice by the artistic director, choreographer, or prime mover of the overall production, of a technical director, lighting designer, and stage manager. In many instances these jobs will melt together and be filled by a single individual. In large production it is quite desirable to keep these jobs separate and distinct. The description of what each of these jobs entail varies from place to place, but as used here is approximated below:

- **Technical Director.** Is ultimately responsible for all aspects of technical production and may, in turn, appoint lighting designers and stage manager. He/she develops the production schedule and sees to it that it is met, makes initial contacts with theater managers, assures that necessary equipment, props, sets, crew members, and so on are obtained or arranged for.

- **Stage Manager.** As the name implies, the stage manager is in charge of what takes place backstage, both in set-up and in performance. He/she directs the stage crew in setting up the stage as specified in the light plot, in writing or recording cues and other information necessary to running the performance, and calls cues during rehearsal and performance. The stage manager is solely in charge of what takes place throughout the duration of the performance.

- **Lighting Designer.** The lighting designer works in collaboration with the choreographer to develop a lighting scheme and a light plot. He/she should be present at the cue-setting to adjust lighting levels and to direct the stage manager in the sequence and initiation of cues.

The technical production begins with the technical director who organizes and schedules all technical preparation and time in the theater. The job of the lighting designer begins at about the same time or soon after the choreography develops to the point that lighting designs can be formulated and a light plot drawn up. The stage manager's job begins perhaps two to three weeks before the performance. He must first familiarize himself with the choreography to facilitate cue-calling and, soon after, begins work in the theater setting up the stage equipment.
according to the light plot and directions from the lighting designer and/or technical director. Once the theater is set up and rehearsals have begun in the theater, the stage manager's responsibilities and authority are intensified. His job continues through the performances and ends once the stage is struck.

Further information on the duties and interrelationships between the members of the technical staff and their relationship with choreographers and artistic director will be found below.

Collaboration between Lighting Designer and Choreographer

It will be assumed that the choreographer and designer for a given piece are different people. This is certainly not always the case as many choreographers are adept lighting designers as well. It might nevertheless be informative for these multi-talented individuals to consider the two jobs from somewhat different points of view, and they can follow through this section making a few mental modifications.

Especially in working together for the first time, choreographer and designer need to communicate their philosophies and approach and carefully define expectations and limits. Otherwise, it may happen that the designer feels so limited by restrictions imposed on his lighting design by the choreographer that he is denied any sense of creative flexibility and accomplishment. Conversely, the choreographer may find that his studied and refined dance has been transformed into a "light show" by an overzealous lighting designer. If this early communication strongly suggests conflicts or irreconcilable philosophies, the relationship should be terminated and other working partners sought. Far too much is at stake in terms of time, expense, effort, and emotions to enter into working arrangements which are not satisfactory to both parties.

In practice, the designer will find in working with various choreographers that his job ranges from simply following the detailed plan of those who know exactly what they want in lighting (this will often be the case when a piece is being remounted) to those who haven't the slightest idea of what they want. Neither of these extremes is as enjoyable as the middle ground where true collaboration is possible. It should be evident that the personal relationship between choreographer and designer is very important. Mutual trust and respect are requisite to successful collaboration, and all parties involved must exert care and discretion in maintaining the integrity of these relationships.

When designing lighting for a new work, it is vital that the designer get involved early in the choreographic process. Communication and collaboration are concepts which both designer and choreographer should keep in mind from the start. Initial conversations between the two may be quite general—mood, dynamics, setting, point of view and so on might be laid out by the choreographer, the designer might respond in terms of a general color and intensity scheme and might discuss the possibility of special lighting areas, set pieces, projections, or other special effects. The choreographer should reveal any costume plans to the lighting designer as they are formulated, especially colors to be used in the costumes. Ideally, the process involves a continuing give-and-take, stimulation of ideas, and response to stimuli until a plan emerges which is satisfying to both individuals and preferably attributable solely to neither.

These initial ideas and plans may change drastically as work continues and time passes, but they do serve as a starting point in the process. If special requirements are foreseen such as a need for sets, drops, projections, or other requirements which demand considerable time to produce, the designer should sketch out his
plan, obtain approval from the choreographer, and promptly begin work. The designer may also perceive the need to obtain special equipment, order unusual color media, or initiate other processes which might cause delays (or disasters) if not attended to immediately. The designer should call upon the technical director for assistance in these matters.

Once the choreographer has had sufficient time to sketch out the piece with the dancers, the designer should be called to a rehearsal to see the general form of the work. He should take notes and begin to formulate a lighting scheme in detail. As rehearsals progress, the designer should continue to attend. The more familiar the designer can become with the choreography, the more successful his design is likely to be. Discussions with the choreographer about the lighting design should also continue during this formative period.

There are at least two additional reasons for the designer to know the choreography well. First, later in the process when lighting cues are actually being written at the theater, a great deal of time can be saved if the designer knows the sequence of the dance and already has written cues in at least a descriptive way. Second, it often happens that the lighting designer doubles as the stage manager and is responsible for calling cues in the running of the show. Calling cues in the course of a dance can be rather difficult, especially for stage managers who have had little dance experience. Even professional dance stage managers find it desirable to see choreography a number of times prior to lighting rehearsals and performances.

A single lighting designer can design for an entire performance, but it often happens that a number of designers are employed, especially in programs including choreography by various individuals. Such instances require that all the designers meet and be in an agreement on a general lighting plot. It is obviously not possible in a performance to change much more than a few gels between numbers. Slightly more change than this can take place at intermission but even this time should be limited to refocusing a few instruments without involving extensive gel changes or rehanging instruments. When lighting equipment is somewhat limited, it is necessary that compromises be made by the designers and a single flexible general lighting plot be developed. This is not as limiting as it sounds, a good palette of gel colors and general washes can allow a good deal of variety. Odd color gels are seldom as useful as young designers seem to think and when used in combination with other colors, result in only slight differences of effect. It is up to the technical director, working in concert with the artistic director and choreographer, to synthesize the desires and needs of multiple designers into a single workable plot and he should settle any disputes which might arise between them. When sufficient equipment is not available to satisfy all the designers, some equitable scheme should be derived to determine use of the equipment at hand. For example, if, after the general plot has been hung, only twelve spotlights remain for use as "specials," they should be divided up equally among the designers. The same specials can also be used by several designers with a little planning and perhaps even slight changes in choreographic spacing. In programming a concert, technical requirements should always enter into decisions on the order of dances in the concert. When drastic changes in lighting or sets are necessary between two pieces, these must be separated by an intermission to permit time for such changes.

Theater Inventory

Before the final light plot can be devised, it is necessary to take inventory of the theater at which the production is to take place. It makes little sense to send a plot
to a theater calling for instruments which they do not have or which cannot be obtained. It is also unfortunate to use only a small part of the equipment available at a well-equipped theater. If the theater is nearby, a visit by the technical director is indicated. He should talk to the theater manager; make a list of usable instruments (he should not assume that every instrument he sees works or is necessarily available for use), get rough dimensions, count up circuits and dimmers, and, in short, find out all he can. He should tell the resident stage manager what is technically being planned for the concert. The resident stage manager may have important information concerning equipment, crew, scheduling problems, and so on.

