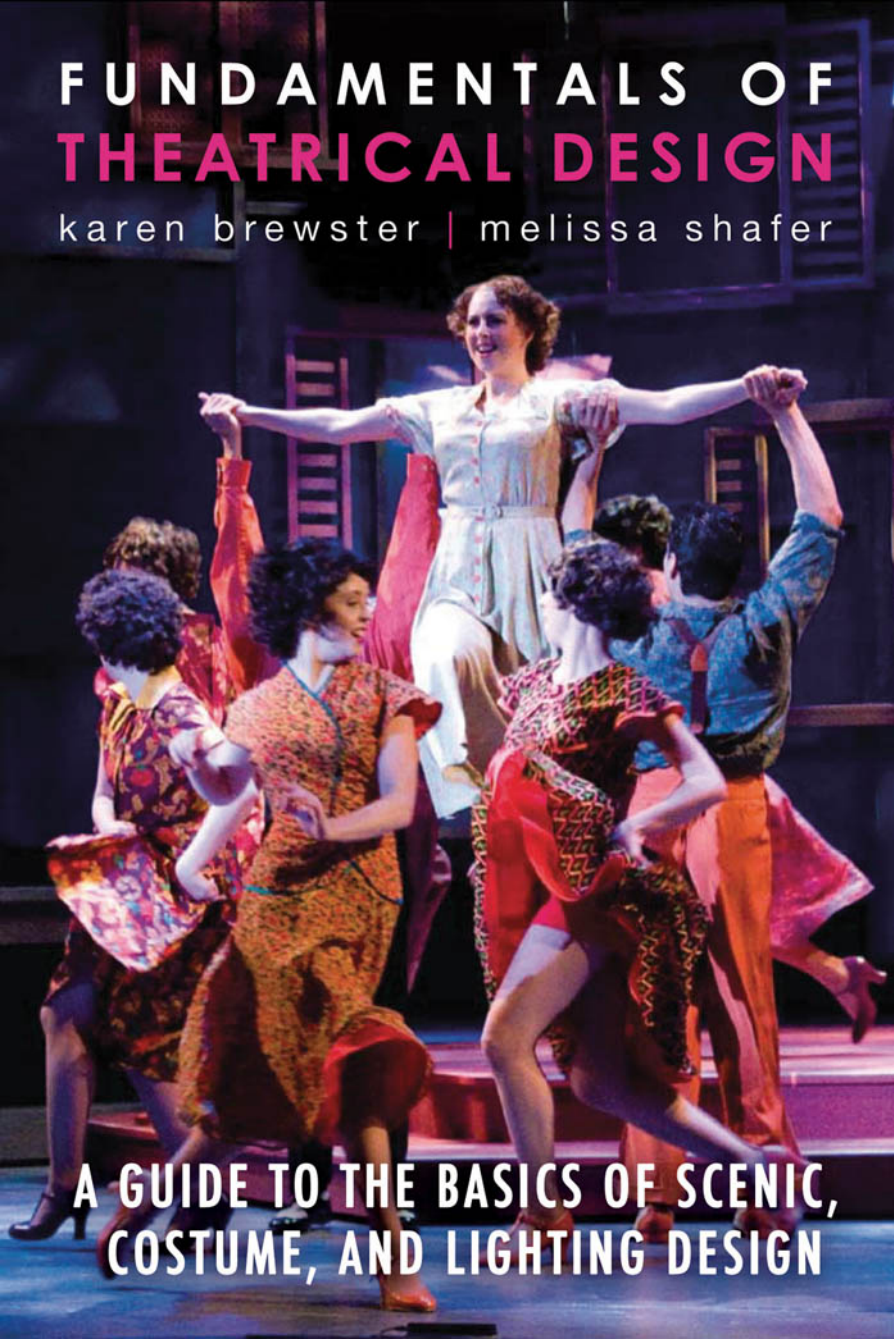
FUNDAMENTALS OF THEATRICAL DESIGN

karen brewster | melissa shafer



A GUIDE TO THE BASICS OF SCENIC, COSTUME, AND LIGHTING DESIGN

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Annotated Table of Contents

Acknowledgments 15
Introduction 17

PART ONE—THE PRELIMINARY DESIGN PROCESS

Chapter 1—Script Analysis for Designers 21
How to Read a Play 21
Script Formatting 22
Dialogue 22
Reading Plays—Language and Subtext 25
The Structure of a Play 28
Plot 31
Imaginative Engagement 31
Identifying the Given Circumstances 33
Visual Metaphor 34
Summary 35
Exercises 36

Chapter 2—The Objectives of Theatrical Design 38
Immersion in the Play 38
Determine the Objectives 39
Time 39
Period 40
Place 41
Locale 42
Place and Locale Challenges 43
Theme 44
Identifying Theme 44
Mood 45
Revealing Character 46
Style 47

Solving Practical Problems 50
Conclusion 52
Exercises 52

Chapter 3—Researching the Design 55
What to Research—The Process of Investigation 55
The Playwright and the Play 56
Researching the Given Circumstances and the Design Objectives 58
Place, Locale, Time, and Period 58
Theme and Mood 59
Revealing Character 60
Style 60
Solving Practical Problems 61
How to Research—Libraries and Online Searches 62
Tertiary Sources for Research 64
Primary Sources for Research 64
Secondary Sources for Research 64
Visual Sources for Research 65
Developing a Research Storehouse 67
Plagiarism 68
Informed Intuition 69
Why We Research—The Enjoyment of Data Collection 69
Exercises 70

Chapter 4—Collaboration 72
The Society and Culture of Theater 74
Design Team Collaboration—The Process 74
Idea Development 74
Communicate Ideas 76
Typical Collaborative Process 76
Develop a Production Concept 78
Communication Challenges 79
Impromptu Discussions 79
Business Etiquette 80
Gender and Communication 81
Technologically Enhanced Collaboration 81
Execute Unified Designs 82
Budget, Labor, Time 84

Tell the Story 85
Exercises 87

PART TWO—UNDERSTANDING THE VISUAL COMPONENTS OF THEATRICAL DESIGN

Chapter 5—Design Elements 88
Point 88
Line 89
Shape 90
Mass 92
Color 94
The Color Wheel 96
Value—The Use of Black and White 96
The Psychology of Color 97
Texture 97
Summary 99
Exercises 99

Chapter 6—Design Principles and Visual Composition 105
Balance 106
Proportion 109
Rhythm 110
Variation 111
Contrast, a Subcategory of Variation 112
Unity 113
Harmony, a Subcategory of Unity 114
Visual Composition 115
Summary 119
Exercises 119

PART THREE—THE ARTISTIC AND PRACTICAL PROCESSES OF THEATRICAL DESIGN

Chapter 7—Scenic Design 122
The Design Objectives and Scenic Design 123
Place, Locale, Time, and Period 123
Mood 124

Theme 125
Revealing Character 126
Style.... 127
Practical Problems.... 128
Practical Considerations.... 129
Types of Performance Spaces.... 129
The Physical Impact of the Theater Space on Scenic Design 131
Traditional Types of Scenery 132
The Basic Building Blocks of Scenic Units.... 134
The Scenic Designer's Process.... 134
The Designer's Punch List.... 134
Idea Development.... 135
Visual Metaphor 136
Thumbnail Sketches 137
The Scene Design Package—Communicating Design Ideas 141
Technical Drawings.... 141
Perspective Rendering 146
The Presentational Model 147
Finalizing the Design 149
Implementing the Design.... 150
Summary 150
Exercises.... 151

Chapter 8—Costume Design 152
The Given Circumstances and Costume Design 153
The Design Objectives and Costume Design 154
Time and Period 154
Place and Locale 155
Mood.... 156
Theme 157
Style.... 159
Revealing Character 161
Solving Practical Problems 165
Practical Problems Related to Theater Spaces and Costumes. 167
The Costume Designer's Process 168
Collaboration with Actors 168
Costume Research.... 169
Communication 170

Figure Drawing 170
Rough Sketches 171
Costume Renderings 173
Design Implementation 176
Pulling 177
Renting 178
Borrowing 179
Building 180
Buying 181
Budget 183
Summary 183
Exercises 184

Chapter 9—Lighting Design 187
The Lighting Designer 187
The Design Objectives 188
Motivated Lighting 188
Nonmotivated Lighting 189
Revealing Character and Solving Practical Problems 190
Functions of Stage Light 192
Visibility 192
Modeling 192
Mood 193
Selective Focus 193
Controllable Qualities of Light 193
Intensity 194
Distribution 194
Direction/Angle 194
Quality 195
Color 195
Movement 197
The Physical Impact of the Theater Space on Lighting Design—Light Hanging Positions 198
The Lighting Designer's Process 199
Idea Development 199
Designer's Punch List 200
Visualizing the Design—Lighting Storyboards 201
Methods of Stage Lighting 203

Single Source Lighting 203
Key and Fill 203
Area Lighting 204
Wash Lighting 205
Specials 207
Lighting Scenery 207
Lighting Control 208
Circuits 208
Dimmers 209
Control Consoles 210
Finalizing the Design 211
The Light Plot 212
Instrument Schedule 213
Channel Schedule 214
Magic Sheet 214
Cue List 215
Design Deadlines 215
Implementing the Design 216
Cueing a Show 216
Technical Rehearsals 217
Summary 217
Exercises 217

PART FOUR—EPILOGUE

Chapter 10—Building a Career in Theater Design 220
Training 221
Applying for Design and Production Work 222
Cover Letter 223
The Résumé 224
The Portfolio 228
Portfolio Contents 229
Additional Portfolio Guidelines 230
The Electronic Portfolio 231
The Job Interview 231
Interview Steps 232
General Guidelines for the Job Interview 233
Conclusion 233

Exercises 234

Appendices 235

Color 235
Fabric 237
Genre 242
Glossary 245
Light Cue List 252
Lighting Fixtures 254
Presentation
Samples:
Cover Letter 257
Résumé 258
Design Statement 259
Step-by-Step Process for Designing 259
Style 262
USITT
Recommended Practice for Theatrical Lighting Design Graphics 264
Lighting Design Commission Portfolio Guidelines for Designers 271
Scenic Design and Technical Production Graphic Standard 276

Index 285

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Introduction

Theater textbooks often begin with a definition of what theater is. While this may seem trite, the reason for posing this question is valid. In order to effectively practice an art form, one must understand what defines that art form. It is a given that many of the fine arts, such as sculpture, painting, and literature, create concrete and tangible works. And while it can be said that theater is an amalgamation of many of these same art forms, the essential art of theater is found in the exchange that happens between artists and audience during a live performance. The art of theater is a transitory, shared, and empathetic encounter involving the intimate examination of the lives, thoughts, and feelings of other people.

"What is our purpose on this planet? Why do some individuals suffer, and some individuals prosper? Why do we love? Hate?" The creative impulse shared by all people and cultures across time attempts to address these eternal questions. Throughout human history, we have used art—and particularly theater—to give voice to these questions and to postulate answers. That is the core of why we write and perform plays. Questioning the meaning and purpose of our lives defines our humanity. We learn about ourselves when we examine the lives of others. It is also important to note that it is the immediacy of this art form that draws us to it; the experience of live theater is much like life itself in that both life and theater are ever changing, at times fleeting and momentary.

While theater art is evanescent and fleeting, its creation is a lengthy collaborative process. Theater is created by artists who each methodically share their expertise in a number of disciplines: playwrights; scenic and properties designers; costume, hair, and makeup designers; lighting, sound, and projection designers; directors and actors; and a legion of craftspersons. On any given production, these theater artisans create "the world of the play" based on the playwright's words. Set and lighting designers create the environment in which the characters live and breathe; costume designers, along with the actors, create the characters that inhabit this world. At the heart of making the art of theater is the excitement that comes from this collaboration, and the realization that this art form is indeed ephemeral—no two productions, or even performances, of the same play will ever be exactly alike.

In order to be a successful designer and collaborative artist, one must study, learn to evaluate and critique, develop awareness and empathy towards the human condition, and cultivate a sense of aesthetics. Many sources, from

teachers, to textbooks, share the technical aspects of making art, but it is difficult to find a source that tells one how to be an artist. How does one truly make art? This is hard to explain, and even more difficult to teach. This task is akin to defining life itself—what is life? What is art, really? And, how do we make it?

The purpose of this text is to grapple with this challenge: how can we help beginning theater designers learn to make works of art? The philosophy of this text is grounded in the idea that all areas of theatrical design—scenery, costumes, lighting, properties, projections, and sound—are built on the same core elements and principles and share the same purposes and goals. A somewhat novel premise drives this text: the idea that regardless of the specific design area, theater designers are all members of the same family. They share similar genetic material and upbringing. So, in the early stages at least, they should be reared together.

While we acknowledge the importance of sound design, hair and makeup design, properties design, and the emerging field of projection design, this book focuses primarily on the fundamentals of scenery, costume, and lighting design. But the basic standards and processes really apply to all areas: reading, analyzing and researching a script, developing design ideas, communicating these ideas to the other members of the production team, and implementing design ideas into a working, evocative theatrical design that effectively tells a story. This text is deliberately structured so that beginning scenic, costume, and lighting designers can understand and appreciate these processes in the order they typically occur, and also so beginners can receive essential fundamental instruction (script analysis, design objectives, research, collaboration, design elements, and design principles) before tackling the more complex and challenging details offered in the design-specific chapters (scenic design, costume design, and lighting design).

Terms in bold font throughout the chapters can be found in the glossary. In addition, the appendices contain more detailed technical information on aspects of theatrical design. Each chapter of this book contains a series of exercises intended to solidify ideas and concepts in ways that are useful to students and teachers alike. Participants are encouraged to adapt these exercises as needed for both the purpose of making new pedagogical discoveries as well as reinforcing established design theories.

Lastly, the final chapter of this text ("Building a Career in Theatrical Design") was included in this book after much conversation and debate. Creating a portfolio and résumé are typically not beginning-level design topics. Ultimately, we came to the conclusion that beginning design students must start early to develop a habit of documenting their work. As theater art is transitory,

far too often early projects are lost due to improper archiving. When career preparation skills are nurtured early, alongside fostering of design proficiency, students are better prepared for the competitive nature of the theater world both practically and artistically.

Throughout this text we emphasize many important characteristics of successful theater artists: the curiosity to explore new thoughts and ideas, awareness to observe people and their surroundings, empathy to other's feelings, and the ability to express those thoughts and feelings visually. We stress the importance of research and collaboration, as theater is a shared experience. It is created by a group of artists who share their expertise in the creation of a work of art and then share that work with an audience. With proper care, that communal experience can be transformative for both artists and audience alike.

Chapter 1

Script Analysis for Designers

Theater begins and is grounded in a story. The story, usually created by a playwright in the form of a script, is the foundation for the collaborative theatrical experience; it is the central work that all of the other artists interpret. Stories about human circumstances can be expressed in a myriad of ways, and literary works generally fall into several broad categories such as poetry, prose, essays, fiction, and drama or plays. The structure of a play and a play's intent are distinct from those in other categories, in that playwrights write plays to be performed, not read. So, reading a play can be a challenging venture. It must be kept in mind that learning to read plays effectively is a fundamental skill for all theater artisans and is vital to successful designing. It is such an important skill, in fact, that beginners should ideally learn how to read a play effectively before embarking on any other study in the theater.

In this chapter, we will explore the physical aspects of a play script. We will learn what to expect when first looking at any play and then ascertain how to acquire the basic skills needed to effectively read plays. Imagination is of prime importance to any theater artist and in this chapter we will discover the essentials of imaginative engagement. We will realize how effective reading and imaginative engagement ultimately work hand in hand with collaboration in the creation of purposeful production concepts and evocative designs for plays.

HOW TO READ A PLAY

Learning to focus on the dialogue, and to visualize the play's action while doing so, will lead to a successful play-reading technique. Reading the play aloud with friends or attending a first rehearsal or read-through is a great way to learn to focus on the dialogue and visualize the play. When a play is read aloud, we are able to *hear* it and get a sense of the characterizations and action. *Hearing* it helps us *visualize* it. Readers will eventually acquire the ability to do this independently and silently, but in the meantime, if it helps to read a play aloud, then do it!

In order to read a play, aloud or otherwise, one must be able to access the playwright's words and intent. Part of the challenge of reading a play is the way the dialogue and action are presented, or the formatting of the script. In

order to focus proper attention on the dialogue and successfully interpret any script, readers must acknowledge and understand the structure of the script itself, otherwise called formatting.

Script Formatting

Plays or scripts can be found in anthologies, collections of plays, as well as bound for individual sale. Individually bound play scripts can be obtained through a number of publishers specializing in plays, including Samuel French, Inc., Dramatists Play Service, Inc., Dramatic Publishing, Baker's Plays, Anchorage Press Plays, and Theatre Communications Group, to name a few. Each publisher has a consistent formatting approach they use when publishing plays. For example, Samuel French, Inc. formats the front matter of their scripts as follows:

Page 1: Title page
Page 2: Copyright and licensing information
Page 3: Licensing cautions and special billing requirements
Page 4: Previous/premier production credits
Page 5: Cast list/time/place
Page 6: Blank page
Page 7: Play begins

There may be some variation within this basic structure. For example, authors may include additional notes, dedications, or special thanks with the script. Play scripts included in anthologies will eliminate much of the information regarding previous productions and contractual arrangements. Readers quickly note that publishers pay special attention to the margins, typeface, and the indentations utilized when printing scripts—these choices are usually made to enhance readability and actor usage.

Dialogue

Italicized stage directions precede (or are imbedded in) many lines of dialogue. Some playwrights, such as George Bernard Shaw, include very detailed italicized directions in their plays. However, readers must keep in mind that the italicized directions in many scripts are not the playwright's words. Often (particularly in plays published in the mid-twentieth century) these italicized directions are a record of stage directions from the original production gleaned from the stage manager's notes. Experienced theater artisans often totally ignore these italicized references on the first reading because they do not want to be influenced by

other productions of the play. Others may read the italicized directions with interest, treating them as adjunct information to the play rather than essential instructions. Whichever the case, beginning play readers will find the formatting (the way the play is typed on the page) very different from prose writing:

> *ARMS AND THE MAN* ACT I
>
> CATHERINE (entering hastily, full of good news). Raina—*(she pronounces it Rah-eena, with the stress on the ee) Raina—(she goes to the bed, expecting to find Raina there.)* Why, where—(*Raina looks into the room.)* Heavens! Child, are you out in the night air instead of in your bed? You'll catch your death. Louka told me you were asleep.
> RAINA *(coming in)*. I sent her away. I wanted to be alone. The stars are so beautiful! What is the matter?
> CATHERINE. Such news. There has been a battle!
> RAINA *(her eyes dilating)*. Ah! *(She throws the cloak on the ottoman, and comes eagerly to Catherine in her nightgown, a pretty garment, but evidently the only one she has on.)*
> CATHERINE. A great battle at Slivnitza! A victory! And it was won by Sergius.
> RAINA *(with a cry of delight)*. Ah! *(Rapturously.)* Oh, mother! *(Then, with sudden anxiety)* Is father safe?
> CATHERINE. Of course: he sent me the news. Sergius is the hero of the hour, the idol of the regiment.

In this example from George Bernard Shaw's *Arms and the Man*, the dialogue is interrupted frequently by descriptive text. It is easy to see how the formatting, while helpful and informative, can get in the way of reading the play—especially for beginners. Generally, most plays are presented in this same fashion, with the bulk of the script dedicated to pages of dialogue such as these. Because this formatting can prevent or hinder beginning readers from successfully accessing the continuity and flow of the play, it is vitally important for theater artisans to develop an effectual play-reading technique; otherwise basic information such as meaning, tone, rhythm, and nuance may be overlooked.

Costume Design for *Arms and the Man* by Jodi Ozimek for University of Southern Maine.

At the end of the play, when the dialogue pages are complete, most scripts leave the "artistic" aspects of the play and return to more "business" aspects of the script. Samuel French, Inc. refers to this section as "back matters." Production lists from original productions may be included in the back matters pages of the script. Theater professionals treat these pages much as they do the aforementioned italicized stage directions, often totally ignoring the information or treating the pages as adjunct information to the play rather than primary source information.

Reading Plays—Language and Subtext

We must always keep in mind that, for designers, the essential information in any script is the "art" of the piece: the message, meaning, or theme of the play. That message is not just delivered through the spoken dialogue; it is also delivered by the actions performed by the characters. In order to best absorb the meaning of the play, designers must also learn to become part detective and part psychologist. Characters in a play, like people in real life, do not always say what they mean and often their actions belie their statements. Theater artisans must become adept at reading between the lines, gleaning information not only from the obvious dialogue but from the subtext of the play. For example, in the opening scene of the play *Proof* by David Auburn, twenty-five-year-old Catherine speaks to her father Robert, who happens to be a famous mathematician.

ROBERT	Can't sleep?
CATHERINE	Jesus, you scared me.
ROBERT	Sorry.
CATHERINE	What are you doing here?
ROBERT	I thought I'd check up on you. Why aren't you in bed?
CATHERINE	Your student is still here. He's up in your study,
ROBERT	He can let himself out.

These lines have one obvious layer of meaning that is easily ascertained on first inspection. But, when we discover that Robert is not only mentally ill, but also dead, it gives this dialogue another deeper, richer layer of meaning. It is the subtext that provides the intrigue in this play, and understanding the subtext informs the dialogue and should also inform the design work for any production of *Proof*.

Subtext refers to the hidden or underlying meaning of a line of dialogue or action. Text is the line of dialogue; subtext is the way that line is spoken, or more specifically, the meaning behind the text. In another example, Yasmina Reza's *God of Carnage* is a play that is very dependent on subtext. In this play, there are four characters, consisting of two married couples. We learn very quickly that these couples are the parents of two eleven-year-old boys, who recently got into a violent altercation in a city park where one boy attacked the other with a stick, knocking out his teeth. Reza's play finds the four parents meeting together at the home of one of the families in an effort to discuss the brutality of the attack. The dialogue begins very collegially, at least on the surface. Through

the course of the play we discover that the children are products of their own environments, as many truths and secrets are revealed about all four people and their marriages. Though the characters behave in a civil manner at first, the play ends much less civilly, even violently, as it becomes evident in Reza's dialogue that profound tensions run deep in the lives of all four characters.

MICHEL I don't think she needs any.
VERONIQUE Give me a drink, Michel.
MICHEL No.
VERONIQUE Michel!
MICHEL No.
Veronique tries to snatch the bottle out of his hands. Michel resists.
ANNETTE What's the matter with you, Michel?!
MICHEL All right, there you are, take it. Drink, drink, who cares?
ANNETTE Is alcohol bad for you?
VERONIQUE It's wonderful.
She slumps.

As in the plays *Proof* and *God of Carnage,* or when considering subtext in any play, the crux is to determine what the characters are doing, how they are doing it, why they are doing it, and the consequences of their actions. The ability to gather and assess information from any script comes with practice and sensitivity and is necessary to effectively read and interpret plays for the stage.

The best way to further develop the ability to access information from plays is to read more plays! The more plays one reads, the more informed one becomes with the various styles and structures. Some scripts are more challenging to read than others. Many designers state that the more challenging plays to read or access include the following:

- Plays written in verse (elevated language)
- Musical theater pieces
- Theatre of the Absurd or avant-garde pieces (non sequitur language)
- Plays with overlapping dialogue and/or actions
- Plays with mostly action and little dialogue
- Nonscripted "concept" or devised pieces

If the dialogue in a play is written in verse or elevated language, the complexity of the language may sometimes make reading and understanding

the play more difficult. Classical works by playwrights such as Shakespeare or Euripides or even American musical song lyrics contain unconventional and unrealistic methods of communicating characters' thoughts and feelings, and take a bit more skill and patience to decipher. The reader must be mindful not to let the poetic form or archaic word usage get in the way of retrieving meaningful information about the story, but instead see the form itself as a revealing stylistic technique. Scripts with complex language or unfamiliar styles may require several additional readings in order for the nuance to become clear.

Musical theater pieces are particularly difficult to visualize when reading because of the diminished emphasis on dialogue and a significant emphasis on song and dance. For example, when the music and lyrics are removed from a musical theater script, what is left is the dialogue, known as the book or libretto, and it can be very thin. There is an emphasis on dance, movement, or action in musical theater that can be time-consuming when actually performed on stage, but can take very little space when typed into a play script. In the modern "book musical," the lyrics are an essential part of the script and give vital information about character and storyline. Designers must become very adept at piecing together information from the many methods of delivery (dialogue, song lyrics, and stage directions) when visualizing the intent of the composer, lyricist, and playwright.

There are even scripts, such as works that are categorized as Theatre of the Absurd, where dialogue is purposefully enigmatic and nonsensical. Reading these scripts is particularly challenging and demands an open mind and a vivid imagination. These plays can be difficult to understand and relate to, but designers must keep in mind that all of the stylistic choices made by the playwright are important clues to the meaning and intent of the play. It is only through careful investment in the play-reading process that designers can make informed and appropriate design decisions.

Performance art, improvisational pieces, dance concerts, or music performances are often developed around an idea or concept. Designing for a devised or conceptual project where no formal script exists presents another design challenge. However, the goal is the same as for scripted pieces: exploring the idea or concept and the overriding message of the piece in order to create effective designs. This involves attending early meetings, speaking at length with the collaborative artists (choreographers, composers, directors, or performance artists involved in the project), and viewing rehearsals, listening to music, and researching information about the concept.

The script (or conceptual idea) serves as the foundation for all of the collaborative artists who interpret it. The style of delivery, whether it is realistic dialogue, verse, song lyrics, or nonsensical and absurd language, is indicative of the playwright's intent for the play and should ultimately influence and serve as a guideline for the production style and design.

The Structure of a Play

Regardless of the nature of the dialogue, when it comes to structure, characters' lines are typically grouped into smaller segments known as scenes, and these scenes are typically grouped into larger segments called acts. Certain classical works, such as Shakespeare's plays, are traditionally composed of five acts, with each act containing multiple scenes. And comparatively, early realist plays from the nineteenth century were typically constructed around three acts. Modern or contemporary works may even have just one or two acts, or may not use the word "act" at all. In whatever configuration, the arrangement of scenes and acts gives the play its structure.

Traditionally, plays fall under one of two major structure categories: climactic or episodic. Climactic plays are tightly constructed and move in a linear cause-and-effect progression. They are typically three acts or less and have a definite beginning, middle, and end. Because of this tight structure, climactic plays are sometimes referred to as "well-made plays." They contain a small number of characters, take place in one or two locations, and the time span of the story is brief, covering a few days or weeks. In contrast, episodic play structure has many scenes or acts and a large number of characters, takes place in multiple locations, and may have numerous subplots. The time span of the story can take place over months, years, or even decades, and the progression of scenes in episodic drama may or may not unfold chronologically.

In addition to the two major classifications of climactic or episodic, there are a number of other types of structures. Musical reviews or an evening of unrelated improvisational skits have a serial structure, as they are performed in a series, one after the other. Repetition, ritual, and tableau are structures where a performance is constructed around an idea, visual image, or character. Book musicals really have their own unique structure, and this structure can appear to be a hybrid of all of the structures described here. Since theater is a live art and reflects culture and society, the manner in which it is presented is always evolving.

Writers over the years have attempted to codify dramatic techniques and methods of telling stories. These dramatic theories are useful to theater

practitioners today in two ways: they give us a historical perspective, and many of the practical applications of these theorists remain relevant to our time. In 350 BCE, Aristotle, through observation of play performances of his day, created a description of traditional tragedy containing six different components: spectacle, song, diction, thought, character, and plot. His observations, titled *Poetics,* influenced subsequent dramatists for centuries. According to Aristotle's observations, a successful plot arrangement has a beginning, middle, and end, as well as unity of action; it can be simple or complex; and development of plot should supersede character development and the other aspects or components of tragedy. Ultimately, for Aristotle, the objective of drama was to achieve catharsis, a purging of one's emotions. Aristotle maintained that the healthy release of emotions through catharsis allowed one to live life less emotionally and therefore with more order and restraint.

Just a few centuries later, on the other side of the globe, a treatise on dramatic theory called the *Natyasastra* was ascribed to the Indian sage Bharata. Like Aristotle's catharsis, the *Natyasastra* also dealt with emotions. "Bhava" was the term that Bharata used to refer to the emotions or feelings of the character onstage, and "rasa" the emotional state elicited in the audience. There were eight original rasas, or emotional states, audience members could experience: love, humor, anger, compassion, disgust, horror, courage, and wonder. Centuries later, a ninth rasa was added: tranquility. In the *Natyasastra*, Bharata gave instructions on dramatic structure and staging techniques in order to break down barriers to achieve rasa. For unlike catharsis, which is the Greek's ideal of purification by cleansing one's emotions, the Hindu principle of rasa seeks to take the audience to a higher emotional existence.

Another significant attempt to describe dramatic structure came from a nineteenth-century German named Gustav Freytag. Freytag is most noted in the theater world for creating an analysis of dramatic structure in his book *Technik des Dramas* in 1863. This analysis divides dramatic action into six parts: exposition, inciting incident, rising action, climax (turning point), falling action or resolution, and denouement or catastrophe, and is often visually expressed in the form of a triangle known as Freytag's pyramid (the apex of the pyramid visually denotes the climax or turning point of the play). Freytag lived at a time when "the well-made play," typically a three-act play with traditional climactic structure, was popular throughout Europe and the United States, and his analysis of dramatic structure was an attempt to create a template for the creation of such plays.

- *Exposition*, the early part of the play, introduces the audience to the characters and the story. It divulges what happened in the story prior to the play's point of attack, the first bit of action or dialogue in the play.
- The *inciting incident* is the event that creates the conflict in the story.
- *Rising action* is the main body of the play where the characters attempt to resolve their conflicts and obtain their objectives.
- Characters must overcome obstacles and crises that will eventually culminate in the *climax* of the play. The climax is the major turning point when the conflict is resolved and one opponent defeats the other.
- The *falling action* of the play wraps up the loose ends and acts as a postscript to the action. The *resolution* happens during the falling action and occurs when the major conflict or problem in the play is solved.
- The *denouement* (or *catastrophe* in tragedy) happens at the end of the play and sums up the events and the characters' reactions to those events.

Avant-garde movements in theater—for example, the Expressionist movement of the early twentieth century or the Absurdist movement of the mid-twentieth century—came about in reaction to the more traditional Western approaches described by Aristotle, Freytag, and others. By definition, avant-garde works tend to be less prescribed, less predictable, and less traditionally structured. They are ahead of current practices and are either short-lived or are eventually absorbed into the cultural mainstream. Nontraditional dramatic structures vary greatly and are often closely tied to the social and political contexts of their origins. For instance**,** Theatre of the Absurd arose as an artistic movement as World War II was ending. The devastation and loss of life wreaked upon the world during that global conflict was profound. The German occupation of Europe, the Holocaust, and the atomic bombs dropped on Japan were unfathomable. The fragility of human existence and the absurdity of human conflict was everywhere. As a result, the qualities that mark Theater of the Absurd—illogical, nonsensical language and plot lines, as well as a more circular, repetitive plot structure—reflect the meaningless existence of humankind.

As one looks at plays and critical works throughout the ages, it becomes easy to appreciate the idea that art reflects the society from which it comes. The standards for dramatic structure for any given era reflect the traits and values of the dominant society of the time. Aristotle and the ancient Greeks were concerned with order and balance. The Hindu Sanskrit dramas were concerned with enlightenment. Drama during the Industrial Revolution was concerned with realistic depictions of the plight of the common person. Theatre of the

Absurd portrays the senselessness of human behavior coming out of a time of world war. Contemporary plays are often structured in a cinematic framework (frequent short scenes, diverse locales) signifying the influence modern media has had on contemporary culture. Our "global society" is evidenced in contemporary drama by the wide diversity of characters and themes, as well as the expansive, varied, and sometimes innovative approaches to dramatic structure.

Plot

There are many different ways to structure a play—perhaps as many as there are playwrights and stories to tell. As designers, it is very important to study and understand the construction of plays because the structure of the play informs the production concept (the unifying guiding vision discussed later in this chapter) and subsequently the stylistic approach to the design.

The way the playwright chooses to tell the story creates the plot of the play. It may help to imagine the acts and scenes of a play as akin to the chapters of a book, or snapshots arranged in a photo album. Each snapshot reveals an important detail and the combination and arrangement of the snapshots can affect the telling of the story. For example, in the case of Lanford Wilson's *The Rimers of Eldritch,* the scene structure is nonchronological, with the timeline of the story out of sequence. This play requires the reader, and ultimately the audience member, to fit the pieces of the puzzle together.

In a novel, the thoughts and motivations of the characters are exposed through descriptive passages; often, the actual dialogue between characters is limited. In a play, the exact opposite is true. Descriptive passages are limited and the thoughts and motivations of characters are discovered primarily through the dialogue and action. In this context, getting to the essence of the story can be challenging. To compound the challenge, playwrights are often purposefully enigmatic in order to create dramatic interest, thereby making obviously informative passages sparse. Theater designers must become experts at gathering information from the dialogue and action between characters and, as noted earlier, must learn to read between the lines so as to glean the subtext of the script.

Imaginative Engagement

When reading a novel, readers can easily imagine the story and characters with unlimited possibilities. The reader "goes" anywhere the author may lead because there are few constraints to the world of the novel. But, as previously noted, the world of the play has many limitations set down by the play's structure,

characters, locations, and time, in addition to the logistical limitations of the production, such as the performance space and production budgets. However, in spite of these limitations, when initially reading a play, the reader should imagine the story and characters with unlimited possibilities. The reader should feel free to imagine elaborate, expansive, but appropriate settings and special effects on the first reading. During subsequent readings of the play, theater artisans should simultaneously keep their imaginations both unlimited and limited. Artisans should imagine the possibilities, all in the context of "how do I make this work on stage?" Letting one's imagination run free enables the designer to visualize a play's utmost potential. In subsequent readings one must learn to imagine the play more practically, keeping one foot in the realm of the possible. This approach should not be viewed as confining, but rather the opposite. Imagining the ideal within the context of the possible should feel expansive, liberating, and very creative. When designers learn to do this, they have mastered a very important step in the design process.

A large part of communicating the meaning of the play happens through the action in the script. Playwrights write action into a play in a number of ways. For the purpose of clarification, we can describe dramatic action as follows:

- *Antecedent action* is action that takes place prior to the beginning of the play. This action may be shown in the form of a flashback scene or can be discussed in the dialogue between the characters, and is otherwise called the exposition of the play. This action can be very revealing and informative for the production team, the actors, and the audience. It tells us who the characters are and what their main motivations are. The antecedent action sets up the major conflict to be resolved in the play.
- *Implied action* is akin to antecedent action in that it happens outside of the plot structure of the play and is expressed indirectly via the dialogue or movements of the characters in a scene. It can be antecedent or current, but is action that is suggested by the dialogue so that we as readers and audience members can infer that it happens "offstage" at a time outside of the structured play. Effective actors and directors embrace this type of action as a method of subtle revelation of character and character relationships.
- *Overt action* is any action that is written into the scene and actually occurs on stage. When we think of the action in any play, this is what we usually think of first. The fatal stabbing of Polonius by Hamlet or

Othello's smothering of Desdemona are overt actions that happen in full view of the audience.

- *Potential action* creates the most inner tension in a scene or play. Good playwrights will establish conflict or tension as the possibility of action and keep audience members "on the hook" anticipating the realization of that potential. Often the realized potential action is the climactic moment of the play. Tom in Tennessee Williams's play *The Glass Menagerie* tells his friend Jim, "I am tired of the movies and I am about to move." Tom goes on to disclose that he has joined the merchant marine and is planning on leaving his mother and sister. The entire play is a flashback, with Tom continuously struggling with this potential.

It is evident from these categories that discovering the necessary information in a play script can be challenging because the action in a play script is not often obvious. Making wise choices based on observations and evaluations in a script can be a laborious task. Some playwrights leave it exclusively to the dialogue to reveal action rather than give any explicit stage directions, while others rely on stage directions to indicate all four categories of action.

IDENTIFYING THE GIVEN CIRCUMSTANCES

After the first reading of the script, designers will conduct subsequent readings in order to glean specific information on the project. The first list of needs for the play that they compile is called "the given circumstances." The term *given circumstances* is originally attributed to Constantin Stanislavski and is used to describe the stated and implied information in the script that the actor uses to create a realistic character. But the term can also be applied to design. Given circumstances are the obvious and concrete requirements of the play and any information that is easily detected and readily accessed while initially reading the script. This list of givens can include the objectives which are discussed in chapter 2—time, period, place, locale, theme, mood, style, revealing characters, and solving practical problems—but only what is immediately obvious upon the first reading. This list is by no means a definitive list of needs for a production. The givens are the basics only, compiled and investigated with the understanding that further requirements will develop after additional readings, research, and conversations with the director and other designers.

For the purpose of explanation, the following is a list of givens compiled from reading the dialogue and stage directions in Lanford Wilson's *Talley's Folly*:

Talley's Folly Given Circumstances

- Time and period: Fourth of July, night, 1944
- Place and locale: boathouse on a river near a Missouri farm
- Mood: romantic, nostalgic, lighthearted, humorous
- Practical problems:
    - Lighting: a moon and moonlight, sunset, working lantern (must be lit onstage)
    - Sound effects: a waltz, a band playing far away in the park, crickets, a dog barking, river water
    - Scenic: boathouse with lots of Victorian decorations carved into it, a "crashing set" effect—rail break with foot through floor
    - Properties: two boats (two actors get inside and sit in one, the other is upturned with a hole in the bottom), ice skates (must be period and worn by an actor), pocket notebook, bottle hidden in set, lantern (must be lit), cigarettes in purse, lighter in pocket, another functional lighter in purse
    - Costumes: pocket watch, eyeglasses, jacket, new "pretty" dress, handkerchief in purse

Making a list of given circumstances is a useful enterprise for a variety of reasons. Producers will often make such a list for plays under consideration in order to determine the scope of the play's requirements, while designers will often bring such a list to the first design meeting as a springboard for discussion. A list such as this is a good beginning for initiating the research process, anticipating more in-depth research to follow.

VISUAL METAPHOR

It is not surprising that theater artists are often quite visual people and that some practitioners work to develop visual metaphors for their productions. **Visual metaphors** often emerge out of the symbolism or imagery used in the play script. These metaphors can often become iconic images that are representative of the theme of a particular play. For example, in Henrik Ibsen's play *A Doll's House*, one of the major characters, Torvald, refers to his wife Nora as "little fritter bird" and "skylark" on several occasions throughout the script. Nora's house (the titular dollhouse) thematically becomes a cage for Nora—much like a gilded birdcage. In this instance, a birdcage might be an appropriate visual

metaphor for a production of this play. This is just one example, as visual metaphors can be identified for any play, though more readily for some than others. There are no right or wrong visual metaphors, and most plays may have the potential for numerous interpretations. Determining a visual metaphor can be a springboard for ideas and design decisions, and, when effectively applied, can have a unifying affect on the entire production.

A production of *Around the World in 80 Days* that took the world map and clock gears as a visual metaphor for the scenic design. Set design by Cheri Prough DeVol, costume design by Amanda Aldridge, lighting design by Trevor Maynard, directed by Katy Brown, photo courtesy of Barter Theatre. Based on the novel by Jules Verne, adapted by Mark Brown, a Barter Theatre production featuring Josephine Hall, Frank Taylor Green, Karen Sabo, Richard Major, and Alice White.

SUMMARY

Designers must learn to identify common play structures, because the way a script is structured gives one insight into the intent of the playwright and the meaning of the play. This understanding begins with an awareness and understanding of play formatting and dialogue. Plays are different from novels or other literary genres, and beginners may find reading plays difficult because of

this fact. The best way to learn how to read plays, and to learn about significant aspects of dramatic structure, is to read and see lots of plays and to be keenly observant in the process. Researching the history of dramatic structure and theory will also prove helpful, because students of theater should be aware of theorists from the past such as Aristotle, Freytag, and Bharata, among others. A clear understanding of where we have been helps us appreciate where we are presently and can positively define our collective future as artists on this planet. As the character Mark Rothko in the play *Red* by John Logan states, "To be civilized is to know where you belong in the continuum of your art and your world. To surmount the past, you must know the past."

Imaginative engagement is a vital skill to acquire and is an important step in the process of designing for the stage. Effective play-reading techniques, coupled with imaginative engagement, work hand in hand to help designers discover the themes presented in the play. Identifying themes, understanding action, and discovering the given circumstances in plays are also necessary skills to learn. Learning these skills, when collaboratively shared with the other production artists, helps design teams create effective production concepts and useful designs.

Exercise #1 – Script Format Exploration
Supplies needed: scripts, notebook, pencil

- Check out several scripts from your local library that represent a cross section of literary styles: for example, Ibsen's *A Doll's House* (realism), Sophocles's *Oedipus* (classical tragedy), Ionescos's *The Bald Soprano* (absurdism), Maria Irene Fornes's *Fefu and Her Friends* (tragicomedy) and/or Michael Frayn's *Noises Off* (farce).
- Read one scene from each selection aloud. Do you find any of these plays more difficult to read than the others? Why or why not?
- What techniques do you employ in order to successfully read each of these plays?

Exercise #2 – First Reading Responses
Supplies needed: script, notebook, pencil

- Keeping imaginations "both limited and unlimited," read a one-act or a ten-minute play. (A good source for ten-minute plays can be found in the Actors Theatre of Louisville's Humana Festival Anthologies.)

- After reading the play, answer the following questions:
  - How did you imagine the play in your mind's eye?
  - How did you imagine the characters? What do they look like?
  - What kind of clothes do they wear?
  - What is the space like where the action takes place?
  - What happens to the characters after the play ends?
- Reread the play and answer the following intuitive response questions:
  - If this play were a painting, what kind of painting would it be?
  - If this play were a piece of music, what kind of music would it be?

Exercise #3 – Develop a Play-Reading Habit
Supplies needed: library card

Compile a list of play titles you would like to read. Many university theater programs have a suggested play-reading list. Or create your own list by compiling titles of Pulitzer Prize–winning, Tony Award–winning, or Drama Desk Award–winning plays.

- Pledge to read a play a week and work your way through the list.
- Organize a weekly play reading with other like-minded individuals.
- Read more plays!

Chapter 2

The Objectives of Theatrical Design

All theater practitioners share the same ultimate goal: to tell the story. To create successful designs, we must first discover the essential requirements of the story, and then always keep those discoveries foremost in our minds as we attempt to solve the design challenges of a particular show. The design objectives discussed in this chapter serve as an outline to help us define and visually illustrate the playwright's intent. All good designers remain constantly on the lookout for clues to these objectives as they read scripts, begin research, and talk with the director and other designers.

Since all theatrical design areas work towards the same goal—creating the world of the play—each of the individual areas logically shares some common ground in terms of approach. For all designers, the design process includes the following common steps:

- Read the play
- Analyze the script
- Determine the objectives
- Research
- Collaborate with the director and other designers
- Communicate design ideas
- Execute the design

As you can see from this list, the beginning phases of design include reading and analyzing the play script (discussed in chapter 1) and determining the design objectives outlined in this chapter. We will define and explore nine objectives of theatrical design: time, period, place, locale, theme, mood, style, revealing character, and solving practical problems.

IMMERSION IN THE PLAY

The first step toward discovering the objectives of theatrical design is to read the play. However, just reading a play is not enough. Designers must wholly immerse themselves in the play, and this is only possible through intense study and research. Unlike many novels, short stories, and poems, plays do not

typically employ the omniscient narrative voice, or the all-knowing point of view. Because of this, a play provides less overt, descriptive detail than we come to expect when reading novels written from the perspective of an omniscient narrator. The playwright may, or may not, describe the characters upon first entrance, and then may never describe them again, except through the dialogue or action.

Detail-oriented playwrights may impart a lot of specific information about the characters and settings in their plays. However, this information is often presented through dialogue, action, and even literary style rather than descriptive text. Directors, designers, actors, and others who interpret plays learn to readily mine information about character and plot by reading and analyzing the dialogue and action in a play script. Proficiency at garnering information from the various genres and styles of drama increases as one acquires experience reading plays.

DETERMINE THE OBJECTIVES

After the first reading (or getting the story of a nonscripted concept piece via discussions, reading a scenario, or listening to a score), designers begin to methodically establish parameters for problems to be solved. The first step is to establish the given circumstances for the play. Then, designers identify more fully the problems or challenges a play presents and will create an outline of these by determining the design objectives of the story. The order of the nine objectives of theatrical design—time, period, place, locale, theme, mood, character revelation, style (literary and visual), and solutions for practical problems—is instigated by accessibility of information during play analysis. For example, time and period are often easily identified in the first few pages of a play script; thus these objectives are addressed first.

Time

The word *time* in the design objective list literally means the *time* of day, day of the week, or *time* of year. Some plays give this information very specifically in the italicized directions at the start of each scene or act. A playwright might indicate, for example: act I scene i: *Friday midday, early September*, and act I scene ii: *Late evening that same day.* Plays written with clear-cut and obvious statements about time make determining this particular design objective easy and straightforward. There are even examples of plays and playwrights who take this straightforward approach to the maximum extent by structuring plays

in absolute real time—the amount of time the play takes to perform is the exact amount of time indicated in the script, no more or no less, like Lanford Wilson's *Talley's Folly*.

With other play scripts, determining time can be more difficult. Some playwrights may present events out of sequence, accompanied by flashbacks, or with the timeline jumbled and out of order. And still others give little or no specific information about time, though in spite of this, it is often clear to the reader that the playwright had a specific time in mind when writing the play. From a design standpoint, it is usually essential to make a determination regarding time even in the most oblique circumstances. In these more obscure cases, it is left to us to identify the time and period by gathering clues. For example, there may be hint-filled descriptive dialogue such as "Thanks for coming; may I take your coat?" or "I love the smell of wood smoke this time of year!" Designers (as well as actors and directors) become experts at making determinations about the circumstances of the script by gathering information from the dialogue in this way. For plays such as these, where the specifics regarding time are less obvious, it may take several readings, some research, and discussions with the director and other designers before a final agreed-upon determination of time comes about. Regardless of the approach, a playwright's choices regarding time are important and often serve as a harbinger for the other design objectives such as theme, mood, and style.

Period

Period is a broader way of referencing time. The *period* of a play is the historical age, decade, or era in which a play is set. Playwrights choose specific periods or eras as settings for plays decisively—as purposefully as they decide on characters, title, or any other aspect. A play's period is particularly significant for theatrical designers because the determination of period has very definite visual consequences and requires variable amounts of research. An obvious example is the variation of fashions from the 1950s and the 1980s. A play set in the 1950s will vary greatly, in a visual sense, from a play set in the 1980s.

It is common for playwrights to set their plays in periods of time that are different from the time when written—the classic example of this is Arthur Miller's *The Crucible*. Miller wrote *The Crucible* in 1953 but set it in the late 1600s; he was attempting to use details from the Salem witch trials of the earlier era to make comment on the political events of his time, in particular "McCarthyism" and the actions of the United States government House Un-American Activities Committee. This device enabled Miller to touch on

sensitive subjects of his day while distancing audiences (and others in the political limelight) from feelings of direct attack. We can safely say that in the 1950s, most reasonable individuals believed that the trials and executions of "witches" in the 1600s were tragic examples of collective fear run amok. Miller used this event in history, and the contemporary view of that historical event, as a way to make commentary on the events happening in his immediate social and political spheres. When designing for any production of *The Crucible,* awareness of the author's intent is essential and provides invaluable information.

Another challenge for designers is provided when a playwright chooses to present different periods within the same play, as is the case with Charlotte Keatley's *My Mother Said I Never Should.* Keatley's *My Mother Said I Never Should* spans sixty years and four generations of women in the same English family. The structure of this play is a series of nonchronological short scenes spanning the entire twentieth century, beginning with the birth of the matriarch in 1900, and following the births of four subsequent generations of women who are each a product of her time. Typically, four actresses play all the parts in this script and appear in scenes that mix characters from different eras simultaneously—adding to the idea that these women are connected by ties that transcend time and present circumstances. This challenging play is a good example of period shifts within a script, and requires strong design elements in order to clearly render the time shifts intended by the playwright.

