SCENE DESIGN AND STAGE LIGHTING

TENTH EDITION

R. CRAIG WOLF • DICK BLOCK

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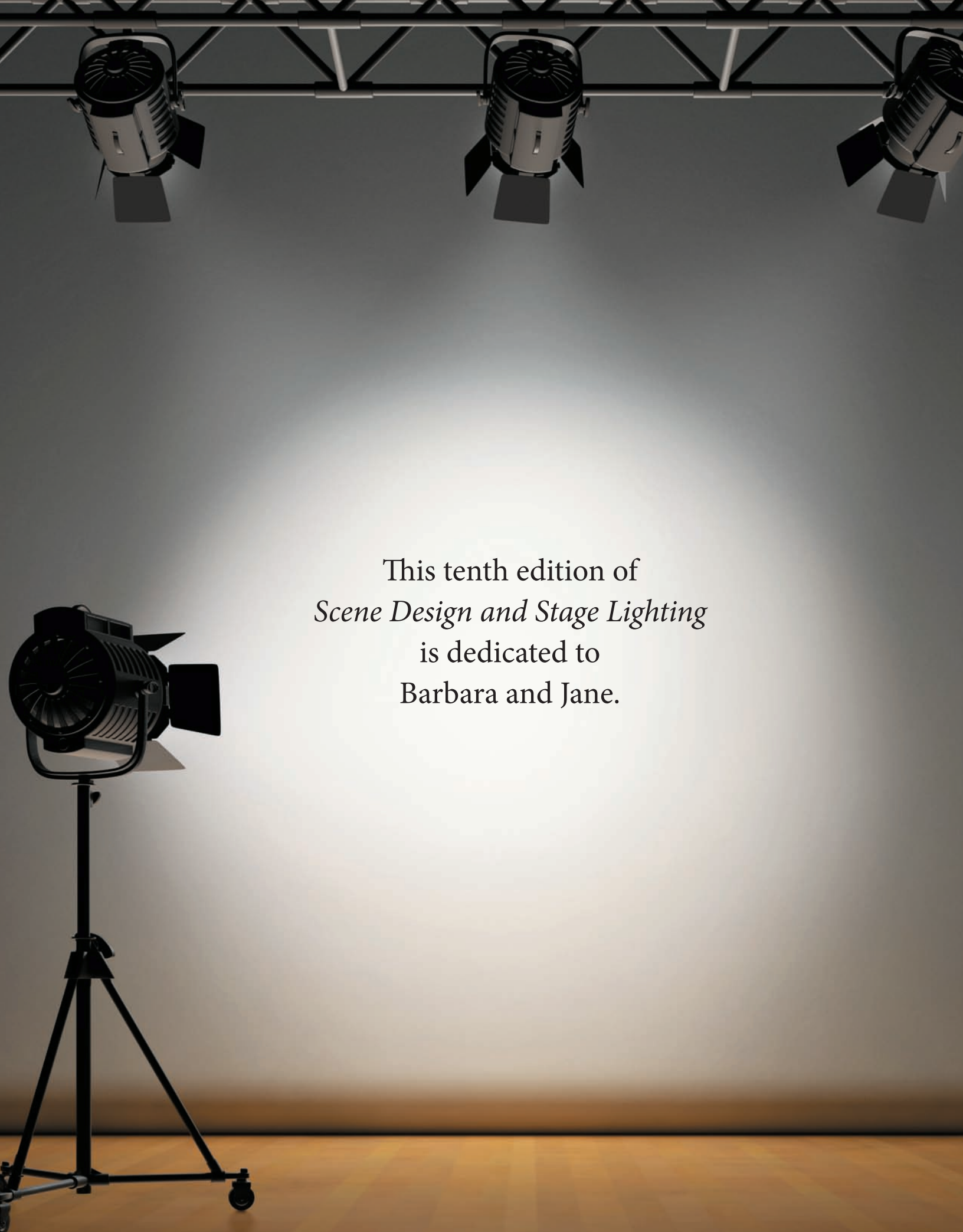

This tenth edition of
Scene Design and Stage Lighting
is dedicated to
Barbara and Jane.