If a visit to the theater is impractical, a technical questionnaire form will need to be sent out (well in advance!). This questionnaire should include questions covering everything of importance to the production. In sending those out, one should be cognizant of the theater and community to be visited. A small-town elementary school performing space may not be graced with a technician who can even make sense of a technical questionnaire using highly technical terms or stage jargon. Large theaters often have already prepared very detailed descriptions of their facility and equipment lists, no more than a phone call or letter may be required in these instances to obtain the desired information.

The Light Plot

Once the designer is confident of his knowledge of the choreography and the choreographer’s wishes and has a list of the lighting equipment available before him, a final light plot can be drawn up. The purpose of a light plot is to convey all the necessary information to the stage crew for hanging, gelling, patching, and focusing of the lighting equipment. When the plot is sent to the theater in advance, it is expected that much of the set-up work can be completed before the lighting designer and stage manager arrive. Final focusing and adjustments can then be quickly completed, before cue setting begins. Sadly, things seldom happen so smoothly, and the company technical crew normally plans to enter an untouched stage and work alongside the resident crew until the equipment is set up. Nevertheless, for touring companies, it is vital that the plot be sent to the theater well in advance of the performance date, particularly if additional equipment, color media, or other technical needs must be obtained or attended to by the hosting theater.

Another very important function of the light plot is maintenance of a record of the lighting for future productions of a dance. It is also helpful in this regard to file cue sheets and the stage manager’s notes along with the plot. (See Chapter VI for more information on light plots.)

Stage Work

In many instances, dance concerts are performed in a studio theater or in a small theater adjacent to rehearsal studios.

Mounting a concert on “home turf” is certainly the easiest situation encountered since a good measure of control can be exerted over schedule and personnel. The “touring” situation is somewhat more complicated, whether the “company” is traveling across the street or across the country for its performance. In the procedural guideline which follows it will be assumed that the performance is being held at another theater since this situation is the most difficult. Besides, almost any performing group, whether student or professional, aspires to tour,
And once a group has learned to produce a concert on the road, setting up at seems simple.

Scheduling in the Theater

One of the difficult aspects of technical production for the inexperienced director and the aspect which often leads to disaster when done improperly is scheduling time and personnel. In a poorly produced performance, you might hear the technical director saying, "Everything was going along fine until . . . (here fill in any problem you can think of) . . . put us way behind schedule, so we didn’t have time for our dress rehearsal. And besides, we were short-handed on crew, and

The first important rule of scheduling time in the theater is expect the unexpected and allow some time for it. The second rule is plan ahead — know as much as possible about the situation you’re entering before you arrive at the theater. If the night before the performance a play which uses a large set is being performed on the stage, you should know about it. One obviously can’t begin rehearsals or set up before the set is struck following the previous performance. In this instance (which one would hope could be avoided by better scheduling), one must plan upon around-the-clock work by a large crew. If the theater is clear for a week before performance night and there is no charge for the space or the crew (as is often the case in high school or even college theaters), one should plan to use the whole week for set-up and rehearsals. The major tasks to be scheduled during this week are set-up, cue-setting, technical rehearsal(s), dress rehearsal, performance, and strik

Set-Up

The first step in set-up is referred to as load-in wherein all equipment brought by the performing company is brought into the stage area. Professional touring companies usually require the hosting theater to provide crew for this task, but this is usually appropriate only in the professional theater. When the distance traveled to the theater or performing space is more than a few miles, costumes, props, and technical equipment should be carefully packed and a manifest should be kept as to the contents of each trunk or showcase. Responsibility for every trunk should be assigned to members of the company. Dancers are often responsible for packing costumes, while technical trunks are the responsibility of the technical director. Trunks should be packed according to the manifest, as this greatly decreases the chance of leaving items behind.

If the amount of baggage brought is extensive, one should consult with the manager of the facility about storage space. Costumes are usually taken directly to the dressing rooms, while technical items are kept backstage or in a nearby storage area. Once these items are sorted out, the company’s technical director or stage manager will want to talk with the theater or facility manager to double check the schedule and to introduce himself. Personal relationships with the person in charge of the stage and any crew the theater is supplying are very important. The company stage manager must be ever charming and tactful, at the same time, he must know when to be firm in his demands. It sometimes happens that resident crews are lazy and will do as little as possible, wishing to get touring groups in and out with minimal fuss. They have even been known to tell touring companies that certain changes in lighting or other technical aspects are flatly impossible. The experienced stage manager knows how to read through this ploy and, still
tactfully, to insist upon having demands met. In most instances, however, one encounters people who are helpful and who genuinely care about the quality of the performance. Here, too, it is important to be responsive and thoughtful in dealings, with the resident crew. Disasters await companies whose members alienate the resident stage manager or crew.

The touring company has every right to expect a clear stage upon arrival and should, in any case, have specified such in their agreement. Not only should the stage be clear of sets from previous performances, it should also be clean and the stage floor should have been carefully checked for splinters, cracks, protruding nails or staples, or any other items which might endanger dancers' feet. Repairs, whether temporary or permanent, should be insisted upon. When a stage is encountered which is not clear, the choices are to demand that the resident stage manager rectify the problem as quickly as possible or to pitch in with all available help and clear it himself. The latter may be as satisfying emotionally, but it certainly is a more practical and expedient approach.

**Hanging**

Once the stage is clear, the hanging of instruments may begin. The size of this job and the time required to do it depend upon the complexity of the plot, the configuration of instruments as encountered, the number of crew members and their degree of experience, and the ability of the company stage manager to direct the work efficiently. On the average, about eight hours should be allowed for this purpose. The actual time will vary either way, according to the above-mentioned factors. The direction offered by the company stage manager deserves special mention since it is perhaps the most important determinant of time required not only for hanging but for all work which takes place in the theater. Even an inexperienced crew can be used efficiently when directions are clear and prompt. All too often it happens that crew members end up standing around not knowing what they should do while the stage manager is frantically working on one or more details of set-up. The experienced stage manager learns to delegate work and get the most out of his crew. He is also frequently called upon to make important decisions when problems arise. No two theaters are the same and set-up never goes exactly as envisioned. Compromises must often be made—certain instruments called for in the light plot may have to be sacrificed, a lack of circuits may require an alternate patching, overhead electric battens may not be spaced ideally, such problems require quick decisions, and errors can be very costly in terms of lost time.

On a stage having a fly system, hanging begins by lowering the electrical battens. Unless one is quite experienced with fly systems, one should not do this by oneself but request the help of the resident crew. The battens should be brought to about waist level. The stage manager may then lay out the lighting instrument on the floor directly under the point on the batten where he wishes them hung or may mark the position in some other way. The instruments are then securely tightened using the "C"-clamp or whatever clamping system is provided.