Occasionally, a director will choose to set a play in a different period from the one the playwright wrote in or about. This is tricky, because most plays are "of their own era" and have difficulty translating to other eras successfully. The plays of William Shakespeare are frequently produced in time periods other than the sixteenth or seventeenth centuries (the time period of Shakespeare's day). The primary intent is to bring Shakespeare's works into the modern age by making them more accessible to a contemporary audience. These modernized productions provide unique artistic and collaborative challenges as they require the design team to translate specific period references to clothing and properties found in the script into another time period, staying true to the playwright's intent without creating undesired anachronisms.

Place

Place refers to the physical environment the characters inhabit in the play. Place can be an office, a living room, a jail cell, a stretch of beach, or any other specific site. The physical environment is the context wherein all action occurs. Play settings can be compared to a real-life individual's place of residence. As

we all know, where we call home has a tremendous impact on every aspect of our lives. From the smallest sense to the largest, our homes impact our very existence. Our homes and their furnishings reflect our socioeconomic status, our sense of orderliness, and our interests and hobbies. The same holds true for the setting of a play. Place can tell us about the characters and their situations and can eventually lead us to larger issues in the play such as theme and mood.

Determining the place of a play is often readily accessed in the first few pages of the script. In the script of Tennessee Williams's *A Streetcar Named Desire*, the first italicized lines of the stage directions state, "The exterior of a two-story building on a street in New Orleans." The main action in *A Streetcar Named Desire* happens in Stanley and Stella Kowalski's small two-room apartment. Further detailed information can be gleaned throughout the dialogue and actions contained within the script, as when Stella's neighbor Eunice lets Blanche into the apartment and declares, "It's sort of messed up right now but when it's clean it's real sweet," and later when Blanche declares to Stella, "Only Poe! Only Mr. Edgar Allen Poe! - Could do it justice." The physical attributes and condition of this apartment and the surrounding environs reflect the circumstances of the characters living inside. The setting also has an impact on Blanche's actions; the place where she seeks refuge will eventually ensnare her.

As theatrical designers, we must carefully read the script and make notes on these veiled clues contained within the action and dialogue that disclose information on the play's place and the characters that inhabit it. The setting of a play offers designers prime opportunity to express information about time and period, about mood and theme, and about the characters. For the design team, gathering information about place first of all provides an enhanced understanding of the play; and secondly can be used as a valuable resource for the creation of an effective design that aids in telling the story.

Locale

When we think of *locale*, we in effect "zoom out" and view the setting from an outside vantage point. While place is a very specific site, an apartment, an office, or a living room, locale is the greater geographic or regional location for a play. This can mean a state, a country, a continent, or even a universe. The place of William's *A Streetcar Named Desire* is a two-room apartment, and the locale is the French Quarter in New Orleans, Louisiana. Add to these aspects the objectives of time and period described earlier (summer, late 1940s) and a very specific picture begins to develop. One could ascertain that this cramped, steamy, raucous environment actually serves as a pressure cooker for the actions

that take place in the story: the fighting, the fantasy escapism, and the complete mental break Blanche eventually experiences. As we see in the example of *A Streetcar Named Desire*, locale encompasses not only the physical aspects of a setting, but the cultural aspects as well. These cultural aspects can include the traditions, customs, and personality of a particular area.

The implications of location on scenic design are obvious, but costume design is equally affected by location. The most obvious examples of regional clothing are folk costumes such as Japanese kimonos, German lederhosen, and Scottish kilts. A subtler example is the contrast between everyday attire worn by a Midwestern American and the contemporary daily wear of a native of North Africa. The globalization of human cultures is making those differences increasingly subtler and the job of the costume designer even more challenging.

Likewise, lighting design decisions are also impacted by the play's location. For example, in the play *On the Verge* by Eric Overmeyer, three women explorers travel through time, period, place, and locale. Their journeys take them from the late-nineteenth-century African jungle to the early-twentieth-century Himalayas and eventually to a 1950s American nightclub. Because the shifts in locale happen swiftly, the lighting designer must designate changes in time, period, place, and locale for the audience through choices in texture, color, and the angle of the lighting.

Place and Locale Challenges

The place and locale are not easily determined in every play script. In less realistic plays such as works classified as Theatre of the Absurd, locale is often ill defined or not defined at all. Ambiguously defined locales provide tremendous but exciting challenges for designers. For example, in the Samuel Beckett play entitled *Happy Days,* the central character Winnie is literally trapped in a mound of earth. The mound grows as the play progresses, and Winnie continues to go about her cheerful routines as best she can, in spite of being rendered immobile by the earthen hillside. This is all we know about the place, and we are given even less information about the locale, though an ambiguous seaside is suggested in Winnie's monologues. The place and locale are deliberately undefined.

From the audience's perspective, viewing plays such as these with undefined locales seems simple and straightforward. However, looks can be deceiving, as simpler designs often can be the most difficult to create. Making appropriate choices for a minimalistic design is often more difficult because information must be conveyed clearly by fewer pieces. When preparing for any play with undefined time and period or place and locale, designers must make

specific choices in the design process—even though the choice may appear to be stylistically ambiguous. The process of creating specific objectives when interpreting an unspecific script requires the production team to establish a clear and concise production concept and adhere to the concept faithfully.

Theme

The *theme* of the play is the intellectual aspect or the main idea or ideas contained in the script. It is the overriding viewpoint suggested by the characters, their relationships, and the action of the play. The theme is what the play means and is much more abstract and expansive than just the basic facts of the storyline or plot. The theme of a play is typically universal, in that it can be understood and appreciated by individuals from many walks of life, though connotations may vary depending on cultural viewpoints.

Playwrights strive to create works that survive the test of time and give insight into the human condition. In order to do this, playwrights make choices that often serve to exemplify and reinforce larger philosophical ideas. Playwrights must certainly concentrate energy on the specific mechanics (character, setting, action) of the play, but they also need to focus on the reasons why characters speak and act, and the subtext, or "between the lines" information in the dialogue and action. It is this focus on subtext and motivation that leads to the development of thematic content. By learning to read between the lines, designers can get to the core of the playwright's viewpoint and purpose, and will be on the way to identifying the themes of the work.

Identifying Theme

It is the job of the theater artisan to identify the themes in a script and then present them in visual terms. How exactly do we identify the theme or themes in a dramatic work? An obvious way to identify theme is a basic one and takes no special training to employ: When reading a play, what does it make you think about? If you are consciously aware of certain aspects of circumstance while reading a play, then it is very possible that those aspects are pointing to important themes in the work. For example, in the play *In the Blood* by Suzan-Lori Parks, one might think, for many reasons supported by the script, that life for the main character Hester is unjust, unfair, and undeserved. Do these thoughts lead to a larger insight into the oppression of minority groups in modern society? Answering this question can prompt the designer to develop theories about defined themes in this play. Most well-written plays contain a myriad of potential themes ready to be explored with this very basic approach.

Another thought-provoking way to identify themes in a play involves the detection of parallel plots. When reading any play, designers should look not only at the primary plot and major characters but thoroughly examine all characters and relationships, no matter how small or seemingly insignificant. Often playwrights will punctuate the premise expressed in the major actions with similar ideas expressed through minor characters. Seeing parallel ideas and circumstances reinforced in this way can often signify thematic content.

For example, in William Shakespeare's *Hamlet*, we find two murdered fathers and two sons intent on avenging their deaths and exacting justice. Looking closely at the similarities and differences in the relationship between Laertes and his father, Polonius, and the relationships between Hamlet and his father and stepfather, can lead us to the deeper meanings in this play. Even though Hamlet and Laertes both seek revenge and justice for the deaths of their fathers, Hamlet struggles with assigning action to his desires, while Laertes springs to action quite readily. Ironically, both Hamlet and Laertes come to the same end, in spite of these differing approaches. This variation creates interest and urgently points to themes relating to loyalty and revenge as well as a myriad of other possibilities.

Mood

The *mood* of the play is its emotional impact on the audience. It is how we feel when we read a play or see it performed. Good playwrights consciously establish an emotional atmosphere, and this ambiance is what we call mood. Contrary to common belief, these emotional aspects do not necessarily indicate intense fluctuations in or extremities of sadness or happiness in the characters or situations. "Mood" does not automatically mean "moody." Rather, the emotional aspects refer to the generalized atmosphere created by the playwright in an effort to solicit communal feelings from the audience.

Human emotion is a visceral response that comes from our core being. Individuals of all ages and nationalities can identify with the mood of a piece, even when connection to the other design objectives, such as theme, proves difficult. Unlike theme, our identification and reaction to the mood of a play is often immediate. As audience, we don't have to "think" about the mood of a play; we simply feel it. If we are truly engaged in a piece, the emotional aspects of it readily prompt sympathetic responses within us. Our task, as designers, is to tune in to these responses—to become conscious of the feelings a play may provoke, and work to create that mood through the design.

While a playwright can specify a mood in stage directions—"There is a tension throughout of impending doom," for example—mood cannot be declared; it is determined solely by the visceral response one has to the work itself. Plays can have one pervading mood that intensifies as progress is made toward the climactic moments. Alternatively, a play's moods can change during the course of action, varying and changing from scene to scene. Very often a prevailing mood is best accentuated in a climate of high contrast, such as an extremely sad character in the midst of a jubilant party. In evocative works, playwrights imbue emotional aspects into the very core of the piece, so that the mood becomes an organic component of the story. For example, the musical *Godspell,* by Stephen Schwartz and John-Michael Tebelak, shows an obvious progression of mood, starting with the presentational, jubilant, clownish atmosphere in act I. Act II begins upbeat but becomes decidedly more somber with a feeling of gravity and impending doom permeating each progressive scene. Betrayal, anger, and ultimately sadness permeate the climax of the play, the moment of Jesus's crucifixion. And then the play returns to the upbeat, joyful mood of the beginning as they learn of his resurrection. Mood, coupled with the other design objectives, aids greatly in the telling of this story and communicating the larger story of life, death, and resurrection.

Revealing Character

A significant part of telling any story is the *revelation of character*. Playwrights create characters with varied and significant traits, and it is our task as designers to unearth these traits in order to reveal them to the audience visually. Choices in clothing and the physical environment can reveal facets of character to the audience. How the characters look, what they wear and how they wear it, and where and how they live are all choices that impart an abundance of information—information that transcends dialogue and plot.

Successful designers regularly pay close attention to people, and, like detectives, learn to decipher information about individuals based on visual information such as clothing, makeup, and hair choices—not only *what* is worn, but *how* it is worn. In a typical classroom filled with high school or college age students, they will at first glance appear to all be dressed very similarly. Yet a closer look will reveal that each will have his or her own "visual stamp." Beyond variations in body type, size, and gender, there are the subtle distinctions in economic status, interests, and outlooks that create distinguishing visual differences. As designers, we must learn to identify these subtle distinctions, and

then recreate them onstage in order to reveal information about the characters in the play to the audience.

The physical environment, or where a character lives and works, is as informative as what the character wears. The values and interests of an individual are evident in where and how they live. Determinations such as messiness or orderliness, stylishness or tastelessness, and even colorfulness or drabness should all be consistent with choices the character would reasonably make in the context of the plot of the play.

Once these determinations are made, designers then choose when and how to reveal these aspects of character to the audience. When revealing character to an audience, one may want to, for the sake of storytelling, purposefully hold some information back to be disclosed later in the performance. Or one may even want the audience to think one way about the character at first, only to discover at the end of the play that the first impression established in the beginning was a false one. These choices should be shaped by the script and the production concept.

The design of a play should work to define and express the individual characters in the script and also their relationships to one another in the story. As such, theatrical designers are interpretive artists whose jobs are threefold:

- Read, study, and analyze the script for detailed information about characters
- Become familiar with the target audience's cultural perspective
- Communicate ideas about character to the audience

Designers must know the target audience's cultural perspective in order to predict how the audience will respond to the visual information in the design. Designers should regularly check the success of their work by getting a read on how well their ideas on character are communicated. The best ways to do this are through close and constant communication with the director, and by sitting in on rehearsals and performances where audience members are present.

Style

Style can be defined as the nature of the framework for the plot of a story. Style is the way a play is written or presented—the method of expression. There is no design objective more important, or more keyed to the success of the final production, than determining the literary, visual, and period style of a play and then expressing those styles clearly in the production style of the design.

All play scripts have a literary style. All play productions have a production style. Ideally, the style of the production is clear, and complements or enhances the literary style of the play script. Designers must learn to recognize and distinguish literary styles, in order to produce plays with appropriate and expressive production styles. The style of a production is considered successful if it effectively fits and expresses the literary content and purpose of the play.

How do we discover the playwright's intended literary style? Some playwrights actually tell us outright. The playwright John Logan says in the opening notes of his play *Red* that "the entire setting should be abstract." But, more often playwrights give us less to go on. So, we begin by determining the design objectives of time and period, place and locale, theme, mood, and revealing characters. These objectives hold many clues to the style of the work. For example, are the times and place of a play concrete and logical, or are they purposefully abstract and illogical? Are there extreme shifts in mood? Are the characters' actions rational or seemingly nonsensical? The mechanics of the play can also indicate style—the language and sentence structure can be elevated and poetical, commonplace and plausible, or senseless. The progression of scenes can be linear cause and effect, repetitive and cyclical, or jumbled and placed out of sequence.

For the theatrical designer, learning about literary style is as important as learning about artistic style. Historically, literary styles often mirrored artistic movements and vice versa. Literary and artistic conventions such as realism and expressionism emerged from shared and specific viewpoints about our world that developed into organized philosophies or movements. Organized creative movements have developed at very specific times in history, and usually present a particular viewpoint on societal concerns of the day. The groups of artists and other individuals involved in these movements desire to use art, literature, architecture, and other creative aspects to promote their philosophies. The attempt is to improve, or simply express, the human condition. In addition to realism and expressionism, other examples of established artistic or literary movements include futurism, impressionism, naturalism, neoclassicism, romanticism, surrealism, and symbolism, among others. There are many artistic and literary movements (some formally defined, some not), at least as many movements as there are significant shifts in historical periods. In fact, the term *period style* is a term that encompasses both literary and artistic style, as well as the mode and manners of the era in question. Studying literary movements, art history, and period style are as important to becoming a good designer as

reading plays. Research of these movements can nurture our work as designers. See appendix on Style.

Any playwright, even a beginner, can tell stories in a distinctive way with a distinctive voice; however, more experienced playwrights use style consciously and purposefully in order to communicate specific feelings and ideas. Many playwrights employ multiple styles, such as Nobel Prize winner Eugene O'Neill. He consciously chose to explore different stylistic modes in playwriting, in an attempt to take American playwriting to new artistic heights. O'Neill wrote realistic plays (*Anna Christie, Long Day's Journey into Night*), expressionistic plays (*The Hairy Ape, The Emperor Jones*), and even modern versions of ancient Greek tragedies (*Mourning Becomes Electra*). August Strindberg is another significant playwright who wrote plays in multiple styles. Strindberg wrote naturalistic plays (*Miss Julie*) and expressionistic, symbolic plays (*A Dream Play*). Contemporary playwrights choose to work in various styles as well, often challenging audiences by trying things that have never been done before. Suzan-Lori Parks is a playwright who tests the boundaries of convention by employing challenging uses of style. She often writes plays in symbolism (*In the Blood*), unconventional and undefined styles, and even uses multiple styles in a single work (*Venus*).

In the Blood written by Suzan-Lori Parks. Directed by Shirley Jo Finney, scenic design by Sandy Leppin, costume design by Jennifer Peterson, lighting design by Christopher Jorandby. Photo courtesy of Robert Holcomb. Produced by Southern Illinois University at Carbondale.

Many contemporary playwrights are influenced by the techniques of film and cinema; the styles they employ reflect this influence. John Logan, a successful screenwriter, brings this experience to his plays. For example, he divides his play *Red* into scenes rather than acts and incorporates aural aspects into these scenes that suggest a cinematic approach. The plays of these and other capable playwrights express the concerns and verisimilitude of their own times with great insight, and the stylistic choices made by the visual artists who interpret these scripts can add significantly to the success of these plays.

A term related to style is *genre*. If the style is the *method* of expression, the genre is the type or *category* of expression. Plays fall into many different genres or categories such as comedy, tragedy, tragicomedy, drama, melodrama and musical theater, among others. Each genre has specific and predictable attributes. For example, comedy is typically positive, upbeat, and humorous. The category of comedy has many subcategories, such as farce, satire, and domestic comedy. It is important to know that some plays do not always fit neatly into one genre, and may even fit into two or more categories. See appendices on Style and Genre.

Solving Practical Problems

Many plays contain specific scenic, sound, lighting, or costume needs and/or special effects that are considered practical problems to be solved by each production company. In Yasmina Reza's play *God of Carnage*, the character Annette "vomits violently. A brutal and catastrophic spray, part of which goes over Alain. The art books on the coffee table are likewise deluged." This is an example of a challenging and unique practical problem that is born from the script. Creating this effect onstage will take the collaborative efforts of costume, property, and scenic designers in addition to the efforts of the actor, stage manager, and running crew.

Another type of practical problem involves concerns that stem from issues specific to a particular production.

These production issues can include the following:

- A small or inadequate budget
- An insufficient or unskilled labor pool
- Limited equipment or materials
- Limitations of time
- The physical limitations of the performance venue
- The physical limitations of the production spaces (scene shop, costume shop)

How do resources such as budget, labor, materials, and time limitations affect the production, and why should we have to consider these when designing a show? These interrelated resources create equilibrium in theater production. When one has time in abundance, the reliance on budget and labor is reduced. Or if there is little time and labor, then the production will require a larger budget, as items will need to be purchased or rented that are ready-made or easily adapted. Assessing the available resources and taking them into account as one begins to design ensures that the design can be built on time and within budget.

If a production requires special or technical effects, the space limitations must also be taken into consideration. *Peter Pan* produced in a black box theater without rigging capabilities will force a very different design approach than the same script produced in a proscenium stage with complex rigging capabilities. Stage equipment such as **revolves, traps, fly systems**, **wing space** or the lack thereof will also influence greatly the approach to specific design challenges.

There are endless examples of less-than-successful productions that failed due to inadequate attention paid to identifying the practical problems and solving them in preproduction. Professional shops expect equal focus on the practical as well as the artistic aspects of a design. A designer can have brilliant and insightful ideas regarding a production, but these ideas will fall short if the design cannot be built within the time and budget allotted.

Directors also expect an equal focus on practical and artistic matters. Occasionally, directors will add to or take away a script requirement because of individual directorial interpretation or logistical concerns. Directors appreciate designers who actively solve practical problems as the production progresses during the rehearsal process. This does not mean the design must go through a complete transformation after every weekly production meeting, but it does mean that the approved design must adapt as necessary when rehearsal discoveries are made. If the sets, costumes, or lighting are beautiful to look at but do not function or serve the needs of the play, then the designs are not a success.

After the director, the stage manager is the individual with whom designers will have much contact regarding practical problems. Rehearsal reports, when prepared properly, give a wealth of information about the practical aspects of the show. Many of the notes found on the rehearsal reports are easily solved by the shop managers and do not involve designers. On occasion, however, solving the problem may compromise the design in some way, so the designer must be consulted. Experienced shop managers, technical directors, and designers know how to solve a myriad of problems efficiently and cost-effectively, with little impact on the approved design. Keeping the lines of communication open

and active and early, frequent production meetings are essential to successfully fulfilling this particular design objective. Seasoned designers know that the objective of "solving practical problems" is ongoing—the practical problems continue to pop up and can make or break a production. Good designers are proficient at identifying problems and then solving them in a way that satisfies the director, stage manager, shop supervisors, business manager, and their own artistic sensibilities.

Conclusion

The nine production objectives are the guideposts that designers use to navigate through the analysis, research, and interpretation of a play. The design objectives involve a discovery of the characters in the play, as well as when, where, and how they live, and why their story is important to us. Time, period, place, locale, theme, mood, style, revealing characters, and solving practical problems as discussed in this chapter serve as an outline for effectual play production—they ultimately define and visually illustrate the playwright's intent. It should be apparent that the objectives are all interdependent and exert influence on each other. The interpretation of theme and mood will affect style; time and period will affect place and locale, and so forth. Identifying the design objectives in a script is a necessary step that must be undertaken before any research and design development can begin.

Exercise #1 – Learning to Observe

Supplies needed: notebook, pencil

- Observe five people you don't know.
  - Note their clothing, hairstyles, and objects they are carrying or surround themselves with.
  - Really look at them—what can you tell about them based on your observation? (Where are they going—to class, to church, to work? What is their economic status? How much time do they spend with their appearance?)
  - Make notes on these observations.
- Observe five living or working spaces you don't know.
  - Note the function of each space. Is it a living space or a work space?
  - Really look at these spaces. Are the rooms and their furnishings designed for comfort? Are they designed for function? What does each space tell you about the people who inhabit it?
  - Make notes on your observations.

Exercise #2 – Design Objectives and Given Circumstances
Supplies needed: script, notebook, pencil

- Choose and read a play script. After the first reading, make a list of the given circumstances. Then reread the play a second time and discover the design objectives.

Exercise #3 – Identifying Theme
Supplies needed: script, notebook, pencil

- Choose and read a play and answer the following theme-related questions:
  - What does the play make you think about?
  - What does the main character want above all else?
  - What do the supporting characters want above all else?
  - Are there recurrent actions or dialogue in the script?
  - Are there clear ideas expressed through words or actions in the play?
  - What are the shared ethics and values of this play's world?

- After answering the questions, develop a list of themes for your chosen play.

Exercise #4 – Identifying Period Style
Supplies needed: cable television or computer with Internet, notebook, pencil

- Watch five minutes of four different television programs and try to identify the time and period of each of the different shows.
- Write down your observations and answer the following questions immediately after viewing each scene:
  - What are the clues that depict time and period for each work? Did the dialogue in the script or the design of the sets, costumes, lighting, and sound on each project provide information?
  - Check your guesses by researching when the programs or movies were actually created.

- Next watch five minutes of the four following futuristic science fiction movies: *Metropolis, The Day the Earth Stood Still, Blade Runner,* and *Star Wars.*
    - Can you discern when each film was produced by the style of the clothing and settings? What kinds of things provided clues to detecting the time and period?

Exercise #5 – Solving Practical Problems
Supplies needed: script, notebook, pencil

- Choose and read a play, then list the design objectives gleaned from your play reading, paying special attention to the practical problems inherent in the script.
- For each of the identified problems, make a list of all of the possible solutions and state whether the solution will require time, money, labor, or some combination of the three.

Chapter 3

Researching the Design

When designers conduct research, they immerse themselves in the world of the play to a level that reading the play alone cannot attain. Effective designers research anything and everything related to the story, the script, and the design. This means researching the more tangible aspects of the script, the given circumstances, and the objectives of time, period, place, locale and character types, as well as the intellectual and inspirational aspects known as theme, mood, and style.

Research is an ongoing activity that should happen at every stage of design development and can be a many-layered and seemingly endless proposition. Play research can take many divergent paths where one can find useful information in extraordinary places and gain insight in unexpected ways. Designers must be bold and tap into their sense of adventure when researching plays, and must not be timid about the process. The enjoyable aspect of designing for the theater is that every observation and life experience can be filed away for some future project.

This chapter examines the process of researching a play from the designer's perspective. It will explain what it means to research the playwright, the script, the given circumstances, and the design objectives of the story. In addition, this chapter will explore the creation of a "research storehouse" and investigate the term *informed intuition*. Research is the foundation of successful designing; it is the groundwork that creates a truly meaningful experience for the production team and the audience, and can help transform a theatrical production into a work of art.

WHAT TO RESEARCH—THE PROCESS OF INVESTIGATION

As stated above, gathering research for a play is an ongoing course of action with different types of research happening throughout each stage of the production process. A successful production design can be achieved after addressing the following:

1. Investigating the playwright and the play
2. Thoroughly researching the given circumstances and design objectives

The Playwright and the Play

An artistic experience becomes more meaningful when we learn something about the artist who created the work and attempt to understand her or his viewpoint and intent. This deeper understanding enhances the aesthetic, intellectual, and spiritual experience for the observer/participant. This is especially true for a theatrical experience. We can read or even see a play "cold" and we will respond to it. That response can be pleasant, interesting, or even disturbing. Our response becomes even more informed and meaningful when we read the play after gaining insight into the playwright's intended message, philosophies, and viewpoints.

How does one get to "know" a playwright? Reading other plays written by the playwright is a good start. Reading biographies and interviews with the playwright and critical writings on the play is also beneficial. Some playwrights may have Web sites that contain biographical information, discussions of their work, and even contact information. Knowing about a playwright's life circumstances, his or her childhood, upbringing, socioeconomic standing, politics, and beliefs can give tremendous insight because any playwright's point of view is influenced by these experiences.

Perspective rendering by Ronald Naversen for *A Raisin in the Sun*, produced by the Southern Illinois University Carbondale Department of Theatre.

A prime example of the importance of a playwright's life circumstance to their work is found in the award-winning playwright of the mid-twentieth

century, Lorraine Hansberry. During her lifetime, Lorraine Hansberry spoke openly about her childhood experiences and their connections to her writings. An examination of Lorraine Hansberry's life gives us insight into the plot and the characters in her play *A Raisin in the Sun.* Hansberry's childhood in Chicago obviously informed the circumstances of this play, as well as the viewpoints of the characters within the play. As a child, Lorraine Hansberry's family entered a legal battle over the issue of racially segregated housing in her South side Chicago neighborhood. The impact of this experience on her life is directly expressed in *A Raisin in the Sun:* The central characters in the play, the Younger family, attempt to move into a white neighborhood and then meet with difficulties and disappointments as a result of their bold attempt for equal access to housing. Hansberry's play is a representation of her own personal struggle, as well as the larger struggles during an era when civil rights issues were boldly in the forefront of American culture.

As art is a reflection of the society in which it is created, a playwright's words reflect societal viewpoints and the circumstances of the time and period when the works are first created. Other playwrights may or may not use their own viewpoints and circumstances as obviously as Lorraine Hansberry did in her play, but the influence is always there. Researching the era and society that fostered a particular playwright can give vital information and put the play in a significant context. Doing this research makes reading, performing, and designing the play much richer and more meaningful, as it gives deeper understanding into the playwright's intentions.

In addition to life circumstances and the artistic and societal viewpoints, there are many other paths to pursue while researching a playwright. Often the particular playwright and play dictate the preferred paths to follow. The following list contains examples of possible avenues for research. An in-depth investigation can be compiled by exploring the following aspects relating to the playwright:

- Life Circumstances: Where and when she or he was raised, the economic status, family situations, and her or his education and training
- Philosophy: The playwright's artistic viewpoint and religious and political beliefs
- Body of Work: Do their other plays have similar themes and stories?
- Any other views, commentary and critical writings on the target play

As audience members, we have a more meaningful experience in the theater when we know something of the playwright's intent prior to attending a play performance. In much the same way, when designers research the playwright in advance of designing a play, the resulting design work will be informed, infused with more vitality and clarity, and ultimately will help create a more meaningful experience for all involved—the performers, the production team, and the audience.

Researching the Given Circumstances and the Design Objectives

In chapter 1, we learned that during the initial readings of a script, designers should make notes on the given circumstances. These givens are the obvious and concrete requirements of the play and any information that is easily detected and readily accessed while reading the script. In chapter 2, we identified the design objectives as time and period, place and locale, theme, mood, character revelation, style (literary and visual), and solutions for practical problems. Creating a research to do list by compiling the noted given circumstances and specifically identifying each of the design objectives in the play script gives direction and focus to the investigation.

Place, Locale, Time, and Period

Examining the first four objectives of time, period, place and locale can be a straightforward and easy proposition. These objectives tend toward the more concrete and literal, and so it follows that the research will most likely also be concrete and literal. For example, as in the case of *Talley's Folly* mentioned earlier, the time is a summer evening (sunset) on July Fourth, the period is 1940s (World War II era), the place is a river boathouse, and the locale is rural Missouri. The methods a designer might employ to direct the research for each of these objectives is fairly straightforward. These methods would most likely include the traditional library searches of hard copy and online information as well as images of 1940s architecture, summer fashion, and of Midwestern riverboats and boathouses.

Another common, and perhaps the most fun, method of research involves travel: visiting pertinent places, experiencing things firsthand, and recording inspirations with a camera or in a sketchbook and/or notebook. Ideally, one could go to actual locales referenced in the play—in the case of *Talley's Folly,* visit a rural Missouri riverfront during the summertime. Not only can much intellectual information be gleaned through travel, it is also a very visceral way of learning and triggering the imagination. This is travel in the present day,

but what of other types of travel? While humans have yet to invent time travel (it will be great for designers when we do), the closest thing to time travel is visiting a museum, a historical site, or a historical theme park such as Colonial Williamsburg. Theatrical designers are characteristically very enthusiastic museum attendees.

There are scripts, however, where these first four objectives (time, period, place, and locale) are less literal and more abstract, as with a nonrealistic play such as Suzan-Lori Parks's *In the Blood.* In this play, Parks indicates the time as "now" and the place as "here". Determining what "here" and "now" actually mean will be unique to each production of this play and should be keyed to the specific production concepts developed in early design meetings. In productions where time and place are purposefully ambiguous, the research will focus more on the theme, mood, and characters of the play and less on time and place.

Theme and Mood

Researching theme and mood can be challenging, as both objectives are less tangible and more abstract than time, period, place, or locale. Research on the play's themes should include studying critical writings, essays, and or articles on the play and its subject matter. This thorough exploration of theme will lead to a more meaningful production concept, a fitting visual metaphor, and to ideas and images which can be expanded by continued visual research.

Mood lends itself well to visual research. Visual imagery can express what words cannot—as the old adage goes, "A picture is worth a thousand words." An effective avenue of visual research is to look at a large volume of fine art, sculpture, paintings, photos, and prints, and find works that are evocative of the thoughts (theme) or emotions (mood) of the play in question. For example, the paintings of Norman Rockwell could be examined when designing a production of Thornton Wilder's *Our Town*. Rockwell created nostalgic paintings of the very subject matter of Wilder's play, early-twentieth-century Americana. After looking at a volume of images, one or more may feel right in connection to the play. This response is an intuitive one. After selecting the image or images that are evocative of the mood and feel of *Our Town*, determine what it is about those works that elicit that sense. Is it the use of line, shape, color, or texture? What of those elements can be employed to draw out that same intellectual or emotional response in the play's production designs?

Revealing Character

The characters are the heart and soul of the story, and if a story is compelling, then the characters most likely will be compelling and interesting as well. Dramatic literature is filled with a variety of character types from nobility to commoners. Before embarking on any research of character, it is important to understand the character's purpose in the story. Are they the **protagonist** or **antagonist**, an enabler or impediment, good or evil? Does the character represent a larger idea or group of people? Knowing the specifics of the people in the play will guide the research. For example, one could research late-nineteenth-century Europeans by looking at the artwork of the time, but just as all characters are unique, all nineteenth-century painters are not the same. There is a world of difference between the characters in Van Gogh's painting *The Potato Eaters* and Degas's painting *At the Milliner's*. Having a clear understanding of the characters in the play will help guide a more meaningful research experience.

Research on characters can occur literally anywhere—libraries, online searches, and even on trips to exotic and not-so-exotic locations. This objective demands keen observation of people and their environments. Researching character means one must become part anthropologist, part sociologist, and part psychologist. A doctor's office waiting room, bus station, laundromat, or literally any place occupied by people can become an opportunity to observe human characters and their environments. By keeping a journal of observations and recording images in a sketchbook or with a camera, one can create a volume of information that can be accessed for future projects.

Style

The literary style of a play is the *way* the playwright develops the plot or tells the story. In gross general terms, literary style falls under two large categories, realism and nonrealism. There is a logical progression of language and action in realism. The story is believable and based in real-life situations. Nonrealism can depict fantasy and dreams, can be nonchronological with flashbacks and anachronisms, and can break the fourth wall with actors directly interacting with the audience. Beyond the two larger categories of realism and nonrealism, there are subsets of each: naturalism, expressionism, romanticism, existentialism, among others. See appendices on Style and Genre.

Literary movements usually have corresponding stylistic movements in the visual arts. Those known as realism, romanticism, and expressionism, for example, arose in both the literature and the visual art of their times. Readers can identify the literary style of a play by doing some research into

the time and circumstances of the play's inception, as well as researching the viewpoints and philosophies of the playwright. In addition, analyzing the script for characteristics of voice, dialogue, and circumstance and then finding parallels with other plays in a particular category or genre can also give a clue. Once the literary style of a script is identified, research into artworks of the corresponding visual style should take place. Conducting research for a play's style should also include critical writings on the corresponding literary and visual art movements, in order to gain insight into the history and philosophies behind the movement. Examining the characteristics of the visual style will make it possible for designers to translate and express style appropriately in the scenery, lighting, and costumes.

Another term often used to describe visual style is *period style*. Art deco, Greco-Roman, rococo, and Victorian are all examples of period style, which is a term that is actually broader than either of the terms *literary style* or *visual style*, as it describes specific attributes of art, architecture, literature, fashion, and manners that happened at a specific time in human history. The characteristics of any aspect of style—the use of line, shapes, textures, and colors, for instance—are tied directly to the social aesthetics of the time period when the style developed. For example, the neoclassical movement in art and architecture in the later part of the eighteenth century was a reaction to the excesses displayed in the earlier period styles of baroque and rococo. Neoclassical style was a revival of the aesthetics of classical Greece and Rome, when science, reason, and democracy were ideal virtues. The individuals who were part of the Enlightenment found these neoclassical characteristics very appealing.

Ultimately, the stylistic approach to a production determines the way the plot and story are delivered to the audience. In order for the style to make sense, it must evolve from the script, and in the most successful productions, all components of the production, from the design to the acting, conform to one appropriate stylistic approach. This is why determining production style is such an important component in any production concept.

Solving Practical Problems

This is another case where research can happen anywhere at any time, and observation of clever solutions to any practical problem can be filed away for some future use. Solving practical problems can often be a collaborative venture between designer, technical director, and shop manager. The craftspersons involved in implementing the technical aspects of any design have very valuable input into how to make things work, but there are often circumstances that arise during the

technical implementation phase that impact the aesthetics of the design. In these cases the designer must take the lead.

This is the one objective where researching other productions may be an option. For example, in *The Foreigner* by Larry Shue, there is a scene where a larger-than-life Ku Klux Klan member must rise out of the floor in a farcical attempt to run the "foreigner" out of town. Solving this practical problem involves the specifics of the theater space where the play will be produced (are floor **traps** available?), the budget, and the time available to execute the solution. The location of available floor traps, or the necessity to create traps within the scenery, will affect the aesthetics of the design. Researching many potential solutions, including what other producing organizations have done to solve the problem, will lead to the conception of an effective and reasonable solution for the production's challenges.

Internet searches of special effects for theater will yield possible solutions to production challenges as well. There are also numerous online blogs or vendors specific to stagecraft, rigging, lighting, and costume technology where questions can be posed and answered by other working artists. Additionally, reference books on stagecraft and technology are readily available in libraries and bookstores. How-to descriptions on a number of special effects and construction methods can be found in many of these reference books.

HOW TO RESEARCH—LIBRARIES AND ONLINE SEARCHES

Before the 1980s, working theatrical designers spent endless hours in the stacks of public and university libraries, poring over books and periodicals and lugging tomes between home, studio, and production meetings. These days, working designers still maintain an intimate relationship with libraries, but the nature of that relationship has been affected by a universal and widespread access to the Internet. Libraries are no longer just bricks-and-mortar buildings full of hard copy documents. Our modern libraries still have the traditional stacks of books and periodicals, but they are now also virtual, in that they carry many extensive holdings that are accessible only electronically.

Most of us have computers and access to the Internet close at hand, and many colleges and universities provide access to reputable research libraries for student and faculty use. Some even provide guidelines on their Web sites in order to aid research. For example, the libraries at the University of Connecticut offer detailed online research guides—a category as specific as a "Drama Research Guide" is available—making Internet and in-house library

searches much more fruitful. Access to college and university library services is usually reserved to those affiliated with the college or university as student or employee, though some allow restricted public access. Contacting the library directly is the best way to determine accessibility. There are many advantages to using college-and-university sponsored services:

- Library services such as these teach you how and where to conduct research and often have a humanities librarian to assist you.
- Online libraries available through colleges and universities contain large and reputable databases.
- Online libraries usually target specific subjects, such as medical research, literary research, or legal research, thereby reducing search time.
- The cost of subscribing to these online resources would be astronomical for an individual subscriber.

If not enrolled at a college or university, there are some open-access journal databases, such as the one called OAIster. OAIster was created by the Digital Library Production Service and the University of Michigan library. The purpose of this database in particular is to create a collection of freely available, previously difficult-to-access, and academically oriented digital resources that are easily searchable by anyone regardless of affiliation. In addition to OAIster, there are many other valid research databases and research encyclopedias accessible from home computers, though some of these may require a membership (involving a registration form and possibly a small yearly fee) in order to attain access to the information. Just searching the word *encyclopedia* or *research* will bring up many possible web addresses.

Designers and scholars of all subjects have to develop effective ways to scrutinize formal sources of research. Just because a book is in print or a topic is posted online does not give the information automatic credibility. Designers must develop the ability to examine, analyze, and dissect sources in order to determine the integrity of the material. Here are a few questions to ask while scrutinizing sources:

- Who is responsible for this book or online source? Is the author or organization knowledgeable and reputable? Be sure to research the originator of the source as well as the source itself.
- Is the information found in multiple places? While rogue ideas are intriguing, finding information repeated in more than one place can

give the idea some credibility, particularly if the shared ideas come from multiple credible sources.

Tertiary Sources for Research

Sources for research can be divided into three major categories: tertiary sources, primary sources, and secondary sources. Research is typically started with a tertiary source. Tertiary sources are those that provide a broad overview of the subject. Tertiary sources can be found in the form of encyclopedias, dictionaries, and other broad reference works. Details are often discovered in tertiary searches that lead to further investigation involving secondary and primary source research.

Primary Sources for Research

Primary source research denotes firsthand contact with a principal, first-generation informant (writer, painter, photographer, or eyewitness). There is no middleman in primary source research. The researcher has direct contact with the recorder of the actual event, or direct contact with the source itself. The obvious places to find primary sources for research are libraries and museums. Examples of primary sources are documents written from firsthand experience, oral histories, personal memoirs, and paintings and photographs of the actual locale or germane event. For the theatrical designer, primary source research can also entail visiting actual locations, viewing relevant museum collections, interviewing significant source individuals, and experiencing actual environmental conditions.

Secondary Sources for Research

Secondary sources are secondhand, derivative accounts of primary information. There is, indeed, a middleman in the creation of secondary sources. Designers must keep in mind that secondary sources are at least one step removed from the core person or event, and therefore should be evaluated with appropriate scrutiny. Secondary sources are found in many places, the most common being the public library and Internet web searches. Other sources for secondary information include, among many others, historical reenactments, antique reproductions, biographies, and historical theme parks.

Secondary sources are also often found in the form of scholarly accounts of a topic, an event, or an era, written with some distance from the primary event and with a specific cultural, social, or political viewpoint. Academic articles in journals are considered secondary sources. In these works, scholars examine

primary data and give an educated analysis of that data. Secondary sources are valid foundations for research, though they are often given less weight than primary sources, particularly in the realm of scholarly research.

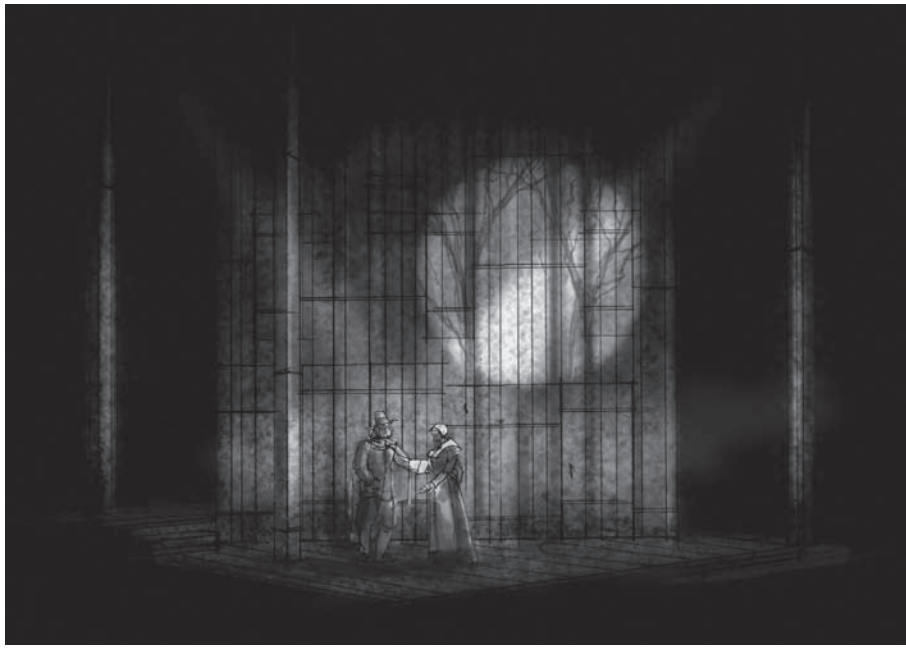
It is advisable to couple primary and secondary sources because the primary sources can give credence and perspective to the secondary. For example, designers for a production of *Inherit the Wind* (the play by Jerome Lawrence and Robert Edwin Lee about the 1925 Scopes "Monkey" Trial) took a field trip to the Dayton County, Tennessee, courthouse where the Scopes Trial actually took place (primary research). After visiting the intact courtroom (primary), the team then spent some time in the attached museum viewing actual photos (primary) and listening to museum tour guide accounts of the event (secondary). After returning home, the team shared books purchased in the museum gift shop and continued researching the topic by viewing online informational sites and video clips of other productions of *Inherit the Wind* (secondary). The primary resource experience of visiting the actual courtroom and museum gave the various secondary activities an accurate point of reference. The primary source and the secondary sources worked hand in hand in this instance, thereby creating a substantive research experience.

Visual Sources for Research

Theatrical design is a visual endeavor. So, it certainly makes sense to draw information and inspiration from visual research in the forms of real-life imagery, photographs, paintings, sculptures, and the like. Investigating visual imagery is so important that many designers say they rarely research the printed word, focusing primarily on visual research for most of their design challenges. This "visual research only" preference may be on the extreme end of the spectrum. In truth, critical writings about the play, playwright, and theme are often necessary to fully comprehend a playwright's intent. The individual approach to research varies from designer to designer and even from project to project. It is safe to say that most designers utilize a combination of both printed and visual research in their design processes.

Many designers, while doing research, look for a visual metaphor or a symbolic visual image in order to focus their approach when working on a specific design challenge. For example, Arthur Miller's 1953 play *The Crucible* takes as its subject matter the Salem witch trials of 1692. *The Crucible* offers many obvious possibilities for visual research. There are a multitude of paintings, sketches, and prints of the event in Salem and of public executions and gallows. However, the play is written as an allegory to the communist

"witch hunt" that was instigated by Senator McCarthy at the time. One could say that, thematically, the play is about the hysteria that overtakes reason and grips the town. The play also addresses themes of religious intolerance and false accusations. Therefore, artists should explore images that reflect these themes when researching the design for any production of *The Crucible*.



Early perspective rendering for *The Crucible* designed by Daniel Ettinger.

Primary source information can be derived from direct observation in many places and in many ways, including from a designer's own experiments. For set designer Eugene Lee, a predominant theme in the Broadway musical *Wicked* is time. In the official *Wicked* Web site, the set is described as "inspired by an image in Gregory Maguire's novel . . . The main idea for the set is that you're looking at the interior of a giant clock: gears and other mechanisms." In a 2006 interview with Bryan Rourke of the *Providence Journal*, Lee speaks of his visual research for the scenic design for *Wicked*: "I took a clock and tossed it down the stairs. We went down and picked up all the pieces. Suddenly it started becoming a thing about clockworks and gears." The visual metaphor is evidenced in the motif of cogs and gears used throughout the show's portals and in other specific scenic units. This quote from Eugene Lee gives some insight into how determining a

visual metaphor can facilitate design development and how methods of visual research can vary. Research is a cause-and-effect process, in that one discovery leads to another idea and that idea in turn leads to another search and discovery and so on.

Developing a Research Storehouse

The dominant approach to this chapter is based on the idea that most designers conduct research while in the midst of creating designs for specific projects. A word must be said, however, about the concept of more generalized research. In order to be an effective designer, one must develop a cache of generalized information, or a "research storehouse". This often is a literal place in the office, study, or on the computer desktop, containing files and books on widely diverse topics. But, this storehouse can and should also be a "place" in the creative mind. Designers develop this place, or create this storehouse—both cerebral and literal—over time while living an investigative and observant life. For successful designers, it becomes a way of life, in that every experience and encounter can provide opportunity for adding data to the designer's storehouse. This approach to life makes such designers supremely ready for any future design challenge or research project. Designers with a well-stocked research storehouse can begin new assignments in a state of advancement, and often take projects to levels that are more challenging and in-depth. As observers of life and lifelong learners, these designers are better prepared to begin researching and designing any project, and can speak impromptu with authority on any number of subjects. Designers such as these have landed jobs through serendipitous conversations with would-be directors, making positive impressions on these directors by drawing from their well-nurtured "cerebral storehouses" while discussing plays and any number of other topics.

As important as developing lifelong learning and powers of observation is the development of objectivity in the research process. It is important that designers remain objective while researching—keeping personal likes and dislikes checked while conducting investigations. What you wear, where you live, or your personal aesthetics may have little relevance to what a character in the world of the play may wear or where they may live. Keeping an open mind and striving towards objectivity while researching is crucial to expanding the potential of any project. Some would argue that it is not possible to be truly objective, but it still holds true that designers create more effective designs when they are freed from the unnecessary censorship of their own personal preferences. Living an investigative life imbued with a well-stocked research

storehouse can only happen by employing an open mind and an impartial viewpoint; and regularly stocking a research storehouse is good practice for the successful development of a true artistic sensibility.

Plagiarism

It is important to include in our discussion on sources of research a word about honesty and fairness with regard to the use of research materials. As designers, we involve ourselves in research in order to learn information about, and immerse ourselves into, the world of the play. After this process of education and immersion, we then create designs based on information gleaned from the experience. When designing, it is very important to take great care to create unique and original works *enriched* by the research as opposed to co-opting or *duplicating* the research in any way.

If we use another person's work and call it our own, either by openly taking credit for the work or by simply failing to give proper acknowledgment for ownership of the work, this is called *plagiarism*. Plagiarism is unethical and illegal. Copyright laws protect the writings, artwork, audio and video recordings, and anything considered the intellectual property of other people. These areas are broad and sometimes ill defined, so maintaining honesty can sometimes be a test. Rule of thumb: it is best to err on the side of safety when in doubt about a situation regarding plagiarism.

We can avoid plagiarism simply by giving credit where credit is due. When writing a paper or a book, add a citation for a direct quote or when an idea is referenced. In the case of design work or other artistic expressions, steer clear of plagiarism either by gaining permission to use the work and then giving public acknowledgment, or by simply avoiding any duplication of the work of others altogether. This seems simple enough, but determining acceptable use in these cases can be a challenge. If you have reservations about a situation, either give credit where appropriate or don't use the visual element at all.

Another way to avoid being unduly influenced by the works of others is to steer clear of specifically researching previous designs of a current project. While it may prove useful with regard to solving a particular practical problem, specific research of past designs is not advisable. Besides the potential for inadvertent plagiarism, remember that the circumstances of any production, the production concept, the theater space, the actors and audience, even social and political times vary and will be vastly different from any prior works.

Informed Intuition

There is a point after the script analysis and research has begun when design ideas begin to form. Design ideas are born from an "informed intuition." When designing, it may feel at times that ideas spring from instinct or a hunch, but these ideas are assuredly informed by the research, study, and investigation completed prior to making them. Informed intuition occurs after the brain has time to gather information and the mind has time to process it. Designers should strive to open themselves to this integration of intellect and instinct and allow time for this subconscious synthesis to take place.

Designers should not put pencil to paper or open their computer software drawing programs and begin to develop concrete ideas until the script analysis, research, preliminary discussions, and some time for thought has occurred. Informed intuition is the desired frame of mind to adopt when serious designing needs to happen. It takes no special training to achieve and will come about naturally if an open mind and spirit are present, and the work of script immersion, research, and exploration have taken place.