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About the Authors

R. Craig Wolf is a professional lighting designer as well as an educator. Mr. Wolf's designs have been seen nationwide, including productions for San Diego's Old Globe Theatre, San Diego Repertory Theatre, Dance Theatre Workshop in New York, Virginia Shakespeare, Richmond Ballet Company, Theatre Artaud in San Francisco, and Japan America Center and Odyssey Theatre Ensemble of Los Angeles. He is currently resident lighting designer for Native Voices at the Autry in Los Angeles and recently designed for Cygnet Theatre in San Diego. Craig has served two terms on the board of directors of the United States Institute for Theatre Technology (USITT), was vice-chair of their publications committee and lighting commissioner for five years. In 2011 he was awarded "Distinguished Educator of the Year" by USITT's Education Commission. He became a lighting associate member of the United Scenic Artists Design Union in 1977. Mr. Wolf has taught at the University of Michigan and University of Virginia and is currently professor of design, MFA graduate adviser, and head of the design program in the School of Theatre, Television, and Film at San Diego State University.

Dick Block has worked as a freelance scene designer and a scenic artist for more than 25 years. He has designed for AMAS, Columbia Artists, and TheatreWorks USA, all in New York, and for the Virginia Stage Company, the Shakespeare Theatre of New Jersey, the Weston Playhouse (Vermont), and the Human Race (Ohio). Additional regional credits include work at the McCarter Theatre in Princeton, the American Repertory Theatre in Cambridge, Center Stage in Baltimore, Opera Theatre of St. Louis, as well as the Pittsburgh Playhouse and the Pittsburgh Public Theatre. Mr. Block is also active with the United States Institute for Theatre Technology (USITT), having served as scene design co-commissioner and on the board of directors, and with the Kennedy Center/American College Theatre Festival both regionally and nationally, having served as the first national design chair. He is the recipient of the Kennedy Center Medallion for Distinguished Service. Mr. Block received his MFA from Northwestern University. After teaching at the University of Michigan and Cornell, he began teaching at Carnegie Mellon University in the School of Drama and is currently the Associate Head.

Preface

It has only been five years since the ninth edition of this book, and we are amazed at how much the theatre world has changed in so short a time! Sections of *Scene Design and Stage Lighting* that we might have thought warranted little updating turned out to be those most in need. Technological advances have brought about new methods of producing theatre, potential venues for employment are rapidly developing, and the concern for environmentally-friendly production continues to grow. While addressing these and other issues in this tenth edition, we continue our emphasis on the collaborative nature of theatre. Throughout the text, the marginal glossary has been expanded to reflect new terminology from developing technologies. Illustrations and photographs have been updated, design processes have been examined with a new eye, and we have added two new chapters: Projection in the Theatre (Chapter 12) and Automation in the Theatre (Chapter 13). However, we are most excited about the fact that this tenth edition is our first full-color text.

The value of full color should be apparent: Our readers will be able to see the influence of one of the most important design elements in the photographs and illustrations. One of our favorite responses from a colleague to the announcement of a full-color edition was "Well what do you know, a design text in color!" We are confident that instructors using this new text will find that their students learn design concepts quicker and better, more fully understand photographs and illustrations, and more readily discover the huge impact that color has in the world of design.

We felt that the addition of the two new chapters was critical. Automation of both scenery and lighting is a relatively new and vastly important element in production, and projection has grown into its own design form, analogous to scenery, lighting, costume, and sound. Because these two elements have a huge impact on both scenery and lighting, we have placed these new chapters in the center of the book (Chapters 12 and 13).

There are a number of updates in the scenic design chapters. Chapter 3 on the composition of design now includes images in the abstract as well as specific design examples. Chapter 4 on the design process includes almost all new images and a stronger emphasis on script analysis, including examples. While the description of the basic design process remains the same, we include information about other methodologies that are now common. As well, we have added a section in Chapter 4 on the process of looking for a job as a new designer. The chapter on drafting (Chapter 6) has seen some changes as well—nearly all of the drafting examples are new. More importantly, there is no longer any differentiation between hand and computer drafting; rather, the emphasis is on communication of the material, whatever method is used.