**Connecting and Patching**

Lighting instruments are next plugged into electrical circuits. In general, instruments are plugged into the nearest available outlet on the batten. A complete circuit diagram is seldom received prior to entering the stage and circuit numbers
are almost never included in light plots. Circuiting can therefore be a bit tricky and trial-and-error must sometimes be used to produce a satisfactory hookup. In stages having patch panels and many circuits on each batten, hookup is fairly arbitrary, a record should be kept of instruments and circuit numbers to facilitate patching later on. When few circuits are available, instruments which work together (such as Fresnels used in an overhead cool wash) should be ganged into the same circuit using a "twofer" or "Y" connector. One caution: never "hot-patch" instruments, i.e., do not plug an instrument into an energized circuit. This can result in arcing electricity as the plug slides into the socket and is thus hard on connectors and reduces the life of lamps as well. One should also watch carefully for fray ed cords, loose connectors, damaged cables, and the like, and these should be repaired before power is applied.

Patching refers to the way in which the circuits are connected electrically to the dimmers. Depending upon the type of dimmer system in the theater, patching ranges from arbitrary to very important in terms of ease of operation of the dimmer board. On old manual transformer type boards, it is important that patching be such that dimmers that are used together be placed adjacent to one another so that a single individual can operate them. This also allows for mechanical mastering of sets of dimmers. On modern, electronic dimming systems, whether multi-scene preset boards or the recently developed memory boards, patching order makes little difference if the stage manager has a listing and can call for the dimmers he wants brought up. Patching need not be completed immediately after circuiting the instruments if any given instrument can be energized quickly for focusing, but, it is often more efficient to patch before beginning the focusing procedure than waiting until afterwards.

**Gelling**

When all instruments are hung and circuited, the specified gel is placed in a frame and the whole mounted in each instrument. Gel (or more properly these days "color media") should be cut exactly the size of the holder frame, using scissors, a matte knife, or a paper cutter. Gels cut too large or too small can be very annoying, and the savings effected by squeezing one more piece out of a sheet is simply not worth the hassle of having to tape the edges of a slightly too small gel into the frame. In an emergency, acetate or mylar base color media can be repaired or pieced together using clear tape. If barn-doors, or snoots, or gobos are required, they should also be mounted at this time. The battens may then be flown preparatory to focusing. In theaters having stationary (or dead-hung) electrical battens, it may be simpler to hang, connect, gel, and sequentially focus each instrument so that a single trip up the ladder or scaffold will suffice for each instrument.

**Focusing**

The term focusing really refers to two different operations on the lighting instruments. One operation is aiming the beam of light to a specified area of the stage. This is effected by rotating the yoke of the instrument with respect to the "C" clamp, by tilting the housing of the instrument with respect to the yoke, or, in extreme cases, by repositioning the clamp of the batten. The second operation of focusing is the adjustment of the optics of the lighting instrument to change the size, shape, and quality of the beam. In focusing an ellipsoidal spotlight, the lens may be slid away from or toward the lamp to "sharpen" or "blur" the edges of the
beam and also to alter the field intensity gradient somewhat. The shutters may be used to change the shape of the beam or an iris may be used to decrease the diameter of the beam.

In the case of the Fresnel instrument, altering the distance between the lens and the lamp results in drastic changes in the size (and therefore the intensity) of the beam. The beam may thus be changed from "spot" to "full-flood", depending upon the use to which it is to be put. When an array of Fresnels is used to create an even wash of a single color, the lens of each Fresnel is placed in flood position. When used singly as a "special", the spot position would probably be favored.

Focusing is properly done from atop a ladder or scaffold. The battens must be trimmed at the height at which they will be used. Raising or lowering the batten from the focusing position would result in increased or decreased area of illumination, respectively. The trim height must be marked or recorded in some way so that this exact height can be regained should it be necessary to lower the batten for adjustments, re-lamping, re-circuiting, or other changes. An efficient way to focus is for the stage manager to direct from the stage the technician doing the focusing. He tells the technician just where to aim the beam and requests any changes in size, shape, or quality of the beam.

Check-out and Experimentation

The plot has now been completely hung, gelled, and focused, the designer and stage manager will now want to look at all the lights working together and explore variations in color and intensity levels. The designer now has first opportunity to test the plot, the media colors he has chosen, and the position of lighting instruments. The choreographer should also be called in to check the position of specials, to make sure their position fits the choreography. A need for some adjustment or minor changes will likely be discovered in this process, as well as any problems with lighting instruments, dimmers, or other technical problems. It is helpful and time-saving to make these changes before the arrival of dancers and additional crew for the cue-setting. Situations where a number of people are standing around waiting with nothing to do should always be avoided in the theater. Not only are such delays unprofessional, they quickly make a shambles of schedules. When this happens, students and amateur performers quickly perceive that schedules are meaningless. The stage manager has a real responsibility to keep wasted time to a minimum, especially when large casts are involved. The best way to stay on schedule is to make a reasonable schedule in the first place. The hour for final adjustment and check-out of equipment before arrival of the cast for cue-setting is very important. Even if no problems have arisen and this extra time is not needed, an hour's breathing space doesn't hurt unless the schedule is extremely tight.

Cue-Setting

Cue-setting is the process of creating and recording all information necessary to the running of the show. It includes all dimmer settings and changes, the operation of curtains and drops, initiation of sound and sound intensity levels, and so on. Present at cue-setting should be the stage manager, the choreographer or artistic director, the lighting designer, as many dancers (in costume) as are necessary to walk through the choreography (to be safe, require that all dancers are present), and sufficient crew for operating the light board and recording cues. In practice, the stage manager, choreographer, and lighting designer will take a
position in the house. The stage manager will be in communication with the board operators and other crew members, the choreographer will direct the dancers, and the lighting designer will work with the stage manager in setting light levels.

From this point on and through all subsequent rehearsals and performances, the stage manager is in charge of what takes place. This is not to say that he is not taking direction from the artistic director, the lighting designer, the technical director, but control must issue from a single voice or confusion will reign.

Where possible, cue-setting should follow the order of the concert. Start at the beginning—the house lights are on, the curtain is closed. One should step through every change which requires action by any person. Call this change a cue, give it a number, determine the point of initiation of this cue, and also define a warning point for the cue. The first change which begins a concert is usually to dim the house lights to about half intensity, then, after a suitable pause, take them out completely. The order of curtain opening, starting sound, and the first light-cue is quite variable. If the curtain opens on a lit stage, call this first light level a "preset" and number each change thereafter sequentially. While the board crew need record only the cue number and dimmer settings, the stage manager must write a good deal of additional information on his cue sheets. Not only will he direct the light board crew but also a sound technician, curtain puller, fly man, and other stage hands, as well as see to the performers being warned and ready at the beginning of each dance. He must know when to warn his crew members that a cue is about to begin, and must know the exact moment when it should be initiated. Calling dance cues can be considerably more difficult than calling cues in a play. The written script may be used in a play and "word" cues relied upon. In dance, "movement" cues are normally used. For the stage manager who has not himself had dance training or extensive experience, this can be tricky. The choreographer may inform the stage manager that a cue should begin, "just after the entrechat but certainly before the rond de jambe". This again points out the need for the stage manager to be familiar with the choreography. At this point in time he should have attended several rehearsals of each piece on the concert.