WHY WE RESEARCH—THE ENJOYMENT OF DATA COLLECTION

Art reflects society, and theater at its most basic level is about the human condition. As artists we make commentary about our own existences. Observing life and being lifelong learners is at the heart of every successful artist. Many theatrical designers tend to be curious individuals by nature and find the researching phase one of the most enjoyable parts of the design process. To these individuals, researching is not drudgery but a fun and interesting exploration into the world of the play and how it relates to the world around them. This keen interest in research, enhanced by a deep-seated curiosity, often leads one to unexpected places. Designers may find themselves wandering through an antiques shop, reading in the children's section of the public library, viewing art in a regional museum, participating in a chat room online, or perhaps exploring a hospital waiting room, a zoo, a winery, a coal mine, or even riding in the cab of a railroad engine or spending time in a multitude of other places—all in the pursuit of background information for a specific theatrical design project. However, it must be noted that many designers seek this adventurous living even when no specific project is pending. These designers embrace an experiential life as a matter of course, and in the process, they become more knowledgeable artisans and storytellers.

Many designers recount that they get so involved in the research process that they lose all track of time as one thing leads to another in the quest for more information. True immersion into this process can bring designers to a state of being where the possibilities all seem endless, exciting, and ever intriguing. Just imagine a lifetime of design projects—and the varied avenues of exploration and research that go along with mounting scores of productions over the span of a career—and it will soon become obvious why a theatrical occupation may be many things, but it is never boring.

Exercise #1 – Image Search - Period
Supplies needed: computer with Internet, notebook, pencil
Time limit: 25 minutes

- Conduct an online image search for chairs.
- How many images appear? Note this.
- What are the various ways the images are depicted, i.e., photos, paintings, sketches, cartoons, advertising? Note this.
- Now see if you can hone your search to some specifics.
    - Find five good examples of chairs for each of the following five decades in the twentieth century (twenty-five total images): 1920s, 1930s, 1940s, 1950s, and 1960s.
    - Save each set of examples to a labeled file, and be sure to cite your sources.

- Make notes—how is each decade distinct from the others?

Exercise #2 – Image Search - Style
Supplies needed: computer with Internet, notebook, pencil
Time limit: 15 minutes

- Search and select five images of chairs found in artwork from each of the following styles: realism and expressionism.
    - Save each set of examples to a labeled file, and be sure to cite your sources.

- Select one chair for use in a comedy and one for use in a tragedy from each style. What guided your selection?

Exercise #3 – Image Search - Locale
Supplies needed: computer with Internet, notebook, pencil
Time limit: 15 minutes

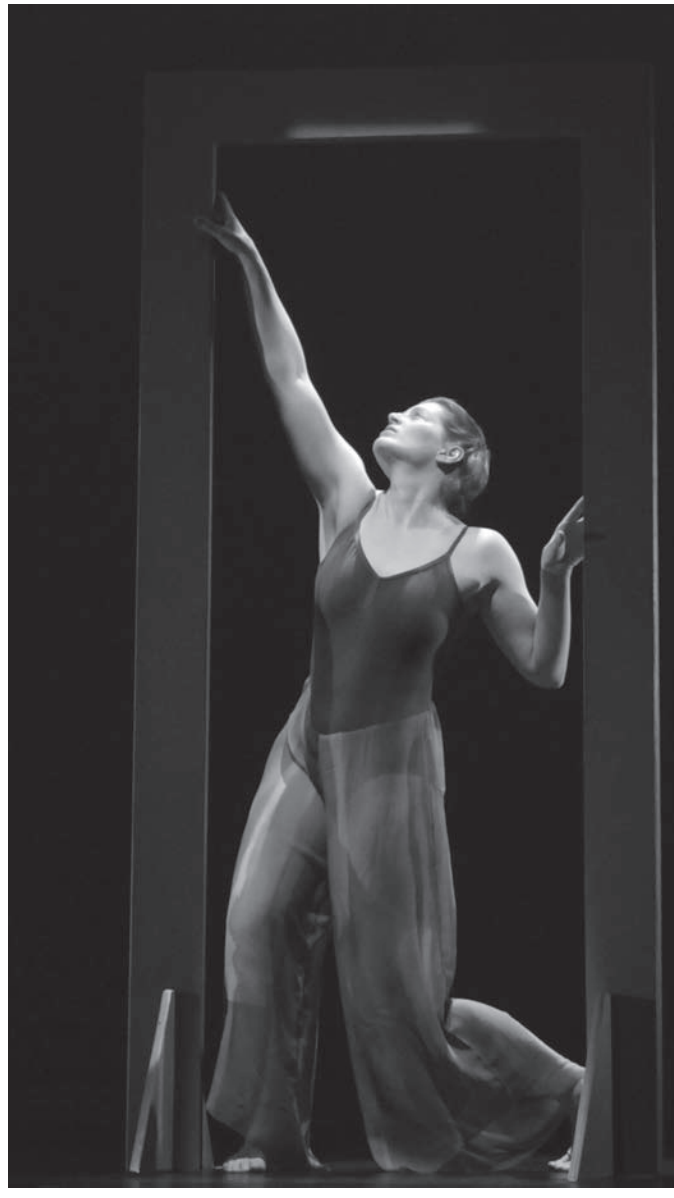
- Search and select five images of chairs that have regional influence, for example, Asian, African, Egyptian, and so forth.
  - Save each set of examples to a labeled file, and be sure to cite your sources.
  - What are the differences between the examples? What are the similarities?

Chapter 4

Collaboration

Theater is a collaborative art form. It is a process where a number of individual artists come together and share in the creation of a single artistic expression. This group of artist collaborators is most often comprised of a producer, an artistic director, a director, designers, stage managers, actors, and, depending on the show, a choreographer, dancers, a musical director, musicians, and/or a fight choreographer. In the broader definition, the collaborative team can extend backstage to include the running crews (wardrobe, props, sound, lights), the business manager, the front of house team (box office, house manager, ushers), and the marketing and development teams (publicity and promotion). These people all share in the creation of a single artistic expression, the production of a theatrical event. The basis of their collaboration is most often an *interpretive* work—meaning that the experience begins when a director, designers, and actors decode and enhance the vision of a writer, or playwright, whose work typically takes the form of a play script. There are exceptions to this, such as with dance, opera, improvisational pieces, devised works, or performance art, where no actual written script exists. However, even in these cases, the work is still interpretive (music, stories, or conceptual ideas as the basis rather than plays) and is *always* collaborative. Collaboration can be a difficult skill to learn, as it is equal parts process and personality. Combine the multifaceted process of theater production with the variability of human personality traits and this makes for a very complex and potentially unpredictable experience. It is made even trickier when one considers the number of people who comprise the production team and the fact that quite often these creative teams change from project to project.

Regardless of the composition and personalities of any given production team, successful collaborations happen best when designers and other theater artisans come to the experience fully prepared. The early phase of the collaborative process relies on each artist bringing to the table information gathered via their script analysis and research. An understanding of the performance venue and the intended audience as well as an awareness of budgetary restraints must also be considered. And, just as important, collaborators must understand the society and culture of theater in order to achieve successful results.



Even a solo dance performance requires many collaborators. In the Mountain Movers's production of *In and Out of Place,* the collaborators included choreographer Erin Law, dancer Jen Kintner, costume designer Karen Brewster, lighting designer Melissa Shafer, and music by Direwires and Metakinetic.

Photo courtesy of the East Tennessee State University photo lab.

THE SOCIETY AND CULTURE OF THEATER

The world of the theater can be recognized as a vital society containing an active and ever-growing culture. This theater culture contains a very definite set of rules and acceptable behaviors. In order to become an involved and functional member of the theater community, it is imperative to understand and appreciate the society and culture that defines it.

The culture of theater has its own language, symbol set, and rules regarding behavior. Even though experimentation and free expression are very often encouraged in the theater world, it must be kept in mind that each theater artist usually has a defined and definite purpose on any given theater project. Each job in the theater comes with a set of boundaries that includes a protocol of acceptable behavior. The set designer is responsible for the visual look of the scenery, the costume designer for the visual look of the character, the sound designer handles the aural aspects of the show, and the director is the guiding hand throughout the process, and so on. Successful theater practitioners possess a keen sensitivity to these boundaries and tacit protocols. The details of these protocols are often left unspoken until those boundaries have been crossed. Knowing one's place in the hierarchy of the production company is learned through experience and observation, much like the days in early theater history, when beginners learned by serving as apprentices to more experienced practitioners. The best advice is to think before speaking and listen carefully to what is being said. There is a big difference between brainstorming an idea and offering an opinion when none is needed or wanted. Learning to read the subtext in real-life conversations is as important as learning to read between the lines in a script.

DESIGN TEAM COLLABORATION—THE PROCESS

Idea Development

In the early stages of collaboration on a theatrical production, the members of the production design team are typically busy gathering information regarding the project. They do this via script analysis and research, and then they share this information with one another in design meetings. Through the analysis, research, and sharing, design ideas will begin to form. One may wonder exactly where ideas come from. Ideas are naturally fed by script analysis and research, but ultimately ideas spring from individual viewpoints and experiences and in design meetings are developed into a production concept. If the production

concept is the map to the final destination of the performance, it is the director who is steering the ship. As such, the collaborative team members are interpretive artists who not only interpret the playwright's vision, but also interpret the vision of the director. The success of these collaborative ventures is keyed to communication, and good communication can be fraught with challenges.

The challenges to successful communication can take many forms. Interestingly enough, not all directors are what one might call "visual"; in fact, many are more "cerebral" in their methods and sometimes have difficulty relating to the designers in visual terms. On the flip side, many designers are not readily verbal, and communicating with words rather than pictures may prove difficult. Ultimately, it is the designer's challenge to find ways to communicate effectively with every director and to find common ground with all members of the production team.

Directing, like every other aspect of the theater, is an organic process. It has a life that is ever changing and developing. As a result, some directors—particularly novice ones—may have difficulty solidifying their ideas into a defined production concept. This can prove frustrating to designers, who have the pressures of shop deadlines and production crews who are awaiting their assignments. This frustration can increase if major reworks are requested for already-completed pieces later in the production process. Very clear statements on deadlines should be articulated at the beginning of the production process to avoid these frustrations.

Perhaps the most challenging aspect is something that affects all theater collaborators: the fact that when we communicate, there is often a disconnect between what we *mean* to say, what we *do* say, and what others *hear.* Again, the key to success in overcoming this disconnect is listening carefully and speaking thoughtfully. Every theatrical director has individual methods, theories, and values regarding the making of theater. Designers spend their careers working with myriads of different directors and directing styles and must develop the ability to tune in to each director's method in order to make effective designs. It is ultimately the job of the designer to access the director's vision of the project, no matter what communication difficulties may arise.

Good directors communicate not only their vision, but also the needs of the production—both practical and artistic—to the entire team. Good designers work to fully understand the director's vision and needs in order to visually interpret the play. The early communication between director and designers can be tricky, and each artist must be respectful of the viewpoints of others.

Simply speaking, how these early interactions are handled can lead to either the success or the failure of the entire project.

Communicate Ideas

Throughout the production process, design meetings, production meetings, and other discussions are arranged with the primary goal of exchanging creative ideas. The ability to convey ideas succinctly is an important communication skill. Another vital communication skill is being open to new and different ideas. Collaboration requires that each participant have the flexibility to incorporate the ideas of others into their own work. It also requires that each participant be open to fully exploring an idea before it is embraced or discarded. Discarded ideas are not necessarily bad ideas; they just may not work within the context of the production concept. Designers must not be thin-skinned. Discarded ideas should not be taken personally. There are an infinite number of ways to interpret a script; ultimately, it is the director's vision that shapes that interpretation. The strongest collaborative abilities one can possess are listening skills, trust, and patience.

Typical Collaborative Process

Keep in mind that every production is unique and the timing may vary on these steps.

First Step: Read the play (a few weeks in advance of the first meeting).

- Designers look at the theater space.
- Designers obtain budget, labor, and time-constraint information from producer, director, and/or shop manager.
- Directors start developing a vision for the project.

Second Step: Attend initial meeting (several weeks prior to auditions/rehearsals).

- The director shares his or her interpretation of the playwright's words. This is coupled with the needs of the play in relation to casting and theater space, as well as the "problems" of the script.
- The director also speaks in terms of what he or she does not want to happen. Some possible examples: scene shifts must not slow the pace, no costume changes, no pieces stored in the wings.

- Designers typically spend this meeting listening, asking questions, sharing their impressions of the play, and working to understand the director's vision.

Third Step: After the first meeting . . .

- The director continues to evaluate and expand initial ideas.
- Designers conduct visual and textual research on the play.
- The designers formulate possible visual arrangements based on information from the initial meeting.

Fourth and Subsequent Steps: Attend additional meetings (the number will vary depending on the show).

- Designers bring rough ideas to the table. These can be communicated in a number of ways: thumbnail sketches, rough models, or photos of inspiration.
- The collaborative process truly begins with fertile idea exchange—ongoing and involved discussions should take place!
- A production concept is developed.
- At later meetings, final ideas are presented in sketched or modeled forms and eventually approved by the director.

Final Steps ("Designer Meetings" turn into "Production Meetings"):

- Production meetings center on the execution of the designs and typically take place during the construction phase and rehearsal period. The production design team attends these meetings, as well as many of the craftspeople involved in executing the designs.
- The purpose of the final meetings is to communicate and solve problems as they arise. Ongoing collaboration continues until opening and the performance phase.

As you can see, the early planning meetings typically occur long before auditions are held. By the time auditions take place, the set design has been finalized, costume designs are on the way to being approved, and the artistic approach and design decisions are settled. Once the show is cast and rehearsals begin, the meetings shift from design meetings into production meetings,

where the emphasis moves from planning to implementation. At this point, the meetings should expand to include the division heads from all of the technical areas in addition to the core production design team members. These later meetings are moderated by the stage manager or production manager. The director is the visionary "boss" of the individual production, and the stage management team serves as an extension of that authority. Depending on the organization, the director may even answer to a higher power in the form of an artistic director or a producer who must put the needs of the individual production in the context of a season.

Develop a Production Concept

In order to achieve clear, concise, meaningful work, many hours of meetings and discussions take place among members of the design team. The ideal result of these meetings is the development of a *production concept.* The production concept is an important step towards creating a unified piece of art that tells a story, imparts a message, and evokes emotions. The production concept ensures that every creative decision is working towards the same goal in that it defines the intended message and includes decisions on the time and period, the place and locale, and the style of the production. Often, the venue and the intended audience are also discussed and decided upon. These decisions should be grounded in what works best for the needs of the play, the production, and the mission of the producing organization.

Sometimes, the director will arrive at a concept before meeting with the full team of artists. In this case it is more accurately called a "directorial concept." Other times a director may come to the table with a partial concept that will be more fully developed through meetings with the entire team. And still other times, a production concept is developed from information gathered and shared by the director and the entire production design team from the outset. The working style of the director and the team, and the needs of the play itself, will dictate the desired approach to concept development.

Quite often, the result of the more open collaborations is synergistic, meaning that the sum is greater than the individual parts. Each member sees the play from their unique perspective, and the discussion of the play from different points of view often leads to a deeper understanding than one can obtain individually. At every point during this process, a delicate balance of flexibility and persistence is very important. It cannot be stated strongly enough that successful collaboration demands that each member is well versed about the script and must be able to back up ideas with accurate, concise information.

All of the best planning in the world may not prevent an idea from falling flat in rehearsal, even if it sounded terrific in the early meetings. And occasionally, an idea will occur in the rehearsal process that requires a change in a prop, costume, set piece, or lighting or sound cue. These small changes are typical of the artistic process and signal evidence of healthy growth of the production concept. Larger changes, such as a major shift in the overall time period, theme, style, or location, are not evidence of growth, but instead indicate a significant divergence from the original concept. These larger changes midstream will most likely leave the team frustrated and the producers unhappy if not handled with great care and delicacy, as large, sweeping changes typically result in significant additional expense. Due to the limited resources of labor, time, and money, major changes are not commonly approved by those who manage these resources. Allowing ample time during the preproduction period circumvents the need for major change by producing a solid production concept, capable of sustaining reasonable growth. Starting early and maintaining open communication through regularly scheduled meetings, along with clear and concise stage manager's rehearsal reports, are the foundations for success.

Communication Challenges

Problems in communication naturally occur in any human interaction, and the personality-rich environment of theater is no exception. These issues can occur at any stage of the process and can have positive or negative results depending on the circumstances. If the issues are avoided or not addressed, real problems may develop, and the success of the theatrical venture could be threatened. The following paragraphs highlight many pitfalls involving communication challenges commonly found in the production process.

Impromptu Discussions: One common area of concern, and one that happens on virtually every project, involves impromptu or off-the-cuff discussions. Impromptu discussions may take place in the rehearsal hall, the production shops, in a bar after a rehearsal, or on the phone. These discussions are ones that are not privy to all members of the production design team and are generally thought of as a normal consequence of doing business. However, it is important that *any* ideas, information, or decisions arising from these spontaneous meetings get shared as quickly as possible with other members of the team. It is not hyperbole to state that the decisions of an individual area impact the entire team. A change in a lighting cue may very

well affect a sound cue. A change in a prop may require a change in a pocket of a costume. In a musical, where the musicians are placed affects the stage picture and sound design. The width of an actress's hat may impact the size of the door openings, or vice versa. Impromptu conversations are necessary and expected, but all artisans must be mindful of the importance of sharing the results of these conversations, no matter how small, with the entire team.

Business Etiquette: As the number of people in design and production meetings can be large, another potential area of concern regarding communication and collaboration centers on the practice of business etiquette. Business etiquette first and foremost involves old-fashioned good manners and collegiality. Adherence to good manners and established protocol can have a positive impact on the work of the production team and can, in fact, improve work efficiency.

Early design meetings typically involve fewer people; the structure of those meetings can be more free-flowing as ideas are exchanged and production concepts are developed. But even in the freer early meetings, staying on task is imperative. Drifting off topic, rambling, and interrupting become hindrances in an expanded group meeting. Anecdotal information and off-topic discussions waste precious time and are best left to social meetings and gatherings. This tendency to drift and wander off topic during meetings, even the early ones, can be indicative of a larger problem in the organization—one that indicates a lack of focus and a need for a more defined goals.

Design meetings usually turn into production meetings once rehearsals begin, after which the number of participants in the meetings increases. At this point, the adherence to a more organized meeting methodology becomes absolutely imperative, and the need for efficiency and meeting protocol becomes even more necessary. Production meetings should run on an established agenda and as efficiently as possible, as time is precious during the production **build**. Typically, the production manager, stage manager, or the director runs the meeting and will go around the table asking each member of the team to report on their area, sharing necessary information or problems relating to the production. When each member of the production team is thoroughly prepared and responds in an organized and thoughtful manner, an overall atmosphere of efficiency is promoted.

To aid in this quest for efficiency, all information should be organized in a way that is easily referenced and shared with the other artists. It is a given that each collaborator should bring a note-taking device to every meeting, be it a PDA, laptop computer, or old-fashioned legal pad and pencil. Even though

stage management will take notes and distribute minutes from the design and production meetings, it is important for all participants to listen attentively and take thorough notes at all meetings. Developing careful listening and note-taking skills helps prevent minutiae from falling through the cracks. In addition, bringing a calendar and a calculator to each meeting is often useful. Many designers will create a "show bible" that contains all of the research, meeting notes, sketches, and plots that are created throughout the production. The show bible should be brought to every meeting because this research notebook can make accessing, referencing, and sharing information relatively easy and painless.

Gender and Communication: A word must be said here about another communication challenge area: gender and communication. The way females and males have been socialized to interact affects the way information is put forth and received. It is a generally accepted fact that women and men communicate differently. It is important to acknowledge this and develop an awareness of these differences. According to current gender communication theory, men generally converse with the intent of providing information, instruction, and to enhance their own status; while women incline toward inclusiveness, personal disclosure, and even tentativeness while communicating with others. Not surprisingly, these differences carry over to nonverbal communication as well; generally, men take up physical space, while women yield it.

The differing communication styles between the genders are often the sources of misunderstanding leading to ongoing tensions and misjudgments. Theater artisans must strive to understand these gender-based communication differences in order to avoid such tensions and misunderstandings and to facilitate free speech, open communication, and successful collaborations.

Technologically Enhanced Collaboration: The evolution of technology in this modern information age has given us a myriad of new and ever-changing ways to share ideas. As a matter of fact, e-mail, social networking forums, cyber meeting rooms, blogs, teleconferencing, and telecommunications have made long-distance collaborations very possible. Today's production teams rely on research sent as e-mail attachments, URLs shared between team members, sketches scanned, and models photographed and sent as JPEG images. Networking sites such as Facebook are often utilized to share rehearsal and production information as well as show photographs and research. The methods of long-distance communication are evolving rapidly and all have

some application to the process of theater. This new technology leads us into fresh and exciting frontiers fraught with new and unpredictable communication challenges.

The potential drawbacks to technological communication are apparent to anyone who has attempted to use it. We all have horror stories regarding failed technology—the success of this kind of communication certainly depends on the various gadgets and technologies performing as expected. It is wise to always have a backup plan for when these failures occur. And be sure to always create a backup file, disc, or hard copy when saving any work. Nothing is more frustrating than spending hours working on a project only to have it irretrievably lost.

Technology-enhanced collaborations also rely on access to appropriate equipment and the ability to use sometimes-challenging machines and software products. Knowing the equipment, accessing the equipment, and making certain those with whom you are communicating are technologically savvy, are important factors to consider when including technology in production team communication. Another consideration when utilizing electronic communication is the potential for miscommunication. A large part of human interaction involves nonverbal cues, facial expression, and intonation. A statement made in an e-mail can sometimes be misinterpreted without the aid of these cues. It is extremely important to craft written communication in such a way that any misinterpretation is avoided. It is also essential that everyone on the production team is copied any electronic discussions involving decisions relating to the production.

Execute Unified Designs

One of the most important common goals shared by collaborators on any theatrical production is creating design unity. (A definition for design unity can be found in chapter 6 of this text.) One key idea regarding unity: when a design is unified, the key elements have a sense of belonging together, a quality of *oneness.* This quality of oneness is achieved through intense collaborative effort that is outlined in the following guideline:

Three-part collaborative process to achieve unity

- ***Awareness***—First, you must look inward and examine your own work.

  - Know exactly what *you* are doing and how it impacts the production. Are your designs really doing what you want? Are your choices purposeful? Be objective and aware!
  - Communicate your ideas clearly to others on the team.

- ***Comprehension***—Next, look outward and take it all in!
  - To achieve design unity, every designer must understand what every other designer is doing. Designers must not work in isolation. It is each designer's responsibility to listen, observe, ask questions, and generally become acquainted with what others are doing on the project.
  - How do your ideas fit with the ideas of others on the project? Do the designs of others work with your designs in realizing the director's vision? Again, be objective! Make adjustments where necessary.

- ***Execution***—Follow through with your ideas!
  - Work with your technical crew to execute your ideas within the production concept, accurately striving to be true to your vision as approved by the director and as you communicated it to the team.
  - When changes are necessary, be sure to remain true to the production concept.
  - Keep lines of communication open!
    - Communicate any changes and developments to the entire team.
    - Be aware of any changes reported by other members of the team. Adjust your work accordingly in order to maintain unity and stay true to the production concept.

Failure to follow the guidelines will certainly jeopardize the potential for a unified outcome. There are also additional extenuating circumstances that can produce negative outcomes—these usually happen when an outside or unexpected element is introduced, such as a costume rental or a borrowed prop. Additionally, unified designs can be at risk when shows go on tour because the theater space or facility has an impact on the visual aspects of a show. Even **pulling** costume, scenic, or property elements out of stock can prove challenging in regard to maintaining unity.

On the other hand, there are situations that can make creating a unified show *easier* instead of more difficult. Many times artists wear "multiple hats"—

supervising more than one aspect of a production—and this situation can make creating a unified production easier because the steps of communication are lessened. Another example can be found in the case of established collaborative teams who have devised their own shortcuts to creating unified productions. These experienced collaborative teams are like old married couples, in that they understand one another's ways of working, value systems, and personal styles. These collaborative teams typically possess strong and established lines of communication and a respect for each other's viewpoint, all of which aids in the production of unified shows.

Budget, Labor, and Time

Three very important essentials in the building phase for any show are *budget, labor,* and *time.* This powerful trio is interdependent and impacts the show in profound ways; when one area is adjusted, the other two must adjust as well. Specifically, they are inversely proportional: when one aspect of the three *reduces*, the other two must *increase*. For example, if the budget for a show is reduced, this typically means an increase in labor and time. Or if the build time is reduced, this will mean an increase in expenditures and labor, and so on. This phenomenon impacts collaboration because these resources—budget, labor, time—are typically shared within the production areas. If one area—for example, scenery—does not complete build by the deadline, then the lighting crew will be impacted, as their time onstage and the ability to focus lights with the scenery in place will be reduced. Or if one area goes over budget, the deficit may need to be offset by taking money from another area. Budget is, in fact, one area where the concept of collaboration definitely comes into play. The method for determining budgets for shows varies from organization to organization.

For regional theaters and university theaters, budgets are set early in the season. The following is an explanation of the budgeting process offered by Rick Rose, the producing artistic director of Barter Theatre: "Our process is, once the season is chosen, we submit budget forms to the shop manager. The budget forms include a breakdown budget for each individual show as well as labor both per show and season (broken down in weeks by show). The shop supervisor works in conjunction with the resident designer and all of the other members of the shop to submit a proposed budget back to me. Capital needs and major equipment purchase requests are submitted separately within this budget form.

"We take this budget submission extremely seriously. This process takes place with each department. We put all of these numbers into our master

budget, along with the calculated predictions of income for each show and for the institution overall. If we have need for the departments to curtail their budget expectations from their original submissions to me, we send the forms back to them and ask that they trim their budgets by a certain amount of money. The departments decide where to make the cuts and then submit the budget numbers back to me.

"We are usually in conversation throughout the process, about expectations, what shows are most important and least important, etc. We also have a meeting with production and directors at the start of this budget process to discuss the shows, the scope of each individual project, what directors' expectations may be, and what my expectations are, so that the departments can determine budgets as accurately as possible. Each individual show is ultimately assigned a budget for each department based on need and income for that project.

"While we always stay within our budgets, I think it is important to understand that budgets are guidelines and do not necessarily dictate the end result. We may adjust budgets if necessary. We never overspend, but resources might move around based on need."

Some organizations assign very absolute and specific budgets to projects from the outset, allowing no wiggle room or flexibility with the numbers. Other groups may give each show a lump sum of money, allowing the production team to divvy that lump sum up among the design areas as dictated by the production concept. This latter scenario demands the most collaborative approach. When setting budgets in this way, it is important for the entire team to remember shared common goals and work in a spirit of collegial compromise. For example, if the production is an intense lighting and effects show, the set and costume designers may need to trim their budgets in order to boost the lighting budget. The keys to keeping this in check are for all designers to earnestly discuss the needs and priorities of the production prior to final design decisions, for department heads to report frank and honest assessments of the progress of the build during the production meetings, and for all to defer to the needs of the production.

Tell the Story

Collaboration is all about communication and give-and-take. Good directors and designers know how to ask the right questions, to clarify burgeoning ideas, to edit ideas down to those that serve the essential purpose, and to draw out ideas from other members of the production team. The following is a list of

qualities necessary for each member of the team to possess in order to achieve successful and positive collaborations:

- Openness to ideas
- Good listening skills
- Preparedness—bringing thoughtful research to the table
- Flexibility
- Willingness to revise and edit
- Generosity of spirit
- A concern for the whole

Intensive collaboration between the director, the designers, and all of the other contributors to the production must occur in order to tell the playwright's story effectively. The production team works on common goals in order to reach a consensus and realize the director's vision for the play. One of the most important shared goals is the development of the production concept. If the production concept is effective, a unified production will result and the story will be told in an effective way.

So, with all the reading, researching, analyzing, and communicating, the purpose is simple: tell the story. That is the ultimate aim for any theatrical venture. Stories have an essential and magical impact on us, validating our very existence and connecting us to each other. The desire to experience this magic is basic and universal to all cultures. As with all art forms, this is important work and it must be taken seriously. All aspects of the production—costumes, lights, sets, props, sound effects, projections, posters, and all the rest—should support the story. No matter how sophisticated the equipment or flashy the special effect, designers must never lose sight of this most basic, primal, and universal purpose.

EXERCISES

Exercise #1 – Exploring Collaboration
Supplies needed: friends, modeling clay
Time limit: 15 minutes

- For this exercise, you will need a group of friends. It is important to work in complete silence, without verbal communication, and for each participant to take no more than thirty seconds for each turn.
- Start with a fresh ball of clay that will be passed around the group. In addition, each participant should have a small amount of clay in front of them to make additions to the mother ball if desired.
- Person 1 does something very simple to the ball of clay (adds, takes away, changes the shape) and then passes it to person 2.
- Person 2 adds to what person one did by doing something very simple to the clay (one move) and then passes it to person 3.
- This continues until each person has had four turns.
- How did you feel when you made changes to another's work? How did you feel when someone changed your work? What kinds of insights into the nature of collaboration did you make?

EXERCISE #2 – DEVELOPING A PRODUCTION CONCEPT
Supplies needed: friends, notebook, pencil
Time limit: 50 minutes

- Gather a collective of other theater artists.
- Choose a contemporary *short* (ten-minute) play.
- Assign a production team: choose one director and three designers, one each for costume, scenic, and lighting. Determine a target audience: adults, children, seniors, or an ethnic or cultural group.
- Read the play aloud as a group.
- As a group, led by the director, determine a production concept using this chapter as a guide. Keep in mind that the budget is $0.00—zip!
- As a group, create and write a succinct production concept that identifies the space, target audience, and the intended message of the production.

Chapter 5

Design Elements

The design elements, known as point, line, shape, mass, color, and texture, are the basic building blocks of any artwork. They are to visual design what the alphabet is to writing. We first combine letters of the alphabet into words, and then combine words into poetry, plays, or textbooks; likewise, design elements are combined into design principles, and then the principles are combined to create a work of art, be it a painting, sculpture, or a theatrical design. It is a given that there are well-written plays and not-so-well-written plays; but regardless, the essence of the words used to create any of these plays always remains intact. The same holds true for the elements of design. The elements can be used to create great artwork and lesser artwork; in either case, the essence and the integrity of the individual design elements remain unchanged. The color red is still the color red, whether it is used in a painting by Vincent Van Gogh or a preschooler's first drawing.

Within each individual culture, design elements are the basis of a visual language that is, arguably, innately learned, inherently understood, and at times purposefully manipulated by designers for specific visual intent. All designers utilize these elements, be they graphic designers, architectural designers, or theatrical designers. Aspiring theatrical designers must fully grasp the implications of the design elements beyond what is inherently understood, then learn to manipulate the elements by effectively utilizing the design principles described in the following chapter. This chapter will define each design element, and then explain how the elements are actually used in a theatrical design context.

POINT

The simplest and most fundamental design element is the point. A point is defined as a single dot in any medium, be it paint, fabric, or light. In lighting design, a single down spotlight cutting through a dark stage is akin to a single point of ink on a page. It is powerful; it commands the attention of the observer. It is difficult to view a single spot of light within the frame of a proscenium opening, or a single dot of ink within the format of a sheet of paper, without applying great significance to that spot. We instinctively

"relate" to the spot and the environment or space where the spot resides, and quickly apply deep meaning to this simplistic arrangement. Experienced designers know this and at times use this to great advantage.

Point has a special relationship with the elements of line and shape, playing a significant part in the creation of "implied lines" and "implied shapes." Similar points, when repeated, readily relate to one another in a way that can imply a line to the viewer. If this implied line can be visually "enclosed" by the viewer, it then becomes an implied shape. For example, if three similar-sized dots are placed randomly on a sheet of paper, most viewers tend to imagine a triangle or circle from those dots. This is evidenced by the fact that through the ages, human beings have created pictures, or constellations, in the night sky by connecting the points made by stars. This inclination was embraced and then expanded into an art form and philosophy by nineteenth-century pointillist artists such as George Seurat, whose paintings are comprised of many colored dots. When viewed, these "points" are blended by the viewer's brain into a solid, realistic image. Chuck Close is another more contemporary painter whose works create a similar effect: he uses a series of grids and his own thumbprints to create images. Younger artists such as Eric Daigh and Devorah Sperber have experimented with this same idea using materials of modern society, such as pushpins and spools of thread, rather than paint. See appendix on Style.

LINE

Line is defined as a continuous mark produced by a moving point. In order to imagine this, it may be helpful to visualize a falling star in a night sky, with the trace of light the falling star makes representing a moving point, or line. Line has a variety of qualities—direction, thickness, and sharpness—and each of those qualities communicates meaning. The myriad of meanings we get from line are universally translated, in that all humans respond similarly to the qualities of line.

Lines can be straight, angled, or curved, with each expression communicating different feelings and ideas. Straight lines convey a singularity of purpose. Angled lines show an abrupt change in position and express a juxtaposition of divergent ideas or attitudes. Curved lines can imply many different things. For example, tight overlapping curves impart a sense of kinetic energy, a frenzied tangle where the beginning and ending points may be confused and indecipherable; in contrast, gentle curved lines communicate

sensuality and comfort, like the curved lines of a mother rocking her baby or a lover's embrace. It is interesting to note that culturally, angled lines are often considered "masculine" and curved lines "feminine."

Unifying use of line in Barter Theatre's Production of *Long Shadow* written by Conrad Bishop and Elizabeth Fuller. Scenic design by Lori Fleenor, costume design by Kelly Jenkins, lighting design by Richard Rose and Lori Fleenor, directed by Rick Rose. Photo courtesy of Barter Theatre.

The thickness or thinness of the line is another attribute that imparts meaning. A thin line might convey a sense of delicacy or fragility, while thick, heavy lines give designs a sense of stability or may act as a visual barrier or impediment. The sharpness and cleanness of line also has connotations: sharp, crisp lines denote precision or meticulousness, while fuzzy lines can imply softness or ambiguity. These characteristics compound when combined: a straight, thick line communicates stability and singularity of purpose, while a fuzzy, thin, gently curved line is generally interpreted as soft, delicate reassurance. Lines are expressed on stage in various ways: as details painted on a set or on a costume, in the edges of **platforms** or **flats**, in shafts of light, and in the **masking** and framing of the stage itself. Even the silhouette of a dress is often called the "line" of the garment.

The direction of line is relative to the position of the viewer. For example, a line can "go up" or "go down." A line "going up," relative to the viewer, communicates specific ideas and feelings (hope, strength, optimism), as does a line "going down" (weakness, frailty, despondence). We can further develop our thinking regarding line direction by exploring more specific terminology, such as horizontal, vertical, or diagonal. Each of these terms describes a line direction that carries a very distinct set of commonly acknowledged characteristics.

Direction of line holds much significance for viewers, and this significance stems from the associations line and direction have to similar phenomena occurring in nature. For example, horizontal lines are typically considered tranquil or peaceful, such as the horizon line where sky meets ocean or a succession of gentle waves rolling onto the beach. Vertical lines are forceful and strong, such as the lines found in a forest of stately pines or the landscape of a city skyline. Diagonal lines are considered dynamic, imparting a great feeling of movement, as if they are escaping the laws of gravity. The contour of a mountain range contains many diagonal lines, for example.

SHAPE

Whenever two ends of a continuous line meet and enclose a defined space, a shape is created. These enclosed lines, or shapes, are two-dimensional areas that have both width and height. Shapes can be organic, like shapes found in nature, or architectural, geometric forms that are human constructs. **Organic shapes** are often curvilinear, meaning that they are made from rounded, wavy, or curved lines, while **geometric shapes** are typically angular, straight, and rigid. Two exceptions to this are the circle and the oval, because both are found in nature as well as in machine-made architectural applications. Geometric circles and ovals are "perfect" in that they are mathematically precise; while circles and ovals found in nature typically have natural irregularities and imperfections that create visual interest. Many other shapes may be found in both the organic and geometric categories, but if the shape has a quality of mathematical precision, it is considered geometric.

Artists use organic and geometric shapes in different ways in order to express different ideas or moods. In the extreme, organic shapes express intuitive feelings and moods that are serene, peaceable, graceful, elegant, and fluid. Geometric shapes communicate intellectual ideas and thoughts that are either harsh, unyielding, severe, and inflexible, or the other extreme, simplistic, whimsical, and childlike. An infinite variety of combinations can be produced using these

categories of shapes, and each variation will communicate something slightly different.

In art and in theater, shapes inhabit space. Theatrical artists use shape and space combinations in order to create large visual pictures that communicate ideas and feelings invoked by the play. When we imagine a theatrical stage in two-dimensional terms, like a sketch or a painting, we can see that the pictures created by scenic designers are comprised of purposeful arrangements of shapes within the space of the stage. The area inhabited by shapes on stage or on the page is referred to as **positive space**, and the spaces that surround each defined shape are referred to as **negative spaces**. Combinations of organic shapes typically create organic negative spaces, and the same holds true for geometric arrangements, respectively.

The placement of positive and negative shapes onstage determines the actor's movement patterns around the stage. The actors' blocking is shaped by the placement of the positive shapes, the entrances and exits, the furniture, and the various scenic elements on the stage. The line of the actors' movement, whether it be diagonal, upstage to downstage, horizontal across the stage, or meandering, is determined by the negative space that is created around those shapes.

MASS

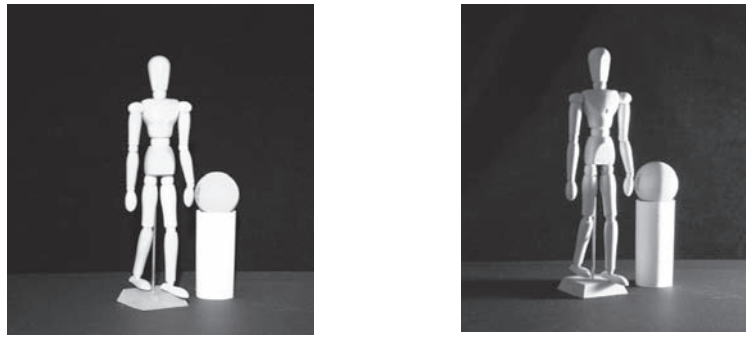
When shape takes on the added dimension of depth, in addition to width and height, it becomes mass**,** sometimes called "form." Mass occupies space in all directions, can be viewed from many angles, and can be described using measurements of height, depth, and width. Mass implies volume and weight. We can hold a smaller mass or form in our hands, or we can stand or sit on larger masses.

Masses fall into the same categories as shapes: geometric (man- or machine-made) and organic (shapes and masses occurring in nature). The attributes and expressive characteristics of geometric and organic masses are the same as those found in shapes. The relationships between positive and negative spaces are also the same, except these spatial relationships happen in three dimensions rather than just two.

The dimensions of mass can be revealed and enhanced through lighting and shading methods, such as those found in the artist's technique known as "**chiaroscuro**." Literally translated from the Italian as "light dark," this term refers to the use of light and dark in painting or sculpture for the purpose

of creating an enhanced three-dimensional effect. This enhancement occurs with the aid of the visual tenet that lights advance and darks recede. This means that the parts of an object that are in the highlight will appear to come closer and draw the attention of the viewer, and the shadowed areas in a design will appear to recede, or diminish in the viewer's observation. The exception to the rule that lights advance and darks recede happens in landscapes and is known as "atmospheric perspective." In atmospheric perspective, as objects become more distant to the viewer, the contrast in colors diminishes and shifts towards the color of the background, for example, a blue-gray against the daytime sky.

A chiaroscuro effect can be accomplished using light. The angle of the light striking an object, and the variant highlights and shadows, can accentuate or obliterate the illusion of depth. When an object is lit with direct front light, it appears flat, as natural shadows are washed out. If the angle of the light begins to shift to the side, highlights and shadows are created—a chiaroscuro effect. This contrast, combined with the gentle half-tone shading that naturally occurs between the strong light and dark, gives an enhanced sense of volume and mass and emphasizes the perception of three dimensions.



The effect of lighting angles on mass or form. Figure I lit with direct front light, figure II lit with sidelight.

In addition to manipulating the light and dark of mass, forms can also be abstracted for expressive effect. When organic or geometric shapes and masses are reduced to the most simplistic expression, or exaggerated and distorted to the most stylized extremes, these shapes are called ***abstract*** shapes. The process of visual abstraction is one of simplification and generalization, where designers are less inclined to use a shape or a mass to express specific smaller ideas and more inclined to use exaggerated or abstracted shapes and masses to

express larger, broader, more representative concepts. Abstract shapes are most successfully utilized in nonrealistic productions, such as in Theater of the Absurd or Expressionistic pieces, or even in children's theater productions.

COLOR

The study of color entails scientific principles involving light, particularly wavelengths in the electromagnetic spectrum called the visible spectrum, and how they are perceived by the human eye and brain. Cone photoreceptors in the retina of the human eye are sensitive to different portions of the visible spectrum. A few mammals, like humans, are "trichromatic," meaning that they possess photoreceptive cones in the eye with the ability to perceive reds, blues, and greens. Some other animals see additional portions of the electromagnetic spectrum and are called "tetrachromates" (birds and bees see colors that humans cannot perceive), and still other animals, called "dichromates" (horses and ponies) or "monochromates", (dolphins, whales, and seals), see less of the visible spectrum than humans do and therefore perceive less color.

The visible spectrum can be demonstrated by observing light through a prism. When viewed through a prism, the visible light spectrum shows a true rainbow of color. We can easily remember the colors in this visible spectrum by remembering the moniker "ROY G. BIV," an acronym for red, orange, yellow, green, blue, indigo, and violet. Objects in the world naturally absorb and reflect certain wavelengths or frequencies of the electromagnetic spectrum. The colors we see when looking at an object are the wavelengths or frequencies that are reflected back to us. A red apple, for example, absorbs all wavelengths in the visible spectrum except those that we call red. An apple is not inherently red; rather, this is a phenomenon that occurs in our brains when we view the apple and perceive the reflected wavelengths.

Artists must generally understand the physical properties of color—how light works and how the eye perceives it. But more importantly, we must also learn how best to organize color, how colors relate to other colors, and how to manipulate color in artistically advantageous ways. Scientists and artists have been developing theories of color since the time of Leonardo da Vinci, though Sir Isaac Newton is commonly credited with the development of the first color wheel in 1706. Johannes Itten, a Swiss artist and teacher in the twentieth-century Weimar Bauhaus School, further developed ideas on color theory. The topic of color is under continuous scrutiny, though some commonly held theories about the subject are tried and true. For example, in pigment, there are three primary

colors, red, yellow, and blue. These primaries combine, in equal parts, to create what are called the secondary colors: orange, green, and violet. The secondary colors are in turn combined equally to create the tertiary colors, red-orange, red-violet, blue-green, blue-violet, yellow-orange, and yellow-green. All colors fall into broad categories known as warm colors (reds, oranges, and yellows) and cool colors (blues, greens, and violets). It is evident that the study of color, otherwise called chromatics, is comprised of specific phrases and terminology. The purpose of these phrases and terminology is to make color and color relationships accessible and comprehensible. More detailed information on color can be found in the appendix on Color Terminology.

The Color Wheel

The color wheel is a chart that represents all colors in the visible spectrum, placed in the form of a circle rather than a line. The color wheel is a useful tool in depicting color relationships and allows visual organization of many of the ideas found in the appendix on Color Terminology. All artists utilize color wheels, whether they are studio artists, graphic artists, architects, or theatrical designers. It is a good idea for artists to build their own color wheels, because the process leads one to a deeper understanding of color relationships. For example, complementary colors are colors positioned opposite each other on the color wheel. This placement on the wheel physically demonstrates the relationship that complementary colors hold to each other. For example, when one complement is added to another complement, or when one complement is placed beside another, the intensity or brightness of each color is affected. There are different color wheels for light and pigment, as the primary colors are different on each of these wheels. A detailed description of how to create a color wheel can be found in the exercises at the end of this chapter. Refer to the insert at the center of this book to view the color wheels.

Value—The Use of Black and White

Both black and white pigments are used judiciously on stage because of their light absorption and light reflective qualities. Black absorbs light, which is the reason most theaters have black velour backstage drapes and masking. Black velour curtains absorb any light "spill" and do not reflect stage lighting. When architects and designers wish to make things visually "disappear," they create a void using black fabrics and black paints. The inside of the theater space itself, and sometimes the audience and **front of house** areas as well, are often painted black for this same reason. Scenic designers and scenic painters paint the legs

and undersides of platforms black in an effort to make these elements visually fade away. Backstage crews wear black clothing known as "backstage **blacks**" in order to become less visible. Costume designers use black for much the same reasons, in order to create a uniform look or when they want performers to "vanish." But there are times when the use of black is imperative, such as when costuming nuns or priests, for example. These situations can prove challenging: the color's light absorption characteristics, as well as the presence of black drapes and masking, can make these characters less visible when they need to be otherwise.

Conversely, white has a tendency to reflect any and all light and will draw focus quickly. This can be a potent tool when used effectively, but the use of white can cause a great deal of misdirected focus if used incorrectly. Often designers will resist using true white, instead opting to use a tint of warm or cool white (white with a small amount of red, yellow, or blue added). A tint of white will read white to the audience but avoid the problems caused by true white: misdirected focus and difficulty controlling the lighting balance.

The Psychology of Color

Any examination of the element of color should also include a study of its psychological impact: how individuals respond, intellectually and emotionally, to the symbolism of color. Designers must familiarize themselves with these color associations and acknowledge their power when choosing the color palette for their designs. If the culture of the target audience for the production is different from the designer's, additional research on the psychology of color will need to be done, as color symbolism varies around the globe. Knowing the target audience and developing an understanding of their associations is imperative to avoid miscommunications with the design. See appendix on The Psychology of Color.