The addition of full color in the lighting chapters has made a world of difference. The examples in Chapter 16 (Color and Light), are much clearer and more informative. The chapter on lighting fixtures (Chapter 17) has been greatly altered to include the newest LED technologies, including color mixing. Our lighting design chapters (Chapters 19 and 20) pay more attention to the use of automated fixtures and LED sources. Chapter 21 (Power Distribution and Control) considers a theatre that is much less dependent on dimmers and more concerned with power and control distribution. Of course, Chapter 23 on light sources has changed dramatically to include LED and

other new sources. Finally, in Chapter 25 we have added a new "Designers at Work" interview with concert designer Marc Janowitz, along with many examples of his work.

Students can find additional materials on the book's companion website, which can be accessed at **www.CengageBrain.com**. These useful resources include chapter-specific quizzes, a glossary, flash cards, relevant Web links, and larger versions of several images from the text (allowing closer study).

As with any text of this magnitude, we have relied on experts in many fields to guide us, all of whom have contributed in substantial ways to this edition. This collaboration has been particularly significant because technology has changed so rapidly.

Any number of scenic designers were extremely gracious and generous in providing many images of their work. In particular, Linda Buchanan, Steve Gilliam, Ron Keller, Pam Knauert Lavarnway, Lynne Koscielniak, Charles Murdock Lucas, Anne Mundell, Scott C. Neale, Kevin Rigdon, and Todd Rosenthal gave us far more images than we could possibly use, making it difficult to choose. Wendall Harrington and Peter Nigrini were incredibly generous in discussing their work and theories of projection design, as was Rachel Keebler of Cobalt Studios in helping with the scenic painting chapter.

The "Working Professionals" interviewees provide insight into how theatre-makers and television and film designers operate, and we thank them: Scott Bradley, Robert Elliott, Chris Kennedy, John Shaffner, Joe Stewart, and Thomas Walsh.

The scenery section of the chapter on automation could not have been written without the help of David Boevers and Kevin Hines, who was also instrumental in updating the chapters on the construction and moving of scenery. Likewise, thanks go to Jon Ward on props, Ben Carter on tools and especially metal-working, and Beth Zamborsky, who painted the series of samples that we use in the scene-painting chapter.

As always, thanks also go to our lighting "Designers at Work" interviewees: Donald Holder, Mark Janowitz, York Kennedy, Lynda Montgomery, Robert Shook, and Dennis Size. In addition, we have been very fortunate to be able to include the work of Ann Archbold, Ken Billington, Michelle Caron, Ralph Funicello, Cindy Limauro, Chris Parry, David Segal, and Mary Tarantino as well as many other designers. Thanks go to Mike Wood for his informative and insightful information on LED sources.

Peter Nordyke was instrumental in advising on the sound chapters of this and several past editions. For this edition, he additionally reworked illustrations, updating and coloring them for clarity. Finally, this edition would not have been possible without the tireless and splendid work of our associate in lighting, Michelle Caron. She handled the complex task of securing images and illustrations, as well as the often frustrating job of obtaining permissions.

The following instructors generously reviewed the ninth edition of the text and made suggestions for this edition: Professor Joan Arhelger, San Francisco State University; Jeromy Hopgood, Assistant Professor of Entertainment Design & Technology, Eastern Michigan University; and Michael Ramsaur, Stanford University.

Many thanks of course to the expert professionals who worked on the production of this edition, but especially to our terrific editor, Ed Dodd, as well as Kate Mannix and Matt Rosenquist at Graphic World Inc., and Michael Lepera and Michael Rosenberg at Cengage Learning.

And, most of all, we acknowledge with great love and thanks the incredible support of our partners, Barbara and Jane, who helped make this edition a reality.

R. Craig Wolf
San Diego, California

Dick Block
Pittsburgh, Pennsylvania

Introduction

Design in the theatre may branch into various areas of specialization, including **scenery, costumes, lighting, sound,** and **projection**.

The paths leading to a career in theatre design are numerous and varied. They may come from within the theatre itself or from elsewhere. Many a would-be actor has discovered more excitement in design; directors with a strong visual sense have sometimes become designers. Architects, fine artists, and other trained visual artists equipped with the practical ability to draw and paint and possessing a strong desire to be in the theatre have forged careers as designers.

A student standing at the threshold of training for a career in design for the theatre may wonder what the future holds. Never before has theatre training made more sense; today, people with a solid grasp of theatrical design are being hired and are working in myriad related industries. The discipline, dedication, organization, and sense of collaboration that theatre requires are qualities that easily transfer to any number of fields. The sudden but transitory flush of excitement involving one's first experiences in the theatre should not, however, obscure the need for a long-range artistic commitment to hard work. Anyone interested in achieving creative and personal fulfillment as a scene, costume, lighting, sound, or projection designer must first thoroughly understand the complexity of theatre as an art form.