In his notes, the stage manager must record a description that is sufficient to allow recognition of the movement leading to the beginning of the cue, so it is important in the cue-setting procedure that this information be recorded as well as the technical details of the cues themselves. The choreographer can help him greatly in this regard and it is also helpful here to have all dancers present and have them run through sections leading up to a cue.

In setting dimmer levels, the lighting designer should have final say. The process of setting levels, of getting just the right balance between warm and cool washes, the proper intensity on side lights and front-of-house lights, can be tedious and sometimes frustrating. It is important that distractions and the general noise-confusion level be kept down during this process. Dancers should be instructed to stay very quiet and to stay nearby so that they can be called to the stage quickly when it is time to light the piece they are in. One should not try to set sound levels while setting lighting cues. Take some time after completion of light cues to run through portions of each sound track and record intensity levels.

Cue-setting is often a tense and anxious time. Those in charge must strive to project a calm and controlled demeanor and should expect the same from performers and crew.

For new pieces which have never been lit, allow at least an hour for cue-setting. For pieces which are being remounted, one should probably allow a half hour. When time for changeover from one piece to the next is considered, it may be
expected that cue setting for an average one-and-a-half hour show will take at least four hours!

Technical Rehearsal

In the technical rehearsal, the major elements of the production—the choreography, the lighting, and the sound—come together for the first time. The first technical rehearsal is bound to have problems. Indeed, part of its purpose is to discover and resolve problems. It offers practice for the dancers to move in the lights, perhaps on a new stage, for the crew to learn their various tasks, and it provides an opportunity for the designer to really see, for the first time, how well his scheme works.

Everyone directly involved in the performance must be present at the technical rehearsal. Dancers should be in costume or at least partial costume so that colors can be assessed (they need not be in stage makeup). All crew running the light board and sound must be present (curtain pullers are optional at this point), choreographer(s) and lighting designer(s) must be present in the audience, and should have either headset communication with the stage manager (who should be backstage) or should take detailed notes of problems, corrections, and changes. The technical rehearsal cannot be run with starts and stops and restarts, but it should be run in program order, since technical changeover is dependent upon the order of the pieces. The stage manager should be paying attention to changeover time between pieces, but should not yet expect things to run “up to speed”. Dancers will be working out spacing, entrances and exits, crossovers, costume and property placement backstage, and so on.

In calling cues, the stage manager should use a consistent voice cue system to communicate with the crew. He might say, “Warning on cue 2”, followed by “Cue 2, go”. The crew should be instructed never to make any change until hearing the word “Go”.

This is usually a trying time for the stage manager. A great deal of information is flowing his way and problems are springing up right and left. There is generally not time for him to process all this information and act upon it so that a piece runs perfectly the first time (unless the lighting is extremely simple). Cue #4 may be called correctly but it doesn’t come up or comes up incorrectly because of an operator error. While Cue #4 is being “fixed”, cue #5 is missed altogether. The stage manager then calls #6 at the proper time but the board operators are confused because #5 has been skipped. Meanwhile, the lighting designer is rattling the stage manager’s headset with “What the —— is going on back there??!!?” and the choreographer is complaining because the upstage special didn’t come on, the board operators are all asking questions at once . . .

At this point, the inexperienced stage manager often erupts with anger or tears and threatens to walk out altogether. The experienced stage manager stops the tape and the dance, walks onto the stage and in a calm voice says, “I’m sorry, we’re having some small problems—we’ll start again from the top—please save your comments until after the run. Thank you very much”. It is important that the stage manager not take criticism and corrections personally. All errors and problems must be pointed out by the lighting designer and choreographer to assure that these problems will not recur. It is equally important that criticism and correction be done kindly and considerately.

A short meeting should always follow the technical rehearsal so that problems can be aired and solutions proposed. Changes in cues can be written in and
necessary corrections made to miswritten cues. The lighting designer might feel that a cue is too dark and wish to rewrite the cue to brighten it up a bit. Some cues might be deleted or new cues inserted. Some changes in the plot might be requested—the position of a special changed, or a different tint of blue gel in the side-lights indicated, and so forth. Major changes should not be undertaken, however, unless absolutely necessary. Depending upon how well the first technical rehearsal went, a second (or even third) run might be indicated prior to the dress rehearsal.

**Dress Rehearsal/Performance**

Dress rehearsal and performance are grouped together because the dress rehearsal is simply a performance without an audience. It should be run the same as a performance in every other detail. Dancers should be in full costume and makeup, then performance should be run in proper order with curtains and bows, the entire program should be run “up to speed” with pauses between pieces and intermissions of the same duration as planned for in the concert. Call times for the dress rehearsal for dancers and crew should be the same as they will be on opening night (it is preferable to hold the dress rehearsal the night before opening night and to have no other rehearsal scheduled in the theater on that day. However, it is sometimes necessary to hold the dress rehearsal a few hours before the opening performance or a few hours after a technical rehearsal when time is limited.)

A sign-in board should be posted for crew and dancers to assure that the entire cast is present well in advance of curtain time. Dancers should be required to arrive as much as three hours prior to curtain time to attend warmup, apply makeup, and get into costume. They should then wait in adjoining dressing rooms or green room until called by the stage manager.

Crew members should arrive as much as an hour prior to curtain time. After the dancers’ warmup, which is usually held on stage, the stage should be swept and damp mopped. A dimmer instrument check must then be done by the stage manager, all dimmers run up one at a time, sequentially, to assure proper operation of dimmers and lamps. At no later than one-half hour before performance, the main curtain should be closed and the house opened, the house is not to be opened by the house manager, however, until word has been received from the stage manager that he is ready. Once the house is open, the curtain should never be “cut” by anyone, that is, no one should pass through the curtain opening or between the curtain and proscenium. It is traditional that performers should not be seen by the audience prior to raising the curtain, nor the cast permitted to enter the house to watch pieces in which they are not performing, especially when in costume or stage makeup. The technical crew likewise should not be seen by the audience, even though their presence might be inconspicuous.

It is not unusual to wait five minutes or so past curtain time to begin, especially if people are waiting for tickets in the lobby. Longer waits than this should be avoided. The audience is warned that the performance is about to begin by lowering the house lights to a noticeable extent, leaving the house lights at this level for perhaps thirty seconds so that the last few people who have entered can find their seats. The house entrances should then be sealed during the first offering. Latecomers can be seated after the first curtain closing when house lights are again brought up. Between dances, house lights need to be brought up sufficiently to a level that programs can be comfortably read.
During the running of the show, it must be remembered that the stage manager is solely in charge of calling cues. He should be backstage for this purpose and communicate with the board operators via headset. This is preferable to being in some remote lighting booth, as it permits ready communication with the performers and quick recognition of unexpected problems of any nature backstage. Extraneous persons should never be permitted backstage during a performance.