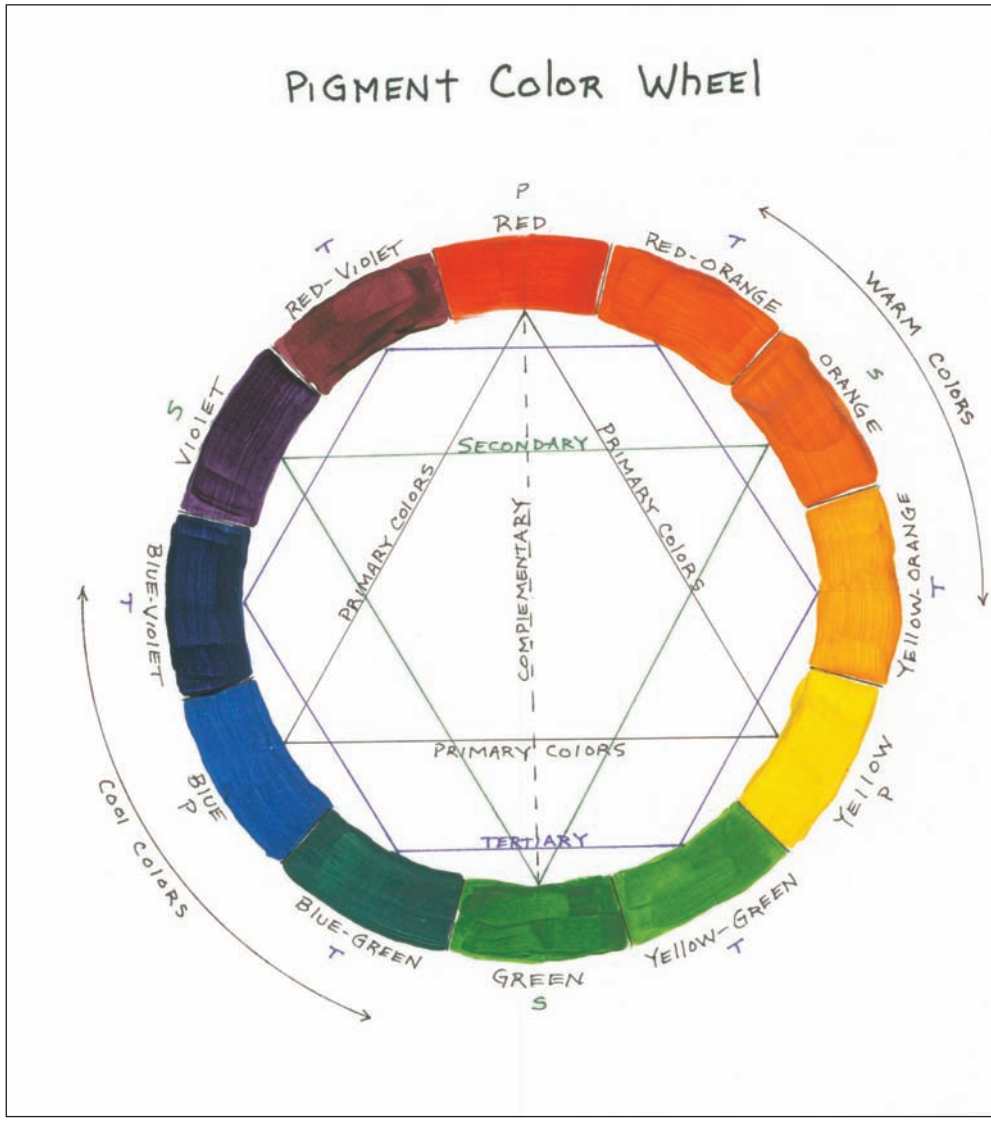
TEXTURE

Texture refers to the surface quality of an object: its relative smoothness, like polished marble and stainless steel, or roughness, like sand, tree bark, and gravel. Texture is related to our sense of touch, either literally or imaginatively. For example, we can touch the side of a brick and feel the sharp and prickly roughness of the object, or we can see a painted replication of a brick onstage and simply imagine that sharp and prickly roughness. When texture is created through painting techniques or from patterned fabrics and involves the sense of

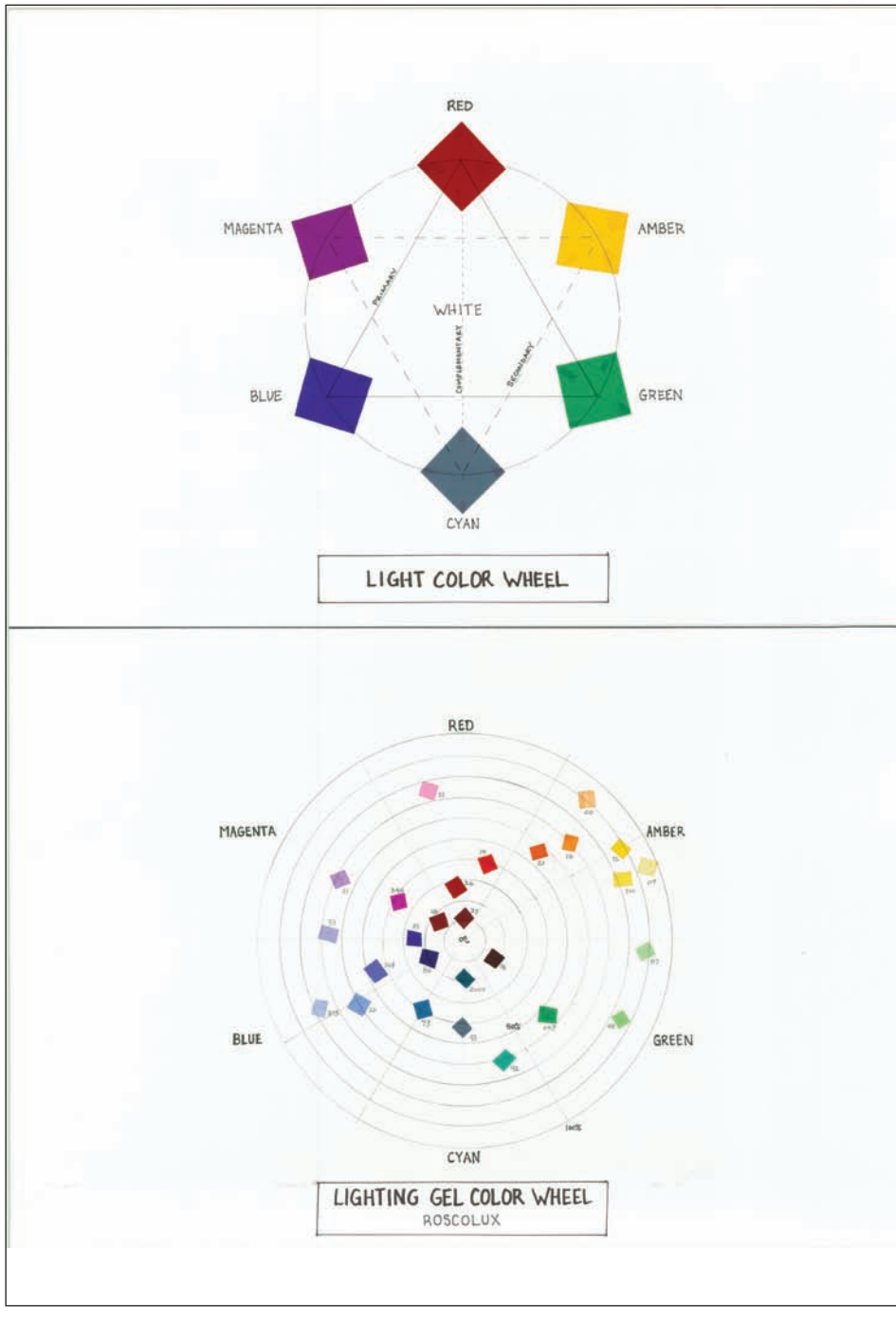
sight rather than touch, it is an implied texture, as opposed to a tactile texture. Fabrics can have both a tactile texture—silk being on the smooth end of the continuum and burlap on the rough end—and an implied texture, articulated through colors, patterns, prints, and weaves. Set and costume designers choose textures that express the feel of the characters and environment. They create a texture palette for the production, similar to a color palette, and can enhance the tactile texture of pieces using painting techniques or by choosing fabric patterns that create an implied visual texture.

Stage light is not something you can touch, feel, or hold in your hand. Therefore, the texture of light is strictly visual. Lighting instruments in good working order have a smooth, even, circular beam of light. Texture in stage lighting is commonly created using an appliance called a **gobo**. A gobo is a thin punched metal sheet that is inserted in the body of a lighting fixture to create a shadow pattern onstage. Recently, glass gobos were developed that create a colored texture onstage. There are literally hundreds of manufactured gobos that will easily create a light and shadow pattern of a foliage design, a star field, or any number of images. Sometimes smoke or fog effects are used to create a texture with light onstage.

We have natural associations with textures. Silks and satins, polished marble, precious metals, and gemstones all have smooth, slick textures that communicate urban wealth and prosperity. Burlap, rough-hewn lumber, and coarse stone communicate rustic, earthier environments. Texture can be expressed in a myriad of ways for a myriad of purposes, through the choice of materials, painting techniques, fabric patterns, or lighting effects. They create visual interest and can give a sense of depth to a scenic element or to a costume. All designers utilize texture because it can be highly informative about the characters and the environment, while enhancing both the mood and theme of a production.



Pigment color wheel showing the interrelation of primary, secondary, tertiary, and complementary colors.



Lighting color wheel and lighting gel swatch exercise showing the interrelation of the colors in light.

The use of color as a way to visually organize and draw focus as demonstrated in *Thoroughly Modern Millie* by Jeanine Tesori, Dick Scanlan, and Richard Morris. Scenic design by Daniel Ettinger, costume design by Amanda Aldridge, lighting design by Craig Zemsky, directed by Richard Rose. Photo courtesy of Leah Prater. A Barter Theatre production.

Nonmotivated lighting used in the Milligan College/East Tennessee State University production of Sophocles's *Oedipus the King.* Scenic design by Melissa Shafer, costume design by Karen Brewster, lighting design by Scott Hardy, directed by Richard Major.

Motivated light from a floor mount in John Steinbeck's *Of Mice and Men.* Scenic design by Cheri Prough DeVol, costume design by Amanda Aldridge, lighting design by Lucas Benjaminh Krech, directed by Katy Brown, photo courtesy of Leah Prater. A Barter Theatre production featuring John Hardy and Mike Ostroski.

Actors Tom Angland, Christopher Salazar, Wendy Mitchell Piper, Robert Kitchens, and Joshua Gibby perform in an environment where texture is evident in scenery, costumes, and lighting. A Barter Theatre production of *Peter Pan* written by J. M. Barrie and adapted by Richard Rose. Scenic design by Charles Vess, costume design by Amanda Aldridge, lighting design by Todd Wren, directed by Richard Rose, photo courtesy of Leah Prater.

SUMMARY

The design elements—point, line, shape, mass, color, and texture—all communicate essential information to the observer. It is important to fully grasp the connotations of the variations of design elements, as they are the tools designers use to communicate emotions and ideas to an audience. In large part, we learn this visual language in the same way we learn verbal language: through exposure to it throughout our lives. Language, both verbal and visual, is learned from birth. And just as verbal and written language skills can be studied to improve vocabulary and syntax, studying visual language tenets can also improve one's ability to communicate visually. For designers, the study of visual language is ongoing and lifelong. Visiting museums and galleries, studying the graphic art on a magazine page or product label, or viewing live theatrical performances are all opportunities to observe and evaluate how the design elements are used. The development of a strong visual vocabulary and command of visual language is essential to becoming an effective designer for the stage.

EXERCISES

Exercise #1 – Natural/Organic Shapes and Textures
Supplies needed: index cards, pencils
Time limit: 30 minutes

- Write the following emotions on index cards, one word per card. When complete, set the stack aside.
  - Despair
  - Joy
  - Tranquility
  - Love
  - Anger
- Take a ten-minute walk outside and collect examples of natural or organic shapes and textures. These can be flowers, rocks, bark, sticks, leaves, or anything found in nature.
- Place all of these collections on a common table. Spend time looking at the shapes, comparing and exploring.
- Spread your index cards out on the table and match the texture and/or shape to the index card that best describes the thought or feeling the object evokes.
- Can you tell from this exercise that certain lines, shapes, and textures predictably evoke certain thoughts and feelings? For example, do angular lines provoke aggressive thoughts and feelings, or do circular lines and shapes express warm and fuzzy thoughts and feelings? Make notes of your observations.

Exercise #2– Exploring Collaboration and Elements with Squiggles, Dots, and Shapes
Supplies needed: friends, paper, pencils, pens, or markers
Time limit: 15 minutes

- For this exercise, you will need a group of friends. It is important to work in complete silence, without verbal communication, and for each participant to take no more than thirty seconds for each turn.
- Starting with three clean sheets of paper, each person will make a mark on each of their three sheets of paper: a dot on one, a line or squiggle on the second, and a simple shape on the third.

- When all the marks are complete, the sheets of paper are passed to the friend on the right.
- The second person adds to what the first person did by doing something very simple (one move) to the sheets of paper—keeping to the theme of either squiggles, dots, or shapes—then passes it to the third person.
- This continues until each person has had four turns on each and every squiggle, dot, and shape sheet of paper.
- Evaluate the end results.
- How did you feel when you made changes to another's work? How did you feel when someone changed your work? What kinds of insights into the nature of collaboration did you make?

Exercise #3A – Pigment Color Wheel
Supplies needed for #3A-C: Illustration board or watercolor paper (at least 9" x 11"), watercolors (containing red, blue, yellow, black, and white) protractor, compass, pencil, ruler, black fine point marker (see appendix on Color Terminology).

The creation of a color wheel begins with a mathematically precise, geometric circle at least six inches in diameter. The placement of color on a color wheel visually represents the mixing of pigment colors.

- Divide sheet of watercolor paper in half both lengthwise and widthwise using pencil lines. The point where these two lines intersect will be the center of the color wheel.
- Place the point of the compass where the two lines intersect at the center of the paper. With this compass, carefully draw a complete circle at least six inches in diameter.
- Now that you have drawn two intersecting lines and a circle, notice that the intersecting lines divide the circle into four parts. You will now begin to plot points on the circle where colors will be placed. The first four plots are located where the lines intersect the circle: Red goes top center, yellow-orange goes right, blue-violet goes left, and green goes bottom center. Mark each location lightly with pencil.
- Using a protractor, mark additional thirty-degree angle increments on the circle, starting with red and moving around the circle clockwise, marking each thirty-degree step with the pencil. You will see when finished that the circle is divided into twelve evenly spaced "pie slices."

- Temporarily label with the pencil each of the twelve marks as follows, beginning with red, top center, and moving clockwise around the circle in this manner: red (top center), red-orange, orange, yellow-orange, yellow, yellow-green, green (bottom center), blue-green, blue, blue-violet, violet, red-violet.
- Now that the color wheel is lightly drawn with pencil, it is time to start painting. (If you are unsure how to use watercolors, look up "beginner watercolor" on the Internet. There are numerous sites available.) The first step is to paint the primary colors on the wheel: red, yellow, and blue. Place small circles or squares of paint centered on the pencil mark for that color—be sure to be precise.
- The next step is to paint the secondary colors: orange, green, and violet. One part yellow mixed with one equal part of red creates the color orange. This is represented by placing orange equidistant between red and yellow on the color wheel. The same holds true for the colors green and violet: green is placed on the color wheel exactly halfway between the primaries yellow and blue, visually demonstrating that green is equal parts yellow and blue, and violet is placed exactly halfway between blue and red on the color wheel, showing how that secondary is created. Exact placement of each of the primaries and secondary colors is essential to the success of this chart. (The process of creating a color wheel is more enriching if the secondary and tertiary colors are carefully mixed using the primary paints, rather than using premixed pigments. It is helpful to mix the colors on a separate tray, painting the color on the wheel only after the desired color is created on the tray.)
- The third painting step is to mix the tertiary colors and place each exactly halfway between the secondary colors and each primary. Red-orange will be placed on the color wheel at the exact midpoint between red and orange, demonstrating that red-orange is created using equal parts red and orange. Red-violet is placed at the exact midpoint between red and violet, and so on. Again, exact measurements and exact placement, as well as careful color mixing, are imperative to the success of the chart.
- After placing all primary, secondary, and tertiary colors, the color wheel is considered close to complete. After all desired colors are painted, the chart should be labeled. The labels should indicate the following:

- Primaries—often indicated by drawing a triangle in the center of the color wheel connecting these three points and labeling it "primary colors."
- Secondary colors—often indicated by drawing a triangle in the center of the color wheel connecting these three points and labeling it "secondary colors."
- Tertiary colors—often indicated by drawing a hexagon in the center of the color wheel connecting the six colors and labeling it "tertiary colors."
- Warm colors—indicate this on the side of the color wheel where reds, oranges, and yellows are located.
- Cool colors—indicate this on the side of the color wheel where blues, greens, and violets are located.
- Complementary colors—often indicated by drawing a straight line between one of the primaries and the color opposite the wheel, for example, red and green.

Exercise #3B – Value Chart

A value chart shows tints and shades of one color. A "tint" is created when white is added to a color, and a "shade" is created when black is added to a color. Value is the lightness or darkness of a color.

- Draw a straight line on the watercolor paper. Mark eleven steps in one-inch increments on this line. The value steps will be painted neatly on the pencil line at each one-inch marker, with one unaltered primary color in the center of the line, five added tint steps on one side, and five added shade steps on the other.
- Create the tint portion of the chart by choosing one primary color and then adding drops of white to that color in methodical and equal increments. Create at least five steps, painting a small amount of each mix on each one inch mark.
- Create the shade portion of the chart by adding drops of black to the primary color in methodical increments and adding each mix to each one inch mark.
- Label the entire set "Value Chart" and indicate "tints" and "shades."

Exercise #3C – Intensity Chart

An intensity chart shows two colors, a primary and its complement, mixed together in a step-by-step way in order to show an adjustment in brightness. Intensity is the brightness or dullness of a color.

- Draw a straight line on the watercolor paper. Mark ten steps in one-inch increments on this line. The intensity steps will be painted neatly on the pencil line at each one-inch marker, with one unaltered primary color on one end of the line and the primary's complement on the other (for example, red and green).
- Methodically add drops of the complementary color to the primary in small and equal increments, mixing on a tray until the desired color is obtained, then transferring to the paper. The first mark will show the primary with one drop of complement, the second with two drops of complement, and so on. Create five to ten steps in this fashion, painting a sample of each new mix to each one-inch mark.
- The colors should progressively get duller as more and more complement is added to the primary.
- Label the finished chart Intensity Chart.

Exercise #6 – Lighting Gel Color Wheel

Supplies needed: illustration board at least 12"x12" in size, gel swatch book, protractor, bow compass, pencils, ruler, scissors, and glue stick

- Find the vertical and horizontal center on your sheet of illustration board and draw light guidelines.
- Using the bow compass, draw ten concentric circles radiating out from the center of the board. The innermost ring should be circle with a one-inch diameter. Increase the radius by half an inch on each concentric circle. The outermost ring will be ten inches in diameter.
- Using the protractor, divide the circle into six equally spaced pie pieces. (Every sixty degrees there will be a division.)
- Starting at the top of the wheel, label the divisions clockwise as red, amber, green, cyan, blue, and magenta. At this point you should have what resembles a bull's eye labeled with the primary (red, blue, green) and secondary (magenta, cyan, amber) colors.

- Label the center of the bull's eye as 0 percent. Label the outermost ring as 100 percent. This notation represents the transmission rate of each gel. (The percentage of light that passes through the filter.)
- Take the gel swatch book and select and cut small samples of gel that are as close to the primary colors as possible. Make note of the transmission information provided with the swatch. (If the transmission rate is not given, approximate the information to the best of your ability by eyeing the samples in relation to each other.)
- Glue the samples on the wheel on the appropriate color location and transmission ring.
- Label the sample with the manufacturer's gel number.
- Repeat the procedure by selecting secondary colors.
- Repeat the procedure again by selecting samples of colors that have the least and the greatest amount of transmission.
- Continue the process as desired. Your wheel should have no fewer than twenty-five samples.
- When creating complementary color washes onstage, it is advisable to match transmission rates. How can information obtained by creating lighting gel color wheel help in selecting color for a production?

Chapter 6

Design Principles and Visual Composition

Designers achieve desired results by manipulating the design elements discussed in chapter 5 to create the design principles explored in this chapter. These terms, *design elements*, *design principles*, and their subsequent categories, provide artists with a common vocabulary describing the visual aspects inherent in any art form. Just as eggs, butter, flour, and cream are combined to create cake, bread, or pudding, the design elements known as point, line, shape, mass, color, and texture are combined in different ways to create a myriad of different effects. These resulting combinations are identified as the following design principles: balance, proportion, rhythm, variation and contrast, and unity and harmony.

It is important to note that all of these design principles are very closely aligned and work together symbiotically. For example, balance is affected by contrast, rhythm influences unity, and variation can have a strong impact on the proportion of any theatrical design. Every design principle has the potential to complement and reinforce the effects created by the other principles. Designers learn to use each of these tools independently as well as collectively in order to communicate specific ideas to the audience.

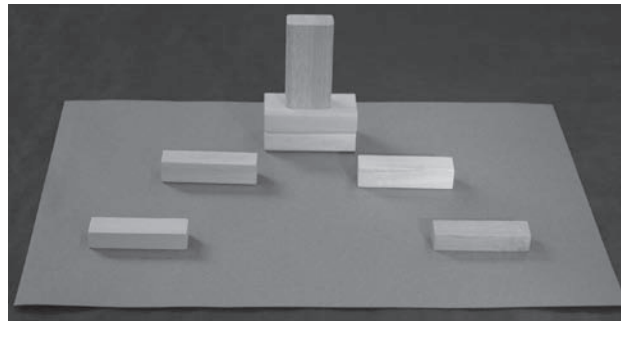
The design principles are inherent in every work of art. They impart organization, structure, and visual "meaning" to the basic design elements. Design principles can often be difficult to conceptualize and control, particularly for beginners. To add to the confusion, terminology is often inconsistent. For example, one source may use the terms *gradation*, *repetition*, and *dominance* while other sources (like this one) use the terms "variation," "rhythm," and "proportion". Beginners must realize that these terms are all endeavoring to describe the same visual phenomena. The exact terminology used is less important than a lucid understanding of the visual tenets the terms are attempting to describe. A thorough understanding of these principles, regardless of terminology, is essential to becoming an effective theatrical designer. By starting with the basics and learning the building blocks of design (commonly called the design elements) and how they combine effectively (commonly called the design principles), the design student can, in time, through experimentation and implementation, learn to create purposeful, effective, and unified stage productions. This chapter will describe each of the design principles individually, and then attempt to describe how the

principles aesthetically relate to other principles within a theatrical design context—otherwise called visual composition.

BALANCE

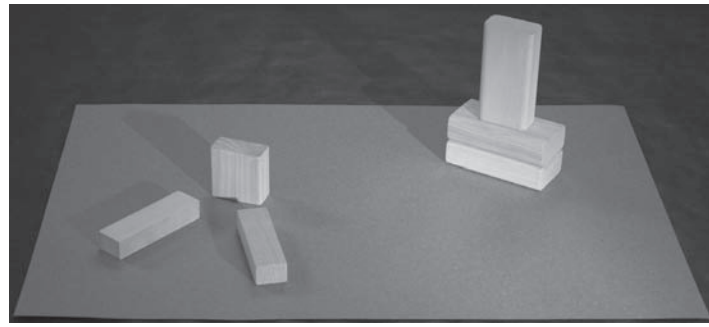
Balance can be defined as an equalizing of weight, number, mass, or volume. In theatrical design, we consider the principle of balance in visual terms. There are three ways visual balance can be achieved: symmetrical balance, asymmetrical balance, and radial balance. Each of these communicates certain inherent and distinct emotional qualities.

Symmetrical balance (also commonly known as formal balance) involves the repetition of visual elements on opposite sides of a defined or implied centerline. These elements can be the same size, the same shape, the same position, or the same color. Designs employing symmetrical balance impart a great sense of formality, order, stability, and predictability. Many environmental examples exhibit this design principle: classical Greek and Roman art and architecture, most of the U.S. government buildings in Washington DC, American military dress uniforms, courtrooms, and church sanctuaries usually give a sense of symmetry in their use of line, shape, and mass. However, symmetrical balance can appear static and boring if not carefully applied. Designers can avoid the static quality often found in formal balance, if this quality is not desired, by additionally utilizing the principles of variation and contrast described later in this chapter. For example, a simple variation of shape or change of color can make formal symmetrical designs much more dynamic.



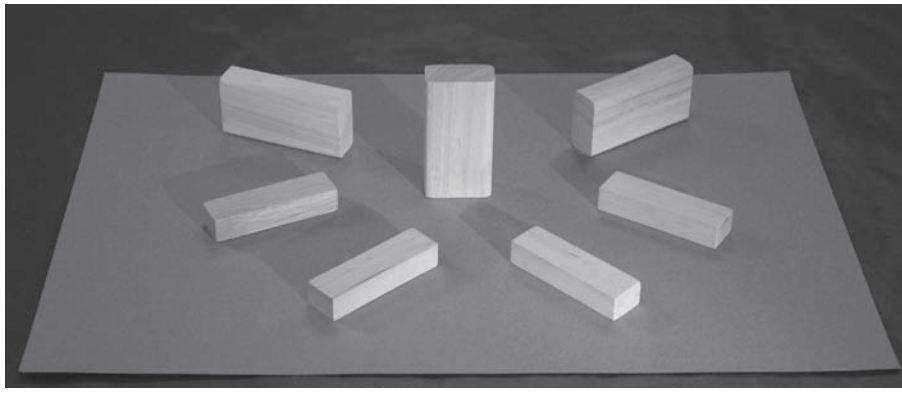
Example of symmetrical balance

The second type of balance, asymmetrical balance, also involves the repetition of elements on the two sides of a defined or implied centerline, but, unlike symmetrical balance, the objects are not the same mass, shape, color, or size in asymmetrical balance. We can visualize asymmetrical balance by imagining two very different-sized kids on a seesaw. Physical balance can be achieved on this seesaw by the careful placement of the kids on either side of the seesaw fulcrum or the centerline. We achieve visual asymmetrical balance in much the same way. For example, the designer can place a larger, dull-colored mass on the upstage right side of the stage and asymmetrically balance this with a much smaller and more brightly colored object on the downstage left side of the stage. As with the kids on the seesaw, effective placement of these objects or persons is the key to achieving a sense of successful visual balance. The feeling created when employing asymmetrical balance is naturally more dynamic and less formal than when symmetrical balance is used. Asymmetrical balance is often a more visually interesting approach for this reason.



Example of asymmetrical balance

The third category of balance described in this chapter is radial balance. Radial balance can be described as having visual "rays" coming from a common center. The daisy, with its ring of petals, is an example of radial balance found in nature. This approach to visual balance imparts a distinctive and highly dynamic feeling. A sense of energy and movement is implied when this technique is adopted, and a strong sense of visual focus is easily achieved using this principle. Musical theater, children's theater productions, and many nonrealistic pieces readily lend themselves to this visual approach. Plays in which the universe revolves around the central character, such as an expressionistic piece, can be thematically reinforced when using the principle of radial balance.



Example of radial balance

It is very difficult to create compositions that contain no sense of balance, though there are indeed situations where a visual "lack of balance" is the best choice. We naturally seek a sense of order, proportion, and balance in visual compositions and in life itself. Because of this natural inclination, designs with a deliberate lack of balance tend to put us on "edge". Each method of achieving balance outlined above communicates a different feeling. And conversely, creating a design that seems unbalanced also communicates a distinct feeling. As you experiment with balance through these various methods—symmetrical balance, asymmetrical balance, and radial balance—pay special attention to the feeling that each imparts.

Symmetrical balance in the scenery and blocking as demonstrated on set of *Forever Plaid* written and originally directed and choreographed by Stuart Ross. Scenic design by Dale Jordan, costume design by Kelly Jenkins, lighting design by Michael Barnett, directed and choreographed by Robert Randle. Kevin Green, Steven Douglas Stewart, Patrick O'Neill, and Chris Vaughn as the Plaids. Photo courtesy of Leah Prater. A Barter Theatre production.

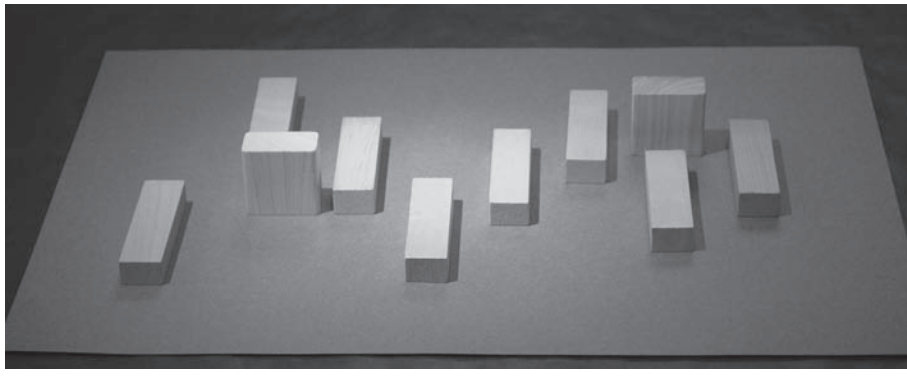
PROPORTION

We can define *proportion* simply as the scale of objects as they appear in relation to each other. The *Merriam-Webster Dictionary* defines *proportion* as "a relation of parts to each other and to the whole with respect to magnitude, quantity, or degree". Whether objects or performers appear large or small, full or thin, imposing or diminutive to an audience is a relative experience; and as human beings, we naturally tend to measure the parts of our world in human scale. Visual proportions are relative: human-sized things are "average," and larger than human-sized things are considered "large," and so on. (If we were insects, our shared innate sense of proportion would be totally different.) This is important to note, since theater is about human beings and human feelings, and so the proportions used onstage, typically, are based on a human-sized scale. Designers will often deliberately play with this innate human scale by making "larger than life" or "smaller than life" choices in order to express a thematic idea.

The principle of balance and the principle of proportion share a particularly close relationship. Designers often use both proportion and balance in partnership to facilitate visual focus, or to create a point of interest. For example, if you can imagine a major performer standing in a spotlight downstage right wearing an oversized bright yellow hat, and a chorus of supporting characters standing together in dim lighting upstage left wearing smaller dark brown hats, then you have imagined a situation using both proportion and asymmetrical balance in order to emphasize the focal point in the blocking arrangement.

RHYTHM

Rhythm can be a physical, an aural, and a visual experience. Human beings instinctively respond to the design principle of rhythm. From the earliest days in our mothers' wombs, rhythm and movement shape our lives. Visual rhythms suggest physical sensations, beats, or sounds. We relate to these rhythms in an instinctual way, much like we relate to a heartbeat, blinking eye, or other rhythms of nature. Visual rhythm can be established by a repetition of line, shapes, color, texture, or space. Repetition also creates a sense of speed and movement. Our eyes naturally follow rhythmic patterns; as a result, movement, direction, and focus can be established through the use of rhythm. Effective designers learn to manage qualities of rhythm, movement, and direction in their designs in order to better communicate mood, theme, and story.



Example of visual rhythm

Just as actors and directors divide their play scripts into "beats," designers must analyze scripts for the implied rhythms. Designers utilize the principle of rhythm to reinforce pacing in the script by attempting to recreate that pacing through visual means. This visual rhythm will have an implied speed and movement. For example, a pattern that is closely spaced and highly repetitive will have a faster sense of rhythm and movement than a pattern that has fewer elements more widely spaced. Rhythmic patterns can also impart mood. A pattern that is simplistic and predictable communicates a certain mood or idea to an audience, whereas a pattern that is complex and erratic communicates a very different mood or idea.

Visual rhythm used in the set for *Of Mice and Men,* written by John Steinbeck. Scenic design by Cheri Prough DeVol, costume design by Amanda Aldridge, lighting design by Lucas Benjaminh Krech, directed by Katy Brown. Performers: Eugene Wolf, John Hardy, and Ashley Campos. Photo by Leah Prater. A Barter Theatre production.

The use of rhythm in the play version of John Steinbeck's novella *Of Mice and Men* expresses the extreme ups and downs of life among migrant field workers in California during the Great Depression. The two main characters, Lennie and George, represent the extreme hardships faced daily by individuals living during this difficult period in American history. They dream of living predictable and stable lives, but instead find that due to economic and physical circumstances, life becomes anything but secure and conventional. Their ups are found in their dreams of better lives, and their downs come with

the harsh realities of economic hardship. Lennie and George are a study in contrasts, both in physical size and intellectual abilities. The characters, the structure, and the action of the play all employ a juxtaposition of contrasting characteristics: large and small, complex and simple, violent and gentle. These contrasts give the play a distinct and unpredictable rhythm. Effective designs for any production of *Of Mice and Men* express these juxtapositions visually by alternating rhythmic extremes—expressing in visual terms the ups and downs found in Steinbeck's world.

VARIATION

Designers employ variation by changing the form, position, or condition of any of the design elements, thereby altering the visual status quo. For instance, a series of short lines interrupted by a long line, or a series of circles with an intermittent rectangle, or even simple, undulating shapes or colors methodically mixed with straight lines are examples of variation. Visual variety in a design not only enhances visual interest but can also be used to establish a point of focus. By successfully employing the principle of variation in a design, we have the ability to control when and where audience attention is directed at any given point in the play. Judicious use of variety establishes focus at key dramatic moments, thus supporting and expressing the text in a visually meaningful way.

To illustrate the principle of variation, imagine a large musical chorus onstage dressed in blues and greens. The group is lined up in order of blue, green, blue, green, blue, green, and so on. As the group moves, the patterns will most certainly change. Perhaps the pattern becomes blue, blue, green, green, blue, blue. Let's say the lighting on this group reinforces this blue and green palette with soft washes of cool color. Now imagine adding to this large, ever-changing blue and green group one lone performer dressed in red. The performer in red may be isolated in a warm spotlight. The audience's attention immediately goes to this performer in red because of the high contrast (extreme variation) between the large cool group of blues and greens and the warm individual in red. In this simple scenario we see the design principles of variation and contrast at work in tandem to successfully create a point of interest in a scene.

Contrast, a Subcategory of Variation

The principles of variation and contrast are closely related concepts, and when we utilize contrast, it is true that we are also employing variation. Contrast conveys variety, but variety does not necessarily impart obvious contrast. Some

designers think of contrast as a subset to variation because contrast can be described as variation taken to the extreme.

For designers to successfully appreciate and use contrast as a tool, they must first understand what the term *contrast* actually means. The *Merriam-Webster Dictionary* defines contrast as "diversity of adjacent parts in color, emotion, tone, or brightness". In other words, with the principle of contrast, designers situate things that are very dissimilar close to each other onstage in order to create a visual impact by maximizing the juxtaposition of extremes. Visual extremes are the name of the game when employing the principle of contrast: lights next to darks, large next to small, or rapid next to slow, for example. The greater the contrast, or diversity, one object has from the other objects in the composition, the more that object is apt to get the audience's attention or draw focus. The ability to control where audiences focus attention at key moments during theatrical performances is a very powerful tool.

Most dramatic action involves some conflict between characters in the play. When designers effectively employ the principle of contrast, or extreme variation, in their designs, the conflicts between characters in the script can often be clearly expressed. For example, in Tennessee Williams's play *A Streetcar Named Desire,* Blanche and Stanley are constantly at odds with each other. Blanche is an ethereal female, very fragile and emotional. Stanley is the opposite, often viewed as an example of harsh male brutality. In perhaps the most famous scene in the play, Stanley is typically presented bare-chested or in a sleeveless undershirt, and in work pants. Blanche is typically costumed in a gauzy, layered, flowing dress. The contrast of the line, mass, and textures of the costumes reflects and supports the contrast in the characters.

UNITY

In order to communicate ideas and feelings clearly to the audience, it is important that all elements within a set design, costume design, or lighting design are unified—that they all appear to be of the same world, telling the same story. It is equally important that each of the design areas is unified with the other design areas within the production—costume with scenery with lighting. Unity is defined as the state of being undivided, unbroken, and complete. When a design is unified, the key elements have a sense of belonging together, a quality of "oneness." Unity is also described as the application of all parts of a composition to a single main idea. When a production design is unified, the individual design aspects (costume, scenery,

lighting) work together in an organized way and do not fight each other for attention. Instead, they visually complement each other in a coordinated effort to express the agreed-upon production concept.

There are many ways to ensure a production design is unified. One is to apply one design element consistently the same way across the board. For example, the color red may be used consistently (though not exclusively) throughout the costumes, set, and lighting. When employed in this way, color becomes a unifying element to the overall production design. Any of the design elements discussed in chapter 5 can be used as a unifier. The choice and application of a unifying element is often based on a significant idea extracted from the production concept. For example, a production concept for Shakespeare's play *A Midsummer Night's Dream* may be the power of love and nature over societal restrictions. In this case, opening scenes with the Athenians may make use of lines that are straight, heavy, and restrictive. As they move into the forest, the use of line in scenery, costumes, and lighting may become progressively more light and curvaceous.

Designers should not confuse unity with lack of variety. When a theatrical design is unified, that does not mean that there is no variety. It just means that the elements conform, or visually "make sense" together. If a design lacks variety, it may indeed seem unified, but it will not be dynamic. It risks appearing static, boring, and uninteresting. A strong collaboration among the production team members (director, musical director, choreographer, designers) during the early stages of production planning will most likely yield a *unified* production design.

Harmony, a Subcategory of Unity

Many designers consider harmony to be an aspect of unity. Harmony is defined as a satisfying arrangement of parts consisting of complex but pleasing visual combinations. Harmony in the design implies agreeability and is the utmost positive application of unity in design. A theatrical design is considered harmonious if it is pleasing to the senses; it seems to belong and is appropriate or right for the stage production.

A distinction must be drawn between the principle of unity and the subcategory of harmony. It is possible, and sometimes preferable, for a production to have aspects that appear to be of the same world that are not pleasing or satisfying. If the main theme of the play is one that runs counter to a feeling of harmony, the designer will often intentionally create a design that is not harmonious. However, that design must still be unified within itself and with the other components in the production. It is always important to

remember that even when attempting to indicate discordant themes through nonharmonious design element combinations, the production aspects must still appear unified.

Unity, harmony, contrast, and variation in the scenic and lighting design of Barter Theatre's production of *Four Places,* written by Joel Drake Johnson. Scenic design by Derek Smith, costume design by Adrienne Webber, lighting design by Cheri Prough DeVol, directed by Richard Rose, photo courtesy of Leah Prater.

VISUAL COMPOSITION

When we compose things visually, we purposefully put together design elements in order to create an arrangement of pictures or compositions; this should always be governed by a keen awareness of the principles of design. Theatrical designers collaboratively create visual compositions in an effort to tell the playwright's story and to support the work of the performance artists. In addition to the actors, these artists can consist of the director, the choreographer, the fight choreographer, and the musical director. Costume, scenic, and lighting designers should always keep the work of these performance artists in mind when creating their designs, as these artists, in particular the director and choreographer, will be completing the visual compositions onstage through the blocking of the performers. Communication between the performance team and the production team is

the key to the success of any theatrical venture, and it is considered a failure on the part of the designers when proper visual support for the work of the performers isn't provided. In Broadway productions, and even in film, this support for the work of the performance team is apparent and usually achieved so effectively that audiences take it for granted. As is the case in all things, experienced professionals make the work look easy. In actuality, the process of effectively coordinating the design elements and principles, collaborating with the other designers, and supporting the work of the performance artists involves a very complex orchestration of skills.

It probably seems obvious by now that the processes of theatrical design and visual composition for the stage are governed by many of the same visual tenets that are followed in the various fields of studio art, sculpture, fibers, and painting, for example. The design elements and the design principles discussed earlier are, in fact, borrowed from these disciplines. Since theatrical design is also an artistic medium, distinct in that it is collaborative and transitory, it only makes sense that many of the codes found in the art world apply in the theater world. It may be helpful now to discuss some additional tenets relating to visual composition and how they specifically relate to the environment of theatrical design.

Positive Space and Negative Space

The figures or performers and objects that inhabit any visual composition occupy what is known as the positive space. Negative space (commonly known as white space in the field of graphic design) is the blank space where no objects or performers reside. Judicious manipulation of both positive and negative spaces affords the observers' eyes and brains time to"rest between stimuli," in order to allow the stimuli greater impact. Just as musical composers think of using rests when making music, so too must painters, graphic artists, and theatrical designers think of the voided as well as the filled spaces when creating visual compositions. An extra challenge exists for theatrical designers in that their negative spaces are often in flux, thus adding another layer of complexity to their designs.

It is common for beginning designers to focus primarily on filling positive space, and to ignore the importance of negative space. Negative spaces can generate their own "shapes" and should be considered with equal attention. Designers should ask themselves: Are the negative spaces in my designs vertical, diagonal, or horizontal? Are the negative spaces geometric or organic? Do the negative spaces complement the positive spaces I am

creating by reinforcing the established themes and moods? What happens visually when the actors inhabit the stage space—how are the positive and negative spaces impacted by their presence? The actors will move through the negative space as they move from object to object onstage. How does the shape of the negative space affect their movement patterns? As designers gain experience, they come to realize and appreciate the power of the negative space, and think as much about what is left "blank" as they do about the spaces they are filling when creating designs.

Rule of Thirds

There are many other things to consider when composing a design in addition to the use of positive and negative spaces. Designers should keep in mind other tenets, such as, "Diagonal lines are generally more dynamic than horizontal or vertical lines in a theatrical design," and "Odd numbers of objects are more interesting than even numbers." Another rule to consider when making powerful theatrical designs is called the rule of thirds. This "rule" is a composition standard consistently used by photographers, painters, and graphic designers, and is also acknowledged by many theatrical design professionals. What it basically means: Divide the entire "canvas," actor, or stage space, into equal thirds, both vertically and horizontally (you can do this mentally or by drawing it on a piece of paper). According to this rule, designers should place significant visual elements at the intersections of the six lines created in these divisions in order to achieve maximum visual impact.

Western Audiences Read from Left to Right

Our reading mode (left to right in Western cultures, right to left in Eastern) impacts the designs and artworks we create. This fact has a tremendous impact on how audiences absorb works of art. It is a commonly accepted notion by many Western studio artists that viewers visually "enter" a work of art on the left-hand side and "exit" on the right-hand side. Some studies even suggest a more specific point of entry by claiming that viewers visually enter a work on the *lower*-left side and visually exit the work on the *upper*-right side. For Eastern artists and viewers, the opposite is true. Like studio artists, theatrical designers should also acknowledge the possibility that Western audiences "read" their designs from left to right. Because of this phenomenon, some would argue that the most "comfortable" position onstage may well be *down right* (house/audience left) and one of the least commanding positions may indeed be *up left* (house/audience right). Very powerful positions, of course,

are located in the middle of the work: *up center* and *down center*. (*Up center* is particularly strong on a costume as it is near the actor's face.)

Designers and directors in Western cultures can purposefully create discomfort by working against this socialized inclination to read left to right, deliberately placing key items in their designs so audiences have to "read" the design from right to left. This going against the natural grain is useful in plays where disturbing themes are present, or in scenes where murder and mayhem are about to ensue.

Point of View

This aspect of style is a term commonly used in literature as well as in the arts. Since theater arts by their very nature link the literary and the artistic, for our purposes the term denotes two simultaneously occurring yet differing features: the more abstract, thematic, or literary point of view and the physical, technical, and artistic perspective known as the "angle of vision." All painters, photographers, and theatrical designers choose, either consciously or intuitively, both literary and artistic points of view when they create art.

Together, these literary and artistic points of view have an intimate relationship; one influences the other, and it is sometimes hard to see where one perspective starts and the other perspective ends. It is easiest to just use the term *point of view* to refer to both perspectives inclusively. Even so, designers must keep in mind that the literary perspective is the point of view communicated *through* the work (the themes and moods held by both playwright and designer and communicated through the design). The artistic perspective takes into account the actual visual angle or viewpoint of the audience (*what* they really see and the *way* they see it). Many designers work intuitively where point of view is concerned, but it is helpful for designers to be aware of the significance of this stylistic aspect when making designs for stage.

Less is More

A greater impact is achieved when we keep it simple, appropriate, and efficient. In other words, a little bit goes a long way. Today many theater professionals regularly adopt this phrase into their working philosophies, seeing it as a succinct idiom that expresses the need for a lucid, well-organized, and proficient artistic expression. A closely related term is *synergy*. Synergy basically means that the whole is greater than the sum of the parts. Theatrical design is a collaborative undertaking, so when designers employ the "less is more" philosophy to their works, they most likely are creating synergistic

designs. To truly enact the "less is more" principle, all aspects onstage must work together efficiently (synergistically) to create the desired effect. Ideally, theater artisans incorporate both ideas ("less is more" and synergy) when creating visual compositions for the stage. It is a sign of experience and skill when designers are able to consistently and deliberately "say a lot" with only a few elements.

Summary

It is not necessary for designers to follow any of the previously mentioned compositional "rules" religiously. However, it is necessary for designers to understand all of these standards (as well as the elements and principles of design) and be proficient in their use. Designers will even break the rules deliberately because a particular project dictates such an approach. Creating art that is rife with meaning and feeling means creating compositions that capture the audience's attention and imagination. Theater design involves interpreting a literary work, the play script, and transporting an audience into the world of that play. That interpretation relies on the artist's command of the elements and principles of design in order to manipulate them into an evocative work of art. Creating designs for the stage involves a complex orchestration of diverse technical and artistic skills.

EXERCISES

Exercise #1 – Balance:
Supplies needed: building blocks, construction paper, notebook, and pencil
Time limit: 10 minutes

- Write down the phrases "symmetrical balance", "asymmetrical balance", and "radial balance."
- While keeping these words and their definitions in mind, on three separate sheets of black construction paper create three-dimensional compositions out of building blocks (colored construction paper can be used to create two-dimensional compositions if blocks are unavailable) that demonstrate each of the three types of balance.

- View your compositions. Now list adjectives under the headings (symmetrical balance, asymmetrical balance, and radial balance) that describe the feeling each composition imparts.

Exercise #2 – Proportion:
Supplies needed: construction paper, notebook, and pencil
Time limit: 10 minutes

- Cut similarly sized organic or geometric shapes out of construction paper.
- Choose one shape and cut two similarly shaped pieces, one much larger and one much smaller, out of the paper.
- Place these objects in a row on the paper. Do the differently sized shapes draw focus?
- Now take the larger shape and place it in the foreground. Take the smaller shape and place it in the background. Is there a sense of depth that emerges?
- Now take your shapes and create several compositions.
- View your compositions. What kinds of relationships stand out? Do any create an interesting sense of depth?

Exercise #3 – Variation
Supplies needed: Post-it notepad with ten pages, notebook, pencil, colored pencils
Time limit: 30 minutes

- Create a flipbook that demonstrates how variation is used in animation to create movement.
- Begin with an easy subject: for example, the phases of the moon, a moon in orbit around a planet, a frowning face changing into a smile, or stick-figure tennis match.
- On a sheet of notebook paper, make a grid with ten squares. This will become the storyboard for the flipbook.
- In the first square, draw your subject.
- In each subsequent square, plan out the slight variations on the preceding drawing that will create the animation.

- Transfer the storyboard onto the pages of the Post-it notepad. It is helpful to begin with page 10 so that it is easily referenced when drawing page 9, and so forth.
- When all ten pages are drawn, flip through the animation.
- Now go back and add some static element such as a background or border. Does the static background make the animation more interesting?
- Using color pencils, try adding a color to the animation. Does the added element of color add to the visual interest?

Exercise #4 – Visual Composition
Supplies: magazines, tracing paper, ruler, pencil
Time limit: 20 minutes

- Take five minutes and collect two photographs (visual compositions) from magazines, postcards, or books.
- Using tracing paper, a ruler, and a fine point pencil or pen, draw an outline of the perimeter or format of the photograph (should be a rectangle or square).
- Within this outline, using a ruler and a pencil, divide the rectangle on the tracing paper into thirds horizontally and vertically. The result should resemble a tic-tac-toe grid.
- Lay the tracing paper grid over the photograph.
- Does the visual composition follow the rule of thirds (are key visual elements located at the intersections of the vertical and horizontal lines)?
- Do you think the rule of thirds compositions are more interesting than the ones that do not follow this rule?

Chapter 7

Scenic Design

Scenic design is the creation of the physical space of the play, dance, or opera. It is the conception of the environment where the story takes place and where the characters come to life, where they live and breathe. Scenery must clearly depict the when and where of the action, and it must also reflect the style of the production. Like all the components that go into the production of a play, scenery assists in telling the story.

The scenic designer is responsible for the visual look of the entire stage. That responsibility extends beyond the flats, platforms, and the painted **drops** of the scenery and includes the furniture, set props, set dressing, or decoration (window treatments, knickknacks on shelves, pictures on walls) and stage masking. In larger production companies, there may be a properties designer in addition to the scenic designer on staff. When that is the case, the set designer works very closely with the properties designer regarding the overall look and feel of the set dressing and hand properties, ensuring that the visual elements of scenery and properties are unified.

A successful scenic designer must possess both verbal and visual communication skills in order to effectively express design ideas. She or he must also have an understanding of theater production, how the collaboration of theater happens, and the technical processes of bringing a production to life. The ability to identify and solve problems is also a large part of the scenic designer's work. But in order to create artful works, perhaps the most important aspect a designer must possess is a curiosity about other cultures and the lives of other people, both contemporary and historical. In order to create an alternate reality on the stage, one must be able to embrace different perspectives and have empathy towards other people and other cultures. This needs to happen as objectively as possible and without judgment. The story and the concept must take center stage.

THE DESIGN OBJECTIVES AND SCENIC DESIGN

Place, Locale, Time, and Period

The beginning of every theater project begins with an idea. Typically that idea takes the form of a script, but occasionally the project may be concept based: for example, a piece of choreography or an improvisational work. Regardless, the first step of the project for all of the various members of the production design team is immersion in that script, idea, or concept. As explained in the chapters on script analysis and research, reading the script and compiling a list of the given circumstances and the production objectives is the starting point for developing a design.