Theatre is ever evolving, even in definition. During the 20th century it faced significant changes in its literary, physical, and theatrical form; these reflect evolution in the views of society as well as advances in technology. A wide range of influences has affected theatre. Multiculturalism and globalization have enabled us to understand and appreciate the lives of those with different backgrounds. The attempt to be inclusive has allowed the audience to be more directly involved physically and emotionally and us to consider wholly new theatre forms. Other expectations have also changed, so a much wider array of venues is now acceptable for performance spaces.

Television and film are one obvious influence, as more and more playscripts are written as a series of short scenes in numerous locales and more "live theatre"-trained students are pursuing careers in this arena. Computer and digital technology have made the most profound impact. This technology has allowed for increased control of complex physical movement of scenery and light, and revolutionized the way sound is manipulated. In many cases, it has changed the way that designers conceptualize, develop, and present their work. In addition, newer forms of storytelling, such as webcasts, podcasts, and YouTube, have increasingly become part of our daily lives. Consider how these have affected designers and their function in the theatre; *theatre* design has really become, more broadly, *entertainment* design.

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This book deals mostly with training in "live theatre." Although other methods of storytelling are addressed, solid understanding of live theatre will provide the basis for a designer to move into other venues.

Theatrical Form

Theatrical form in its simplest description is the communication of ideas between two groups: performers and audience. These ideas may range from the ancient to the most topical, from the profound to the absurd, and be either sentimentally obvious or intellectually obscure.

Good theatre, whatever the form, is about telling a story. In live theatre, the personality of the actors, the physical form of the space, and the dynamic of the audience itself all affect its success. The challenge is to tell the story in an exciting, intriguing, and provocative way.

All types of theatrical forms affect the work of the designer. The most obvious are the literary form, or drama, in which the spoken word is emphasized; the musical form, including opera, book musicals, and revues, in which music tells part of the story; and ballet and modern dance, in which sight and sound, rather than the spoken word, matter most. There are many other possible outlets for design that should not be overlooked, including film and television, trade shows or "industrials" (promoting a product or company), themed entertainment (rock concerts, videos, restaurants, and theme parks), museum and display design, and performance art. Additional forms are constantly evolving.

Of these forms, the literary form has historically so dominated theatre that the word *drama* has nearly become synonymous with *theatre.* A major portion of a designer's training for the theatre is spent learning to interpret the ideas of the playwright and finding a method to express that interpretation visually, physically or aurally. This can't be overemphasized because it is the basis for all design in the theatre—finding a way to tell the playwright's story.

Theatre artists have led the way as audiences have gotten more sophisticated. The search for meaning in a play, musical, or opera is all-important. We expect the design to reflect that search in a way that enhances the experience for the audience. At the same time, people attend commercial theatre—a theatre in which the primary objective is to make a profit, for example, Broadway—today for *spectacle*, or theatre that impresses by the use of sophisticated technology, such as *Spider-Man: Turn Off the Dark*. The digital age has made this much easier, allowing for more complex media, rapid changes of scenery and lighting, and far more control of stage movement. There is nothing intrinsically wrong with theatre being sheer entertainment, but audiences attend theatre for a variety of reasons: as a social event, for entertainment, or as an intellectual challenge. For a theatre-maker, any reason to attend theatre is valid.

The Total Dramatic Effect

The creation of an environment in which the action of the play happens is very exciting. By responding to the text, the designers and the director provide a physical, visual, and aural world for the play. The written words of the playwright are transformed for the audience through the collaboration of these many minds.

Theatre design is concerned with the total visual and aural effect of a dramatic production. This overall effect is the sum of all the elements that provide an audience with clues about the play's meaning and purpose and the world in which its action takes place.

DESIGN BASICS
The Five Elements of Theatre Design

- Scenery
- Costumes
- Lighting
- Sound
- Projection

All the elements must support the spoken "word" (however presented) of the dramatic form. Careful consideration of all five design areas is critical as it takes the combination to be successful. Everything onstage, whether large or small, obvious or subtle, tangible or intangible, should embody the world of the play that one is trying to create for the audience. This is true whether the visual requirements of a script are as simple as those of Thornton Wilder's *Our Town* or as complicated as those of Jerome Kern's *Showboat*.