With a little practice and after the show has been rehearsed a few times, cues usually go quite smoothly, but on opening night, there is often one glaring exception—bow light cues. Unless carefully recorded and practiced with dancers ahead of time, bow cues will not go smoothly. Botched bows take the polish off an otherwise good performance and can be quite embarrassing for the performers. Even when rehearsed, bow cues can be difficult for the stage manager to call, depending on audience response. When struggling with the question of whether to bring up the lights or the curtain for one more bow, it is well to remember that one too few is better than one too many. Don’t “milk” the audience for applause.

Another difficult decision for a stage manager, which one would hope would happen very rarely, is whether a problem is serious enough to warrant closing the curtain on a piece or even cancelling the remainder of a performance. Certain situations clearly require immediate closing of the curtain: a dancer injured on stage and unable to come off, any backstage fire (also lower asbestos curtain), an instrument or other object fallen on the stage or about to fall, objects being thrown onstage by an unruly audience, or any other situation which poses imminent danger to performers, crew, or audience.

**Strike**

The final task in the theater is the strike. The first and most important rule of the strike is to return the stage to as good or better shape than it was upon arrival. Take everything brought with you. Discard any items for which you have no further use, but leave nothing behind. The care and speed with which strike is carried out can have much bearing on the reception one will receive from the resident stage manager should one return to that stage.

Strike should begin immediately after the final performance, while the crew is still at hand. Action is sometimes delayed a bit by well-wishers who come backstage after the performance, if this practice is permitted. One must be considerate of these people; they are backstage because they liked the performance and want to tell the company so. Do not begin to lower battens over the heads of a group of people! Give them a few minutes and then ask that the stage be cleared before beginning the strike. Depending upon the wishes of the resident stage manager, strike may vary from pulling the gels to completely stripping the electrics of instruments. As company stage manager, you should accede to the resident manager at this point and allow him to direct the work, especially if his crew is doing most of it.

One should count all equipment and tools which have been brought to the theater (this is simpler if everything has been pre-marked with paint or colored tape). Pack items in their proper trunk and load them out. And finally, thank the resident stage manager and crew (even if it’s not heartfelt) and tell them you hope you can come back.
In terms of priorities, the need for publicity is often treated as an afterthought. However, it is an integral part of bringing about a successful dance event and the whole performance will suffer if the publicity is too little or too late.

First, publicity is needed to provide information about the production, since without it, no one will attend. It is disheartening, to say the least, to perform for a small house because a concert has not been well-publicized. Providing specific, accurate information is essential. Incorrect information creates confusion and frustration in potential audience members who, as a consequence, may arrive at a concert at the wrong place or at the wrong time.

Second, publicity functions as a form of salesmanship. People are not likely to attend an event if it does not sound appealing. To be effective, publicity needs to be used to make an event seem exciting, intriguing, interesting, or beneficial in some way.

Instead of advertising dance events in a piecemeal manner, an overall publicity plan that can stimulate audience growth over an extended period of time can be
used as a form of market development. The intention of this chapter is to provide information that will help develop an effective system for publicizing concerts, workshops, and other dance events. In general, one should look at forms of advertising in terms of what will give a dance event the most exposure, at the most opportune time, at the highest quality, and for the least cost.

To assist the publicity director in organizing his plans concisely, the following topics will be addressed:
- forms of advertising;
- deadlines—making a realistic schedule;
- planning a budget;
- personal relations with business associates.

Much of the information presented here may seem blatantly obvious but it is included because many mistakes have been made by overlooking some of these points. It is hoped that this information will help the reader to develop a general sense about how to use publicity to the best advantage and how to avoid costly errors in terms of both time and money.

Forms of Advertising

Forms of publicity that may be used for dance are: posters; flyers and brochures; articles for local newspapers; special newsletters, arts bulletins, and events calendars; radio-TV advertising, printed programs, and special media advertising.

Posters

Displaying posters is a popular way to advertise dance concerts. When a poster is used for publicity purposes, one needs to decide what information to include on the poster, how to design the poster, and where and when posters will be displayed.

The information that should be included is what, who, where, when, and how. First, what is it? In this example, it is a dance concert. Second, who is performing and sponsoring this concert? The performing group or individual performing artist needs to be stated. Often, sponsors require that their name be stated on all forms of publicity used to advertise an event they sponsor. This should be checked before any publicity information is released. Third, state where the concert is taking place. Fourth, state when the concert is happening including both the dates and times of the concert. Be sure the date includes the year. It is impossible to keep an accurate file of past activities when the years that specific events took place are omitted from publicity and program materials. Files of this nature are very important when conducting historical research. How refers to where tickets are sold and the price of admission for all groups (students, general admission, senior citizens, and so forth). Finally, a phone number or business address where further information can be obtained may need to be listed.

There are several important factors to consider when designing a poster. First it should be designed to look like a dance poster. This may seem too obvious to mention but, too often, dance posters are designed in such a way that it is difficult to tell that the poster is actually advertising a dance event. Photographs and graphic designs may be used. Designs are most effective and functional when they are simple and clear. If people must approach the poster closely to read it, they may not make the effort.

Second, the poster should be interesting to look at. It needs to be eye-catching. Bright colors with strong contrasts of intensity help attract the eye. Often a
potential audience member will judge how interesting a concert will be in terms of how interesting the poster is.

Third, consider the best size for the poster. Where will the poster be displayed? How well will it be seen? Are there size regulations in places where the posters will be displayed? Find out the answers to these questions before determining the poster size.

Finally, be sure the information is arranged in a format that is easy to read. Make it as simple as possible for people to get the necessary information from the poster.

In summary, the following questions should be addressed when designing a poster:
• does it look like a dance poster?
• is it interesting and aesthetically pleasing to look at?
• is the poster the proper size for the locations where it will be displayed?
• is the essential information complete and correct?
• is the information on the poster easy to read?

Once the posters have been designed and printed, they are ready to be displayed. Before plastering posters anywhere, it is essential to know where posters are permitted. Certain places have special regulations. For example, most universities require that all posters be stamped for approval before they can be displayed. It is wise to check in advance and make a list of places where posters can and will be hung. In theory, posters should be placed where the largest number of people circulate who potentially have a desire to see a dance concert. Some suggestions are schools, local businesses, shopping malls, university areas, restaurants, community dance studios, record-music shops, theaters, and museum and library bulletin boards.

To use advertising media effectively, it is essential to determine the opportune time to release publicity materials. The best time to display posters is usually three weeks before a concert and again at the beginning of the last week before a concert. Avoid putting up too many posters too soon or too few too late. In using any medium of publicity, one should be building a momentum of interest that peaks at the time of the actual dance event.

Flyers and Brochures

Using flyers and brochures is a popular way to provide general information about a dance group. Flyers are normally used to advertise a single event and contain information similar to that on a poster. Brochures are more extensive than flyers and are generally used to secure bookings for concert performances or lecture-demonstrations, workshops, and/or master classes of a touring group. A brochure is designed to give a pleasing presentation of what the dance group is and what specific services it offers. This information should be arranged in a concise, interesting, and easy-to-read format. Using photographs within the brochure design is an excellent way to generate the interest of potential sponsors.