The most obvious production objective for scenic design is place and locale, as the scenery creates the physical environment for the action of the play. The layout of the scenery on the stage facilitates the actor's movement, or blocking. It determines whether the actors will be in close proximity, circling each other as they spar, or making a grand sweeping entrance down a staircase. The scenery is also one of the audience's first indications as to the style of the performance. When the curtain rises on a realistically detailed 1960s living room, or even a 1960s living room constructed completely out of books, the audience is immediately informed about the presentational style of the production. No matter the style, scenic designers attempt to create the world of the play, the place where the characters live, be it a very realistic fourteenth-century castle dining hall or a heavily stylized twenty-fifth-century spaceship. In many play scripts, the objectives of place and locale are readily apparent and are often the second piece of information mentioned in the script, after the list of characters. For instance, in Sarah Ruhl's *Dead Man's Cell Phone,* the place in scene 1 is "an almost empty café," and then in scene 2 "a church." Later, in scene 6, Ruhl writes, "at the stationary store. The supply closet," eventually ending up in part 2, scene 4 indicating both place and locale with "at the airport in Johannesburg." While *Dead Man's Cell Phone* is not overtly time and period specific, there are many contemporary references in the play. The use of cell phones, for example, places the play in a somewhat specific period of time.

Often, time and period are very apparent in a script, usually directly listed in the information with characters and setting. There are scripts where the reference to time is listed as present day. This reference refers to the playwright's present day, and therefore staging the play in the time the script was written and first produced is the typical solution. Plays with established place, locale, time, and period can be very straightforward in

the approach to the design. Creating a realistic 1880s Norwegian sitting room or a 1950s New Orleans French Quarter apartment are very specific eras and locations that can be researched, examined, and recreated onstage. There are some scripts, however, that do not provide a clear sense of when and where the action takes place. When this is the case, it is perhaps even more important that the members of the production design team come to a conclusion about those objectives.

Beginning actors are taught to "play the specifics" and not engage in generalities. That advice is as important for designers. For example, a script may only give the information: "Scene: a room. Time: present day." Making choices based on a specific idea of where that room exists and when the story happens, even if the audience is never privy to what those specifics are, will keep the decisions of the production team unified and moving in the same direction.

The other production objectives—mood, theme, style, revealing character, and solving practical problems—may take deeper analysis and investigation. Mood, theme, and style require research into the script, and also any scholarly or critical writings of the dramatic literature, as well as previous productions of the play. Several discussions with the other members of the production design team may be needed in order for a clear direction to emerge with regard to mood, theme, and style. Often, when the play is confusing and the story feels ambiguous, it is because one of these three objectives has been muddied by conflicting messages in the production's overall design.

Mood

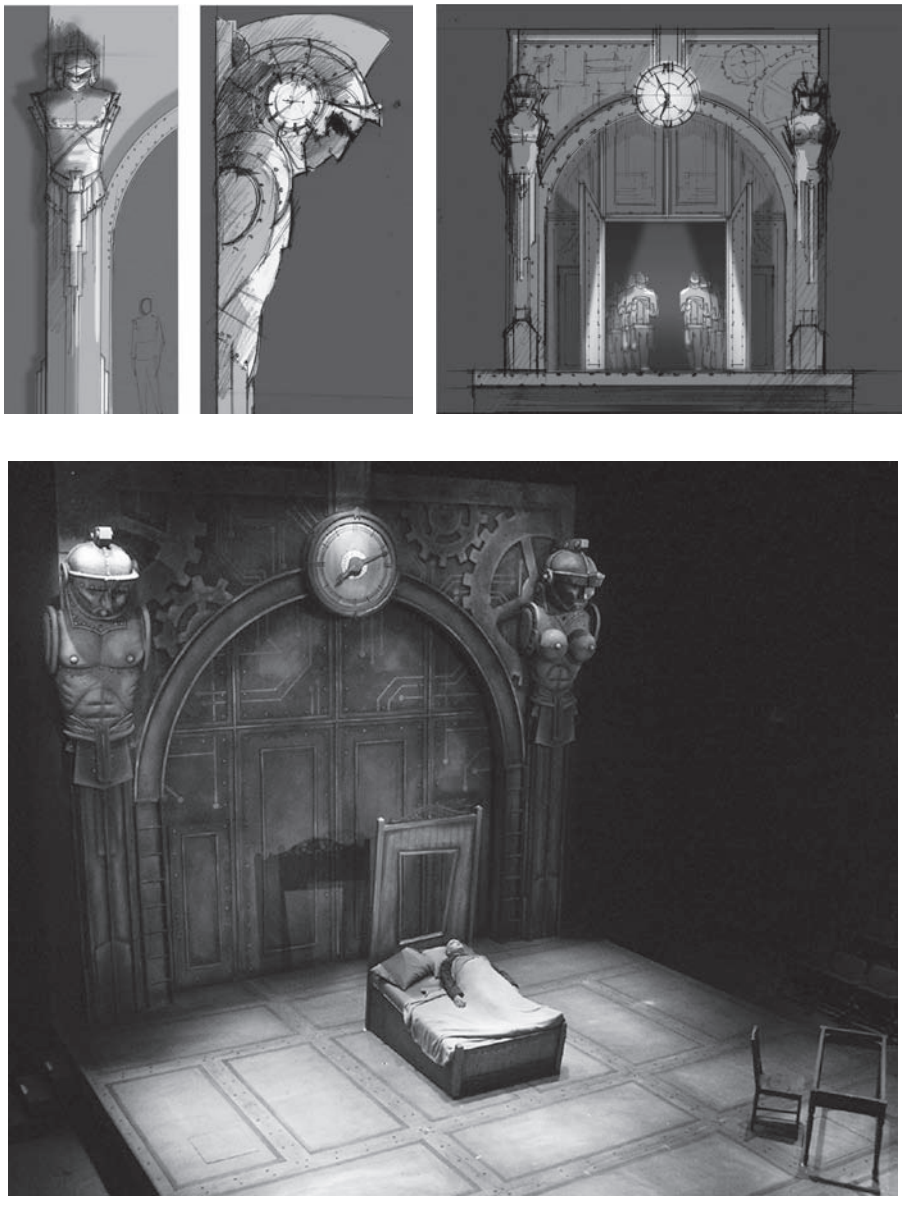
In the chapter on design elements, we discussed the ways in which point, line, shape, mass, color, and texture communicate mood. Heavy, dark, angular lines communicate anger or oppression. Light, airy, circuitous lines communicate frivolity. If the mood of the play's script can be described as dark and heavy, that is a clue to the approach that the line, shape, mass, texture, and color of the scenic design may take. Conversely, the scenery for a lighthearted, whimsical play should be lighthearted and whimsical. For example, Oscar Wilde's play *The Importance of Being Earnest* is subtitled *A Trivial Comedy for Serious People*. The mocking humor expressed in the subtitle gives one an immediate indication that the approach to the play should be lighthearted. The play is a classic example of a comedy of manners, a genre that makes fun of the affectations of the upper class. *Earnest* is written with fanciful language full of witticisms, and the plot twists come full circle by the end of the script. A design approach to this play should reflect and support the dramatic structure contained in the language and

plot lines, the thematic skewering of superficial facades, and the lighthearted mood. One method might be to employ the same curving, elegant lines and quick rhythms found in the language of the play in the scenery, and to emphasize the façade and ornamentation of the surroundings, rather than the substance of the environment.

Theme

The theme of the play is typically summed up in the production concept. Those one or two sentences should state the intended message that the production design team has chosen as the theme of the play. Moliere's comedy *Tartuffe* may be interpreted as a play about the hypocrisy of religious leaders who feign virtue while collecting riches from those who blindly follow them. The application of theme in the scenic design for *Tartuffe* may be a literal depiction of feigned virtue or things being not as they seem. Perhaps the gilt veneer is wearing thin or the furnishings appear elegant at first glance but are in fact somewhat cheap and tawdry.

Elmer Rice's 1923 work *The Adding Machine* is an expressionistic play that explores the dehumanization of human beings in the machine age. The adding machine of the play's title is the protagonist, Mr. Zero, who is fired after twenty-five years on the job and replaced by a machine. In Daniel Ettinger's design for *The Adding Machine,* the set takes on the geometric shapes, mechanical precision, and elegance that are characteristic of the 1920s and '30s art deco movement. The theme of the play is supported by the details of the ornamentation, the riveted metallic surface, machine cogs and gears, and the mechanized sculptures that frame the archway.



Detail sketch, scenic sketch, and production photo from the Towson University Theatre production of *The Adding Machine*. Scenic design by Daniel Ettinger, costume design by Georgia Baker, and lighting design by Jay Herzog.

Revealing Character

In order to infuse information about the characters into the set, set designers must delve into the type of character analysis practiced by most actors. They must ask the same questions, such as: Who are the persons that occupy this space? What are their interests? Are they neat and tidy or are they slovenly? What is their socioeconomic status? Do they spend their money on creating an image or are they frugal or miserly? The answers to those questions, among others, should be addressed and reflected in the design choices. The apartment of a penny-pinching miser will look very different from the apartment of a pleasure-seeking bachelor, even if the the rooms are architecturally identical. Character is revealed through the choice of living space, the condition of the living space, and through the choices of objects, or the set dressing, in that space.

The details in the set design that reveal information about the characters in the play will also help to tell the story to the audience. Avoiding the generic and working towards the specific is always the ideal when designing scenery. Research and analysis are steps in the design process that should be afforded sufficient time and attention, and the payoff for a patient and studied approach will be evident in the end product.

Style

Determining whether the script is realistic or one of the myriad forms of nonrealism is the major factor in establishing style and should be an early topic of discussion in preliminary design meetings. Directors and production design teams will sometimes select a style that does not emerge organically from the script, but is layered on top of the script. Choosing to perform *Macbeth* as an absurdist drama may leave the audience scratching their heads as they walk out at intermission. The production design team must be extremely critical of all ideas and choices in order to ensure that the story is supported and not obscured or upstaged. Another danger is the uneven application of a layered stylistic approach. If the design of costumes, scenery, sound, and lighting is expressionistic and highly abstract, but the actors are performing in a classical acting style, it will confuse the audience. All elements in a production, from design to acting, must depict the style of the world being created.

A realistic set design requires research and study of the actual locations where the story takes place. For example, Wendy Wasserstein's realistic play *An American Daughter* takes place in a living room in Georgetown, Washington DC. There are a number of sources one might investigate when researching for a design of this play. *Architectural Digest* pictorials, photos in biographies

and profiles of politicians, or even an Internet search on Georgetown real estate can yield realistic representations of the subject matter. Design details and inspirations can be drawn from these sources readily.

A set design for a nonrealistic production will require additional research into visual characteristics of the particular style of the production. For example, a design that is expressionistic will not only require research into the locations depicted in the story, but will require additional research into how subject matter is treated and how the design elements and principles are applied in expressionistic art.

For instance, Wilde's *The Importance of Being Earnest* was written in 1895. It was during that time that the art nouveau movement in art and architecture was at its peak. Art nouveau was a reaction against the structures of the academic art of the 1800s and employed highly stylized, curvilinear forms, primarily created through the use of vine and floral motifs. Oscar Wilde was also a part of the Aesthetic Movement in art and literature. The Aesthetes believed that life should imitate art. Beauty and sensuous pleasure were the goals in both art and life. Their motto was "Art for art's sake." Researching the Aesthetic Movement and art nouveau art and design for inspirations to the approach of a set design for a production of *Earnest* is essential. See appendix on Style.

Practical Problems

Another large consideration when designing scenery involves the practical problems found in any production. These problems include specific known effects called for in the script, such as the ghostly apparitions in *A Christmas Carol* or the witch melting in *The Wizard of Oz*. Part of the job of the designer is to effectively identify and solve these problems. The limitations of the physical space and the resources of time, labor, and budget must also be considered. For example, if the stage space does not have floor traps, the Wicked Witch's melting and disappearance must be accommodated in some other way. Elevating her on a platform with a trap space created underneath, or against a wall with a trapdoor or hidden passage will enable her to escape in a veil of smoke. The theater space and audience sight lines will have strong implications on the configuration of the scenic design in this instance.

The production style will also be a determining factor in solutions to practical problems. If the style of the production is presentational, the audience will accept stagehands shifting scenery and special effects that are evocative, if not "magical." However a production seeking to present extreme spectacle may require scenery shifts and effects that happen magically, without visible support.

Such is the case with the Noel Coward play *Blithe Spirit,* where special effects call for books to fly off shelves and the lid to the old-fashioned Victrola record player rising and lowering on its own.

One key to successful problem solving is to ask, "What is the desired effect, what is the simplest and most cost-effective way to achieve it, and can it be accomplished in the time allotted?" Oftentimes there are multiple solutions to a given problem, but the ideal solution is the one that is achievable within the given limitations of time, labor, and money and within the style of the production.

PRACTICAL CONSIDERATIONS

Types of Performance Spaces

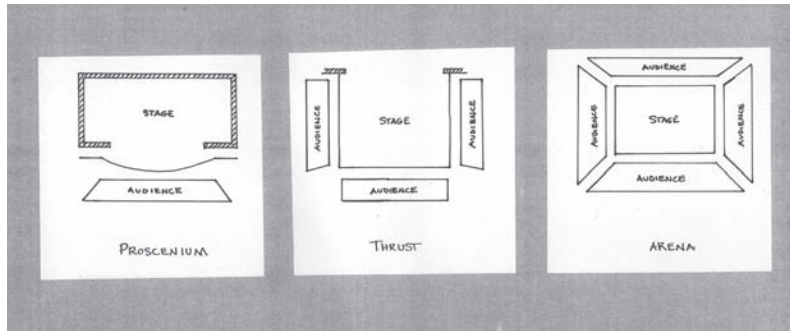
The type of performance venue and the physical attributes of the performance space have an enormous impact on the scenic design. All theaters will fall under one of the five basic configurations of performance spaces: the **proscenium** stage, the thrust theater, the arena stage or theater-in-the-round, the black box space, and the created or found space.

The *proscenium stage* is perhaps the most prevalent and familiar. This configuration has the audience seated in rows facing the same direction, towards a stage that is framed behind the proscenium arch. This type of theater is also known as the picture frame stage or the fourth wall theater. The proscenium stage was created during the Italian Renaissance to best display the newly developed perspective art that was being employed by scenic designers and painters. The proscenium stage allows for a great deal of scenery and effects, as there is generally area backstage in the wings and above in the **fly loft** to support scenery movement on- and offstage. The vast majority of Broadway houses are proscenium stages.

The *thrust stage,* one of the earliest theater configurations, has the audience wrapped around three sides of the performance area. This space allows for greater audience intimacy with the performers, as more seats can be placed closer to the stage. It also allows for some scenery on the fourth side of the stage that will not obstruct audience sight lines. Unlike the arena stage, this configuration makes it possible to have backstage support areas. The ruins of the classical Greek amphitheatres, with the hillside audience seating wrapped around a circular playing area backed by a large stage house, are some of the earliest examples of the thrust theater. Shakespeare's Globe Theatre is also an example of a thrust

stage. The thrust stage regained popularity in the mid-twentieth century with the advent of several avant-garde theater movements. The Guthrie Theatre in Minneapolis, which opened in 1963, is a classic example of a modern thrust stage.

The *arena stage*, or the theater-in-the-round, allows for the least amount of scenic units, as the acting area is completely surrounded by the audience and sight lines cannot be compromised with too many visual obstructions. While minimal scenery may seem an easy task for the scenic designer, quite often the opposite is true, as fewer elements give each of those elements greater importance. Careful selection becomes critical. A great deal of information must be communicated within the limited pieces that can be placed onstage. As with the thrust stage, the arena stage offers a great deal of intimacy between the performers and the audience, as more seats can be placed closer to the stage than can be placed in any other stage-audience configuration. Washington DC's Arena Stage and New York City's Circle in the Square are examples of contemporary arena theaters.



Audience configurations for proscenium, thrust, and arena theaters

Black box theaters are performance spaces that are large rooms typically painted black with flexible staging and seating that can be arranged in a variety of ways. Black box theaters afford the design team the luxury of creating an audience-performer configuration that works best for needs of the specific production, as they can be configured as an arena, thrust, or proscenium space. The black box was popularized during the experimental theater of the 1960s and '70s. Many colleges and universities and regional theaters have a black box, in addition to a main stage, where they can present student directed and designed productions, or more intimate, experimental, and/or avant-garde works.

The fifth type of stage space, *created* or *found space*, is a performance venue that has been converted or co-opted from another type of structure not originally built as a theater. Storefronts, churches, warehouses, town squares, city parks, any space large enough to house a stage area and an audience can be converted into a performance venue. Created or found theaters will typically be arranged under one of the previous configurations: arena, thrust, proscenium, or black box spaces.

Another type of created or found space involves staging theater that is site specific. For example, producing T. S. Eliot's *Murder in the Cathedral* in an actual cathedral, or the Artificial Intelligence Comedy Troupe's production of *Tony n' Tina's Wedding*, which was originally staged in a New York City church and reception hall. Street theater or guerrilla theater often takes place in some public area, such as a park or in front of a government or corporate building that is relevant to the themes being explored in the performance.

The Physical Impact of the Theater Space on Scenic Design

Obtaining information about the physical makeup of the performance venue is necessary as one begins the design process. If the performance space is unfamiliar, ideally a site visit should be arranged. The most obvious bearing the theater will have on the scenic design is the configuration of the stage space, its size, and its relation to the audience. As previously noted, designing scenery for an arena stage will differ vastly from designing for a proscenium stage. The size of the stage and the availability (or lack thereof) of wing space, fly space, and stage mechanics such as traps, turntables, and **counterweight systems** also exert influence over the design decisions. And the audience's vantage point also must be accounted for. In a 1,200 seat theater, small details will be lost more readily than in a smaller theater with more intimate audience seating. A theater with steeply raked audience seating or a balcony will need special attention paid to the design of the stage floor, as it will become a major visual area. An auditorium with a low seating area, where the audience looks up to the stage, will de-emphasize the stage floor.

The physical environment of the theater will also have an effect on the scenery, beyond the obvious impact of designing for the arena stage versus designing for the proscenium stage or the size of the stage area. The ambiance of the theater itself will have an impact on the audience. Is it an elegant opera house with crystal chandeliers and plush carpet? Or is it a converted Quonset hut with rough planked floors and folding chairs? In acting, when someone is cast in a role that is not the stereotype of the character—for example, Whoopi

Goldberg playing Santa Claus in the movie *Call Me Claus*—it is referred to as *playing against type*. In scenic design, there is a similar phenomenon: for example, staging Johann Strauss's operetta *Die Fledermaus* in a dilapidated Quonset hut, or producing Sam Sheppard's single set drama *Buried Child* in a grand opera house. The designer may be able to use the physical environment of the theater to enhance the mood of the design by incorporating elements or motifs from the larger venue into the scenery. Or the designer may have to *play against type* and find ways to focus the audiences' attention to the world created onstage, perhaps by visually isolating the playing space and scenery from the larger venue. Regardless, one must take into account the physical environment of the theater itself and imagine how the scenery will work within that atmosphere throughout the design process.

If the performance venue is unfamiliar, it will be helpful to take along a digital camera on the initial site visit. Having a reference for the details of the theater—the gild of the proscenium, the color of the curtains and seats, the view of the stage from an audience's vantage—will prove useful. Obtaining measurements of the stage area is also necessary. A **ground plan** and **sectional view** of the theater space will give the width, depth, and height of the performance area. Usually, these drawings can be obtained through the facility manager or technical director. If no such drawings exist, they will need to be created by taking measurements of the performance area and then drafting plans of the space in scale.

Traditional Types of Scenery

Stage scenery typically falls into one of four basic categories: the single set, the unit set, simultaneous staging, and multiple sets. The script will designate whether the action of the play takes place in one place or in several places. The style of the script and the production concept will indicate whether the set or settings should be realistic or abstracted. And the physical resources at hand, the technical capabilities of the performance venue, and the trinity of time, labor, and money will also factor into which type of stage set is utilized on a particular production.

The *single set* is the representation of a single location that does not change throughout the performance. A single set can range from very realistic to very abstract. The traditional *box set* is the realistic depiction of a room on the stage. The box set was originally developed for the proscenium stage and is the source of the term *fourth wall*, as often the box set consists of three walls with the fourth wall removed on the side facing the audience. There are many examples

of plays that require a traditional realistic box set, such as Henrik Ibsen's plays *Hedda Gabler, Ghosts,* and *A Doll's House.* However, not all single sets are box sets. There are numerous plays that take place in a single location that may or may not be an interior of a room. An example of an exterior single set location is David Auburn's play *Proof,* which takes place on the porch of a University of Chicago professor's home, or Edward Albee's *Seascape,* which takes place on a patch of ocean beach. The single set also need not be realistic. It can be stylized, abstracted, or distorted to fit with a particular visual style that the production has adopted.

The *unit set* is a generic, multipurpose setting that endeavors to function as a number of different locations without physical changes in the scenery. Shifts in location happen primarily through dialogue and action. A few set props may be employed to assist in changing locales or some of the elements of the unit set may be rearranged to create visual variety, but there is no attempt to realistically depict the various locations called for in the script. Typically Shakespeare's plays are performed on unit sets.

When the script requires several specific locations, the settings can be solved in one of two ways. *Simultaneous staging* will place two or more different locations on the stage at the same time. In this staging, a shift in lighting takes the audience's focus from one location on stage to another. Perhaps the least utilized of the four types of stage spaces, simultaneous staging offers some possible solutions to theaters that have little to no offstage space. There are some plays that lend themselves to this type of set. It could be argued that Tennessee William's *A Streetcar Named Desire* crosses from single set into simultaneous staging with the need for the bedroom and kitchen of the apartment, the staircase to the upstairs neighbor's, and the area in the street outside the apartment. Diana Son's play *Stop Kiss* is often staged with simultaneous scenery, with the main setting, a New York apartment, realistically depicted, and another area of the stage designed as a unit set to stage the other numerous locations called for in the script. Often outdoor dramas will be staged on simultaneous sets.

Multiple sets are moving stage sets that completely shift from one specific location to another within the course of the play's performance. Any unused scenery is removed from the audience's view. Musicals often require multiple settings. But many plays, such as Mary Chase's classic comedy *Harvey,* also require multiple locations. In *Harvey,* two locations, the parlor of the Dowd family home and the waiting reception area of the sanitarium, are required and must be shifted into and out of quickly.

The physical characteristics of the performance space have a great influence on how the practical problem of shifting scenery is solved. The type of stage space can either aid or exacerbate the ability to shift scenery quickly and magically in a multiset situation. The availability of offstage space and stage equipment such as counterweight fly systems or turntables, will influence how scenery is moved and stored. A theater with little support space and equipment requires clever scenery solutions and will test the ingenuity of both the scenic designer and technical director.

The Basic Building Blocks of Scenic Units

There are a few basic constructs that are used as the foundation of most scenic units: platforms, flats, and **soft goods**. Platforms are three-dimensional, weight-bearing structures that are used to create different levels on the stage. Balconies, staircase landings, and ramps are all made from platforms. Scenic **wagons** (rolling units that come on- and offstage at various times in the play to depict different locations) are platforms with casters. All horizontal levels that are walked on by actors are created with platforms. Flats are two-dimensional, non-weight-bearing structures that are used to create the illusion of walls or other such vertical elevations. Traditional flats are made with framed muslin or plywood. Many theaters will keep an inventory of platforms and flats in stock sizes. Stock scenery refers to those items that a producing company will keep in storage and use as foundation pieces in a design. Stock platforms are usually 4 x 8 feet (the size of a sheet of plywood) or increments under that size: 2 x 8 feet, 4 x 6 feet, and so forth. Stock flats are usually 2, 4, or 6 feet wide and 8, 10, 12, 14, or 16 feet high. When building the scenery for a show, stock pieces are often put together to create the base structure, and then custom-built pieces are added on to create a unique configuration. Utilizing stock elements in such a way reduces the time, labor, and money required of building a set from scratch.

Soft goods, expanses of unframed fabric, are another type of two-dimensional scenery: Painted drops, **cut drops**, **sky drops**, and black velour masking **legs** and **borders** are all examples of soft goods. Most scenery is comprised of one or more of these basic building blocks used in combination to create interiors, exteriors, and everything in between.

THE SCENIC DESIGNER'S PROCESS

The Designer's Punch List

A valuable tool for scenic designers is to compile the list of the essential elements necessary for the play's action. In general language, a *punch list* is a list of required tasks that organizes the project through to its completion. In theater design, this punch list combines the given circumstances and production objectives inherent in the script, including any requisites necessary for the dramatic action and ambiance of the story that may arise from production design meetings. Often scripts will contain embedded information on the physical environment in the action or dialogue. Designers must read carefully and analyze the dramatic action in order to develop this list of essentials. They learn to imagine the story while reading the script, asking key questions. If the action of the play takes place indoors, what does the room look like? Is it oppressive or inviting? Is the furniture sparse or generous; is it hard and uncomfortable or overstuffed and welcoming? Are there doors to other locations? Where do those doors lead? Does the script require the lead character to sit and gaze longingly out of a window? What is he or she looking at? Is the window open or closed? Are there curtains or blinds over the window? Is there dialogue about the chaotic state of the apartment? All of these observations should be written down as part of the punch list and integrated into the design.

The stage directions written in italics in the script can be helpful, but they can also be misleading. More often than not, they are a description of the original production and not necessarily an accurate list of what are essential requirements for the play. Designers must remember that every production of a play is produced in a different space, for a different time, using a different concept. Rather than following the stage directions in the script, it is best to create the list of essentials from one's own readings and observations and then make revisions to it after discussions with the director. Once there is a punch list of the essential requirements, it will serve as a springboard for additional research and as a checklist to ensure all requirements are being met.

Idea Development

After reading, analyzing, and researching the given circumstances and design objectives in the script, discussions with other members of the production design team regarding design ideas begin. In these early meetings, the designers and director develop the approach to the play, and throughout these early stages, more research

will be done and shared among the team. Scenic designers typically assemble a binder of textual information, and many create image boards or **collages** of their visual research. Others may choose to spread their images out across the conference table. Regardless of the method, a designer must be able to talk about what she or he finds evocative in pictures and how those images might translate into a scenic design. The director and other designers will also share visual and textual research. From all of this a few images will emerge that everyone seems drawn to. These evocative images can be analyzed for their line, shape, mass, color, and texture, balance, rhythm, mood, and style. Also, an image or images may surface that speak to the theme or mood of the play. These visual inspirations may evolve into a central visual image, or *visual metaphor*, which can then be applied to various aspects of the design.

Visual Metaphor

In language, a *metaphor* is a word or phrase used analogously in place of another word or phrase. "War is hell" or "love is blind" are examples of common verbal metaphors. A *visual metaphor* is similar in that a representative visual image is used to invoke a mood and theme. Hamlet is caught in a whirlpool and progressively spins out of control. Nora in *A Doll's House* is a bird in a gilded cage. Amanda in *The Glass Menagerie* is a wilted hothouse flower. Often the play titles themselves are metaphors. *A Doll's House* represents the plaything Nora has become for her husband Torvald. She lives for his amusement. *The Glass Menagerie* is symbolic of the fragility of Laura's existence. For the scenic designer, the visual metaphor can be a strong aid in developing design ideas. In a realistic production, the visual metaphor may be employed subtly, applying the line, shape, or texture of the image into the scenery. In a highly stylized production, the image can sometimes be applied directly or symbolically. In Barter Theatre's production of *Charlotte's Web*, the visual metaphor of a cathedral was inspired by the themes of the barn as a place of reverence and the self-sacrificing love of Charlotte for Wilbur. The web in this design serves as a central focus, much as an altar in a cathedral.

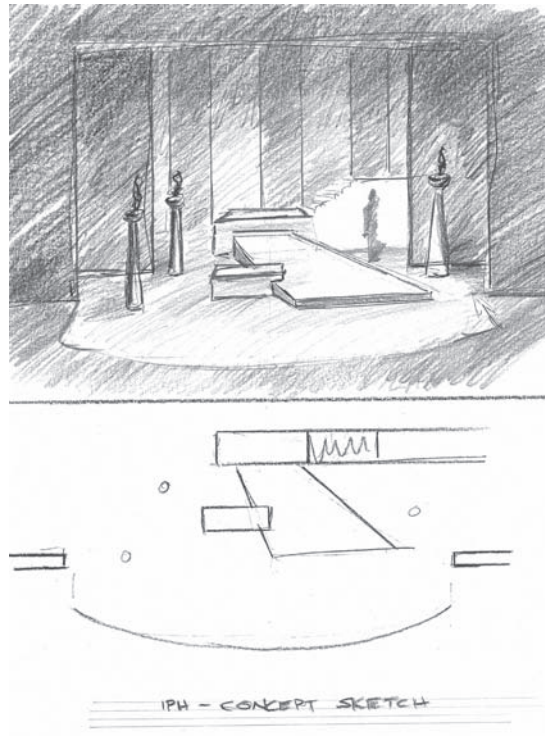
Barter Theatre's Barter Players production of *Charlotte's Web.* Scenic design by Melissa Shafer, costume design by Monet La Clair, lighting design by Craig Zemsky, directed by Katy Brown, photo courtesy of Barter Theatre.
Performers pictured: Gwen Edwards and Janee Reeves

After the production team has settled on an approach to the design elements and objectives, it is time to put design ideas down on paper. Scenic designers must be sure to integrate design ideas into the performance venue at the start of design development, as the approach to scenery in an arena theater will vary greatly from a design of the same play in a proscenium house. It helps to have all of the information organized in a way that is easily referenced as one begins the actual design. Notes on the script and on discussions with the collaborators, information regarding the performance venue, and researched visual images should be arranged in a research binder or a visual collage and kept close at hand.

Thumbnail Sketches

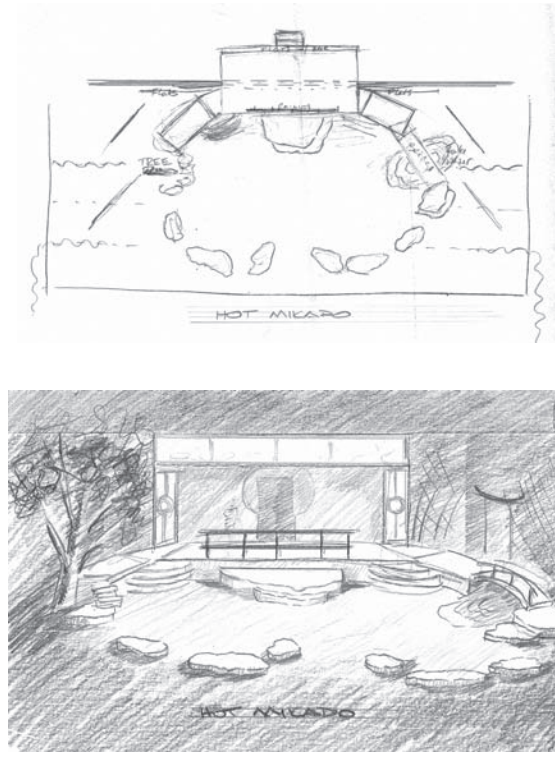
Throughout the initial phases of a design project, during the script readings, research, and discussions with other members of the production design team, ideas for design approaches will develop. Those ideas are explored by creating **thumbnail sketches** and rough ground plans. Thumbnail sketches are quick sketches that depict a general look and feel of a potential set design. Rough ground plans are quick drawings of the layout of the set on the stage floor of the performance venue. (A definition of ground plans follows in this chapter.) Thumbnails and rough ground plans should be drawn with a sense of the performance space in mind. Begin the thumbnail by drawing a sketch of the

bare stage from the audience's viewpoint. A rough ground plan should also begin with a layout of the stage space. With the punch list of requirements at hand and the objectives in mind, quickly sketch scenic possibilities into the space, paying close attention to the overall feel of the composition.



Early concept sketches of Austin Peay State University's production of *Iph.* The production found connections between stories from ancient Greek and classical Japanese theater. The centrally placed altar and the braziers work to create a sense of ritual, while the asymmetry speaks to the horrors of the story. Designed by David Brandon.

Often, designers may have a strong visual image in mind for the set as they begin their sketches. It may be a literal set design idea based on an actual floor plan or real space, or it may be an image that evokes a feeling, for example, the aforementioned visual metaphors of a whirlpool for *Hamlet* or a gilded birdcage for *A Doll's House.* Those images can be a springboard for a design layout on the stage. In the Paschall Theatre's production of *Hot Mikado,* designer David Brandon researched Japanese architecture and traditional wood block prints to create a Japanese garden on the stage.

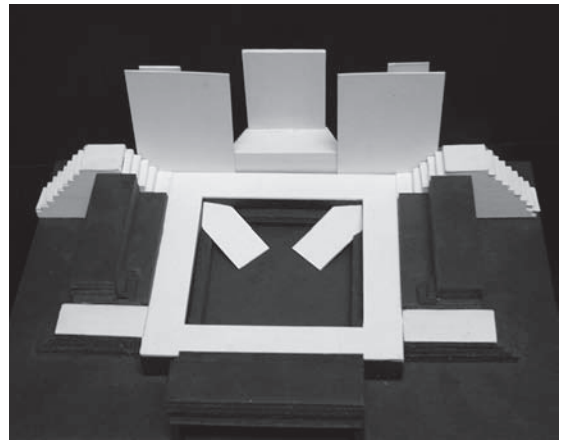


Rough ground plan and perspective sketch for the Paschall Theatre production of the *Hot Mikado*. Designed by David Brandon.

One of the most important things to remember is that the ground plan dictates **stage movement** patterns. Placement of furniture, exits and entrances, and set props creates both positive space and negative space (the "empty" space around or surrounding objects in a design as mentioned in chapter 5). Actors move in the negative space between objects. In a set design with entrances and objects placed so that the negative space is diagonal, the actors will have strong diagonal movement. An entrance upstage with no obstructions at the center of the stage will create a strong downstage cross. An environment with many objects placed about will create a circuitous movement pattern with the actors. David Brandon's design for *Hot Mikado* creates a circular flow, with a central area that supports large musical numbers. The goal in scenic design is to create a movement pattern that reinforces the mood, theme, and style of the production. Discussions with the director about movement and blocking should take place during the early phases of the design development.

Thumbnails and rough ground plans should not be belabored; they are quick studies. Their purpose is to allow the designer to work through various configurations of the requisite scenic elements until one that is aesthetically pleasing and appropriate to the play is found. Thumbnail sketches should be quickly created and just as quickly discarded as the design evolves.

Often a designer will explore or evolve an idea further by creating a three-dimensional scaled paper **model**, or white model. Paper models are quick mock-ups, typically done in one-fourth-inch scale, created from heavyweight paper, tape, and glue. They are the 3-D equivalent of the thumbnail sketch and can be beneficial in understanding the space relationship of scenic components.



Paper model for the University of Virginia at Wise's production of *Metamorphoses*. Scenic designer Jonathon Taylor.

When there are several workable paper model or thumbnail options, they are then shared with other collaborative team members in early design meetings. At these meetings, thumbnails may be tossed out or chosen for further development, and parts of different thumbnails or paper models may be brought together to create yet another new possibility. There may be several meetings and many preliminary ideas before a firm direction on the design emerges. Once the director has approved a design idea, work then begins on fleshing out the specific details of the design.

THE SCENE DESIGN PACKAGE—COMMUNICATING DESIGN IDEAS

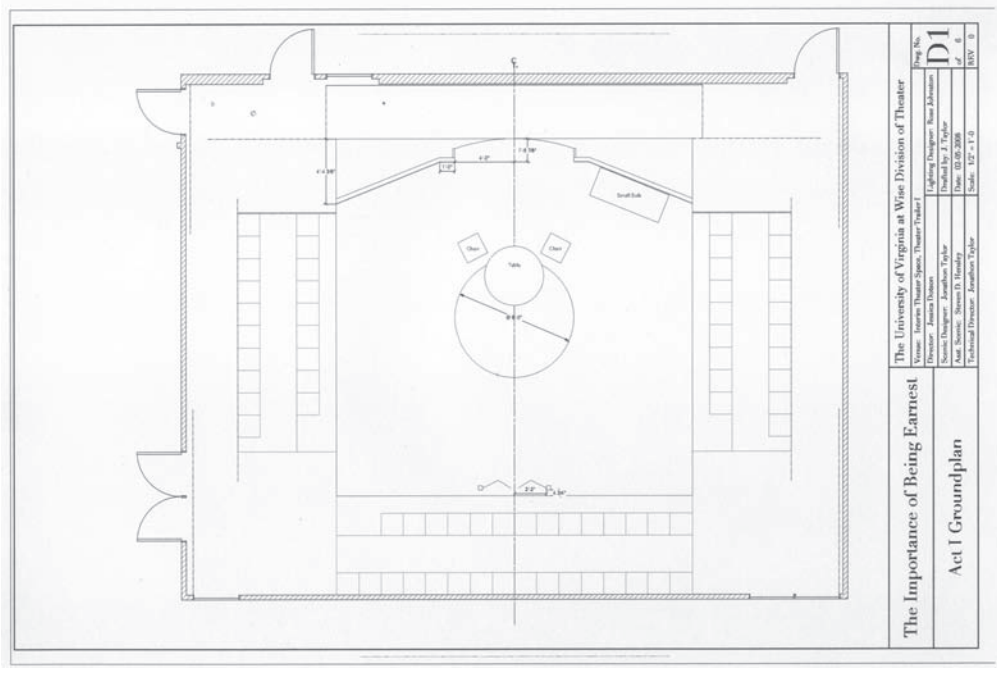
The set designer is responsible for creating a package of design information that will be shared and used by various members of the production team. This package may include some or all of the following: idea sketches, **technical drawings**, paint elevations, a painted **rendering,** and/or a presentational model. All of these presentations are done to **scale**. Drawing to scale means that the object depicted is drawn in a precise ratio to the actual size of the object. Most scenic draftings are done in ½" = 1'–0" scale, meaning that every one-half inch of the object drawn equals one foot of the object in actuality. Technical drawings are either created by hand using drafting tools (T squares, architect's scale, triangles, compasses) or are computer-generated using any number of the CADD (computer-aided design and drafting) software programs available. The symbols, line types (solid, long dash, short dash, and so on) and the line weight (heavy, medium, light) used on the drawings should all comply with the graphics standards in the industry. The technical drawings, or *mechanical draftings,* are used by the production team to accurately build the set and by the other designers for information regarding the parameters of the set that will affect their own work. The use of standard graphics ensures that the drawing is communicating information precisely by using the common, accepted vocabulary of symbols and lines. See appendix on USITT Scenic Design and Techincal Production Graphics Standards.

There are five types of technical drawings that are used to communicate the intention of the scenic design to the production team: *the ground plan, front elevations, rear elevations, sectional drawings,* and *detail drawings*. In addition to the technical drawings, the scenic designer will create a *painter's elevation.* The painter's elevation is a scaled view of the paint and texture treatment of the set. The scenic designer will also create an artistic representation of the completed set. This will either be in the form of a *perspective rendering* or a *presentational model*, or both. Deadlines for the design package vary from project to project. But they are always set early enough to allow the technical director, the person responsible for the construction of the scenery, time to plan, schedule construction, and order materials before the actual build begins.

Technical Drawings

The *ground plan* is a scaled drawing of the floor plan of the set as it is situated on the stage. It shows a top aerial bird's-eye view of the set as it is positioned within the walls of the theater space. It is perhaps the single most important set drawing because it is used and referenced by virtually everyone involved

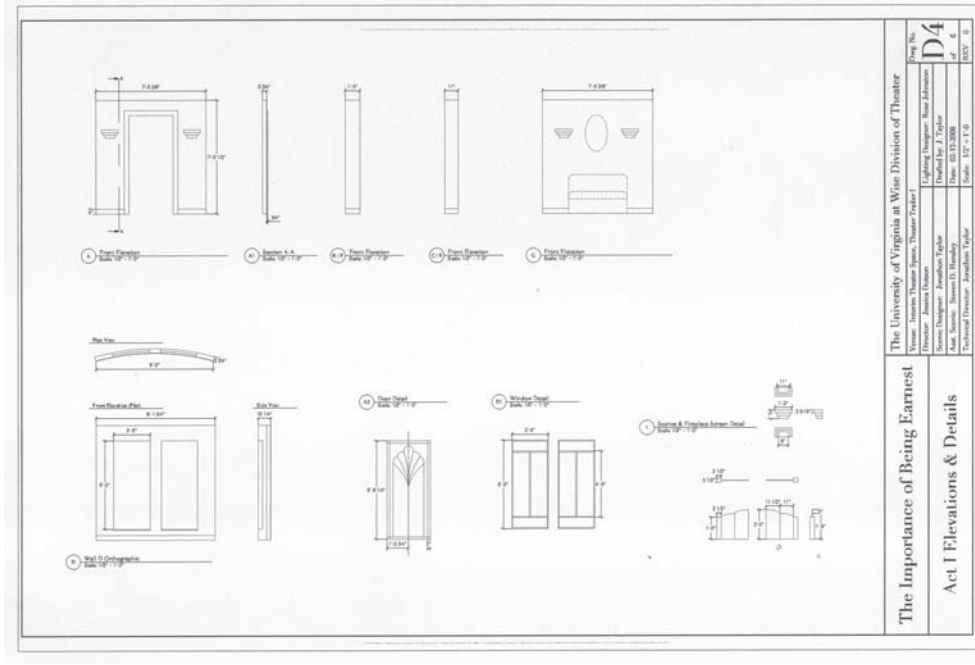
in the production. Directors plan their blocking using the ground plan. Stage managers often record blocking on a small copy of the ground plan and tape out the ground plan in full scale on the floor of the rehearsal hall that actors then use in rehearsal. Lighting designers create **light plots** by developing lighting areas and plotting instruments on an overlay of the ground plan and sound designers plan speaker and microphone placements in reference to the ground plan. Often costume designers and wardrobe supervisors use the ground plan to arrange quick change areas offstage or to determine any impact the scenic design will have on the physical considerations of footwear or on garments the actor is wearing. And of course, the ground plan is instrumental to the work of the technical director and set crew. It gives information regarding the dimensions of the set, its location onstage, and details regarding the masking and support areas.



Ground plan for *The Importance of Being Earnest*.
Designed and drafted by Jonathon Taylor for the University of Virginia at Wise production.

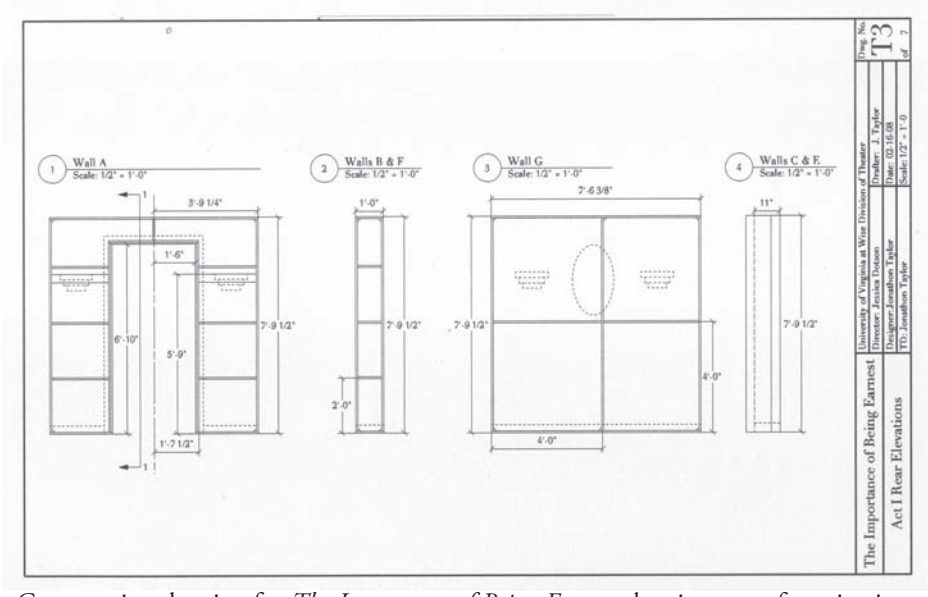
Front elevations are perhaps the second most important drawing created by the scenic designer. These drawings show the set from the front view, as

if each wall or scenic unit were lined up flat along a single plane. There is no attempt at perspective. It shows the detail of each unit from the front. Typically this draft is primarily used by the director and stage manager to get a feel for the overall treatment of the vertical scenery. It is also used by the properties master to see any set prop needs—window treatment, bookshelves, etc. The front elevation is also used by the technical director to create the rear elevations.



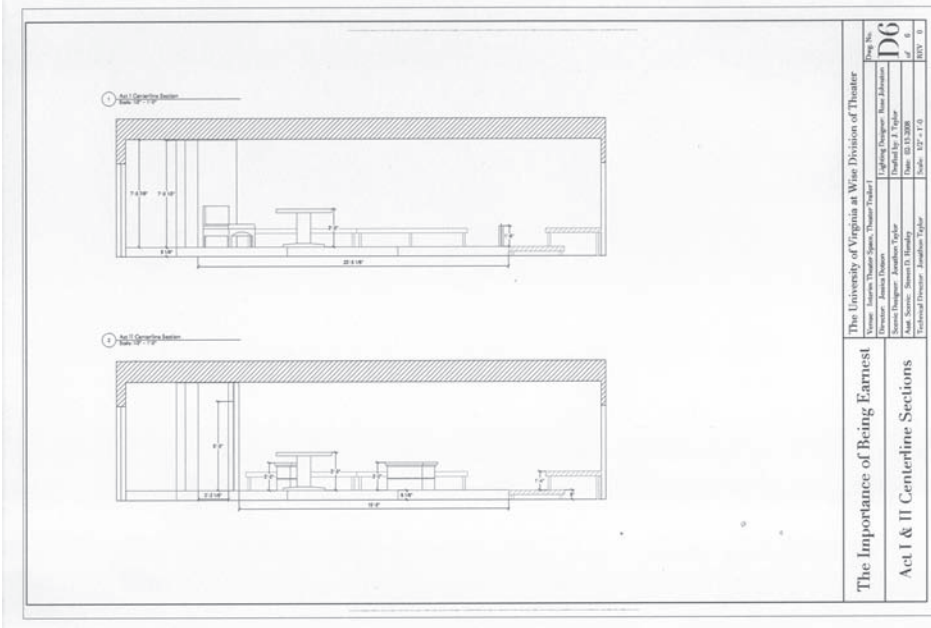
Front elevation for *The Importance of Being Earnest*.
Designed and drafted by Jonathon Taylor for the University of Virginia at Wise production.

Rear elevations or construction drawings are mechanical drawings that depict the back of the set and instruct the carpenters how to build each unit. The rear elevations are typically drawn by the technical director or the master carpenter and take into account the structural requirements as well as the aesthetic of the set. Rear elevations are used to figure materials needed and subsequently the projected cost of the scenery. These drawings are also used to create material cut lists for the carpenters working on specific units.



Construction drawing for *The Importance of Being Earnest* showing rear of scenic pieces. Designed and drawn by Jonathon Taylor for the University of Virginia at Wise production.

The **sectional view** is also created by the scenic designer and is a side view of the set as if it had been sliced down the centerline of the theater and viewed in cross section. It shows the location of the set in the theater space and the audience's vertical sight lines. The sectional plan is used by the technical director to determine the location of borders needed to mask any flown scenery and equipment and by the lighting designer to determine the lighting angles on the set from the various hanging positions front of house and over the stage.

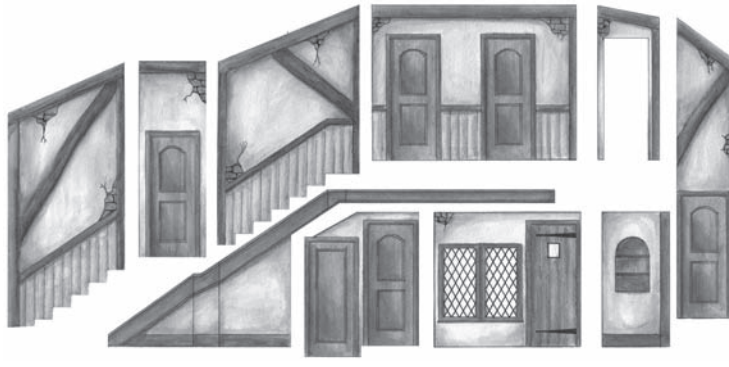


Sectional wiew of *The Importance of Being Earnest*. Designed and drawn by Jonathon Taylor.