Qualities of Designers

Beginning designers are expected to know so many things at once that they may wonder where to begin. They soon find that anyone who aspires to be a designer needs the vision and imagination of the creative artist and the ingenuity and skills of the stage artisan, as well as the knowledge and sense of theatre of the actor, director, and playwright. Above all, a designer's success depends upon the ability to work effectively in collaboration with his or her peers. This is true no matter whether they choose to design lighting, sound, costumes, projections, or scenery.

To function as creative artists in the theatre, designers must display talent in their use of line, color, and form. To successfully bring meaning and significance to a stage picture, they must possess a visual vocabulary developed through study of art, history, and literature. In addition, designers must be keenly aware of the world around them. Imaginative and creative qualities are enhanced by training in the nonverbal techniques of design, drawing, and painting. As stage artisans, designers must be able, through the use of unique materials and theatrical techniques, to bring substance to their ideas with skill and dispatch and within the structural limitations of their medium. To create a design that can be wholly realized, the scenic designer must know the structure of scenery, the limitations of resources, and the methods of shifting scenic pieces. Likewise, the lighting designer must have a working knowledge of available equipment and the latest technologies. The same is true for costume, projection, and sound designers, although the specifics are different. In all cases, designers must have at least a basic understanding and appreciation of the other areas of design.

The study of dramatic structure and perception of the playwright's intent allows the designer to bring an appropriate visual interpretation onto the stage. Understanding the ideas of the play and remaining true to the intent of the playwright while allowing an artistic vision to develop is a difficult but vital part of the designer's job. A successful visual interpretation requires an understanding of all the physical and textual elements, the actor's needs, and a sense of space and movement.

Design Collaboration

Most productions involve a scene designer, a costume designer, a lighting designer, and a sound designer; some require a projection designer. Working in collaboration with the director, they form an artistic team to create the world of the play.

In fact, none of the designers can, with integrity, design without concern for the work of their colleagues. Attention should be paid to consistency in style of all the design elements. The design should function in a way that accommodates the practical needs of the production. Each designer must acknowledge the needs of the other design areas in order to accomplish these common goals. For these reasons, involvement of all designers in the initial stages of conceptualization is highly desirable. Constant communication among the designers and with the director is critical throughout the production process.

Each designer has unique responsibilities. Although the final action and staging of the actors is the prerogative of the director, the arrangement of the scenic pieces has a direct bearing on everything that happens in that space. Part of the scene designer's job is

to assist the director in creating theatrical pictures by arranging the actors within the setting in a manner appropriate to the telling of the story. A successful floor plan indicates a logical physical arrangement of actors onstage.

Light brings atmosphere and focus to a production as well as a flexible means of modifying color and modeling scenic forms. The lighting reveals or hides what is necessary—sometimes subtly, sometimes blatantly. It is innately theatrical. A good lighting designer illuminates the actors and the set in such a way that members of the audience sense the mood and the tone of the moment, often without being aware of how they are being manipulated. The scene designer must be aware of the design potential of light in the theatre and provide the lighting designer ample opportunity to achieve that potential.

The color, line, and period style of the costumes must be appropriate to the intent of the playwright and complement the other design work. Costumes help define the individual characters, placing them in proper relationship to the world of the play.

Sound in theatrical production is a powerful means of establishing locale and reinforcing the action of a play. Like lighting, it can establish mood in a way unnoticed by the audience.

Projections, when they are used, encompass the use of visuals created by film or digital means, which enhance the production in the same manner as the other design elements. It can be used to set locale, establish mood, comment on the action, or even as a light source itself.

Each of the designers must work to bring all their contributions together to form one whole. If the design team has successfully created the world of the play in a given production, they have done their jobs well. This can happen only through a series of discussions in which each member of the artistic team brings ideas to the table. It is the melding of these ideas and their development that allows theatre to happen. One of the most exciting times for the designer is that point at which the director or fellow designer has taken an idea and developed it in a different direction than was initially conceived. This exploration of the ideas of the play through visual means is what makes theatre immediate, unique, and alive for the designers as well as for the audience. The more fully developed the ideas of the artistic team, the more fulfilling the production will be for the audience.