The following information is appropriate for inclusion in such a brochure, depending upon the specific situation:
• name of the company or dance group;
• names of the director and company members with biographical information, where appropriate (credentials create an atmosphere of competency and satisfy curiosity about the dancers);
• specific offerings by the dance group
  — concert program — possibly a listing of dances
  — brief description of lecture-demonstration, specifying the age group for which it has been designed, if appropriate
types of master classes available and names of the teachers of these classes
— for extended residencies, available workshop activities such as composition
or improvisation classes, and so forth;
• schedule of fees;
• dates of availability;
• name, address, and phone number of contact person.
While flyers for a performance are usually mailed at the same time that posters
are first displayed, brochures are quite another matter. Sponsors booking dance
groups require months of advance planning and will need to receive the informa-
tion contained in the brochure in ample time to schedule the performance or
dance event, arrange to cover the costs, secure the appropriate facilities, and
publicize the event. These timing factors are essential considerations to keep in
mind when scheduling the release of printed publicity materials.
If a brochure or flyer is going to be used for mailing purposes, it needs to be
designed to fit mailing regulations. Check with the post office to find out about
these specifications. If more than two hundred identical flyers are going to be
mailed, check with the post office about obtaining a bulk rate mailing permit. This
permit can be obtained by non-profit tax exempt organizations but there is an
annual fee. However, this permit can be a good money-saving device when one
considers that a letter costs several times that of a piece of bulk mail.
From an economic standpoint, mailings advertising a specific event or promot-
ing a group cannot be sent out indiscriminately. It is obvious that a brochure
designed to promote a dance group should be distributed to potential sponsors.
Actually locating potential sponsors and potential audiences takes a great deal of
work. Developing a mailing list is an important step in locating sponsors and
developing prospective audiences. Often, communities have arts organizations
that will sell, trade, or give away mailing lists of people and organizations that
have supported the arts in the past. It is well worth the time to investigate these
arts organizations. Further, it is a good idea to keep a list of persons (and their
addresses) who have attended other dance events that one has sponsored; these
include classes, concerts, workshops, lecture-demonstrations, and the like.

Local Newspapers

Submitting press releases to local newspapers is an excellent way to advertise
upcoming events and to give general exposure to a group, especially because
press releases provide exposure without costing money. A press release is a story
that is of interest to the public, not an advertisement. In working with newspa-
pers, ascertain their deadlines well in advance of the publicity campaign. It is also
of great help to have a contact person on all the newspapers to which press
releases can be submitted. The first time a press release is given to a newspaper, it
is wise either to enclose a cover letter generally introducing the dance organiza-
tion and requesting support or to directly meet and talk with the contact person.
The following information needs to be submitted with the press release:
• the date when the press release is sent;
• the organization's name submitting the press release;
• a contact person and phone number the newspaper can call for further informa-
tion;
• a release date that lets the newspaper know when to print the story.
The story itself should include:
• what the event is;
• who is performing;
• the sponsoring organization(s);
• place, dates, and times of the event;
• choreographer(s) and titles of pieces;
• information about purchasing-tickets;
• a phone number or business address for referral for more information.

Other information, such as a list of future activities or short biographies about
the performers or choreographers or other human interest stories can be included
to make the article(s) more appealing. However, essential information should be
stated first. The press release should be kept brief and be written so that the
information is clearly presented and interesting to read. All information should be
double checked for accuracy and correct spelling of titles and names. The press
release should be double-spaced and typed on only one side of a page. Some
newspapers may have specific formats and regulations regarding copy for press
releases. Find out these requirements in advance.

In most communities, it is common practice for the staff of local newspapers,
university publications, and local arts bulletins to write feature stories about local
art groups and performances. A feature story is a wonderful way to generate
interest in an upcoming event and can be of tremendous help in selling a perfor-
mance. However, in order to persuade a newspaper or magazine editor to give
space to such a story, one must begin early and be able to come up with some
unusual angle that will capture the interest of the reading populace.

Submitting photographs with a press release is an excellent way to generate
further interest in a story. However, an artsy photograph printed in a newspaper
may come out as a gray blur. Clear, high contrast photographs are needed. Each
photograph submitted should be properly identified with the name of the
choreographer, the title of the dance, and the names of the dancers, all correctly
spelled. This information should be typed and then taped on the back of the
photograph. Do not write directly on the back of photographs since such writing
can leave impressions which may make the photograph impossible to print in a
newspaper.

As well as press releases, paid advertisements can be submitted to newspapers.
To determine how effective a paid advertisement will be, find out how much the
ad will cost for the amount of exposure provided, in terms of how large and visible
the ad will be on the page, where the ad will be printed in the newspaper, and how
many days the ad will run.

The design of an ad is very important. It needs to be eye-catching and appeal-
ing. The same basic information included on a poster (what, who, where, when,
and how) should appear in a paid ad. In fact, it is often desirable for reinforce-
ment to use the same design for an ad that is used for a poster advertising the same
event. Have the ad checked in advance by the newspaper to be sure that it is
printable.

The ad should be sent with the name of the organization submitting the ad, a
contact person and phone number, and a release date. Be sure that the cost of the
ad and a method of payment have been clearly agreed upon. Press releases and
paid ads must be submitted on time. When publicity materials are submitted after
deadlines, these materials cannot be printed on time, if at all. Find out all dead-
lines in advance.

Special Newsletters, Arts Bulletins,
and Events Calendars

In every community, there are local newsletters, events calendars, arts bulle-
tins, community magazines, university newspapers, and so forth, that print
listings of upcoming events. It is worth the time to search out these sources. Often
the listing is free and these bulletins circulate among people who generally have an interest in the arts and other local activities. Be sure to check deadline dates for submitting information about upcoming events and any other regulations regarding how this information should be submitted.

Radio-TV Advertising

The Federal Communications Commission requires electronic media to provide free air time for public service announcements. When wishing to advertise a specific dance event on the air, a public service announcement (PSA) should be sent to all area radio stations or at least to those stations that have listeners who would be interested in knowing about upcoming events.

Radio stations usually read a PSA in a 10-, 20-, 30-, or 60-second time block. Be sure to find out what specific time blocks are used before writing a PSA. Some radio stations will rewrite all the PSAs they receive to fit into the style of their particular station. However, do not assume this will be done. It is very important to write a PSA with all essential information stated in a concise yet interesting manner. Keep sentences short. A PSA should be easy to speak and easy to understand.

A PSA should be double-spaced and typed on only one side of a page. The name of the organization submitting the PSA, a contact person and phone number, and a release date should be sent with the PSA. It is advisable to make a follow-up call to be sure the PSA was received and that it will be read on the air.

Paid TV advertising is also a way to publicize an upcoming event. However, to produce even a 30-second spot can be very expensive. On the other hand, if well done and aired at the proper time, a paid TV ad can be an effective means of advertising. Paid TV ads are normally used by groups that have established reputations in a community over a period of time.

Programs

When presenting a dance concert, the following information should be included in a program:
- what the program is (that is, a dance concert);
- place, complete dates, and times;
- an order of events including the titles of the dances, choreographers, music and composers, costume designers, lighting designers, and names of dancers;
- program notes (if necessary);
- intermissions;
- names of director and technical staff;
- special thanks to sponsors.