Detail drawings are larger scale drawings (typically at least 1" = 1'–0" to 3"=1'–0") that will show the detail of specific scenic elements, such as crown moldings, mantelpieces, or prop furniture. Any unit that needs more detailed description on how to build it will necessitate a detail drawing. These are also generated by the scenic designer.

Paint elevations are scaled two-dimensional examples of the paint colors and texturing treatments to be recreated by the scenic artist and painters. If the painting is basic and repetitive, often one wall and a section of the floor are done as a sample. Painted drops and more detailed complex treatments are drawn fully so that the design can be transferred accurately. The paint elevation is created by the scenic designer and given to the *scenic artist* or *scenic charge*, the person responsible for supervising the painting of the set. Paint elevations are also referenced by the costume and lighting designers to obtain accurate information about the set's color palette.

Paint elevation of the drop for Barter Theatre's production of *Where the Red Fern Grows.* Designed by Melissa Shafer.



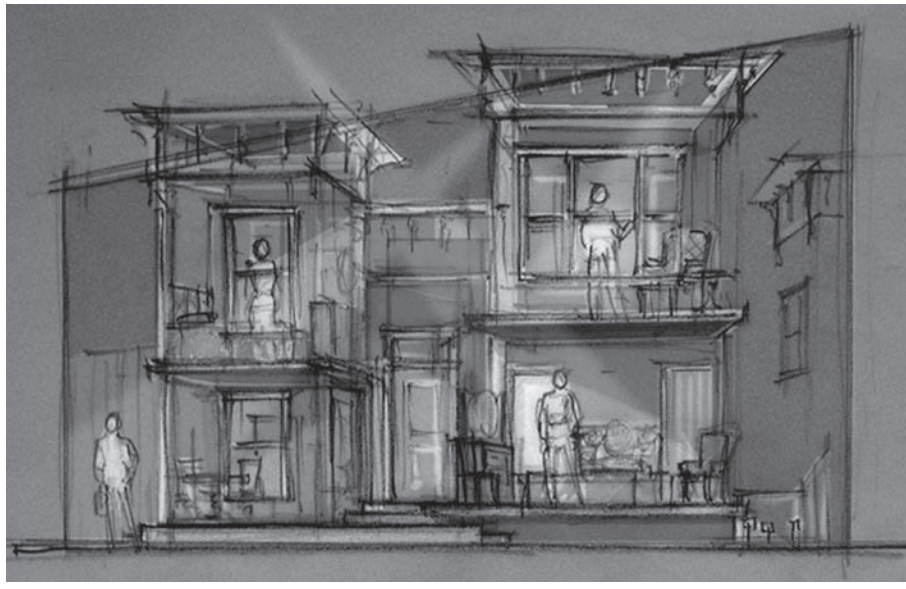
Paint elevation of the set walls for *Noises Off.* Scenic design by Brad M. Carlson. The McLeod Theatre, Southern Illinois University Carbondale.

Perspective Rendering

A ***perspective*** *drawing* is a two-dimensional drawing that attempts to describe the set in three dimensions. The drawing will have a foreground, middle ground, and background in order to portray a sense of depth. A *set rendering* is a perspective drawing that has been painted to represent what the set will look like in performance with actors; therefore, the rendering will attempt to illustrate a moment in the play, complete with blocked actors and a sense of stage lighting.

There are several methods to use when creating the perspective sketch. One can freehand draw the perspective scenery, use one of several methods of mechanically drafting the perspective, or draw the scenery digitally using a computer software drawing program such as Google SketchUp or Vectorworks Renderworks.

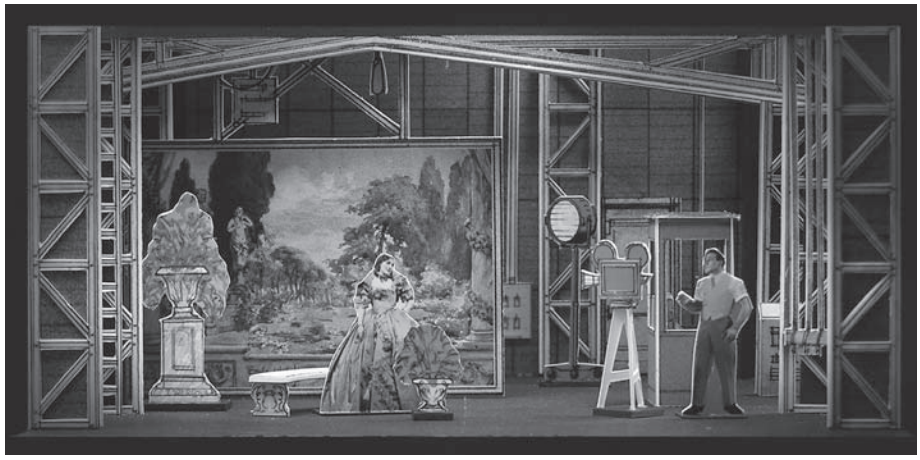
The hand-drawn perspective sketch is then transferred to watercolor paper or illustration board and colored with watercolor paint, pencils, or markers to give the impression of what the finished set will look like with actors and a suggestion of stage light. The computer can also be used to paint the digital sketch in order to create a set rendering that can be printed or sent as an electronic file to the production team. Regardless of the method, drawing and rendering skills should be practiced and developed continually.



Perspective sketch for the set of the Wooly Mammoth Theatre Company's production of *Starving*. Scenic design by Daniel Ettinger.

The Presentational Model

The *presentational model* is a scaled, painted, three-dimensional representation of the set. The traditional presentational model is handcrafted using illustration board, balsa wood, and any other materials the creative imagination can employ. Oftentimes, the presentational model begins as a paper model that is created in the conceptual stage of the design process. If created out of illustration board, paper models can be turned into the skeleton of what will eventually become a finished presentational model. Like the set rendering, the presentational model is a fully dressed and painted version of the set and includes a scaled representation of an actor or actors to give the model a sense of proportion and a dramatic feel.



Presentational model and production photo for Barter Theatre's production of *Singin' in the Rain.* Scenic design by Daniel Ettinger, choreography and costume design by Amanda Aldridge, lighting design by Craig Zemsky, directed by Rick Rose, photos courtesy of Daniel Ettinger.

Recently, the traditional handcrafted model is sometimes replaced by a computer-generated version, created using a software program such as Google SketchUp or Vectorworks. There are advantages and disadvantages to both the traditional handcrafted model and the virtual model. Virtual models in the form of computer files can be shared long distance and can be duplicated and used

by several people at the same time. However, they also depend on the end user having the software to support the file and or the knowledge to access the file and its information. Handcrafted presentational models can be touched, picked up, and experienced in a more visceral way. Many directors like the ability to study the model and using scaled representations of people, will work on their blocking of the show. However, creating a traditional presentational model is time-consuming and labor-intensive. There typically is only one version of the traditional presentational model in existence and it must be shared among the director, designers, and construction personnel.

FINALIZING THE DESIGN

Some designers will work on the perspective rendering or presentational model before beginning technical drawings. Other designers will begin with a ground plan and work on elevations as they develop the design. Most designers will do a combination of drawings and models as they develop the design and the approach will vary from project to project.

There are several points along the way when the scenic design needs approval from the director in order to continue in its evolution:

- First, the director should approve one of the design ideas presented in thumbnail or paper model form. The scenic designer will then take that idea and flesh it out.
- The ground plan and model or renderings are the first part of the design package to be completed. Once these items are complete, the director is given the opportunity to study the fleshed-out design and request any necessary revisions.
- Once the director approves the design, it is considered finalized, and the completion of the remainder of the technical package can begin.
- As soon as the design is finalized, the ground plan is given to the other production team members for their various uses.

A word of caution: there are some instances when revisions or changes are needed after the design has been finalized. Theater by nature produces living artwork that grows and evolves throughout rehearsals and performances. But requests for scenery revisions should be judicious. Time and money wasted can have a negative impact, and changes can sometimes have a domino effect, creating other problems.

IMPLEMENTING THE DESIGN

After the design is finalized, it moves into the implementation phase. The drawings and model are handed over to the technical director and the shop begins building the set. Depending on the size of the production company, the designer may or may not be required to work hands-on with the set from this point forward. But the scenic designer will collaborate and consult with many artists during the implementation phase: the technical director during construction, the scenic artist during the painting, and the properties master during the dressing of the set. In a larger commercial venue, the designer will walk through the construction area on a regular basis to ensure that there are no questions from the crew and that the artistic integrity of the design is maintained. In a union shop, the scenic designer is not permitted to work hands-on building, painting, and dressing the set. In a smaller venue, like a small educational or community theater, the designer may have a more hands-on role to take and will supervise the painting and dressing of the scenery and may even be responsible for its construction.

SUMMARY

The scenic design creates the physical environment where the story takes place. That environment should reflect, support, and sustain the characters within the play as well as the style, mood, theme, and the givens of time and place in the story.

Throughout the production process, from the initial design meeting to opening night, the developing scenic design needs to be constantly checked for consistency against the production concept and against the design elements, principles, and objectives. Does the scenic design fit with the director's vision? Does it help to clarify the story or does it confuse it? Is it unified with the other design elements, costumes, lighting, properties, and sound?

Learning to judge design ideas critically, without bias, is very important and essential to the continuing growth of a designer. Learning to modify and adjust ideas to fit into the bigger picture of a unified production is the key to being a successful collaborative team member. A clever idea that is discarded is not wasted if it is filed away for a more appropriate application on some future production.

EXERCISES

Exercise #1 – Observing Environment
Supplies needed: notebook, pencil

- As you sit in your own living space, take a moment to observe your surroundings with a neutral eye. What is the condition of your space? What kind of furnishings and décor fill the space? If you knew nothing about the person living there, what would these clues tell you? Make notes on your observations.
- While visiting other places—homes, apartments, dorm rooms, faculty offices, doctors' offices, restaurants—make notes on how each differs from the other and what those differences communicate. What is the socioeconomic status? What is the level of cleanliness? When were the furnishings purchased or the interior decorated?
- What types of observations led to your conclusions?

Exercise #2 – Developing Drawing Skills
Supplies needed: sketchbook, pencils

- Make four sketches of your living room, bedroom, or kitchen from various vantage points (one from each corner of the room).
- Pick another room and sketch the furniture that is in that room.

Exercise #3 – Developing Rough Ideas
Supplies needed: script, notebook, sketchbook, pencils

- Create a scenery punch list for a specific script that lists the given circumstances and design objectives.
- Create two sets of thumbnails and rough ground plans for the play, one design for a proscenium stage and the other for an arena stage.

Exercise #4 – Developing Design Ideas
Supplies needed: vellum, drafting tools

- Chose one of the sets of rough designs for the proscenium stage in exercise #2 and develop the design idea into a drafted ground plan. See appendix on USITT Scenic Design and Techincal Production Graphics Standards.

Chapter 8

Costume Design

A costume is more than just a fashionable set of clothes or a scary Halloween outfit; it is an expression of character and an important part of any theatrical storytelling experience. Anything and everything worn onstage by an actor, dancer, or opera singer is considered a costume—including undergarments, shoes, accessories, hair, and headpieces. A costume encompasses traditional clothing, such as jeans, dresses, and suits, as well as nontraditional garments like those in the musical *Beauty and the Beast,* where actors are costumed to look like furniture pieces, teacups, plates, and candelabras.

Audiences respond to good-quality costuming both consciously and subconsciously. The compliment, "I loved your costume," should be taken seriously by the actor as well as the costume designer. Such strong positive reactions to clothing typically occur because costumes help produce an emotional and intellectual connection to the character and the work of the actor. When viewers really "connect" to the character, the play, and the story, costumes are often contributors toward that experience. Costumes are more than just clothes; costumes help transport audiences to the world and the circumstances of the play. Costumes can also benefit actors in this movement; in fact, it is an exciting achievement for the designer when costumes aid actors in their own discovery of character.

In order for costume designers to create artful products (as opposed to just putting clothes on actors) they must first have a clear understanding of what they are striving to achieve. Experienced costume designers endeavor to go beyond the basics of simple "body coverage" to ascend to the level of fine art with their creations. These designers work ceaselessly to reveal deeper insights by drawing on the tools and techniques of their craft as well as the collaborative input of their fellow artisans. Taking rudimentary craft skills to the level of fine art is a lofty aspiration, but the best designers aspire to create art with every new project and every new costume. Most successful designers attempt to generate a collaborative artistic expression that is thought-provoking, emotionally evocative, and well beyond a perfunctory interpretation of the play. In order to do this, there are certain tried and true tactics each beginning designer should adopt. The first tried and true steps are to read and analyze the play, and the next is to determine the given circumstances.

THE GIVEN CIRCUMSTANCES AND COSTUME DESIGN

Reading the play and determining the givens are the beginning steps in a process of revelation and discovery. The givens provide essential, obvious, and basic information about the play to be designed. The given circumstances for costumes can be expressed in the script in a number of places. The most apparent locations for costume information are in the playwright's descriptive passages at the top of every new scene. For example, in *Rabbit Hole,* written in 2006 by David Lindsay-Abaire, the playwright gives fundamental information in the scene-opening passages; this helpful information is often purposefully basic and mechanical such as, "Late February," "gathered around a birthday cake," and "her pregnancy is starting to show a little. She's four and a half months along." This kind of data should all go on the costume designer's list of givens, in addition to the information Lindsay-Abaire places on the "cast list/time/place page," where we find the ages of the characters, the location of the play (Larchmont, New York), and the time (the present).

In addition to the cast list page and the scene-opening passages, costume designers also find useful information contained in the dialogue of the script itself. For example, in Tracy Letts's 2008 play *August: Osage County,* the character Violet says to her daughter Ivy, "Your shoulders are slumped and your hair's all straight and you don't wear makeup. You look like a lesbian. You're a pretty enough girl, you could get a decent man if you spruced up a bit, that's all I'm saying." Violet's commentary on her daughter's looks provides the costume designer with basic information regarding Ivy's appearance, as well as a clue about Violet's own point of view. Another completely different example of given information contained within dialogue can be found in Moliere's play *The Miser,* first performed in 1668, where Harpagon says to Cleante in act I, "But what I would like to know, never mind anything else, is what's the use of all those ribbons you are decked out with from head to foot?"(Penguin Classic translation). Again, this useful information about clothing and appearance contained within the dialogue of a play (in this case specifically regarding Cleante's clothing and appearance) should go in the list of given circumstances for any production of *The Miser.*

THE DESIGN OBJECTIVES AND COSTUME DESIGN

Time and Period

Once the list of costume givens is created, a more in-depth look at the objectives of design as they relate to costumes is warranted. We know from watching play performances, as well as films and television shows, that costumes very readily express the attributes of time and period, place and locale, mood and theme, character, and style, so how exactly do designers identify these objectives of design in order to facilitate this expression? Designers must make a list of the design objectives outlined in chapter 2 and methodically work through the list, identifying each objective in the script as it relates to the costumes. Identifying objectives involves more digging than identifying givens and will most likely entail some creative thinking, some research, and even some intense collaborative discussions with the director and other members of the design team. Playwrights reveal the objectives in their plays in a multitude of different ways and emphasize these objectives differently according to their storytelling needs.

It is important to keep in mind that the key to creating successful realistic expressions of time and period, and all other objectives in costuming, involves the following: identification, observation, and selectivity. After identifying the objective in the script, designers then practice careful observation of the clothing worn by individuals living in a specific and appropriate era; then they choose clothing based on the observations that expresses the objective. This process basically describes the act of selectivity practiced by all working artists. Artists first scrutinize and evaluate all potential choices, then select what they feel is the best option—the option that best expresses the intended thought, mood, or other design objective.

Paula Vogel's *The Mineola Twins, A Comedy in Six Scenes, Four Dreams, and Six Wigs* is a satirical farce containing challenging aspects of time and period. The first two scenes of this play take place during the American Eisenhower administration of the 1950s. The play then progresses in time to the late 1960s and early 1970s during the Nixon administration, and then the final scenes of the play take place in the late 1980s and early 1990s during the George H. W. Bush administration. The playwright outlines the time requirements in the front matter of the script and at the top of each scene, as in "Scene One, 1950s," which makes the identification of time and period relatively easy. This play broadly lampoons American culture and serves as a metaphor for the divide between liberals and conservatives in American politics. Any costume designer for *The Mineola Twins* must delve into research of American clothing from the late 1940s

until the 1990s. Choices must then be made from the research. Designers must also determine the way these choices will be expressed—otherwise known as style. In this case, it is a broad satirical style. Paula Vogel gives us a hint regarding style from the outset in her production notes when she says, "There are two ways to do this play: 1. With good wigs. 2. With bad wigs. Personally, I prefer the second way." See appendices on Genre and Style.

In other nonrealistic productions, playwrights often leave time and period purposefully ambiguous. This can prove challenging for a costume designer who is accustomed to a realistic and detailed research approach. In Samuel Beckett's play *Endgame*, the dialogue is purposefully repetitive and nonsensical, and the characters are obviously irrational and hopeless. Each character's purpose in the play is vaguely drawn, and we are given an indistinct idea of character relationships. The play offers no concrete time, period, place, or locale. Developing a production concept for this play and making appropriate costume choices are both challenging propositions because designers cannot approach this play as a realistic piece. Beckett's thematic content becomes very important, as references to time and period are purposefully confusing or simply do not exist in *Endgame.* Designers must discover the themes by looking for repeated patterns in dialogue and action.

Place and Locale

In order to show place and locale through clothing in realistic productions, designers first determine the specific physical origin of each character, then observe and note clothing worn by others from that locale, and lastly reveal the origin or place to the audience via appropriate clothing choices (identification, observation, and selection). How might costume designers approach researching and designing costumes for a realistic play whose characters are contemporary American college students, for example? Again, as with time and period, designers must utilize identification, observation, and selectivity methods when determining place and locale. Identifying the place in this instance would be the specific college or university and the locale the particular region, state, and/or city within the United States where that college is (or might be) found. In addition to identifying the specific college or university and its geographic location, designers must also identify and research the hometown of each student. Each student's place of origin may be very different from that of the college or university itself, thereby compounding the information denoted in the clothing. Once these places and locales are identified, the designer must observe, research, and select appropriate garments for each student based on the information gathered. The students may all look similar, but good designers

provide subtle yet distinctive details in order to give each student a unique visual identity.

Costumers study people and their origins, and they revel in the little details that express aspects of character, particularly when they relate to place and locale. For example, *Riders to the Sea,* by John Millington Synge, is a one-act play written in the early twentieth century and set in a coastal island community off the west coast of Ireland. The locale of this one-act is particularly important to the play and the story Synge tells; the land the characters inhabit and the sea that surrounds their small island community are key elements. In fact, the sea is responsible for the deaths of most of the men in the Irish family at the center of the story, and one of the larger themes in this play is the struggle between human beings and the natural world. The influence of the sea and the land should be included in any production concept for this play, and good costume designs will reveal this influence on some level. There are a variety of ways this could be expressed: the color palette and textures of the costumes could draw inspiration from the ocean and Irish landscape, or the shapes and forms of the costume elements could reflect those shapes and forms found on the Irish coastline.

Mood

Mood is an expression of the feelings evoked by a scene or play, and *Riders to the Sea* by John Millington Synge is not only a good example of place and locale, but is a good script to look to when exploring mood. In his opening descriptive passages, Synge makes a strong case for mood. He states, "Throughout the play is heard the forbidding pound of surf . . . and the eerie whistling of the wind around the eaves . . . This sound should . . . serve as a mood accompaniment." An example of the prevailing mood of the play can also be found in Maurya's words when she pleads with her son not to go sailing in bad weather: "It's hard set we'll be surely the day you're drownd'd with the rest. What way will I live and the girls with me, and I an old woman looking for the grave?" Costume designers for *Riders to the Sea* must look to all aspects of the play—the playwright's descriptions, the dialogue, the action, and the imagery—when deciding how to express the mood. When reading any play, designers must get in touch with how the play makes them feel and then determine how they will visually support the story in order to impart that feeling to the audience.

Clothes can readily express mood. We easily see in our own lives that what we wear and the way we dress for school or work articulates our own

daily moods or feelings. Our general attitude toward life is evident in our clothing as well. The colorful tie-dye of the flower child is contrasted by the black somberness of the goth subculture, and both looks express very distinct temperaments or moods. An obvious example of a character's mood revealed in clothing is found in William Shakespeare's play *The Tragedy of Hamlet, Prince of Denmark* (more commonly known as just *Hamlet*). In act I, scene II, Hamlet speaks to his mother, Gertrude,

"Seems," madam? Nay, it is. I know not "seems."
'Tis not alone my inky cloak, good mother,
Nor customary suits of solemn black . . .
But I have that within which passeth show,
These but the trappings and the suits of woe.

Shakespeare obviously intended for Hamlet to wear black clothing not only to indicate the standard custom of mourning, but also to symbolize the deep grief and remorseful mood he embodies. This is an example of how one design element in clothing, in this case color, can readily indicate the mood of a character, a scene, or even the play itself.

Theme

The thoughts invoked by a play are a clue to its themes. As seen in chapters 1 and 4, the director and designers determine the production concept for a play based on the play's themes, and often a central visual metaphor is established to express this concept. Metaphors can be overtly or subtly applied, and the most effective visual metaphors are adopted by all of the production's designers to some degree.

For example, the design team for a recent production of *Oedipus the King* adopted a central metaphor of eroded and ancient stone for their designs. The circumstances of the play show the inhabitants of Thebes in a condition of despair and disease, seeking to cure their ailments and repair their city. The director of this production sought to express this circumstance of plot by drawing inspiration from the architectural ruins of the Acropolis in Athens. The present-day eroding condition of the buildings of a once-great civilization serves as a reminder to modern viewers that nothing is permanent, and even the strongest among us can weaken and fall away. The caryatids—human-shaped sculptures used as columns on the Acropolis—as well as the colors and textures of the eroded stone and other natural materials found in the architectural treatments were all used as visual inspirations and functioned as metaphor in this particular production. The scenic, lighting, and costume designers used the

eroding condition and colors and textures of the stone, as well as the shapes and textures of the caryatids, as visual metaphors in their designs. The production had a strong sense of unity as a result of this approach.

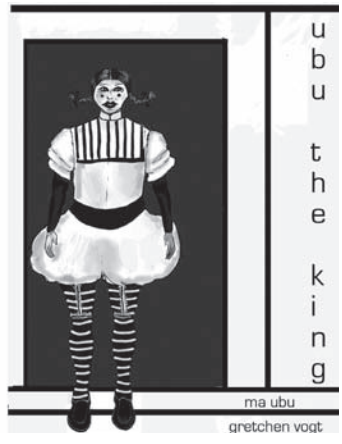
Research photograph, costume rendering and production photograph of Sophocles's *Oedipus the King*, demonstrating the utilization of ancient Greek architectural ruins as a visual metaphor for the production design. This show was produced jointly by Milligan College and East Tennessee State University, with set designed by Melissa Shafer, costume design by Karen Brewster, and lighting design by Scott Hardy. Directed by Richard Major. Photo of Acropolis courtesy of Alice Anthony.

Theme in costuming can also be expressed in the *way* clothing is worn, not just in the clothing choices. Say, for example, the characters in act 1 are neat and tidy, and then in act 2 they all become disheveled and unkempt. This could illustrate a thematic statement about the loss of control. One particular production of *Hamlet* used the obverse of this idea—the costume designer had the character of Hamlet begin the play very unkempt and messy, and as he gained a sense of purpose and determination during the course of the story, his clothing and hair became neater, cleaner, and more controlled. Using the way clothing is worn very simply and strongly expressed the themes of control in this particular production concept for *Hamlet.* This approach also gave opportunity to visually express the intellectual and emotional changes Hamlet experiences throughout the course of the play.

Style

The style of a play is the way the story is told, and the term *theatrical style* refers to an overall visual approach, an expressive technique, or a convention that all aspects of a play production follow. These conventions are sometimes associated with a historical period or literary or artistic movements. Generally, style is either representational (realistic) or presentational (nonrealistic or stylized,

containing abstractions, symbolism, fantasy, and allegory). Many plays fall somewhere between these two extremes. Designers must be able to recognize, correctly identify, and understand the appropriate styles for plays in order to create effective visual interpretations. The ability to do this is reliant on keen observation of stylistic modes as well as a persistent study of historic stylistic movements. See chapter 1 and appendix on Style.



A contrast in styles: a nonrealistic costume design and rendering for *Ubu the King* by Cynthia Turnbull contrasts with the realistic costume design and rendering for *Artichoke* by Karen Brewster; Denison University production of *Ubu the King*, written by Alfred Jarry, Barter Theatre production of *Artichoke*, written by Joanna McClelland Glass.

In order to adopt an appropriate style for a production, costume designers beginning to visualize designs for their productions should ask themselves, To effectively support the play, should these characters wear clothing that is like clothing in everyday life? Should the clothes help convince the audience that the situation onstage is akin to reality? Or can it be appropriately imagined that these characters are wearing fantasy garb, donning abstract shapes, or wearing clothing unlike anything ever seen in everyday life experiences? These questions will lead designers to make the broad determination: Is the play realistic or nonrealistic, or somewhere in between? After this broad determination is made, more specific questions about style and genre must be answered based on the information listed in the appendix on Style in the back of this book. Answers to basic questions such as these will help directors and designers establish a suitable production concept, and will ultimately ensure that the clothing is stylistically appropriate.

Many designers subscribe to the opinion that nonrealistic styles are more difficult to produce successfully in costumes than in the other design areas. This theory proposes that costumes are attached to human bodies; therefore, the garments exist alongside a constant realistic reference, and the leap to nonrealism is made more difficult because of this intrinsic circumstance. Whether or not this theory is a worthy argument can be debated, but it is a fact that the realistic human body poses a challenge when attempting to create nonrealistic articles of clothing. To counter this effect, many costume designers attempt first to distort the human form with nonrealistic structures such as padding or other framing, and second to attach a nonrealistic outer garment over that distorted form.

The use of masks in a theatrical production is another device that is inherently nonrealistic. Masks have been used in performances since the beginning of human history, and they hold potent symbolic meaning. The aforementioned production of Sophocles's *Oedipus the King* shows all characters dressed in masks as a way to connect to ancient Greek practices. These masks readily evoked the extreme emotion and symbolism in this heightened drama. And the challenge of representing a bloodied and newly blinded Oedipus onstage was artfully and nonrealistically solved through the use of masks.

King Oedipus, wearing a mask, is "blinded." The mask expressed the symbolism and style of the production, while also solving a practical problem. *Oedipus the King*, written by Sophocles, was produced jointly by Milligan College and East Tennessee State University. Scenic design by Melissa Shafer, costume design by Karen Brewster, and lighting design by Scott Hardy. Directed by Richard Major.

Revealing Character

While every one of the design areas (costume, scenic, lighting) can reveal character, the most powerful design area that aids character revelation is costume design. In addition to revealing objectives of period and time, place and locale, mood, theme, and style, costume designs also communicate information about the age, status, and health of the character. In the broadest sense, costumes, along with makeup and hair, can tell the audience whether the character is old or young, rich or poor, and even healthy or sick. Costumes can also reveal more detailed character attributes, such as miserliness, generosity, confidence, insecurity, orderliness, and slovenliness, among other things. This information can be communicated almost instantaneously, or subtly and slowly depending on the concept and the design.

The character's occupation can also be indicated with costumes, which is most obvious if the occupation calls for a type of uniform, such as with police officers, firefighters, doctors, or other service personnel. But occupation can also be subtly indicated by the other standards of dress in the workforce. For example, business people and politicians stereotypically wear suits, college students wear jeans and T-shirts, and college professors often dress in a way that is somewhere in between these two extremes. Occupational clothing is interesting to consider, especially coupled with information regarding the character's attitude toward their employment. Some people are comfortable dressing in suits every day, while others prefer to wear more casual clothing on a daily basis, and this preference can be very revealing of character. This exemplifies why it is important for actors and costume designers to understand that while the costume is one important aspect of character revelation, the way the costume is worn is yet another. For instance, subtleties in the way the actor wears a police uniform can speak volumes about how the character feels about her job, herself, and the world.

Barter Theatre's production of *Lying in State* by David C. Hyer exemplifies how information about character can be displayed in clothing and hair choices as well as in the way clothing is worn. Scenic design by Cheri Prough DeVol, costume design by Karen Brewster, lighting design by Craig Zemsky, directed by Nicholas Piper. Performers: Michael Poisson, Elizabeth P. McKnight, and Scot Atkinson. Photo courtesy of Barter Theatre.

One of the more challenging types of dramatic characters for actors as well as costume designers are those characters based on real-life people. This poses a challenge for many obvious reasons, the most significant of which is arguably that the audience has a preconceived idea of how the "real-life" character should look. In the play *Frost/Nixon* by Peter Morgan, we have two very well-known characters based on real people: television personality David Frost and the thirty-seventh President of the United States Richard Nixon. The play is based on interviews that took place between the two in 1974. The positive aspect of doing this play is that there is ample research available, both textual and visual. And perhaps the most significant lesson is found in the playwright's own words at the top of the script: "Finally, it is a play, not a historical document, and I have on occasion, perhaps inevitably, been unable to resist using my imagination." This is important advice for any theatrical artisan seeking to represent real people and real situations.

Color is a useful indicator of character; it is an element often used by designers and directors as a way of expressing character relationships and can

even create visual focus in blocking and choreography. A character's bearing in the story can be expressed by using color to establish visual connections to other characters, as in Barter Theatre's production of *Count Dracula*, where the color green was used throughout the production to connect Dracula with his victims. Green was used for the lining of Dracula's cape, and everyone affected by the vampire had green tones in their clothing. Additionally, color is often used in musicals to express character relationships and to help audiences make visual and emotional connections. In Barter Theatre's *Thoroughly Modern Millie*, the costume designer used color to connect the romantic couples, with one couple in pink, one in blue, one in purple, and one in teal. This device helped audiences keep the couples visually connected in the dances; in addition, the group of couples served as a contrasting "backdrop" to Millie's yellow costume at key moments in the choreography, helping draw focus to the central character.

The script can also drive color usage. Early in the play *Steel Magnolias,* by Robert Harling, the central character Shelby makes a lighthearted point that her favorite color is pink, calling it her "signature color." The entire play takes place in a beauty shop with a cast of six female characters. The women are all connected to one another on some level, either as blood relations or close friends and neighbors. Shelby is the central character in this play, and the entire action of the play revolves around the events of her life: her wedding, the birth of her child, and eventually her death. Shelby eventually dies in a noble and tragic fashion, and her death has a profound effect on all the other characters. Because of the established circumstances in the play, costume designers typically dress Shelby in pink, use the color pink to establish a connection between Shelby and her mother M'Lynn, and later, after Shelby's death, to the other characters in the story.

The use of color as a way to visually organize and draw focus as demonstrated in *Thoroughly Modern Millie* by Jeanine Tesori, Dick Scanlan, and Richard Morris (see color insert at center of book). Scenic design by Daniel Ettinger, costume design by Amanda Aldridge, lighting design by Craig Zemsky, directed by Richard Rose. Photo courtesy of Leah Prater. A Barter Theatre production.

Solving Practical Problems

This objective underlies every phase of the costume design process. For all designers, this objective has a dual concentration:

- Artistic/creative—relating to the play, the characters, and telling the story
- Technical/practical—relating to the costume pieces, their expressiveness and execution

Designers begin solving practical problems during the first reading of the play and do not stop until opening night. Designers consider the artistic side of this objective when deciding exactly how to tell the story, and how to determine the style, moods, and themes. Designers and technical staff also look at the

practical side of this objective when they evaluate costume pieces and whether these pieces are successfully executed. Do the costumes fit the actors? Can the actors move and function in the costumes? Will the costumes hold up during a long run? Both the artistic and technical aspects of solving practical problems prove especially important for the actor because any problem with the costume can impede their ability to provide an effective performance.

When solving practical problems for all performances, including opera and dance, costume designers must keep in mind two absolute, overriding, and seemingly obvious practical notes:

- Singers and actors must breathe.
- Dancers and actors must move.

Design choices are more successful when these tenets are kept in primary focus. These notes seem ridiculously obvious and very basic, but are unfortunately overlooked far too often. This neglect leads to loss of time, money, and even artistic integrity while issues related to these tenets are resolved. Communication is crucial to making effective decisions regarding movement and comfort. It also helps to research what actors, singers, and dancers generally need and how they function when performing their roles.

The need for quick costume changes and instantaneous transformations creates additional practical problems that designers must consider. These challenges are common ones, and experienced costume designers know just how to solve problems such as these with simple solutions that also provide for the needs of the show. These simple solutions often entail ingenious costume combinations involving planned layers worn one over the other. Another common yet related costume challenge happens in plays where a core group of actors play multiple roles, as in the plays *The Dining Room* by A. R. Gurney and *A Piece of My Heart* by Shirley Lauro. Often in these types of plays, costume designers dress the actors in a standard generic costume that serves as the visual base for pieces that are added on, taken off, and worn in different combinations to signify different characters. Designing this type of show is challenging, and involves close collaboration with the actors, the stage manager, and the wardrobe supervisor for the production. It is common for the costume pieces to be stored on stage and added or removed in the middle of key scenes, and this takes careful design planning. The challenge of storing costume pieces on the set leads to another very important aspect related to helping performers and solving practical

problems: the actual theater space, and how the venue impacts performers and the costume design.

Practical Problems Related to Theater Spaces and Costumes

When it comes to performance venues, the common inclination is to think that the theater space impacts scenic and lighting designs more than costume designs. This is arguably true; nevertheless, costume design is certainly influenced by the theatrical performance space more than many realize. There are limitations and challenges presented by every theatrical performance venue, and learning about the varieties of theatrical venues and how they impact design is important. Seeing lots of plays in performance can facilitate this aspect of education. Ways the theater space influences costume design include:

- The **rake** of the audience space and its relationship to the stage—is the audience "looking down" on the actors or "looking up" on the actors? When audiences "look down" on the actors, they see the tops of heads more and feet less. When audiences "look up" on actors, they notice feet more, hemlines look shorter, and the tops of actor heads are difficult to see.
- Proscenium, thrust, or arena will influence how costumes are viewed. If the space is a thrust or arena, the audience will view the costumes from the sides and back more frequently than in a proscenium space.
- The size of the performance space impacts costume design. In an intimate space such as a black box, fabric prints and costume details are more visible than in a large performance hall. Designers often have to go very bold with colors and patterns in larger venues, or typically use fewer patterns and more solids. In larger venues costume designers often emphasize scale and proportion more and smaller details less.
- Backstage areas influence design choices. Is there ample available wing space and are there onstage dressing room spaces, or are the dressing and quick-change areas limited? The answers to these questions will influence choices made by costume designers.
- Angle and availability of lighting positions in the theater space will impact costume designers. For example, lots of front lighting will "flatten out" the performer and visually "push them back" against the set. Costume designers compensate for these phenomena by creating a higher contrast between the set and the costumes in an effort to separate actor from environment.

Ultimately, the performance venue has a tremendous impact on the entire team, from directors to designers to actors. Anyone who has toured a show can attest to this fact. It is crucial that designers become acquainted with the theater space in question as soon as possible. Ideally, they should visit the empty theater and see a performance in the space. Talking to other artists who have worked in the space can also prove invaluable.

THE COSTUME DESIGNER'S PROCESS

Collaboration with Actors

As stated in chapter 4, theater is collaborative, and costuming is no exception. Costume designers must collaborate with the director, other designers, the costume shop staff, and the actors in particular. The relationship between a costume designer and an actor is much like the relationship between a patient and a medical professional. The patient must have confidence in the abilities of the medical professional and must trust that they have the patient's best interests in mind. Likewise, the medical professional must earn the trust of the patient and then do nothing to erode that trust. The same holds true for the costume designer–actor relationship. Costume designers ask actors to exhibit their bodies in ways akin to those involving medical procedures, and this situation demands a matter-of-fact and confident professionalism in order to achieve trust. Some actors may have had negative experiences with costumes or designers and may have difficulty letting go and allowing the designer the necessary freedom to work. Still other actors may have body-image issues and have trouble gaining confidence in a designer's abilities for that reason. In all cases, designers must learn to be patient and understanding while garnering the performer's trust through informed conversation and sincere support.

The relationship and trust building begin with the first interchange or fitting between designer and actor. Good designers are keenly aware of the importance of this first meeting. Actors should be treated with sincere respect, beginning with the first interaction. Costume designers must strive to understand and respect the work of the actor and show genuine interest when an actor has a question or concern about the design. Respectful designers invite collaborative interchange with actors on issues relating to the costumes and the concept. Actors need to be convinced that the costume is an essential aspect of the character; this ensures the actor will wear the costume in total comfort both

emotionally and physically. Good costume designers know that when an actor invests in the costume, it is more likely to "work," both artistically and practically.

Costume Research

Research and investigation are very important to costume designers. Costume designers are observers of people: people on the street, people at work and at play, people in the past and present. There is a wealth of information available in the observation and study of people who are living, or have lived, lives like the characters in any play. Costume designers are masters of asking "How?" and "Why?" They make it a habit to observe the details of *how* people look—what they wear and how they wear it—and *why* they look that way. When costume designers carry out research, they always consider the social context. How do the individuals live, what do they eat, where and how do they sleep? Answers to all of these questions impact clothing choices. The information gleaned from these questions is then used to develop an informed visage for the character.

When conducting research, costume designers not only observe people *in situ*, but also read books and search online sources. There are many costume history reference books and general information online sites that are often very helpful. But these general reference books and sites are just the beginning—one step in the process of costume research. Good costume designers dig deep for information in any location and in any way that is fruitful, leaving no stone unturned when in pursuit of necessary information for their projects.

The first rule of conducting research for costume designs is that designers should go beyond just scratching the surface, beyond the first source investigated. Digging deeper in this way will lead to more interesting references and will provide a richer, fuller, more informed end result. Staying with the first source investigated without looking at other possibilities can be likened to sitting on the tip of an iceberg and never looking underneath the surface of the water. One will never know what is under there unless one looks, and the results could have a massive impact on the design.

The second rule is to play devil's advocate to personal ideas and impulses. This rule is like the first rule, in that it encourages scrutiny. Costume designers must always make it a habit to scrutinize any observations made in the process of gathering research. Designers should ask themselves, Why am I drawn to this choice? Does it truly express my ideas and intentions? Does this choice serve the needs of the play? Will this choice work on this particular actor? Are there other choices that would be better? This scrutiny is the driving force behind "digging deep" and is essential to a successful research process.

There are many research challenges specific to costume design. Costume design research often entails looking into the fabrics of the era and how garments of previous times were constructed. Period-accurate costumes are achieved by employing authentic fabric choices and construction techniques, especially desirable in realistic productions. Information regarding fabrics and garment construction can be found in a number of ways (see appendix on Fabrics):

- Analyzing actual garments
- Perusing fashion and garment construction periodicals of the time
- Looking at old photographs and paintings
- Observing journals and other primary sources
- Reading secondary costume history texts
- Referencing old sewing patterns

Another very important research direction for costume designers involves the director's viewpoint and the production concept. Often the director will name an artist or inspirational work of art, a significant location, culture, period of time, or a historical event that speaks to the play and the directorial approach in a meaningful way. Costume designers must embrace these directorial inspirations and see them as sources for further research. For instance, one director of the musical *Fiddler on the Roof,* inspired by the original Broadway production, used the artist Marc Chagall as inspiration, charging his designers to look to the works of this artist when researching and making choices for the play. The costume designer pored over books and artwork by Chagall, ultimately gaining inspiration from many of the colors and textures found in these pieces. The other designers did so as well, and in the end result it was apparent that the Chagall research had a unifying effect on the entire production.

Communication

Figure Drawing

Costume designers must have a way to communicate the ideas they develop, and the commonly accepted method is drawing the human figure, either by hand or by computer, dressed in a costume design for the play. Because sketching (either electronically or by hand) is the industry standard, and many individuals will see and get information from the costume sketch, designers should train their eyes and hands to be able to draw the human figure in a recognizable and proportionate way. The way to accomplish this ability is twofold: through

keen observation and regular, repetitive practice. Designers should make it a habit to observe the human body in its myriad forms at every opportunity and then regularly engage in attentive figure drawing. It is important to know that anyone can draw. Although some may possess more "natural" ability than others, anyone can learn to draw with dedicated and disciplined practice.

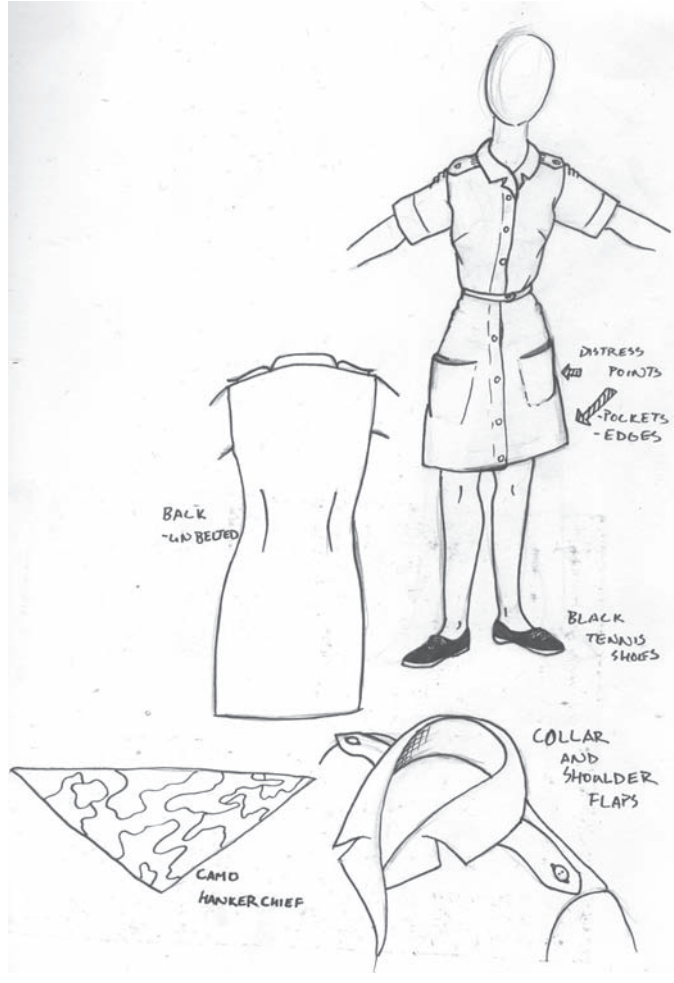
Learning to really "see" the human body is the first step toward drawing it, regardless of whether the drawing is with pencil and paper or on the computer. Seeing and drawing are both mental exercises that develop eye-hand coordination. *The New Drawing on the Right Side of the Brain: A Course in Enhancing Creativity and Artistic Confidence* by Betty Edwards (Tarcher Books, 1999), is one very good source to help burgeoning designers successfully learn to see and draw. There are many additional books and online sources available to help designers learn to "see" and draw the human form; it is essential for designers to find a source that works and then to get in the habit of spending regular, quality time working to improve figure drawing skills. Another great source for developing skills is to study the sketches and costume renderings created by other costume designers.

Rough Sketches

After determining the givens and researching the design objectives, designers begin to formulate substantive ideas for the show. Initial ideas are typically communicated via **rough sketches**. These can be small, quick "thumbnail" drawings or even full-sized outline or "contour" drawings with thoughts and ideas regarding the specific details listed in the margins around the figure. Designers may produce several quick-sketched ideas per character.

Donna Meester's rough sketches for University of Alabama's production of *All's Well That Ends Well* by William Shakespeare.

The purpose of these quick, rough sketches is to facilitate discussions in early design meetings. Rough sketches serve as a way to put forth ideas and to initiate further collaboration with the director and other designers. In meetings, many designers will actually draw over or make notes directly on the sketches as a way to facilitate communication and preserve the results for later consideration.



Costume designer Jordan Straight's rough sketch ideas for East Tennessee State University's production of *A Piece of My Heart* by Shirley Lauro. Notice how the designer uses the process of sketching to work through and develop design ideas.

Some designers, depending on the show, will collect and manipulate inspiration photos or photocopies of research instead of creating rough sketches from scratch. They may even cut and paste selected aspects from these photos to create quick "collage sketches." This cutting and pasting can be done either by hand or electronically. The process of creating a rough sketch or a collage sketch actually helps facilitate the design process because it forces designers to think through the clothing elements in detail while making specific choices for each costume. The photos or collage sketches are later utilized in the same way as rough sketches—as a communication tool in the production meeting and as a springboard for the continued development of design ideas.

For a show primarily pulled from **stock**, the equivalent to rough sketches can be accomplished using a digital camera and dress forms. And, depending on actor availability, photos of potential outfits can even be taken during initial fittings. Putting together potential "pulled" outfits on the forms or on actors in various configurations and then making multiple photographs of the possibilities can substitute for traditional rough sketches, serving an equivalent purpose. The photos can be printed out and used to create a costume collage for presentation in a production meeting, or sent electronically for long-distance discussions with the director.

Costume Renderings

After working out ideas via rough or collage sketches, the final drafts are solidified by creating fully embellished costume renderings or plates. Costume renderings are the representations, typically on paper either by hand or computer-generated, of a costume designer's detailed plan for the clothing in a specified play. The costume plan, or design, is a culmination of the process outlined in this book. As a general rule, the costume designs include a set of costume "plates," or renderings, representing every costume in the play. It must be remembered that the purpose of costume renderings is communication. The intent is not to create a great work of art, though some renderings can be considered great works and have even appeared in the finest museums. The main purpose of costume renderings is to communicate the design to the director, the other designers, the costume shop staff, and the actors.

Since the aim of costume renderings is to clearly communicate ideas, they should be easy to decipher. Designers must keep in mind that while there are many possible ways to create costume renderings, most renderings have several common characteristics:

- Full-body pose—typically three-fourths frontal (or can be any pose that appropriately reveals the costume—rear poses are used when back detail dictates).
- One arm is often extended in some way to show sleeve or arm treatment.
- Renderings are typically in full color—artists' materials used vary depending on the preference of the designer, but common materials include colored pencils, color markers, watercolors, colored inks, and computer software applications such as Adobe Photoshop or Corel Painter. The Wacom drawing tablet is a tool that is frequently used for computer-aided rendering.
- Style of rendering, both in choice of materials used and manner of execution, usually represents the production style.
- Bodies are proportional, posed and drawn to represent the character or the actor playing the character. This is different from fashion design plates, which tend to purposefully elongate the human form.
- Working diagrams and notes can appear in the margins.
- Typically, one character is drawn per plate, though many designers will put multiple characters on one plate.
- Each plate usually has the play title, the character name, the act and scene, and the designer's name. Sometimes the name of the actor, the theater company, and the United Scenic Artists union seal are also included.
- Fabric and trim **swatches** are added when appropriate.

The costume rendering is one important step in the design process. However, after the renderings are completed, the designs may continue to evolve until opening night; therefore, it is common to see differences in the realized costume and the costume rendering. Changes in costume ideas postrendering occur for various reasons. Some common reasons for these changes include the following: roles are recast, fabrics prove unavailable, or directors may make adjustments to concept or blocking resulting in a costume change.

Today, it can be very important to learn how to draw and create costume renderings using the computer. As with hand drawing, the tenets of human form observation and regular practice also apply to computer illustration. There are many software programs available, ranging from simplistic drawing programs to very complex illustration packages containing lots of bells and whistles. The graphic design, video gaming, and fashion design industries have impacted and continue to impact the illustration software market in a big way. For beginners,

the best advice is to start with a simple software illustration program and spend hours working with it. It is advisable to find a class on the topic, or a friend who has knowledge, skills, and equipment to share—at least in the initial stages.