PART I | CREATING THE DESIGN

2 | Scene Design and the Theatre Space
3 | Scene Design as a Visual Art
4 | The Design Process
5 | Color in the Design
6 | Drafting the Design
7 | The Scene Shop, Tools, and Equipment
8 | Building the Scenery
9 | Painting Scenery
10 | Handling Scenery
11 | Stage Properties and the Designer

"I have often found that the set is the geometry of the eventual play, so that a wrong set makes many scenes impossible to play, and even destroys many possibilities for the actors. The best designer evolves step by step with the director, going back, changing, scrapping, as a conception of the whole gradually takes form. . . .

This is the essence of theatrical thinking: a true designer will think of his designs as being all the time in motion, in action, in relation to what the actor brings to a scene as it unfolds."

Peter Brook
The Empty Space

2 Scene Design and the Theatre Space

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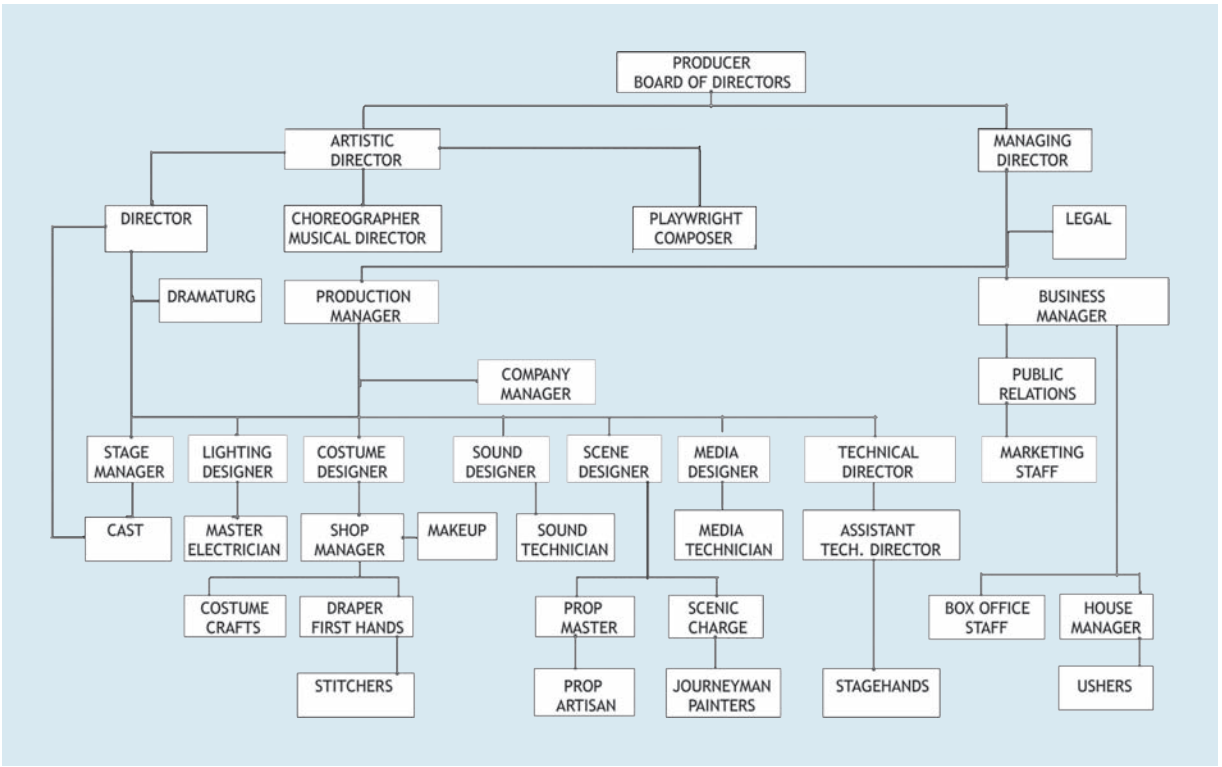
Many things influence the form of a final design for the theatre. The text itself (the raw material) and the conceptual work done by the artistic team (the interpretation of the text) are equally necessary and form the basis for the design. As part of the overall dramatic form of theatre, however, design does not stand alone. It is part of an event only if it includes and involves the audience as well. A scene designer may draw sketches or make models, but designs do not reach a full state of expression until they are onstage and inhabited by actors in front of an audience. As a result, the scene designer is concerned with not only the manner in which the design is presented to the artistic team but also how it will be used in production and the physical space in which it will be presented.