Sometimes short biographies about the choreographers are included as added interest. Printing a list of upcoming dance concerts in a program is a good way to advertise future events because those who attend the performance are likely to attend other concerts.

As to program design, it may again be advantageous to use the same design for the program, poster, and paid advertisements publicizing the event. Sometimes it is even advisable to use the same design to advertise a series of dance events over a year period. This way, the public will begin to associate the specific design with the specific organization and the events it produces.
Special Media Advertising

Dance groups can also devise other clever ways to advertise their performances. Some possibilities include lecture-demonstrations in shopping malls several days in advance of a concert, bumper stickers, postcards, T-shirts, billboards, and so forth. An idea that advertises a dance group in a unique way will usually prove to be beneficial. The public is inundated with advertising to the point that a novel approach invites their attention.

To summarize, in planning an overall publicity campaign, the following questions should be considered to determine the effective use of advertising media:

- What is the exposure offered by each form of advertising? Will the forms of selected publicity reach the target audience?
- Are the publicity materials designed in an attention-getting way? Is the publicity eye-catching or does it "sink into the background?"
- Is the publicity designed in a way to generate interest in actually attending the dance event? Are the beneficial aspects of the dance event well-stated?
- Is the information accurate? Are all names and titles correctly spelled?

To make advertising an effective tool, two other factors need to be considered. Will publicity materials be submitted on time?, have realistic deadlines been established?, what kind of budget has been allocated for publicity?, is maximum exposure going to be achieved with the monies available? These questions will be addressed in the following two sections.

Deadlines: Making a Realistic Schedule

It is extremely important to set up realistic deadlines for completion of all work involved in the preparation of publicity materials. As stated earlier, one should be able to release publicity information on a time schedule that builds a momentum of interest, climaxing at the time of the actual dance event. This plan cannot be implemented if publicity materials are not prepared well in advance of the actual date of the dance event. When publicity is treated as an afterthought, there is usually a great deal of confusion, last-minute rushing around, missed deadlines, and ultimately, spotty use of publicity.

It is important to check the time schedules of printers, graphic designers, photographers, and any other professionals whose services will be used to produce publicity materials. These businesses have other work to do besides prepare a single poster, program, or flyer so that they may not be able to complete a job for several weeks. A schedule should be made which allows all persons and services involved in publicity preparation to finish their work well ahead of the release date of these publicity materials. When possible, plan extra time in the schedule to cover the event of an emergency.

In terms of producing a poster, the following steps will need to be scheduled:

- Decide what the poster design will be and what specific information will be included;
- If photographs are to be used in the poster design, schedule a photographic session early and set a schedule with the photographer for viewing the proofs and printing the selected photographs;
- If a graphic artist is to be used, establish a deadline for the design and layout of the poster to be completed;
- Take the design to a printer who will make up a "blue" or trial poster.
check the trial poster carefully, particularly the printed information, to see that it is correct in every detail;

give instructions for final printing.

(The poster is now printed and ready for distribution. The above procedure also applies for brochures, flyers, and programs that are professionally designed and printed.)

Press releases and public service announcements should be written in plenty of time to be submitted according to newspaper and radio-TV deadlines. Once again, a reminder: if photographs are to be submitted with press releases, these photographs will need to be prepared, according to newspaper standards (clear, high contrast) time should be scheduled if necessary to prepare these photographs so that they can be submitted in time to meet newspaper deadlines.

Below is a standard deadline system for submitting publicity materials. Although specific deadlines vary slightly from community to community, this system provides a realistic picture of the type of time budgeting that needs to be planned.

1. **Posters**
   a. Plan poster design: eight weeks prior to concert.
   b. Send poster to printer to make up trial copy: six weeks prior to concert.
   c. Have printed poster ready for distribution: three weeks prior to concert.
   (This schedule also applies to flyers that are designed and printed. If flyers are simply typed and mimeographed, they should be prepared, typed, and reproduced four weeks ahead to be ready for distribution three weeks prior to the performance.)

2. **Newspapers**
   a. Press releases: submit three weeks prior to concert.
   b. Interview article (feature story). contact arts section of newspaper five or six weeks prior to concert.

3. **Radio-TV PSAs**: submit three weeks prior to concert.

4. **Magazine article (feature story)**. contact six weeks prior to publication date.

5. **Events calendars, local bulletins, arts newsletters**: submit information four weeks prior to publication.

6. **Program**
   a. Compile information and design program cover. three weeks prior to concert.
   b. Submit to typist: two weeks prior to concert.
   c. Print programs: one week prior to concert.

**Planning a Budget**

The way in which publicity can be approached is dependent, in part, on the amount one has to spend on publicity. Usually publicity budgets are small, but a lot can be done with very little through careful planning and budgeting. For one thing, not all forms of publicity cost money. One does not have to pay for press releases and public service announcements. Magazine articles and feature stories require obtaining an interview with a contact person from the magazine or newspaper, but they do not cost money. Printing posters, flyers, and programs, and using paid ads for TV, radio, and newspapers do cost money.

When money is spent, consider exactly what will be received in relation to the amount spent. What is the quality? How much exposure is provided? What segments of the public will be reached by each medium of advertising? Obviously,
one would not want to use an expensive ad in an obscure paper that most of the public never reads.

The following services and materials are the kinds of expenses that are generally incurred in the preparation of publicity materials:

- photographer's fee and cost of photographs;
- graphic artist's fee for designing posters, flyers, and programs;
- printer's fee for printing posters, flyers, and programs;
- typist/typesetter fee for typing program, press releases, PSAs, calendar announcements, cover letters, and so forth;
- paper, envelopes, postage, and other secretarial supplies for mailings,
- printing materials for posters, programs, brochures

- paper (costs will vary according to weight, type, size, and color of paper)
- number of copies (usually the more copies that are ordered, the less cost per copy)
- types of reproduction
  - human and mechanical
  - photocopy
  - mimeograph
  - photo offset or photo engraving (these types of reproduction all vary in cost).

Besides the costs of producing publicity materials, other common expenses include fees charged for newspaper, radio, and television advertising, and some kind of travel expense money for those who hang posters.

It is important to do some comparative shopping in terms of price estimates before making any business arrangements. There are also ways to stretch publicity dollars. For example, if one has a publicity budget for a year to advertise three concerts, make a poster-program design that can be used for the entire year, changing the color combination for each concert. This way, a graphic artist has to be paid only once for a design that will be used a number of times. Further, one good photo session can produce all the prints necessary for posters, press releases, and so forth for the year. Out of one photographer's fee, one can obtain a great deal of publicity material. With a limited budget, it may be wise to think in terms of these types of money-saving devices.

After decisions have been made regarding the types of publicity to use and cost estimates have been obtained, one should draw up a sample budget. As much as possible, try to predict all expenses no matter how insignificant.