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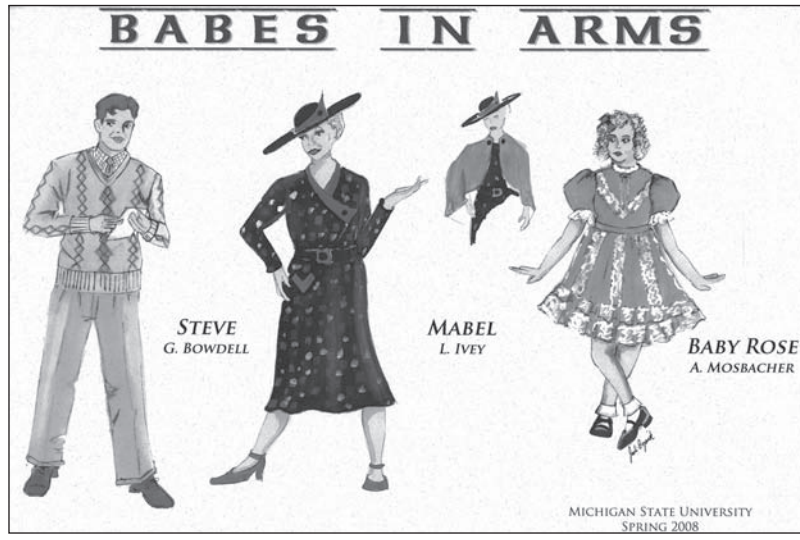
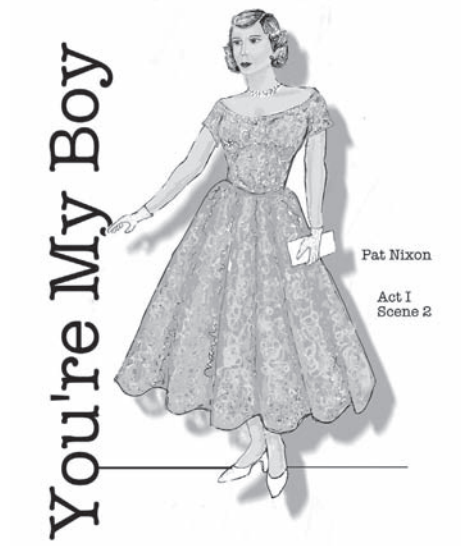


Rendering for *Babes in Arms* by Jodi Ozimek showing appropriate labeling and multiple characters rendered on same plate.

Many designers use a combination of technology and hand drawing in their renderings. They often draw a basic figure in pencil first, then scan and import the drawing into the computer software program in order to add the costume, the background, and necessary lettering. Still other designers create the entire dressed figure in watercolor first and then use the computer to add backgrounds and titles. Using computer illustration software to do backgrounds or lettering on renderings is a common way to create a hybrid illustration, and a good intermediate step between creating drawings entirely by hand and creating drawings entirely on the computer. It is important to know that many designers use an additional piece of equipment called a drawing tablet along with their computers and software programs. Drawing tablets come with a special drawing "pen" that makes drawing with technology much easier. It takes much practice to become proficient enough to create a respectable computer illustration, so do not be discouraged if first tries are a little rough.



Rendering by Cynthia Turnbull for the Contemporary American Theatre Company production of *You're My Boy* by Herb Brown, using computer drawing and software tools.

DESIGN IMPLEMENTATION

Once the renderings are complete and the designs have been fully approved by the director, it is time to start implementing the costume design. This is the phase where the costumes are actually acquired or created according to the plans of the costume designer. Implementation of the costume designs usually involves the efforts of several highly skilled costuming professionals in addition to the costume designer. It is up to the costume designer to fully communicate the costume designs to the others on the costume shop team, including the assistant costume designer, the costume shop supervisor, and the **cutter** or **draper**, who will then help devise a plan for implementation. This plan for implementation will vary depending on the needs of the particular show, but each plan involves a combination of the following five ways to obtain costumes for any play, opera, dance, or film:

- Pull
- Rent

- Borrow
- Build
- Buy

Deciding whether to pull, rent, borrow, build, or buy is dependent on the artistic and practical requirements of the show. These requirements are keyed to the production concept and budget considerations, and most productions will employ some combination of pulling, renting, and borrowing, building, or buying. Costume designers and costume shop staff consider many factors when deciding where to get costumes for a show. These professionals take into account available budget, time, labor, stock inventory, the production concept, the theater space, and even the actors themselves. Determining the proper course of action depends on the knowledge and experience of the costume team, and can often result in a very complex plan of execution that utilizes many available resources. This plan is usually written in the form of wardrobe plots, piece lists, rehearsal lists, and lists for pulling, building, and shopping. Keeping organized lists is a very important part of the costume designer's job. There are software products available with templates to facilitate this organization. These plots and lists, along with copies of renderings, swatches, measurement charts, and other notes, are kept in a notebook referred to as the **show bible** (or "costume bible") in a centralized location in the costume shop.

Pulling

Taking costume pieces from existing stock is called "pulling." Incorporating a pulled costume element into a show design is a twofold process involving both technical and artistic considerations. The technical part of the process requires altering the fit of the garment, and the artistic process entails a change in the visual look of the costume in order to make it work within a new overall design. Costume designers pull from stock to save time, money, and to utilize stock supplies. However, costumers must be careful when making the decision to pull from stock. Experienced costume designers understand that pulling and adapting a costume from stock can easily become a time-consuming proposition. Sometimes alterations to the garment are complicated (more so than originally anticipated), or the process of visually integrating the costume into the look of the entire show becomes very costly. It is for these reasons that the decision to include pulling from stock in the costumer's plan of execution must be carefully thought out, with the shop supervisor and draper also weighing in on the decision.

Most university theaters, community theaters, and resident professional theaters have a costume storage area, and the size and condition of stock storage can be extremely variable. Many freelance designers will even use their own funds to develop a personal costume stock by gathering and storing unusual items from flea markets, antique shops, and thrift stores. Developing and maintaining an expansive stock is dependent on many factors: availability of storage space, the means to set up and maintain stock storage, the ability to make regular contributions to stock storage by buying or building new costumes, and the willingness to accept and catalogue costume donations.

When pulling costumes for a show, most designers pull numerous stage-worthy and hopefully sturdy possibilities in advance of costume fittings with the actors. The pulled garments should be stored in advance of the fittings in an organized and easily accessible manner, usually on a well-organized costume rack. Proper organization of the costume rack is essential in a well-managed costume shop; and this organization usually includes promptly labeling the costume pieces (this can be temporary or permanent), using identifying dividers on the rack, giving each actor individualized accessory bags, and applying clear and consistent labels on the bins, boxes, or shelves. The well-organized costume rack actually *facilitates* the creative design process, as designers will often spend time at the rack looking over possible costume choices in the context of the other visible costume elements. And the well-organized rack facilitates the practical process as well, aiding drapers, stitchers, and craftspeople by keeping the garments clearly labeled and accessible.

Renting

Costume designers decide to rent costumes for a variety of reasons. There are times, for example, when an actor poses a fitting challenge, or there is a need for unusual costume elements, such as specialized armor or an animal costume—elements that are typically time-consuming in the execution. Or, in more extreme cases, costumes for an entire show can be rented. Theater companies decide to rent costumes for entire shows for various reasons, primarily in cases when plenty of budget money is available but there is little time or staff available to make costumes happen.

The decision to include rentals in the costume designer's plan of execution must be thoroughly considered, weighing the advantages and disadvantages very carefully. Advantages are obvious: costumes come ready to wear, altered to actors' measurements. The disadvantage list is lengthier: of all the ways to get costumes for a play, renting affords costume designers the least amount of

artistic control and it prohibits additions to permanent stock. In addition, rentals can be costly, freedom to alter rented costumes is limited, and the quality can be variable. Since costume rental companies vary in price and quality, the best way to find a reputable company is by asking a trusted fellow professional for a referral. Most companies maintain a Web site where terms and conditions regarding rentals are outlined and photographs are available for viewing.

Another completely different type of costume rental involves an arrangement between an Actors' Equity–affiliated theater company and the union-affiliated actor. (Actors' Equity Association, or AEA, is the union for professional actors and stage managers.) There are times when costume designers want to use a garment, a pair of shoes, or some other item from the actor's own personal wardrobe. This happens most often in cases where fit is an issue, or the look of "being lived in" is desired, as in the case with clothing that has been broken in to the actor's body. AEA has very specific guidelines regarding the usage of clothing from the union-affiliated actor's own wardrobe and the guidelines typically require a rider to the actor's contract. Costs for rentals for a number of garment items are listed in the AEA rulebook.

Borrowing

There are some occasions when borrowing costumes makes sense, particularly when an unusual item is required that is unavailable any other way. However, many costume designers are reluctant to borrow from individuals or retail businesses because of the liability factor; costumes take such wear and tear that it is difficult to ensure that the item will be returned in good shape. In spite of this, there are indeed some good occasions to borrow: for example, in situations where theater companies have a reciprocal agreement with one another regarding loans of clothing and props. These arrangements can be more formally drawn out in a written agreement or contract, or may only be based on a handshake, but they typically guarantee rent-free access to storage areas for all companies involved. Relationships such as these should be entered into respectfully, and all parties involved must remember the golden rule of borrowing: treat others, and their property, as you would wish to be treated. This, of course, entails returning garments that are clean and in good repair in a timely fashion. When funds are limited, it is important for theater companies to honor such relationships as a way to support each other and ensure survival.

Borrowing may be standard practice for many, but one should always approach the practice with caution. Those who borrow regularly agree that there are two key elements to successful borrowing: taking good care of the borrowed

item and returning it promptly when finished. Even when great care is taken to ensure safe usage, bad things can happen, so designers must make certain that their theater or producing organization is properly insured for loss or damage to borrowed items. Whatever the insurance circumstances, many designers use the emotional attachment rule for borrowing—if the owner has an emotional attachment to the garment, do not borrow it! Emotions cannot be insured!

Building

The commonly used term for constructing a costume is *build*. The term *build* encompasses the entire process of construction: patterning, fitting, sewing, trimming, dyeing, painting, molding, casting, gluing, and the myriad of other techniques that may be involved in the creation of a costume element. The two biggest advantages to building a costume are that elements can be constructed "to suit," and then can be added to the stock storage when the show closes. For many resident costume designers, adding to stock is a big consideration when designing a show, and builds are often determined based on stock needs. Disadvantages to building involve time and money: building costumes can be time-consuming and expensive. The disadvantages, as well as the advantages, must be considered when developing an approach to creating and acquiring the costumes for any play.

Building a costume that is custom-made for both the production and the actor allows for ultimate control over the technical and artistic aspects of the creation process. The fit can be letter perfect, an especially appealing prospect in cases of unusual actor sizing. Achieving a perfectly tailored fit is also important in situations where the character should look well put together. Other important aspects can also be addressed when building costumes from scratch: quick-change requirements, special laundry or dry cleaning requirements, specific dyeing and distressing needs, actor allergy issues, and strength of construction. Costumes are typically built "super strong" in order to endure the rigors of an eight-show-per-week performance schedule. Actors often have to perform extreme physical feats in their costumes, feats that would not typically be performed in real life, and certainly not eight times a week.

The biggest payoff when building a show is the artistic reward. An adequate budget coupled with a skilled costume staff can provide the designer with unlimited creative results. Choices regarding the color and texture of fabrics, the line and shape of the silhouette, and other considerations can be addressed in a custom build situation. Building enables the designer to have complete artistic control over the costume design.

It is important for designers to understand the costume construction techniques involved in building a costume, even if they are never directly involved in this process. Every decision made by the costume designer has an impact on the build process, so it is very important for designers to know what is involved in order to make technically informed decisions. Miscommunication can result, and precious time can be lost, when designers are ignorant to the technical methods involved in building costumes. This can be frustrating to the costume shop personnel. It would behoove any burgeoning designer to study costume patterning, construction, and tailoring techniques and materials.

When choosing to build costumes for a show, costume designers and technicians work with many tools and materials, but none as important as fabrics. Fabrics are the most vital, essential, and basic component of the costume, aside from the actor. It is impossible to be a functional costume designer without an intimate understanding of all fabrics and their innate properties. Designers must set about to acquaint themselves with all available fabrics, and the best way to accomplish this is through exposure—visiting fabric stores, exploring fabric bins, observing personal clothing as well as other costumes, and draping, sewing, and doing! When it comes to fabrics, there is no substitute for experience. See appendix on Fabrics.

Buying

In this technological dot-com age, when the ability to purchase almost anything is at our fingertips, it makes sense to buy ready-made costume elements when possible. However, many beginning design students question the ethical aspect of purchasing ready-made garments for shows. They wonder if designers are effectively plagiarizing other designers when shopping their products for shows. There may indeed be times when other designers are credited in a costume design, but most often, this is not the case. Beginners may wonder why. It's because creating costume designs for stage, opera, and film involves unique circumstances. The designers for these productions are making appropriate selections for their shows, and often the appropriate selection for a character is a designer fashion or another item originally designed by someone else. In these circumstances, the resulting work of the costume designer then becomes a collection of appropriate choices for the play, as opposed to brand-new designs created from scratch. This is done in good faith and not with the intent of "stealing" but with the intent of making suitable selections in order to tell the story. This is a valid way of working, and one that is employed by many reputable designers. Both in the HBO television series *Sex and the City* and in

the wide release film *The Devil Wears Prada,* costume designer Patricia Field chose clothing from well-known design houses for the characters to wear. These choices were an important part of the design and concept for these presentations, and they became so popular that the clothes became a significant audience draw.

So, what this means is that anything is fair game, as long as it is done with good intent. Designers can find appropriate garments to purchase almost anywhere. For example, there are online costume specialty and reenactment sites easily accessible and available to provide products for various period costume needs. Period petticoats, corsets, and shoes can be purchased online, as well as accessories such as hats, purses, canes, parasols, and glasses. And, of course, modern dress shows are even easier to supply online where a wide range of size and style options are readily provided.

There are four major cautionary technical points to make regarding online shopping:

- Costs of shipping can add up quickly and ruin a budget.
- Designers must be sure to check the return policy on any potential online site.
- Costumers should look for reliable companies that ship orders in a timely fashion.
- Credit cards are usually required.

A word must also be said about old-fashioned "local" shopping. While the days of getting in the car and driving or walking all day from shop to shop in order to shop the show have been reduced due to online venues, they are not completely gone. There are at least five clear reasons to get in the car or on the train and don those walking shoes:

- Items may be needed immediately with no time for shipping.
- Designers may wish to support much-needed local mom-and-pop businesses.
- Designers may wish to actually see and hold the items prior to purchase—this is especially important when purchasing fabrics.
- Designers may wish to take actors on shopping/fitting expeditions.
- Cash or purchase orders may need to be used in addition to credit cards.

BUDGET

Making a good costume plan involves a thorough consideration of financial aspects. A very important factor for all designers is budget, and no matter how talented the designer or how beautiful the show, if the budget is blown, then that is the only thing the producers and artistic directors will remember. Designers must learn to work within the limitations of a budget, and most often the overall allotted costume budget is lower than desired. This is a common fact of the design world, and because of this, designers become very savvy and frugal when it comes to money for their shows. This is yet another area where collaboration is important: smart designers maintain open lines of communication with shop supervisors and assistant designers regarding expenditures because they are often spending equal amounts of money on the project. Designers should ask many questions when considering budget:

- Is this budget for materials only?
- Is this budget only for the build process, or do the costs of running and striking the show come out of this budget as well?
- How will I make purchases? Will purchases be made using a purchase order, a business credit card, or petty cash?
- What kind of bookkeeping does the theater expect?

Regardless of whether the show is commercial or noncommercial, once the budget is set and the designer, shop manager, and assistant designer are making purchases for the show, it becomes imperative to keep receipts and to maintain a running tally of expenditures. A system must be developed that works on the go while in the midst of shopping expeditions. Many designers use computer software programs such as Microsoft Excel or Quicken to track expenditures, while others still use an old-fashioned calculator, notepad, and pencil and update the information into a spreadsheet at a later time. Whatever the method, the key is to keep the records current. In order to do this accurately and effectively, a regular bookkeeping routine must be established.

SUMMARY

Designing for the theater involves a methodical coordination of diverse information and endeavors including but not limited to reading and researching plays, identifying and researching design objectives, and developing and communicating design ideas. This communication entails

drawing the human form and producing effectual renderings as well as intense collaboration with other artisans. Good designers also have a clear understanding of the practical implementations of costuming. This includes the steps involved in building costumes for the stage, as well as a clear grasp of the other methods of obtaining costumes: pull, rent, borrow, and buy. And perhaps just as important, designers understand how to maintain a show budget, and how to create beautiful and effective work on a dime!

There will always be many practical problems to solve, fittings to prepare for, and actors with whom to collaborate. Designers who roll with the punches and solve practical problems readily will survive in this business. The secret to a successful career as a costume designer is methodical determination. Students of design should first use this chapter as a guide in order to make a list of all of the areas where training is necessary, and then set about to systematically and determinedly study each area by watching, exploring, and most importantly, by *doing*.

EXERCISES

Exercise #1:
Supplies needed: notebook, pencil
Time limit: none

Observe people you don't know—what can you tell about these people? List characteristics you can discover just by looking at clothing, hair, and makeup. Be specific! What aspects were the most informative?

Exercise #2:
Figure Drawing Practice
Supplies needed: pencil, drawing paper
Time limit: 1 minute, 5 minutes, 10 minutes, 30 minutes

- Ask someone to be your model. (They should be willing to hold a pose for an extended period of time.)
- Position yourself and your model comfortably, with good lighting.
- Draw your model. Avoid looking at your drawing while working; concentrate on what you see. Move your hand and arm freely while drawing.

- Begin with shorter poses (one minute, five minutes) and work up to longer poses (thirty minutes). For all sessions, concentrate on really seeing your model, keeping your eyes on the subject rather than on your drawing.
- Arrange two separate work sessions: session 1, where the model wears very little or body-revealing clothing (in order to study the human form), and session 2, where the model wears regular dress (in order to study the human form clothed).

Exercise #3:
Supplies needed: notebook, pencil
Time limit: 10 minutes

Look at the fabric labels in your clothing—determine comfort level, durability, and list those qualities with the fiber content found on the labels.

Exercise #4:
Supplies needed: notebook, pencil
Time limit: 1 hour

- Go to a fabric store or gather yardages of many different types of fabrics.
- Handle the fabrics, and attempt to describe the **hand** of each (see appendix on Fabrics).
- If at a fabric store, make note of the fiber content of each fabric and connect that content to your observations of the hand.

Exercise #5: An imaginary shopping expedition
Supplies needed: script, notebook, pencil, computer with Internet access
Time limit: 2 hours

- Start with a short play and cast it with imaginary people of extreme sizes. (The Actors Theatre of Louisville's Humana Festival of New American Plays is a good source for short plays.)
- Choose clothing sizes for each imaginary actor—and stick to your choices.

- Create a wardrobe plot for the play, including all aspects from underwear to main garments to accessories to shoes and hats, with the idea that it will be shopped.
- Give yourself a budget—say $500. Go online and "shop" the show. Be sure to remember shipping costs!

Were you able to stay within budget? What concessions must be made in order to stay within budget?

Chapter 9

Lighting Design

THE LIGHTING DESIGNER

The lighting designer is responsible for creating the stage lighting in a play, concert, dance, or opera. She or he selects the type of lighting instruments used, their physical locations in the theater, where they will be focused on the stage, and any colors and textures used in the lighting. The lighting designer will create the different lighting compositions, or lighting *cues*, used throughout the performance. Those compositions are created by selecting the lighting instruments to be used in each particular moment, their level of brightness, and how fast or slow they will **fade up** or down.

The process of designing with light is similar to the other design areas. The lighting designer reads and analyzes the script, researches the given circumstances and objectives of the story, meets with the production design team, and develops a production concept and approach to the production. It is important for the lighting designer to attend several rehearsals to note actor blocking and movement patterns. Next, the lighting designer drafts a **light plot** (a map of the instruments used and their locations in the theater) and charts associated information in order to communicate the physical requirements of the lighting design to the electricians who will be installing the equipment. Once the lighting equipment is installed, the lighting designer will meet with the electricians to focus, or aim and shape, the lights. Later, the lighting designer will sit with the operator who will run the lighting control board during rehearsals and performances and create and record the light cues that will be used in the production.

Lighting design is equal parts art and technology. In order to literally and figuratively illuminate the story, the lighting designer must have a full grasp of the physical properties of the various lighting instruments, the quality of the light each different unit emits, and how it is colored, shaped, and controlled. Designers must also have knowledge of the aesthetics of light and how various lighting angles and colors can affect perception and mood. The use of angle and color in stage lighting can also enhance, or, if used improperly, muddy visual aspects of the scenery and costumes.

THE DESIGN OBJECTIVES

Stage lighting is elemental in establishing the style of the production. The aesthetic look of the lighting, coupled with the mode in which lights shift from one look to another, sets up certain conventions for the production. The look of the stage lighting can be realistic, and the shifts between light cues can be subtle, with imperceptible changes that seem to happen organically with the action of the play; alternatively, stage lighting can be presentational, with strong nonrealistic looks and bold changes in the cues that are obvious and purposeful. In stage lighting, these two variations in style are classified as motivated or nonmotivated designs.

Motivated Lighting

Motivated lighting design involves creating natural and realistic lighting compositions onstage. The attempt is to re-create everyday life. As such, a motivated lighting design is heavily influenced by place and locale and time and period. If the play's location is outdoors, the lighting will attempt to indicate a specific time of day and the inherent atmospheric conditions by carefully applying the appropriate controllable qualities of light. Motivated lighting for an interior scene will attempt to create naturalistic lighting by recreating the look of a room being lit by exterior windows or the lighting fixtures that would be present in reality. Sunlight or moonlight streaming through a window, a table lamp, a chandelier, a candle, and a fireplace are all examples of interior sources of light that can be recreated onstage in a motivated design.

Indicating time and period is a major goal of motivated stage lighting. Day and night are manifestations of light. We experience daytime and nighttime by the amount of sunlight available. The angle of the available sunlight informs us of the time of day and the season of the year. Ancient cultures created sundials to indicate the time of day and stone and wood henges that followed the sun's path along the horizon to mark the seasons. Lighting designers observe the quality of light at different times of the day and throughout the four seasons of the year in order to accurately interpret reality onstage.

Historical periods can also be indicated through the use of stage practicals. A *practical* is a hand prop or stage prop that replicates an actual lighting fixture, such as a table lamp, candle, or torch. Stage practicals are designed or selected by the scenic designer, but because they are electrified and emit light, the lighting designer can use them to great effect as elements in the lighting composition. If the story being told is realistic and takes place before the advent of electricity, the stage practicals should mimic the appropriate

light fixture of the time and the general stage lighting should depict the color and feel of that light source, be it candle, oil lamp, or gaslight.

Representing place and locale is another major goal of motivated lighting. As we have already discussed, the light in an interior environment will differ from the light in an exterior location. However, there are a wide variety of interiors. The inside of a cave lit by torches will look and feel very different from the interior of a cathedral where sunlight filters through stained glass windows. The lighting inside a 1950s Kansas bus stop during a winter blizzard will look different from the lighting inside a Danish castle on a winter's night in the 1400s. And the range of exteriors is just as vast. The quality of the light in Antarctica at noon on the spring equinox will be very different from the light in an equatorial rain forest at that same time. Again, lighting designers must train themselves to observe these differences in the quality of light, and the emotional responses to it, in order to effectively use light to design realistic stage compositions.

Nonmotivated Lighting

Nonmotivated lighting design is not overly concerned about re-creating a reality of time and place with the lighting. Rather, with non-motivated lighting, the primary interest is creating and establishing a mood and supporting the theme of the play. Nonmotivated lighting is typical of highly stylized productions like dance and music concerts, where the mood of the piece is primary. Experimental or avant-garde theater pieces may also employ non-motivated lighting. For example, Eugene O'Neill's 1922 expressionist play *The Hairy Ape* centers on the character Yank as he embarks on a personal odyssey to find his place in the world. This odyssey takes Yank to several locations: the upper deck and stokehole of a luxury liner, Madison Avenue on a bright Sunday morning, a union office, a jail cell, and a gorilla cage at the zoo. Because expressionism seeks to give outward expression to the inner thoughts and emotions of the central character, the reality of the play's world is altered. In *The Hairy Ape,* reality is filtered through Yank's perceptions. Consequently, the lighting design may be stylized to the degree that lighting in the ship's stokehole might resemble the fiery pits of hell, the jail cell could have distorted cell bar shadows that oppressively overlap, and the sparkle of Madison Avenue might even be blindingly bright. Nonmotivated lighting can establish time and place, but it doesn't necessarily have to be realistic. The major aim is to establish a mood and support the theme. Strong angles, heavy colors and textures, and abrupt changes can all be part of non-motivated lighting.

Nonmotivated lighting used in the Milligan College/East Tennessee State University production of Sophocles's *Oedipus the King.* To see a color version of this photo, refer to the insert at the center of the book. Scenic design by Melissa Shafer, costume design by Karen Brewster, lighting design by Scott Hardy, directed by Richard Major.

Most productions have both motivated and non-motivated lighting needs. The most realistic drama often has transitions between scenes or acts where scenery and properties move about onstage. Those transitions are often lit with non-motivated lighting to set them apart from the play. And there are many play scripts that combine reality and non-reality, such as Arthur Miller's *Death of a Salesman,* which contains scenes that take place in reality and flashback scenes that take place in Willie's mind. Those juxtaposing scenes can be supported and made clear to the audience by a shift in the lighting from motivated, realistic lighting to non-motivated, nonrealistic lighting.

Revealing Character and Solving Practical Problems

Revealing character through costumes and scenery is accomplished through material choices, such as a rumpled, tattered suit or a run-down tenement apartment. Using light to reveal character is more abstract. In non-motivated lighting, angles, colors, and textures can be used to express a character's thoughts and feelings. In motivated lighting, it can be as subtle as a cool wash with high front light to create dark shadows under the actor's brow, making the characters appear slightly sinister. The expression of a hidden

truth can be revealed as a character steps from the shadows into the light. A large part of the art of theatrical lighting design is in these subtleties. It has sometimes been said that the most successful lighting designs are those that go unnoticed by the audience. The reasoning is that if the lighting goes unnoticed, it has become an organic part of the story and does not draw undesired attention from the audience.

The final production objective, solving practical problems, is often quite involved as theatrical lighting design relies heavily on equipment and technology. Practical problems in stage lighting primarily fall under two categories:

- Special effects called for in the script
- Limitations of facility, equipment, and/or budget

The explosions in Kaufman and Hart's *You Can't Take It with You* are an example of a special effect called for in the script. The solution to this script-based problem may be as involved as pyrotechnics or as simple as a smoke machine with a few conventional lighting fixtures, depending on the resources and the production concept.

Special effects in *You Can't Take It with You*, produced by the University of Alabama Tuscaloosa, scenic design by Erin Brown, costume design by Donna Meester, lighting design by Lyndell McDonald, director by Peder Melhuse.

The limitations of the facility, and/or the lack of adequate equipment and budget, are often types of practical problems the lighting designer may encounter. The number and type of lighting instruments available and the hanging positions around the theater will have a major impact on the flexibility of the lighting design. Having a limited lighting equipment inventory can be a practical problem and is akin to a painter with a limited palette; the design choices become critical, but one can still create great art. A small inventory will force the designer to prioritize the essentials needed in a composition, and, much like a Japanese brushstroke, paint the stage as efficiently and evocatively as possible.

FUNCTIONS OF STAGE LIGHT

Visibility

Stage lighting is described as having four functions: visibility, modeling, mood, and selective focus. *Visibility* is the most basic and perhaps the most important function of stage light. It refers to the ability to see the characters and action on the stage. If the audience cannot clearly see what is happening onstage, they will not fully understand the play. The ability to see facial expressions and the movement of lips and mouth aids in the ability to hear and understand what is being said onstage. If the audience cannot see the actor, their ability to hear the actor will also be diminished. And if the audience has to strain to see what is taking place onstage, their attention and interest in the performance will also be lessened.

Modeling

Modeling refers to the capacity of light to reveal the shape, mass, and texture of an object onstage. The angle at which the stage light strikes an object will reveal information about that object's dimensions (its width, length, and depth) and its surface quality (smoothness or roughness) through the resulting highlights and shadows. Stories have been handed down through generations of lighting designers about famous aging thespians who insisted on low front light, or *footlights*, during their performances because the angle of the footlights washed out the deepening wrinkles on the actors' faces. Stories also exist of a certain televangelist's adamant use of strong white backlight, which halos the body in a heavenly glow. And dancers are typically grateful for strong sidelight, because it visually elongates the figure and creates a slender, graceful highlight along the body.

Mood

Mood is the emotional response that lighting can suggest. Stage lighting is a very strong tool in establishing mood. It can create a feeling of well-being or a sense of tension. It can be warm and bright or dark and foreboding. In everyday life, there are examples of lighting used to manipulate us into certain behaviors. Most fine dining establishments have soft, "romantic" lighting to keep customers in their seats. The longer a diner stays, the more likely they are to order drinks, dessert, and coffee. Fast-food restaurants, on the other hand, rely on a volume business and high turnover, rather than high price points. The lighting in fast-food establishments typically is bright and garish. Grocery stores control lighting over various sections of the store. The aisles of shelves are usually lit with fluorescents, while the meat and vegetable sections have specialized lighting used to enhance the visual appeal of the products. Department store displays, casinos, nightclubs, hotel lobbies, and virtually any area where people spend time and money pay some attention to creating mood through lighting.

Selective Focus

Selective focus is an extremely important aspect of stage lighting as it greatly affects the overall stage composition. It is often said the lighting designer "paints the stage with light." Selective focus is created when the lighting designer creates a visual focal point in the composition within a lighting cue that directs the audience's eye to a specific action onstage. In the chapter on design elements, we learned that the eye tends to be drawn to the brightest object on the page or on the stage. Consequently, creating a visual focus onstage is easily accomplished by highlighting the subject in a bright light and or using contrasting color in the lighting. Designers must pay careful attention to creating appropriate focus throughout the design. It is easy to inadvertently misdirect focus and lead audience attention away from the main action with an unbalanced level or inadvertent light spill. Misdirected focus is a distraction and muddles the storytelling and should be avoided at all costs.

CONTROLLABLE QUALITIES OF STAGE LIGHT

Designers manipulate light to create visibility on stage, evoke mood, give shape to the actors, costumes, and scenery, and direct the audience's attention. There are four ways in which light is manipulated or controlled: intensity, distribution, color, and movement.

Intensity

Intensity is the amount of light emitted by an instrument. The intensity of a light is described as being either bright or dim. Intensity in stage lighting instruments is regulated by connecting them to dimmers that are controlled by a light board or control console. Intensity is a strong tool used to create an area of attention onstage based on the tenet that the human eye is naturally drawn to the brightest part of any composition.

Intensity can also influence mood. The medical condition known as seasonal affective disorder (SAD) exemplifies this principle. It is thought that the lack of light in the winter season causes depression in some people; treatments for SAD actually include the sufferer spending time under special lamps. On bright spring days, we may have a desire to throw open the curtains on our windows and let the sunshine in. And on occasion, we may indulge in a romantic, candlelit dinner. All of these situations exemplify the mood-altering powers of the intensity of light.

Intensity can also be used to establish time of day. In a theater with a large lighting inventory, changes in time of day can be created by changing the angle and color of the light in addition to lowering or raising their intensity. Bright light is typically associated with midday, low light can indicate dusk or dawn, and dim light can mimic night. In a theater with limited lighting inventory, where only a few instruments must service the show, the most basic change to indicate time of day could be created by varying the intensity of the light.

Distribution

Distribution refers to both the angle of the light and the quality of the light. Most ceiling fixtures in the home radiate light in all directions, as the function is to create general illumination. In stage lighting, designers want to control where the light goes. So in addition to the light source, or lamp, stage lighting fixtures also have a reflector and lens that gather the light and throw it in one direction.

Direction / Angle

The direction or angle of the light throw is linked to the places one can actually hang or mount a lighting instrument. For example, in an arena theater, the light hanging positions are typically laid out in a grid pattern over the stage. In a traditional proscenium stage, there are generally lighting positions over the stage called ***electrics***, and positions out over the audience called *front of house pipes.*

Front light, top light, backlight, and sidelight are all common directions of stage lighting. Each has an effect on the *modeling* of the object being lit. Front light

tends to wash out shadows and visually flatten out an object. Top light highlights the top of the head and shoulders and will visually shorten or squash a figure. Backlight tends to halo an object. Side light will highlight the side of the object and visually elongate it. Stage lighting generally uses light coming from many different angles to give dimension and shape to the actors and scenery. Depending on the type and style of the production, lighting compositions will have a primary direction of light that highlights the performer and additional light that fills in the shadows and shaded areas from other angles. In theater, front light is usually the primary light used, as the actors' faces are typically the audience's focus. In dance, sidelight takes precedence as the audience's focus is on the dancer's bodies moving through space.

Quality

Distribution also includes the quality of the light, whether it is sharply focused, soft and diffuse, or textured with a pattern. Most lighting instruments have some capacity to adjust the quality of the light. For example, ellipsoidal reflector spotlights have shutters or irises that can change the shape of the beam. By adjusting the relationship of the lenses to the light source, the beam emitted can be either sharp or soft-edged. Ellipsoidals can accept a metal template called a gobo that will create a shadow texture in the light. Fresnel and PARs utilize an accessory known as a barn door, four hinged flaps mounted to the gel frame holder, to shape the beam of light. See appendix on Stage Lighting Fixtures.

The use of light to create shape, visual interest, and focus in the production design of *Arts or Crafts.* Scenic design by Justin A. Miller, costume design by Jodi Ozimek and Amber Marisa Cook, lighting design by Samantha Bostwick, directed by Rob Roznowski. Produced by Michigan State University. Photo courtesy of Amber Marisa Cook.

Controlling the shape of the light is essential to creating focus onstage. Light spilling onto curtains, the front edge of the stage, or the proscenium will draw the audience's attention. The ability to shutter the instrument's beam and cut off unwanted spill is intrinsic to creating an effective composition.

Color

One of the major contributing factors in establishing mood in stage lighting is the use of color. Stage lights are colored by the use of color filters: the most common is called *gel.* Gel is sold in 20" x 24" sheets or 24" x 25" rolls and is cut to fit the various lighting fixtures used in a production. In the early days of modern stage lighting, gel was actually manufactured out of gelatin. Contemporary gel is made from plastic, which holds up better to high temperatures, is not adversely affected by moisture, and is not an attractive meal for vermin. There are several manufacturers of gel, each producing hundreds of colors. Samples of each color are readily available in swatch books.

In light, the primary colors vary from the primary colors of pigment. Lighting primary colors are red, blue, and green. When all three of the primary colors of light are mixed together, they yield white light. Secondary colors in lighting are commonly known as magenta (a mix of red and blue), amber (red and green), and cyan (blue and green). As with the primaries, when complementary colors are mixed in light, the result is white light.

Subtractive color filtering happens when white light passes through a color filter, such as a gel or glass gobo. The filter allows only the wavelengths of light that correspond to the filter's hue to pass through; all other wavelengths of light are absorbed by the filter. Subtractive color mixing applies to a single lighting instrument and its filter. *Additive color mixing* happens when two or more colors from two or more instruments are combined to create a third color. For example, two complementary-colored stage fixtures focused on the same object will mix to create a white light on that object. The interesting thing about additive color mixing is that it does not happen physically, but rather takes place in our brain's perception.

Fairly recent innovations in stage lighting technology have introduced dichroic glass filters into the market. These glass filters are manufactured with a thin film that transmits a specific color while reflecting others. Since the colors (and also the heat) of the light are reflected off of the filter and not absorbed

by it, dichroic filters have a much longer life than plastic gel. Additionally, glass gobos are also readily available from a number of manufacturers. These glass gobos will often impart color as well as texture to the stage.

In 1932, Stanley McCandless, a professor at Yale University, penned a book titled *A Method of Lighting the Stage* (Theatre Arts Books, 1958). In it, McCandless proposed a system that placed two front light sources at forty-five-degree angles to the actor's face and gelled them with complementary colors (one warm and one cool). This created a white light when the sources additively mixed and gave a very natural look to the human form. It is also a very versatile system, as the designer can create cool or warm scenes by adjusting the amount of each color in the mix.

Movement

Movement in lighting means several things. There is the actual physical movement of the light, such as when Lady Macbeth carries her candle across the darkened stage, when the lead in a musical bursts into song and is accentuated throughout by a follow spot, or in a rock concert when the computer-controlled intelligent lighting units pulsate colors and spin light around the stage in beat with the music.

Movement in lighting also refers to the shifting from one lighting look, or cue, to the next. These shifts can be slow, fast, or instantaneous. Lights that shift instantaneously are known as **blackouts** or **bump** ups. The speed of the cues can help to reinforce or even drive the pacing in the performance. A slow fade can aid the romantic moment at the end of the scene, and a blackout can put a "button" on the end of a funny scene. Or perhaps there is a gradual sunset that occurs over the entire thirty-minute scene and is seemingly imperceptible to the audience. Movement in lighting design can be used to create visual variety, which subsequently creates visual interest. Any movement in light will attract attention and draw the audience's focus. Care should be taken that the movement is motivated by the action onstage, or it will pull the audience out of the story.

THE PHYSICAL IMPACT OF THE THEATER SPACE ON THE LIGHTING DESIGN—LIGHT HANGING POSITIONS

The availability of light hanging positions is one of the major factors in distribution and modeling. A theater with a multitude of locations to mount lighting fixtures affords the lighting designer a range of lighting angles with

which to light the actors and the scenery. Conversely, a theater with few hanging positions limits the designer's options.

There are some general positions common to most proscenium theaters. *Front of house* positions are lighting pipes that are located in front of the proscenium or in the auditorium. Horizontal pipes located over the audience are sometimes referred to as **ceiling coves**. Vertical pipes mounted on the auditorium walls are called **box booms**. Theaters with a balcony may have a pipe installed just under the balcony ledge called a **balcony rail**. The pipe **battens** located over the stage area upstage of the proscenium arch are referred to as electrics. In addition to the overhead electrics, lighting instruments can be mounted to the floor backstage and used to light the bottom of **cycloramas** and drops, or for some other special effect, such as creating a strong green up light for Jacob Marley's ghost or a warm glow for a campfire. These units are called *floor mounts.* Fixtures attached to pieces of scenery are *set mounts.* Portable *stage booms,* **light trees**, and **light ladders** are standard lighting positions in dance performances and can be located wherever low angle sidelight is needed. *Footlights,* a trough of lights in front of the stage, were standard in the history of stage lighting and date back to preelectric lighting. Footlights are generally not used as general illumination in modern stage lighting. In an arena theater, the light hanging positions are often laid out in a grid pattern throughout the theater space.

Every stage lighting instrument has a maximum *throw distance.* The throw distance is defined as the length or distance the beam of light travels. Each type of instrument will have a maximum throw distance before the intensity drops off. Additionally, the instrument will have a beam angle, which is the degree the light spreads or widens as it travels. The beam angle is determined by the lenses in the instrument. The various manufacturers of stage lighting instruments provide information on the beam angle and throw distance of their products, referred to as photometrics, which can be readily found online. In order to begin plotting the mechanics of the lighting design, the designer must start with information about available hanging positions, their distance from the stage, and the capabilities of the available lighting instruments. A large part of designing with light is choosing the appropriate stage fixture for the available hanging positions so that the light is effective.

Motivated light from a floor mount in John Steinbeck's *Of Mice and Men.* To see a color version of this photo, refer to the insert at the center of the book.Scenic design by Cheri Prough DeVol, costume design by Amanda Aldridge, lighting design by Lucas Benjaminh Krech, directed by Katy Brown, photo courtesy of Leah Prater. A Barter Theatre production featuring John Hardy and Mike Ostroski.

THE LIGHTING DESIGNER'S PROCESS

Idea Development

The approach to lighting design changes from production to production. With some productions, establishing time and place with good visibility is the primary goal. For other productions, especially nonrealistic theater and dance, driving the mood and theme may be the primary goal. Each design project requires visualizing the lighting before one can begin to plot the design on paper. In order to do this, lighting designers must have knowledge of how light striking an object at different angles looks and how the different colors of light affect mood. Through education and practice, this knowledge must become second nature. Teachers of lighting design commonly emphasize that beginners must learn to observe and analyze the quality of light in everyday situations. What is

the quality of the light at daybreak? Is it a crisp, bright spring morning? Is it a gray November day with soft, diffuse, dim light? Or is it a cold winter morning, dark and starlit? How do the angle and color of light differ between midday and evening? How does light differ from spring to fall? What does a room look like when it is lit by candlelight? What are the shadows like? How is the color of the candlelight different from incandescent light? How does incandescent light differ from fluorescent light? What is the lighting like when the moon is full on a midsummer's night? How is that different from moonlight on a winter night when there is a fresh blanket of snow covering everything? The observations are endless.

The next step in learning to design with light is analyzing how light affects us physically and emotionally. For example, can color of light affect body temperature? There has been anecdotal evidence that being in a room lit with a warm color will make one feel warmer than sitting in a room with a light that is a cooler color, even if the air temperature is the same. Learning to observe and analyze light in the physical environment, in graphic images, in paintings, and in photographs develops an awareness for the quality of light and its emotional effects. Applying that knowledge to a lighting design for a production, in combination with the technical principles outlined earlier in this chapter, will result in very effective, evocative designs.

Designer's Punch List

The basis of the lighting design, like all other areas, begins with the script analysis. The lighting designer must read the script, paying careful attention to the given circumstances and objectives, and note the clues and subtleties written into the dialogue. What are the light sources in the environment of the story? Is there mention of the beautiful sunset or the moonlit night? Are the lights on in the apartment or is the room barely lit? Sunlight through the window, a beautiful sunset, a moonlit night, a character turning on a light switch or pulling the paper lantern off of the naked lightbulb—all of these are clues that must be noted and addressed in the lighting design. In addition to the given circumstances and design objectives, the punch list should include an inventory of technical needs, such as color washes for the cyclorama, follow spots, front light, top light, sidelight, and so on. It may also include a general inventory of available instruments and dimmers. Creating a list of all of the essential lighting needs prior to drafting the plot reduces the chance of something being overlooked when the design is set down on paper.

Visualizing the Design—Lighting Story Boards

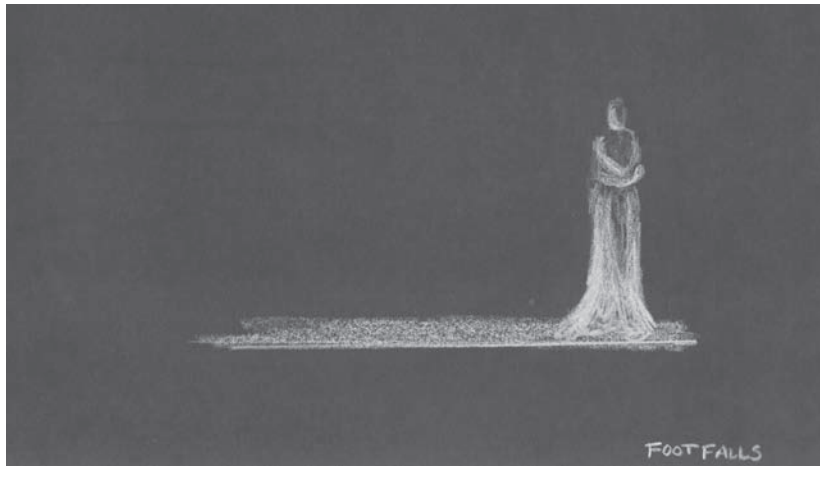
Lighting is an intangible material. It cannot be held in the hand and examined. Costume designers and scenic designers bring in sketches, renderings, and models of their designs. Sound designers can bring in samples of music or effects. Lighting designers can share design ideas in a number of ways: evocative artwork, storyboards, and cue mock-ups in a lighting lab.

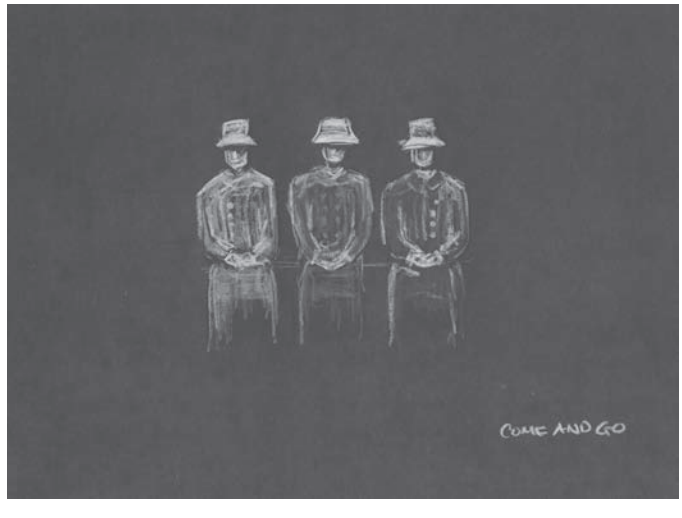
Designers bring in artwork that is representative of the look and feel of the lighting style for the production to the early design meetings. These can be paintings or photos with expressive lighting qualities, evocative lighting angles, intensities, and colors. Often designers will create collages or mood boards of these images to share with the design team. In addition to representative artwork, lighting designers must be able to verbally describe their approach to the lighting. This narrative should involve a description of the style, qualities, and functions of the light, which cannot be summed up in a single word or phrase. One might say, "I see the lighting as realistic in this scene, with a smooth, even wash providing good visibility. It should be warm, soft, and diffuse, washing over the actors and the stage like a warm embrace." Or, "I want to enhance the mystery of this scene, and so I envision it as heavily stylized, dimly lit, with lots of cool-colored shadows and heavy texture created through the use of breakup patterns." Mastering the vocabulary of design and the terminology of design elements and principles is imperative for lighting designers, as it is a major part of relating their design ideas to the director and other production design team members.

In addition to representative artwork and descriptive narrative, design ideas in lighting can also be expressed in a series of storyboards. Storyboards are color renderings of the light in a particular scene. Light is drawn using a technique known as chiaroscuro, which was developed during the Italian Renaissance. Chiaroscuro involves creating the illusion of three dimensions using shades and values to create highlights and shadows on a drawn object. If the scenic designer has created a perspective sketch or rendering, the lighting designer can duplicate that drawing and use it as a base to render lighting ideas for each scene. If there is no perspective sketch or rendering, the lighting designer can create one by sketching the model.

Many educational theaters have lighting labs (a small-scale stage with an inventory of small instruments hooked to dimmers) in their design studios where the director can be brought in to look at cue mock-ups. The scenic model and costume pieces can be examined under various lighting angles and colors easily in the light lab. There are also several computer software programs

available—for example, West Side System's Virtual Light Lab or Stage Research's SoftPlot—that have been designed to render lighting angles, intensities, and colors. These virtual lighting design labs are useful in that they enable the designer to experiment with creating a variety of stage lighting looks with a minimum of effort. When a desired composition is created, the information can easily be translated into a storyboard and to the light plot.





Lighting sketches for the East Tennessee State University Division of Theatre and Dance production of *Footfalls* and *Come and Go* by Samuel Beckett. Lighting designer Melissa Shafer.

METHODS OF STAGE-LIGHTING

Single Source Lighting

Single source lighting, either a single instrument or a single direction of light, is typically not used to light an entire show. Single source lighting creates a harsh highlight and virtually no shaded areas. Aside from one strongly lit contour, the rest of the object or figure will be in heavy shadow. This effect can be very dramatic and can be effective in a specific moment or a short scene, but an entire performance of single source lighting will become wearisome and frustrating for the audience. Typically single source lighting is used judiciously and only for specific effects.

Key and Fill

In everyday life, our environment is sometimes lit by a single source of light: a ceiling fixture, a window, or the sun. More often, our environment has multiple sources of light: a table lamp and a window, or a campfire and the moonlight. Even in a room lit by only a single small window, the light coming from that window will reflect off of the walls, ceiling, and floor to create an ambient bounce light that fills in the shadows.

In stage lighting, the *key light* is the primary light in the composition. When visualizing the lights for a play, the designer must imagine what the light source of the play's environment is and where it is located. The location of the light source will inform the direction of the key light used onstage. The source of light will also inform the quality of the key light: its color, shape, and texture.

Oftentimes the source and location of the key light are indicated by the dialogue or stage directions in the script and by the configuration of the set design. For example, the stage directions for act I, scene 2 of Kaufman and Hart's play *You Can't Take It with You* state, "Late the same night. The house is in darkness save for a light in the hall." In this instance, the light composition in the opening of the scene should take as its key the light emanating from the hallway. The location of key light can also be dictated by the blocking, as when two lovers gaze longingly over the stage right audience, sigh, and discuss the beautiful moon. This necessitates the key light from the moon coming from a point somewhere over the stage right audience. When the key light is not indicated by script or blocking, the direction is determined by the look and feel of the composition the designer wishes to create.