The Theatrical Medium

Because audiences respond to their physical surroundings, an intelligent designer will regard the theatre itself as a medium of expression. Therefore, variation in terms of the physical space available determines in part the manner in which design work is done. The physical space also affects the different ways theatre functions: as a complex organized business, a form of entertainment, and a technological machine. Each of these functions presents opportunities as well as limitations to designers.

Theatre as an Organization

The preparation of any production requires the close cooperation and collaboration of many specialists. The theatrical medium brings together the writer, actors, director, designers, and audience. Regardless of the level of theatre, certain elements are critical to ensure the success of a play. The producing organization must always be efficient in (1) selecting a play; (2) casting and rehearsing the actors; (3) designing the scenery, lighting, costumes, sound, and projection (if needed); (4) producing the physical production (that is, building and painting the sets, designing the costumes, lighting the production, and creating the sound and projection); and (5) promoting the play to an audience. Professional theatres, as well as some college, university, and community theatres, must also consider procuring financial backing, establishing the budget, and selecting a theatre; a hierarchy of positions allows this to happen (See Figure 2-1). Lack of cooperation or understanding from personnel, complicated by faulty planning, can weaken the production as a whole.



COURTESY OF THE AUTHORS

2-1 A Producing Theatre's Organizational Chart This is typical; specifics concerning personnel and hierarchy vary by the particular needs and types of productions of individual theatres.

To function well, any organization must have a guiding force or chief interpretive artist. This could be the director, producer, department chair, or another leader, depending on the given situation. It is the director's overall approach, however, that most often brings a unifying control to the production, including the visual elements, acting style, and literary interpretation. The designers' contributions to the production are the visual statements. As each designer functions as a part of the organization and its collaborative effort, this may mean subordinating personal glory to the good of the whole. When the goal of the production is placed above individual gain, great moments of theatre are more likely.

In addition to being aware of their general relationship to the overall production plans, designers need to know the specifics of their own area of the theatre, such as how the physical space backstage is set up, the standard theatre equipment that is available, and any limitations in terms of time and use of the space. A thorough knowledge of backstage and scene shop organization leads to a more efficient production as well as a more faithful reproduction of design ideas. The scenic designer collaborates directly with the artisans in the various shops, particularly the technical director, the scenic painter, and the props person. Just as important, the designers must be able to work with all the other areas of the theatre organization, including the production manager, the actors, the public relations staff, and the box office. Because of their specialized nature, the personnel and organization of design and technical production are discussed in Chapter 10.

Theatre as Entertainment

The designer's awareness of theatre as entertainment emphasizes the temporal quality of scenery, the dramatic qualities of the visual elements, and above all the sense of joining with an audience to give a performance. Because theatre is of the moment, there is a unique relationship with the audience that other art forms do not provide. A theatrical

performance without an audience is no more than a rehearsal. The audience and its participation are vital parts of the theatrical moment. Consequently, the theatre's almost total dependence on an audience gives it a quality of immediacy that becomes an intrinsic part of the medium.

This quality brings about a specific attitude toward scene design and the structure of scenery; although scenery may look solid for the most part, it must be lightweight and portable to move easily from scene to scene or from audience to audience. The specifics will, of course, vary depending on a number of factors, including the length of the production's run. Scenery built to tour, for example, must be stronger and last much longer than scenery built for a production that will have only ten performances. But ultimately, when the production reaches its last curtain, the usefulness of the scenery ends. It is doomed to storage, (hopefully) recycling, or destruction.

Theatrical success depends on teamwork. Any sense of achievement lies in the reaction of the audience to a good performance, "performance" in the broad sense of all personnel involved. Most audiences respond to the overall experience rather than to any individual element.