Making a sample budget can save money by allowing one to see where monies are going and to consider whether these monies are being used effectively. For example, by looking at the budget, one might decide that a printed flyer is too expensive for the amount of exposure offered and that a paid newspaper ad would be more effective for the cost. This type of budget strategy can stretch a small publicity budget, making it provide the greatest amount of effective exposure for the least amount of money.

### Personal Relations with Business Associates

Successful promotion of a dance organization requires more than meeting the promotion deadlines of the respective agencies and businesses that are helping to produce one's publicity. These agencies and businesses are run by people and it is essential to establish positive working relationships with these people.

One should always have a contact person in a community or business organization that one can call. Be sure, also, that these organizations are given a contact
person within the dance group that they can call. Further, it is essential for a dance organization to act like a business. Artistic capriciousness creates an atmosphere of incompetency. It is crucial to define one's needs clearly and specifically and to be sure that these agencies and businesses have all the information they need to function effectively. A community organization cannot help a dance group unless it understands, specifically, what the group is requesting.

At the same time, it is important for a dance group to have a good idea of the functioning process of these community organizations. Basically, the group needs to establish open lines of communication. Be sure that all commitments made by both the dance group and the business organization are clearly understood by both sides.

Always meet deadlines. These organizations have their own deadlines to meet. When a dance group continually turns in printing and publicity materials late, it encourages the development of non-productive and frustrating relationships.

A personal call or thank-you letter for a job well done creates good community rapport. Thanking someone for printing a story or reading an announcement requires little time and goes a long way toward creating positive relationships that will pay off in the future. Once these networks of goodwill have been established, they can do much to help make the job of the publicity manager a pleasure.

Summary

Learning to use publicity effectively is a skill one develops out of experience acquired over a period of time. Basically, for any given dance event, one needs to plan the following:

- determine which forms of publicity media are most appropriate to advertise a specific event;
- research price estimates for all potential expenses and devise a sample budget;
- make up a calendar schedule, carefully assigning responsibilities to assure the prompt completion of all publicity materials;
- distribute these publicity materials at the most opportune time and in the most opportune places to create interest in the dance event being advertised.

A current list of contact persons and phone numbers, a history file containing a chronological order of previous press releases, posters, programs, and other publicity materials, a list of recent costs for services and materials, a list of poster hang-up places, a mailing list, and a file of past budgets to determine the cost effectiveness of certain past publicity strategies are very helpful records to maintain.

It is important to develop a set of standards for evaluating the effectiveness of one's publicity techniques. The effectiveness of a given publicity medium can generally be determined by evaluating each form of advertising according to which gave a dance event the most exposure of the highest quality, at the most opportune time, for the least cost.

To survive for more than one concert, it is important for a dance organization to develop an audience that will become a permanent source of support. This requires publicity strategies to stimulate the growth of a stable audience over a period of time instead of using publicity to stimulate sporadic, temporary interest. This is why it is important to develop media contacts that can be used again and again. Ultimately, the interest and support of newspaper staffs, printers, sponsors, and other support groups becomes an essential aspect to the survival of a dance organization.
About the Authors

LEE ANNE HARTLEY has taught dance at the University of Utah, University of Arizona, and the University of Colorado. She is at present a freelance teacher and choreographer.

ELIZABETH R. HAYES, formerly director of the modern dance program at the University of Utah, is author of two previous textbooks, Dance Composition and Production and Introduction to the Teaching of Dance. Her chapters on costuming for this publication have been based upon many years of experience in costuming dance performances.

JON SCOVILLE, adjunct associate instructor in charge of music classes in the Modern Dance Department at the University of Utah, is the musical director, composer, and accompanist for the Tandy Beal Dance Company. He is also co-author of a book on the making of musical instruments useful for dance accompaniment, entitled Sound Designs.

KENNETH WHITE was for several years the technical director for the Ririe-Woodbury Dance Company and is currently a staff member in the Modern Dance Department at the University of Utah, serving as instructor for the lighting class and technical advisor for dance productions.
Suggested Listening for Dance

The following list is a selection of music which can be considered for dance scores. It is geared towards the 20th century and thus may be more useful for modern dance than for ballet. As with any list of this nature, it is only a sampling and is far from complete. Its main purpose is to give the choreographer an idea of the wide range of music available.

Medieval/Renaissance
- Byrd, W. — Keyboard Musick
- Camino de Santiago
- Dowland, J. — Dances for Lute
- Golden Dance Hits of 1600 — Archive Anthology
- Instruments of the Middle Ages and Renaissance — David Munrow, Director
- John Renbourne — The Lady and the Unicorn
- Machaut, G. — Ballades, Rondeaux, Virelais

Baroque
- Albinoni, T. — Adagio for Strings and Organ
- Bach, J. S. — Brandenburg Concerti
- Goldberg Variations
- Inventions, 2 and 3 Part
- Lute Music
- Sonatas for Flute and Harpsichord
- Suites for Cello Unaccompanied
- Well-Tempered Clavier
- Couperin, F. — Pieces de Clavecin
- Froberger, J. — Suites de Clavecin
- Handel, G. F. — Suites for Harpsichord
- Water Music Suite
- Pachelbel, J. — Kanon
- Scarlatti, D. — Sonatas (Keyboard)
- Telemann, G. — Suite in A for Flute and Strings
- Trio Sonatas

Vivaldi, A. —
- Concerti for Flute and Orchestra
- Concerti for Orchestra
- Concerto in D for Guitar and Orchestra
- Four Seasons

Classical
- Beethoven, L. — Bagatelles
- Piano Sonatas
- Haydn, F. J. — Menuets
- Sonatas for Piano

Romantic
- Brahms, J. — Intermezzi
- Chopin, F. — Ballades
- Nocturnes
- Preludes
- Schubert, F. — String Quintet in A

Impressionists
- Debussy, C. — Images
- Ondine
- Suite Bergamasque
- Ravel, M. — Pavane pour une infante defunte
- Piano Music
- Satie, E. — Piano Music
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<th>Artist</th>
<th>Work</th>
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<td>Appleton, J.</td>
<td>World Music Theater</td>
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<td>Arel, B.</td>
<td>Mimiana 1 and 11</td>
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<td>Ashley, R.</td>
<td>She Was a Visitor</td>
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<td>Barber, S.</td>
<td>Adagio for Strings</td>
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<td>Summer Music for Woodwind Quintet</td>
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<td>Bartok, B.</td>
<td>Concerto for Orchestra</td>
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<td>Mikrokosmos</td>
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<td>Music for Strings Percussion and Celesta</td>
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<td>Piano Concertos</td>
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<td>Behrman, D.</td>
<td>On the Other Ocean</td>
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<td>Berio, L.</td>
<td>Circles</td>
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<td>Differences</td>
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<td>Fancy Free</td>
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<td>Britten, B.</td>
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<td>Sonic Seasonings</td>
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<td>Walter Carlos by Request</td>
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<td>Well-Tempered Synthesizer</td>
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<td>Sonatas and Interludes for Prepared Piano</td>
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<td>Beauty of the Rose</td>
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<td>Branches</td>
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<td>Appalachian Spring</td>
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<td>Rodeo</td>
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