The designer achieves the dramatic quality of scenery mainly through the creative manipulation of the visual art forms, initially, in the use of proportion and scale. Because theatre more than other art forms is an overstatement, a realistic play is drawn to be a little sharper and greater than life. Even a relatively small idea, stated theatrically, can affect an audience. The way in which the visual elements are used depends partly on the theatre's size and the distance of the audience from the performers, which in turn influences the scale of the scenery. In a large theatre, with the audience at a great distance from the performers, the scenery has to take on an increased scale just to be in proportion to the size of the auditorium and the stage. The size of a theatre for most musical productions tends to be rather large, in part to accommodate a larger cast, an orchestra, and often more scenery. A two-hander (a play with only two characters) would get lost in a large space, denying the audience any connection to the characters; a smaller, more intimate venue providing closer proximity makes more sense. Whatever the physical circumstances, it is the responsibility of the theatrical medium to touch the emotions of the audience in electrifying ways.

Theatre as a Machine

Although other people control the technological aspects of the theatre, the designer should be aware of the backstage operations. Scenery-moving techniques, whether occurring onstage and in full view or hidden from the audience, should guarantee the smooth run of the production. The effortless movement of scenery is part of its theatrical magic, which can be justified as a part of the action of the play or moved in view of the audience as an accepted feature of theatrical form.

Typical scenery-moving machines include rigging systems, which allow scenery to fly; tracked wagons for lateral or diagonal movement; a turntable or revolving stage; and elevators and sliding pallets, all of which might be built into the stage. All these systems might have an influence on the production scheme.

The Physical Stage and Its Auditorium

The most important step for beginning designers in learning their new medium is to become acquainted with the physical stage. Knowledge of the actual shape and physical makeup of the performance area is a must, for they define the space in which a designer must work.

PHOTO COURTESY SCOTT J. KIMMINS

2-2 Proscenium Theatre This proscenium house, the Victoria, in Dayton, Ohio, was originally built for vaudeville performances. Like many theatres of its day, it was eventually used as a movie house. It has since been fully renovated and returned to its old glory and is now a small touring house. The set onstage is for *Alone Together*, designed by Tammy Honesty.

Proscenium Theatre

In the contemporary theatre, the stage takes on various forms based on the relationship of the audience to the stage. The most common form is the proscenium type of theatre, where the audience is arranged on one side of a raised stage area, divided by an implied "fourth wall" (Figure 2-2). The enclosed stage is visible to the audience through the proscenium opening. This allows for a more formal "presentation" of a play and, for the designers, a bit more control over what the audience can and cannot see. Early proscenium openings were surrounded by a decorative frame to separate the audience from the play in an artificial and often unrelated manner. The proscenium wall of the modern stage is often much simpler, functioning as architectural masking to hide stage machinery, lights, and stored scenery.

The Proscenium Opening The modern proscenium theatre attempts to minimize the frame of the opening separating the audience from the stage. It is less of a demarcation than were the old picture-frame prosceniums. The relationship of the design space to the proscenium opening is an early and critical decision for the designer because it is the first statement of scale. Does the setting relate or attach to the frame of the opening, hold free in an open staging manner, or pierce the opening to extend onto the apron? Figure 2-3 provides some examples. Each has different visual and staging capabilities. Closing in the opening reduces the scale of the production but may provide more backstage space for the storage of scenery. Little or no framing expands the design space into open staging, allowing for more "air" around the set. And piercing the opening by extending the stage reaches toward the audience as if to break through the plane of the opening.

In most proscenium theatres, there is a **fire curtain** directly upstage of the proscenium arch. The fire curtain is a fireproof curtain that covers the entire opening of the arch when closed. It is rigged to fall quickly in the event of a fire, sealing the stage from the house, thus protecting the paying public. Although the fire curtain does not usually affect the design, designers must know its exact position and depth. More importantly, it is the responsibility of the production (starting with the designer) to adhere to the fire codes of the particular city in which the play will be presented, particularly in terms of the permissibility of crossing the fire-curtain line with scenery.

fire curtain A fireproof wall-like structure that is built to drop quickly in the event of a fire so that it encloses the entire proscenium opening, separating the stage house from the auditorium.

Changing the Proscenium Opening Sometimes it is desirable to close in or change the shape of the proscenium opening. This is done with a **false proscenium**, which is usually neutral in design (often black). If the portal is designed to make a visual statement that sets the tone of the show, used visually to tie together multiple sets, or in any other way created to refer to the design of a specific production, it is referred to as

false proscenium A neutral frame, most often black, that either reduces the opening of the proscenium arch or alters its shape.