Fill light is the ambient light that gives shape and color to the shadows. It is the secondary light source in the environment, or the bounce light from

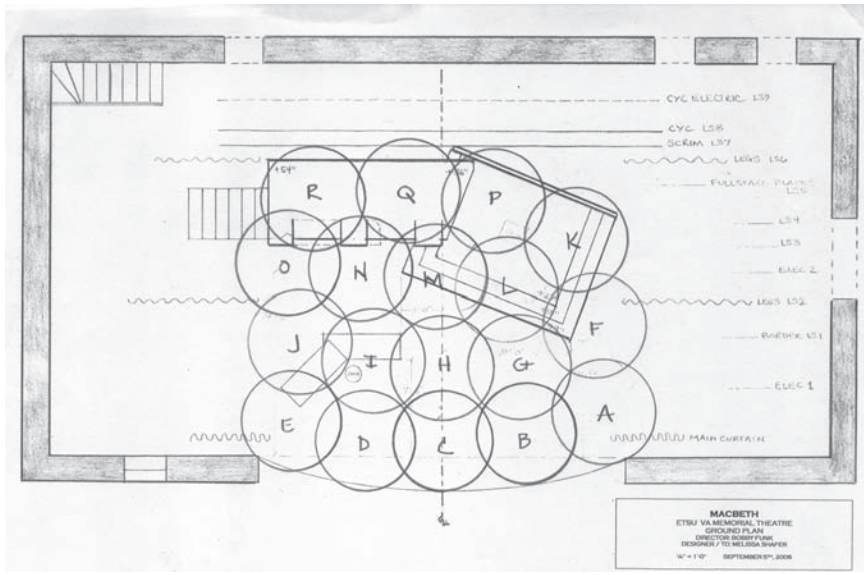
surrounding objects. Stage lighting design uses fill light to paint the stage with color and texture and to shape the contours of the actors and scenery. A motivated approach to the lighting will utilize fill light to give realistic dimension and shaping to the actors and scenery. Nonmotivated lighting will use a less subtle approach to the fill light in order to evoke mood and theme. Visualizing the stage composition and creating storyboards or cue mock-ups will help determine the placement, color, and quality of the stage instruments used to create key and fill lighting.

Area Lighting

In Stanley McCandless's 1932 book, *A Method of Lighting the Stage,* he describes a technique of lighting that breaks the stage into areas and uses a three-point light system to illuminate each area. The three sources consist of two front lights placed at forty-five-degree angles out from the center of the area and a top or backlight over it. The McCandless system is still the basis for many lighting designs today, although it has been expanded to include additional sources from other directions, such as sidelight, front and back diagonal light, and so on. This multidirectional approach to area lighting is sometimes referred to as jewel lighting because it attempts to light the actor as one lights a rare gem on display, hitting it with as many angles as possible to reflect and sparkle from all of its facets. The designer begins by breaking the ground plan of the scenery into areas where individual control of the color, intensity, and angle of the light is desirable. Starting with the strongest area of blocking on the stage, typically downstage center, the designer will draw areas that overlap outwards towards both stage left and stage right. As it is often desirable to isolate downstage center from the rest of the stage, the number of downstage lighting areas is usually an odd number. The mapping out of areas continues through the upstage areas and will expand to include the backing areas of entrances and exits. The total number of lighting areas will be contingent upon the size of the set and the number of control channels, dimmers, and lighting fixtures available. When equipment is not limited, each area will typically be eight to twelve feet in diameter, which usually equates to the diameter of a pool of light from an average throw distance or height from the stage. It is important for lighting areas to overlap and cover the stage space completely, leaving no gaps or dark holes between areas where the actor will dip in and out of the light.

After mapping the stage areas, instruments are then plotted to light each area from a specific direction or angle. Each area will have identical front lighting, top lighting, side lighting, and back lighting. Approaching the lighting design

in this way creates a wide and varied palette from which the lighting designer can paint a stage composition. Choices on the direction of key and fill light are open because all areas of the stage are covered with a variety of angles and colors. The space can be uniformly lit or can have specific areas of the stage highlighted and shaded, or even isolated completely.



Area breakdown for East Tennessee State University Division of Theatre and Dance production of *Macbeth*. Designed by Melissa Shafer.

Wash Lighting

Wash lighting does not concern itself with control over any one specific area of the stage, but rather is concerned with creating an even wash of light across or over the entire stage. This is usually done to add color and texture to the stage, tone the set, or create general illumination. The key light for symphonic or orchestral concerts is typically a strong white top light, as the primary objective is to aid the musician's ability to read sheets of music or glance at a keyboard without the distraction of heavy shadows or colors. A front light wash is then used as fill light for the stage in order for the audience to see the musician's faces.

Dance is usually lit with directional color washes rather than area lighting, as dancers tend to use the full stage in the performance. Because actors communicate largely through the spoken word and facial expression, front light is usually used as key light in theatrical performances. However, in dance,

performers use their bodies in movement through space to communicate, and as a result, sidelight is usually used as key light. Side light contours the sides of the body and creates a strong sense of dimension in the human form. Front lighting is primarily used for color washes and as fill light to eliminate the deep centerline shadow on the body created by strong sidelight.

The use of side lighting in *Suite Simone* accentuates the line of the dancers' bodies. Produced by East Tennessee State University Division of Theatre and Dance, lighting designer Melissa Shafer, costume designer Karen Brewster, choreographer Cara Harker. Photo courtesy of ETSU photo lab.

Lighting for musicals typically involves a combination of both area lighting and color washes. The "book scenes" or dialogue, in contrast to the song and dance scenes in a musical, are generally approached more realistically and will utilize area lighting. The interludes containing the musical numbers may be lit with color washes for mood and follow spots to accentuate the soloists.

Specials

Specials are lighting instruments given a specific assignment, not used as area lighting or to create a wash over the stage. Specials are used to highlight and draw attention to an object or a character in a specific scene. A down pool of light on Hamlet in the "to be or not to be" soliloquy or the light on the picture of Tom's father in *The Glass Menagerie* are examples of specials. Specials are also used to create an effect, such as the light used to create the fireworks explosions in *You Can't Take It with You*.

Lighting Scenery

Stage lighting is primarily concerned with lighting the performer on the stage. The stage compositions should always draw focus to the characters and main action of the play. But creating the atmosphere of the story is also an important element in lighting design. Very often elements of the scenery will require attention in the lighting design. The top portion of the walls of a box set may need a breakup pattern to wash out the harsh contrast of area lighting spilling onto the lower portion of the set. A column may need to be accentuated with a sidelight. The goal is to create an aesthetic and evocative stage composition that creates visibility, mood, and an appropriate focus on the stage.

Backdrops and cycloramas are typically handled separately from area lighting and stage washes. These scenic elements are lit with floodlights specially designed for the purpose. Drops can be lit from top, bottom, or from both the top and bottom. Usually drops are lit with multiple color washes so that a variety of looks can be accomplished. Sky drops are normally seamless, which means that they are constructed from one large expanse of fabric and only hemmed on the edges. Often scenic drops, such as a landscape with sky, are painted with dyes or thin paint in order to make the sky translucent. If the drop is translucent and seamless, it can be backlit, which adds an illusion of reality and depth, as the sky will seemingly glow with light rather than have light reflected off it. This can only be done with seamless drops, however, as backlighting a seamed drop will create a large dark shadow line where the sewn folded fabric joins.

Usually lighting designs for any production employ a variety of approaches. For instance, the light design for a realistic box set on a proscenium stage can be broken down into lighting areas and may include a color and texture wash over the stage, a special to subtly highlight an actor, and instruments devoted to lighting backdrops and scenery.

The Pirates of Penzance co-produced by Milligan College Theatre and the East Tennessee State University Division of Theatre and Dance. Scenic design by Melissa Shafer, costume design by Karen Brewster, lighting design by Scott Hardy, directed by Richard Major. Photo courtesy of Melissa Shafer.

LIGHTING CONTROL

The flexibility of the lighting design is contingent upon the equipment available and its function. Obviously, the larger the inventory of lighting instruments and control channels, the more options a designer has at hand. Regardless, a stage lighting system, no matter the size or complexity, relies on the ability to control the intensity of the stage lights. Creating compositions with light during a performance necessitates the ability to dim or brighten the lights and turn them off or on remotely. To accomplish this, the individual fixtures are connected to a system of equipment that ultimately ends with the control console. But it starts with each individual lighting instrument being plugged in to a circuit.

Circuits

One basic definition of a **circuit** is that it is a pathway through which electricity travels. A lighting circuit in the theater is a receptacle located on a wall, the floor, or along a hanging pipe over the stage or auditorium. Lighting circuits are similar

to the electrical outlets in one's home. Household electrical outlets are all wired back to a breaker panel, typically located in a utility room or basement. In the theater, the circuits are all wired back to the dimmer rack, which also contains the circuit breakers for each dimmer. Each circuit will have a number assignment. The circuits are the pathways that connect the lighting fixtures to the dimmers. It is fairly common for newer lighting systems in theaters to have a large number of circuits distributed throughout the theater in convenient locations. Older theaters may have fewer or even no circuits, so lighting productions may require vast amounts of cable in order to connect instruments directly into the dimmers. Theaters with no circuits require the individual fixtures to be cabled directly to the dimmer rack. This system is sometimes called spidering, due to the large amount of cable running throughout the theater space. The result is a web of cable with the dimmer rack at the hub. It is as if all of the receptacles in one's home are located at the breaker panel and extension cords run from the breaker panel into every room of the house.

In any type of situation, electrical safety relies on using equipment that is in good working order and ensuring that the equipment is never overloaded. All equipment is rated for a specific **voltage, amperage,** or **wattage**. That information is usually clearly labeled on the equipment or is readily available online or in technical manuals. Lighting designers and stage electricians must familiarize themselves with the capacities of the equipment they are using and always stay within the safety limitations of that equipment.

Dimmers

Dimmers control the amount of electricity running to the fixture. They are simply souped-up versions of the dimmer switch that controls the chandelier over the dining room table in the family home, except that in the theater, there are racks of dozens to hundreds of these large-capacity dimmers. (The typical theater dimmer is rated for 2,400 watts.) Like the circuits in the theater, each dimmer has a number assigned to it. In recently constructed theaters, or theaters with newer lighting systems, it is fairly common to have a **dimmer-per-circuit** system. This means that every individual circuit in the theater is directly wired to its own dimmer and the number assigned to each will be the same, circuit 1 is wired to dimmer 1 and so on.

If the theater does not have a dimmer-per-circuit system, it usually means that the electricians will need to ***hard patch*** the circuits into the dimmers. This means that there is another piece of equipment called a *patch panel* inserted between the circuit and the rack of dimmers. The patch panel will have a plug

or a slider with a specific circuit number assigned to it. The plug is physically inserted into an input that assigns the circuit to a specific dimmer. A hard patch is a physical connection or assignment of a circuit to a dimmer. For example, this method may have circuit 1 hard patched into any control dimmer the designer chooses.

Control Consoles

Dimmers are connected to a control console, or light board, via a small low-voltage DMX cable. DMX is a digital protocol that communicates information from the control console to the dimmers. Most special effects equipment (intelligent lighting, fog machines) is manufactured to be addressed by DMX signals, so that special effects equipment, in addition to conventional lighting fixtures, can be remotely controlled through the light board. But the primary purpose of the control console, or light board, is to communicate information on the power output to the instruments connected to each dimmer. The power output to the instruments will in turn regulate the instruments' intensity: the more power, the brighter the light, and vice versa.

Modern light boards are computer-controlled and have keypads to input a variety of information into the computer's memory. In addition to computer keypads, some consoles may also have a manual board with a series of sliders, or faders, that can manually control the intensity of the lights assigned to them. The manual faders and their corresponding "cyber" faders are called **channels**. Each of the control channels is numbered, and each channel can have one or more dimmers assigned to it. The channels on the control console instruct the assigned dimmer or dimmers on their power output, which subsequently controls the intensity of the lighting instruments assigned to that dimmer.

Dimmers are assigned to a specific control channel via a **soft patch**, which is done within the computer control console. Soft patching dimmers into channel assignments is done to organize the control board, so that instruments that serve specific functions can be grouped together for ease of control. When dimmer 1 is assigned to channel 1 and so on, it is called a one-to-one patch. But there may be circumstances where one might reassign dimmers to a different channel number. For example, the color washes lighting the cyclorama may be spread over several dimmers. For simplicity, the designer might want to gang all of the red fixtures lighting the cyclorama onto a single channel. In that instance, all of the dimmers controlling the red cyclorama lights would be soft patched into the same channel number. Dimmers cannot be assigned to more than one channel, but one channel can

have multiple dimmers assigned to it. As it is a computer assignment, there is no limit to the number of dimmers one can soft patch into a channel. But the more instruments controlled by a single channel, the less flexibility in the control of the design. For example, if there was a point in the play where the designer wanted to create a sunrise on an area of the cyclorama, controlling the red cyclorama lights individually would be required, rather than having them ganged together on a single channel.

FINALIZING THE DESIGN

The stylistic approach to the design will be developed in the early design meetings. Once the scenic design has been finalized, the lighting designer can use the set model and rendering to begin visualizing lighting compositions and dividing the ground plan into lighting areas. At some point after the show has been completely blocked, the lighting designer will attend a rehearsal or rehearsals to make notations about how the space is being used, the actor's movement, and any special lighting needs.

Any notes from the rehearsals should be added to the lighting punch list created from the script readings, design meetings, and visualizations (storyboards, inspiration pictures). In addition to the punch list, some very specific technical information will be needed close at hand as the designer begins to plot instrument placement:

- A plan view and a sectional view of the hanging positions in theater auditorium
- The ground plan and sectional view of the scenery
- An inventory of the available instruments and equipment
- The lighting area breakdown of the ground plan

The plan and sectional views of the theater give the location and height of the hanging positions in the theater. The technical director or facilities manager should have these technical drawings and lighting inventory on file. If no such drawings exist, they will need to be created before the design work can begin. The scenic designer provides a ground plan of the set that will show the location of the scenery as it is situated on the stage. The scenic designer or technical director may also provide a section view of the scenery as it is located on the stage. If one is not provided, the lighting designer must create it.

It is from the section view of the theater with the scenery and hanging positions depicted that the lighting designer can determine the angle and distance of each lighting instrument's throw. The section view will also show the height of any flown pieces and masking that might obscure a lighting angle. The section is also used to determine the vertical sight lines from the audience, so that the trim height of flown battens can be adjusted appropriately.

The equipment inventory is essential to have on hand while the lighting design is being plotted on paper. Special care should be taken to continually reference the inventory and track what has been dedicated and what remains available. A small inventory of fixtures will force the designer to prioritize needs and find creative solutions to design problems. As the lighting design is being planned on paper, the designer creates a package of information that relates the specifications and requirements of the lighting design to the electrics crew and to stage management. See examples in the appendices on USITT Lighting Design Commission Portfolio Guidelines for Designers and USITT Recommended Practice for Theatrical Lighting Design Graphics.

The paperwork included in the design package generated by the lighting designer consists of the following:

- The light plot
- Sectional view
- Dimmer schedule
- Channel schedule
- Magic sheet
- Cue list

In addition, the designer may create an equipment inventory, which lists all of the required equipment needed in the lighting design, and a gel cut list, which lists the quantity needed of each size cut for every gel color used in the show. When the designer does not provide an equipment inventory and gel cut list, the master electrician—the person in charge of implementing the light plot and who supervises the crew of electricians—will generate these lists.

The Light Plot

The light plot is a mapped representation of the lighting design. It is a mechanical drafting of the location of each and every instrument used in the lighting design. Light plots can either be hand-drafted or computer-generated, but the information is the same. The plot is done to scale (usually ¼" = 1'–0"

or ½" = 1'–0") and will have the outline of the theater architecture and set design, with the lighting areas, lighting positions, and instrument locations superimposed over them. Using USITT graphic standards, specific symbols are used to represent the various types of stage lighting fixtures and are drawn in their locations on the hanging positions in the theater. Each fixture is then given an instrument number and notated with information about the channel assignment, dimmer, focus, and gel color. The light plot is used by the electricians to correctly install each lighting instrument in its exact location in the theater. See examples in the appendices on USITT Lighting Design Commission Portfolio Guidelines for Designers and USITT Recommended Practice for Theatrical Lighting Design Graphics.

Instrument Schedule

The *instrument schedule* is a chart version of the light design. It has the same information on each of the instruments mapped in the light plot and is organized by hanging positions. For example, the instrument schedule will chart the third electric, instrument number (the position on the pipe), instrument type, lamp type, wattage, the assigned dimmer, the assigned channel, the instrument's focus, and gel, and any special notes regarding that instrument; if there is a pattern in the instrument, it will also give the pattern number. The instrument schedule is a quick reference for the electricians as they work their way down a pipe hanging, circuiting, focusing, and gelling the light fixtures.

Each lighting instrument along a hanging position or light pipe is given an instrument number, so that it can be specifically referenced by the electricians. There are two ways to number instruments. The first is to assign each instrument its own number, so that if there are fifty instruments in the theater, they are numbered one through fifty. This numbering system is more often used in an arena stage with a pipe grid. Usually, the instrument number is assigned in combination with its location in the theater, for example, instrument #6 on the first front of house pipe.

Hanging positions on the instrument schedule are typically listed in the following order:

1. Front of house (FOH) pipes or coves from the proscenium to the rear of auditorium
2. Electrics from proscenium to the back wall of the stage
3. Booms and light ladders
4. Floor mounts

5. Set mounts, practicals, FX equipment

Instrument numbers are typically numbered sequentially in the following order:

1. On pipes running parallel to the proscenium, stage left to stage right
2. On vertical booms or ladders, top to bottom
3. On pipes running perpendicular to the proscenium, downstage to upstage

See examples in the appendices on USITT Lighting Design Commission Portfolio Guidelines for Designers and USITT Recommended Practice for Theatrical Lighting Design Graphics.

Channel Schedule

*Channel schedules (***hookup sheets** *or patch sheets)* are other charted versions of the same lighting design information found in the light plot and dimmer schedule. Channel schedules are organized according to the numerical channel assignment of each lighting fixture. The channel number represents a corresponding fader on the lighting control console. Channel sheets are used by the electricians and board operators throughout the implementation of the design.

As we discussed earlier in this chapter in the section on lighting control, the lighting instrument is connected to a circuit that is wired to a dimmer. The circuit can either be hardwired (as in a dimmer per circuit system) or it is *hard patched* into the dimmer via a **connector** and a receptacle at a patch panel. The dimmer output to the lighting instrument is then controlled by a channel in the light board. The channels are physically assigned to the dimmers by *soft patching* them electronically in the computer control of the light board. The channel sheet is the method of organizing the data required to soft patch.

The lighting designer will use channel assignments as a way to organize the control of the instruments by their function in the design. For example, the front light may be assigned channels 1–10, the top light 11–20, the sidelight 21–30, and so on. This aids the designer, electricians, and board operator in quickly accessing information when troubleshooting equipment, programming, or recording cues. See examples in the appendices on USITT Lighting Design Commission Portfolio Guidelines for Designers

Magic Sheet

The ***magic sheet*** (or cheat sheet) is the designer's aid in efficiently creating cues for a show. The magic sheet is a one-page piece of paper that has information

on the lighting design and is organized by function: for example, warm front light, cool front light, warm top light, cool top light, and so on. It is a quick reference that allows the designer to recall channel numbers quickly without searching through pages of hookup sheets. There are as many ways of creating a magic sheet as there are designers. As the magic sheet is a personal reference, each designer develops a style that works best for them. See examples in the appendices on USITT Lighting Design Commission Portfolio Guidelines for Designers.

Cue List

Cue lists are a chart of the lighting cues anticipated in the production. Cue lists are created before the director, designer, and stage management team sit in the theater and actually compose the lighting cues for the performance. That meeting is referred to as the dry tech, as it takes place without the presence of actors. See "Cueing a Show" later in this chapter. Prior to the dry tech, cue lists are created by both the stage manager and the lighting designer and are consolidated during a meeting referred to as a *paper tech*. Cue lists have the cue number, a description of the cue's action (slow fade to black, lights up full onstage, **cross fade** to stage right area), the time it will take for the cue to execute (five-second fade), and the line or action where the cue happens. The first cue lists serve as springboards; invariably, the cues change during the dry tech and will be adjusted during tech rehearsals. Quite often cues are added or deleted and fade times are adjusted along the way. It is important for the board operator and stage manager to update the cue list as these changes occur. See appendix on Lighting Cue List.

The decision on when to place a change in the lighting in the performance should be motivated by the action onstage. Abrupt, frequent changes in a show that are not motivated by the action onstage will draw the audience's attention away from the story. Lighting is at its best when the light changes seem organic to the action onstage and go unnoticed by the audience.

Design Deadlines

The deadline for the completion of the lighting design package differs from project to project. Commercial theaters that require the rental or purchase of lighting equipment will need to have the design specifications far enough in advance in order to procure that equipment. Most educational, community, and regional theaters have an inventory of in-house equipment. As a consequence, the design

deadline is set far enough in advance to allow the electrics crew time to hang and focus the lighting so that it is completed by the dry tech.

IMPLEMENTING THE DESIGN

At some point prior to the start of the technical rehearsals, the light plot, instrument schedule, channel sheet, equipment inventory, and gel cut list will be given to the master electrician. The master electrician will organize the crew of electricians and hang and circuit the lighting instruments. When all of the instruments are in place and are working properly, the lighting focus will begin. The lighting designer typically runs the focus and will direct the electricians in aiming each light and softening, sharpening, and shaping the beam. They oversee the placement of patterns or gobos and finish by having the crew gel the instruments to the specifications of the plot. This work must be completed by the dry tech. Frequently the finishing touches of the scenery installation are also happening around this time and the actors are beginning to rehearse on the stage. As a result, time onstage is at a premium. Focusing must often take place with the work lights off, and so the electricians may sometimes work at odd hours, often later at night. Being organized and efficient is a major key to successful designing.

Cueing a Show

The first step of composing the actual cues for the show is creating a cue list, which is based on changes in the lighting called for in the script. Later in the rehearsal period, the lighting designer should attend a run through and notate in the script any additional cues that arise from the action onstage that may not be apparent from the text alone.

Once the lights are hung and focused, the lighting designer, light board operator, director, and stage manager will gather in the theater and build the cues for the production. This meeting is sometimes called a dry tech, as it takes place without actors. If there are multiple sets used in the production, the stage crew must often be called, so the lighting compositions can be built with the scenery in place. It helps to have the assistant stage manager or one or more of the stage crew walk the stage once a cue is composed. This will allow the director and designer to check intensity levels and visibility on a human face. Typically cues are composed sequentially, using the cue list created during the paper tech. Once the composition of a cue is created by the lighting designer and approved by the director, the stage manager will record the cue into the prompt

book, and the board operator will record the cue into the computer memory or write out a cue sheet. The cue sheet records each channel and its intensity used in a cue, its fade time, and whether it is a cross fade, **pile-on** or **fade out**.

Technical Rehearsals

The technical rehearsals are rehearsals for the running crew to practice running cues with the actors. Techs are also the opportunity for the designer to hone the cues. Once the actors take the stage, levels may need to be adjusted. Light in some areas may need to be expanded or reduced. The fade time up or down may need to be changed. Or, in some cases, whole cues may need to be added or deleted. During technical rehearsals, the lighting designer must constantly evaluate the stage composition and make any corrections and improvements needed. It is important that as these changes take place, the board operator keeps the cue lists and cue sheets up-to-date.

Summary

As previously stated, stage lighting design is equal parts art and technology. A lighting designer must have an understanding of color and modeling in order to be able to visualize light in a composition. And he or she must have a solid knowledge of lighting fixtures, their capabilities, and their control before he or she can recreate that visualization on stage. The creation of the light plot and associated paperwork requires precise methodology and must conform to the graphic standards of the industry.

Lighting is vital to establishing the style and conventions of the production. The timing of the cues facilitates the pace of the performance. Lighting aids in the creation of place, locale, time, and period—the world of the play. It supports the themes in the story and evokes a mood in the audience. Simply put, stage lighting design, along with scenery and costume design, is essential to telling the story.

EXERCISES

Exercise #1 – Observing Light
Supplies needed: notebook, pencil, and digital camera (optional)
Time limit: none

- Over the course of several days, weeks, or months, take photos and make notes on the quality of the light at specific moments and in

specific places. Record the same location at various times of the day, and, if possible, throughout the seasons.
- What is the angle of the sun? What is the color of the light? Are there sharp shadows or is the light soft and diffuse? How do the weather and time of day affect the light? Are there other sources of light? If so, how do they change the look of the environment? Make notes on your observations.
- How do the various lighting moments affect your thoughts and mood? Make notes on your observations.

Exercise #2 – Rendering Light
Supplies needed: brown craft paper, charcoal, chalk, still life of objects, single source light
Time limit: 20 minutes

- Arrange several objects into a still life.
- Light the objects with a single source of light.
- Using the charcoal and white chalk, draw the highlights and shadows of the objects onto the brown craft paper.

Exercise #3 – The Postcard Project
Supplies needed: referenced artwork, notebook, gel swatch book, pencils
Time limit: 20 minutes

- Find a copy of a painting with good lighting qualities (many of the Dutch masters work well for this project).
- Draw a rough ground plan of the painting.
- By analyzing the angle and color of the light in the painting, create a magic sheet that shows where the light sources should be located and what color gels should be used to recreate the lighting in the painting. (See appendix on USITT Recommended Practice for Theatrical Lighting Design Graphics.)

Exercise #4 – Script Analysis for Lighting

Supplies needed: script, notebook, pencil or computer word processor

- For a specific script, compile a list of the given circumstances and design objectives with regard to lighting.
- Next, create a lighting breakdown that lists each of the cues in the show, where in the script it occurs, what the fade time should be, and a description of the quality of the light in each cue. (See appendix on Light Cue List.)

Chapter 10

Building a Career in Theater Design

Throughout this book, we have explored the various steps in creating designs for a theatrical production. Analyzing and organizing data, formulating creative ideas, and exchanging thoughts with other artists are the foundations of all collaborative ventures in the theater. This chapter will explore the steps necessary for developing a career in theater design. Fortunately, researching job opportunities, creating a résumé and portfolio, and interviewing for a position are all applications of the same skill sets involved in creating a design for a production, and this puts theatrical designers one step ahead when it comes time to prepare for a job search.

Building a résumé and portfolio is a lifelong process, as both are a representation of current expertise and skill. Beginning with the very first project, a designer should gather examples of her or his design process and end product. It is difficult, if not impossible, to gather those materials once the production is over and the next project has begun. Therefore, establishing a disciplined routine of building and saving portfolio materials should be established early on in one's career.

There are many venues to explore when planning a career as a theater designer. Theater takes place on all sorts of levels, including community theater, educational theater, regional theater, and commercial theater, to name a few. Additionally, employment opportunities exist with entertainment organizations such as theme parks, touring productions, concerts, and film and television; the list is long and varied. With so many paths from which to choose, it is important that the route chosen ultimately leads to the desired destination. One tends to get hired in the future based on past experience. Visualizing is an important skill for any theater designer to possess, and visualizing a career goal five, ten, or twenty years into the future should drive the choices made in the present.

After visualizing future goals, the next step is analyzing the criteria required to achieve those goals. One way to do this is to look at successful role models. If, for example, the goal is to become a resident designer for a high-profile regional theater, research the career paths of current successful regional designers. If becoming a Broadway designer is the goal, then research current successful Broadway designers. Or if the goal is to teach theater in high school, again, look towards successful high school teachers. In each of these cases, a fruitful

researcher will look into the education, training, and job histories of individuals who have achieved success. Fortunately, this information is readily available in online biographies, résumés, and curriculum vitae. And whenever possible, speak to these individuals in person and do not be afraid to ask questions!

TRAINING

Although many very good youth and high school theater programs exist (and there are individuals who begin working in theater right out of high school or even before), serious training for a career in theatrical design typically begins at the college and university level. A BA or BFA degree in theater design are the norm, though successful designers have also begun careers with degrees in the humanities, art and design, history, or literature, among others. However, whether in high school or college, it is important to keep in mind that production experiences should not come at the expense of academics. Maintaining a successful balance between academics and involvement in productions is essential, because poor academic standing will limit or eliminate postgraduate opportunities. An MFA in design will open many doors to a life in the theater world, but a poor undergraduate record will quickly shut those doors, leaving young, hopeful designers in despair.

While pursuing a college education, summer theater work is a valuable way to accumulate credits and make professional connections. Summer theater work builds on a solid foundation of academic training and production experience, so beginning designers should pursue these options whenever possible. Summer theater opportunities are vast and varied. Summer stock play festivals, musicals, outdoor dramas, music and dance festivals, and seasonal theme park productions all flourish during the summer months. Many regional LORT theaters (League of Resident Theatres) expand their offerings in the summer and employ summer interns. While the pay may not always be as lucrative as mowing lawns or working retail, the real payoff comes in the résumé credits, portfolio materials, letters of recommendation, and professional contacts. At the very start of a career, choices are often limited, so beginners must grab any and all opportunities to learn and build experience. Just keep in mind that choices made in the present bear on the future, so make choices thoughtfully.

As job opportunities arise and experience accumulates, it cannot be stressed enough to make it a compulsive habit to document design and production work by taking high-quality photos of the work in process as well as the finished product. Collect and save all drawings, research, programs, reviews,

and evaluations by placing them in a substantial box or appropriately sized file folder or portfolio. These materials will be the basis for your design portfolio, so they should be high-quality photographs of premium work samples. Creating a portfolio from bits and pieces long after the shows have closed is frustrating and the product is always second-rate. Remember, theater is transitory; once the show ends, it is nearly impossible to go back and document it.

APPLYING FOR DESIGN AND PRODUCTION WORK

Summer production work, permanent year-round jobs, graduate assistantships, or teaching posts can all be found in a number of ways. Trade publications and online sites such as *TCG.org/Artsearch, Playbill.com, Theatrejobs.com, Backstagejobs.com,* and *The Chronicle of Higher Education,* among many others, all have available jobs posted. Theater associations, such as the United States Institute for Theatre Technology and the Southeastern Theatre Conference (or any of the many other national and regional theater associations) have job contact services online and job fairs at their annual conventions. Many regional theaters will often list job opportunities on their Web sites. Routinely checking for notices may yield positive results. Even searching for "theater jobs" online will net a plethora of job search sites, and a serious job search should cover as many of these online sites, publications, and associations as possible. When searching for a job, do be realistic and honest regarding personal skill levels. Do not apply for a job you are not qualified for or capable of doing. Climbing a ladder is accomplished one rung at a time, so aim one step higher with each job, but do not overreach; otherwise, the application will not be taken seriously.

It is wise to research the target theater or production company, as well as the details of the job position, before applying and interviewing for the job. Researching the company can help determine if it is a desirable place to work. Check out their Web site and, if possible, visit the theater and see a performance. Use the following questions to guide the investigation: What is the overall quality of their productions? Are there any press releases or news articles that shed light on their operation? Review their mission statement; if the theater produces nothing but left-wing liberal theater-for-social-change pieces, for example, and you are a card-carrying member of the John Birch Society, it may be wise to pass on this job opportunity. Or if the company has a reputation of producing poor-quality theater and their economic future seems sketchy, moving to the next job notice might be well advised. If, after close scrutiny, the theater company does look appealing, then the information

discovered in the inquiry can aid in tailoring cover letter, résumé, and portfolio materials to the specific job application.

Cover Letter

A cover letter will be required with any application unless the interview takes place at a job fair or in a large conference setting. The use of a cover letter is required anytime a résumé is mailed, e-mailed, or faxed. There are templates for cover letters available, but they should be used for formatting only. The cover letter should be original and personable, not the writings of a Microsoft Paper Clip or Microsoft Einstein. Businesses hire personality as much as they hire skills, especially businesses where the work is collaborative and long hours are required.

The cover letter serves as an introduction. It must be neat, concise, well-written, grammatically correct, and limited to one page. The body of the letter need not be more than three or four paragraphs. If at all possible, address an actual person in the letter rather than "To Whom It May Concern" (often a contact name is provided in the job notice). Research into the company and job posting will often yield a contact name, and adding a relevant name is an important touch and worth the effort. The initial paragraph of the letter should serve as a personal introduction and should then state the target position. If the job was recommended by someone in particular, reference that person in the first paragraph. Subsequent paragraphs within the letter should highlight pertinent attributes and skills that make you the perfect choice for the job and the company. The conclusion of the letter should invite the reader to seek further information via the contacts provided. If follow-up communication is planned (and this is advised), be sure to let the potential employer know. Many employers look for candidates to show active interest in potential employment in this way, but candidates should maintain an awareness of the thin line between enthusiastic and overzealous.

When e-mailing a job application, the cover letter can be written into the body of the e-mail or can be used as an attachment; however, the résumé should never be copied into the body of the e-mail and should always be sent as an attachment in order to preserve the formatting. There are some who tell candidates to send résumés as PDF files in order to maintain formatting and prevent further edits. Regardless, any attachments sent should have the files titled with your name, the name of the document, and the date, for example, JaneDoeRésumé2010.doc. This will prevent the résumé from being lost in a sea of other résumés and help the recipient organize incoming files. It is always

best to ask a trusted mentor, colleague, or friend to review and proofread any materials prior to sending them to a prospective employer. However, be sure that the reviewer is knowledgeable on grammar, spelling, formatting, and writing styles. See appendix for Sample Cover Letter.

The Résumé

Aside from the cover letter, a résumé is the first introduction and the first impression made on a potential employer. Because of this, the résumé should be flawless. It should be neatly organized, easy to scan, succinct, and free of all typographical errors, misspellings, or any misinformation. It is important to remember that the potential employer may be looking at dozens of résumés for one position, and as a result their initial reading of the document may be little more than a scan. The negative impression made by poorly formatted data and typos will outweigh any positive information proffered by résumé credits. Headings, subheadings, tabulations, and columns all aid in organizing information cleanly so that it can be accessed and assessed at a glance. It is a very time-consuming task to prepare a résumé in this way, but it is well worth the effort, because the résumé continues to represent the candidate long after the interview is over. Common guidelines in creating a résumé:

- A résumé should be kept to one page. Be succinct and judicious when listing information.
- Keep it simple. Limit the résumé to one style of font, and only a couple of font sizes. Use italics and bold sparingly and with purpose. Multiple font styles and fanciful fonts are hard on the eye and do not fax or photocopy well. An exotic font can be lost when sent electronically and will wreak havoc on the formatting.
- Do not use colored or textured paper. These papers will not photocopy or fax well. Some suggest using off-white or subtle gray or cream-colored paper because these choices will stand apart from a stack of white résumés; still others recommend using the whitest paper possible for the same reason. But the bottom line is that the use of colored or textured papers is a moot issue in this era of electronic submissions.
- Never pad a résumé. Listing the same job or production in multiple places weakens the positive impact. Honesty and integrity are more attractive to potential employers than inflated job descriptions.
- Never lie on a résumé. Theater is a relatively small industry and chances are that most interviewers know someone on their interviewee's

résumé. Dishonesty does not pay—it can destroy a reputation, which is something no one can afford to lose.
- Keep it professional. The goal of the résumé is to be as clear and concise as possible. Make it look good by using spell-check or a dictionary, proofreading, and then spell-checking and proofreading again. Computer spell-check devices do not know the difference between costumer and customer, but any potential employer will! In addition, be sure to solicit trusted friends, colleagues, or teachers to proofread all documents before sending them out.
- Update the résumé often and keep it current.

It is a good idea to have several different résumés at the ready in order to highlight skills in different ways. This is especially true when attending a large employment service at a convention where a variety of jobs may be available. For instance, when candidates are proficient at a number of costuming skills, having a costume design résumé, a cutter/draper résumé, and a costume crafts résumé on hand presents these skills in a more accessible manner and makes it easier for would-be employers to match appropriate skills to job availabilities. Ultimately, the information is the same, but the arrangement of that information is targeted to specific employment requirements in hopes of catching the eye of a theatrical company in the market to hire.

The formatting of information on the résumé is fairly standard. Because most résumés are initially scanned and not carefully read, it is not wise to present major deviations from standard résumé formatting. (However, keep in mind that though font style and formatting choices for the résumé are often standard, they should still allow for some sense of personal style to show.) Typically, the most important data is listed first on each line, so that it is the first thing that the reader sees. The outline of the information is as follows:

- The very first thing at the top of the résumé is your name, and it should be the largest font on the page, popping readily when one glances at the page.
- Under your name, list your present job title, area of expertise, or the desired job title.
- Place current contact information after the name and job title—an e-mail address, phone number, and mailing address. Make your e-mail address a professional-looking one; it should ideally be your name and not something obscure, silly, or salacious. Never disclose

personal information, such as height, weight, age, or marital status, and never *ever* put a Social Security number on a résumé.

- Experience in a specific area of expertise is the next block of information. If the desired position is lighting designer, then this first section should display experience as a lighting designer. The order of the list is usually reverse chronological, with the most recent work listed first. Some designers will order the list by emphasis, placing projects in order of relevance or importance. Regardless, each design should have its own line with the following information tabulated into columns within that line:
  - The title of the production
  - The production company or theater name
  - The director or the immediate supervisor
  - The location of the theater venue, city, and state
  - The year the production happened

As the immediate supervisor serves as a secondary reference, listing the project supervisor gives the reviewer a potential reference to contact about your work.

- After "experience," list "related experience." If the résumé is geared towards lighting design, related experience could be work as an assistant designer, master electrician, or electrician. Also, design or production work in other areas may be pertinent related experience. Formatting of related experience is the same as for the experience category, except add a short description of the work credit on each line.
- Special skills or related skills are those abilities that are applicable and might be attractive to a potential employer. Proficiency with specialized tools or equipment beyond the ordinary, possession of a commercial driver's license, the ability to read music or speak a foreign language—all are examples of noteworthy skills. Computer skills with software programs that are relevant to theater production, such as CADD programs, editing programs, patterning software, visualization software, or spreadsheets, should be listed as well. Do not list hobbies, unless they involve a skill one might consider relative. For example, rock climbing and rapelling are hobbies that have applicable skills to theater rigging and production.

- Education is listed in reverse chronological order, with the most recent degree conferred first. Each degree should have its own line with the following information tabulated into columns within that line:
  - Degree
  - Major
  - Institution and its location
  - Date the degree was awarded
  - With honors, include the GPA
  - Minor, if applicable to theater

- Special awards or honors: this is an optional section, but merit scholarships or special recognition that a potential employer may find relevant should be included on the résumé.
- References: listing references in the body of the résumé is a matter of choice. If there is little room left on the page, references may be omitted from the document. Often the statement "references available upon request" is included at the bottom of the page, though even that is sometimes omitted in deference to space. When references are not listed on the résumé, a separate sheet should be created that lists each reference with contact information. Frequently, three reference names and addresses are provided. Make sure this separate reference sheet has your name and contact information as a header and that all reference contact information is accurate and neatly formatted. Name, title, company, e-mail, and phone number are all that is required for the contact information. Try to use professional addresses and phone numbers rather than personal ones whenever possible.

References should be people who have had direct supervisory experience with your work. Always ask before listing someone as a reference, and notify the person giving reference well in advance about the companies that may be making contact. This will ensure that when the people giving reference are called upon to supply a recommendation, they are up-to-date, informed, and ready to provide a good word. If the job requires a recommendation letter, supply reference providers with complete information about the job and the company as far in advance of the deadline as possible and provide them with an addressed and stamped envelope. Do not ask for a general letter that can be photocopied; these are typically a waste of everyone's time, as potential employers tend to dismiss them. It is also helpful to give reference

providers a current résumé to use as a point of reference when writing their recommendation. See appendix for sample résumé.

Once initial résumé selections have been made, the company will ask for an interview or to see portfolio materials. In this electronic age, portfolios can be virtual (on a CD, a jump drive, or online) as well as hard documents. When a candidate is confident of their work, an online portfolio URL can be added to their résumé. In the case of a job service at a large conference, the application, portfolio review, and interview will happen at the same time. Whether it is virtual or hard copy, there are several guidelines for a portfolio that should be observed.

The Portfolio

A portfolio is a collection of renderings, drawings, sketches, research materials, and photographs representing the candidate's best classroom and realized projects. The hard-copy portfolio is typically an oversized binder with protective plastic sleeves for flat artwork and photos. A typical theater portfolio is at least 18"x24" to allow for large renderings and sketches. Portfolios with ring binders that allow pages to be removed and rearranged are ideal, so the portfolio materials can be easily edited and updated frequently. Good-quality art supply stores or online vendors have several sizes and styles from which to choose.

While the résumé is a representation of one's employment history, experiences, and skills, the portfolio is a representation of one's artistic skills and craftsmanship. It is expected that young designers will undoubtedly have a larger ratio of classroom projects to actualized designs. As with the résumé, one should *never* pad the portfolio. Showing a limited number of interesting and neatly presented classroom projects is preferable to pages of filler. And like the résumé, personal style should come through in the selection of work, page composition, labeling, and presentation. Being neat, organized, clear, and concise with the portfolio demonstrates those same values to potential employers.

The portfolio, like the résumé, is a living document; it must be nurtured, updated, and revised frequently. Before interviewing with a company, always research the company's productions and the desired job description in order to best arrange the portfolio to fit the job requirements. For example, if the theater is known for classical works, consider front-loading those types of designs into the portfolio. However, when interviewing at a large convention job service, where there will be many potential employers with a wide variety of job openings, a more generalized approach is recommended.

Significant experience in the desired work area should be the main focus of the portfolio. Ideally, the first section will contain primary design work, followed by sections of related design and craft work. The strongest work in the portfolio should be at the front of these sections. Choose pieces that show skills and abilities in their best light. Some suggest placing some of the best work at the very end of the portfolio as well, since often the portfolio will remain open on the last page while the interview commences. However, be advised that in large convention job fairs, the interview time often elapses before the portfolio has been completely presented. In these cases, there may be no time to view the final pages, or at best, these pages may get a rushed viewing due to time limitations.

There is no one way to create and display work in a portfolio. There are as many styles of presentations in portfolios as there are artists. But there are several "rules" on what all portfolios should contain:

Portfolio Contents:

- A title page consisting of the name and contact information of the designer or technician should come first. Some people will place a résumé on the first page to serve as a cover or title page in their portfolio since the portfolio is often reviewed without the artist present. The name and contact information are important in these circumstances, and in those times when the portfolio is inadvertently left behind or lost in transit. Designers should avoid checking the portfolio as baggage when flying on a commercial airline.
- The body of the portfolio should consist of sketches, renderings, and production photos of designs and construction or craft projects. A beginner should not worry about a minimum number of designs, but as the body of work grows, limit the portfolio to eight to ten of the best projects.
    - Scenery portfolios should include ground plans, front elevations, sectionals, detail drawings, paint elevations, renderings, photos of models, and production photos of realized scenery.
    - Lighting portfolios should include light plots and all associated paperwork: dimmer schedules, hookup sheets, magic sheets, cue lists, and production photos of realized lighting cues.
    - Costume portfolios should include costume plots, swatched renderings, and photos of realized costumes.

- Sketches and research that show or demonstrate the creative process should be included.
- Design statements should go in when available and appropriate. (See appendix on Sample Design Statement.)
- Designers should include sketchbooks, idea notebooks, and any other examples of the design process in the portfolio.
- Evidence and documentation of technical or crafts projects should have a special section in the portfolio. Draped projects, prop construction, scenic art—all should be included. Designers, especially young designers, are often hired to perform various jobs in addition to designing, and this is especially true in summer stock companies or small production companies. Technical skills in addition to design skills are very marketable; evidence of these skills should be readily visible in the portfolio.

Additional Portfolio Guidelines:

- In all cases, if the design work is realized, good-quality photos (displaying the design or craft project in performance) should be included in the portfolio alongside the related conceptual sketch or rendering. Do not use blurry or badly composed photos. Develop a habit of taking lots of pictures throughout the process to ensure a usable selection.
- Technical drawings, ground plans, and light plots should always represent the USITT graphic standards of the industry. See appendices on USITT Graphic Standards, Lighting Graphics, and Lighting Portfolio Guidelines. If possible, include examples of both hand-drawn and computer-generated drawings. Blueprints or photocopies are preferred over original drawings.
- All plates (renderings and blueprints) must be labeled neatly with the show, the producing organization, the candidate's job title on the project, and some descriptive detail.

Detail, organization, and care demonstrated in the portfolio arrangement are indicative of the detail, organization, and care the potential candidate will bring to a job. The ways in which the materials and pages are arranged demonstrate design skills as much as the materials do, so be assured that time invested in portfolio arrangement will be time well spent. Compose each page so that the reviewer's eyes travel a logical path. As with the résumé, designing

the portfolio layout is an opportunity to inject personal style and personality into the portfolio presentation. A dynamic, well-organized, clean presentation will make a convincing argument to potential employers.

The Electronic Portfolio

It is important to maintain a physical hard copy portfolio of representative design materials. However, in addition to a physical portfolio, many designers also create an electronic portfolio stored on a DVD, a personal Web site, a blog, or a professional networking site. All of the rules pertaining to the physical portfolio apply to the electronic one, especially the suggestion for a flawless approach to the organization and presentation. Keep in mind that a résumé and portfolio posted electronically must stand alone as representations of design work, and poorly crafted materials presented on a URL can have a negative effect.

The benefit of online Web sites is that work can be seen by virtually anyone at any time. That is also potentially one of the downsides to an online Web site. Be cautious when posting personal information online. Use electronic mail addresses only and do not post personal phone numbers or home addresses. And when job-related information is linked to a personal site, be professional on all fronts. A designer can have the world's most amazing portfolio of work, but if a potential employer views it alongside pictures of the latest keg pull or blogs about scandalous exploits, a potential candidate might be perceived as a potential problem.

The Job Interview

The job interview is a two-way street. On one side, the interviewer is looking over the potential candidate's résumé and portfolio, asking questions and evaluating responses, while assessing whether the candidate is a good fit for their company and if they possess the appropriate skills for the job. On the other side, the interviewee should also evaluate the company during the job interview. All candidates, if possible, should learn about the potential employer in advance of the application and interview. What is their mission statement? What types of shows do they produce? Will working for this company provide the credentials for career advancement? Potential candidates should use the job interview to ask questions that developed from this research.

If attending a job contact service at a conference, researching the company before the interview may not be possible. It is still very important to evaluate the company during the interview and to ask questions about their mission and season. Having one or two questions ready is advisable.

Developing excellent listening skills is also important. However, be mindful of the time allotted; if scheduled for a fifteen-minute interview, do not ask endless questions and cause the interview to run overtime. Rather inquire as to whether making future contact is welcomed if further questions arise.

The first interview will be nerve-racking. And while interviews will always be stressful, they do get easier. This is especially true of the marathon job searches that take place during large convention job services. By the tenth interview of the day, it will become routine. The key to success in any job interview is to stay relaxed throughout and present oneself as an inviting potential coworker.

Interview Steps:

- Just before the interview, take several very deep breaths and smile. It is important to remember to be positive and honest! Be sure to turn off electronic devices that will not be used in the interview.
- Upon entering the room, greet the people present, make introductions, and shake hands.
- Distribute copies of your résumé to those present. Once the résumé has been received, take the opportunity to highlight some key activities and skills.
- Begin the portfolio presentation. Remember to give context to the work in the portfolio. Discuss design concepts, budget constraints, and interesting solutions to various challenges. Always stay positive, but be mindful of the fine line between talking about oneself positively and being perceived as arrogant. Do not make excuses or apologies, and *never* disparage another company, director, or designer. Theater is a small industry and that disparaged person could be someone's good friend or relative.
- Allow time for questions and listen to those questions carefully. Answer thoroughly and honestly, but as succinctly as possible.
- Always be sure to thank the interviewers for their time and consideration. A handwritten follow-up thank-you note is also a good touch.

Practice interviewing and presenting the résumé and portfolio to trusted mentors. Rehearsing can help alleviate any unwanted nervousness, prevent vocal glitches like "um" and "er," and avoid the overuse of words or phrases such as "like" or "I mean." Address the interviewer by Mr., Ms., or Dr. unless instructed otherwise. It is also important to review the company's information

before the actual interview. Getting a name wrong is not only embarrassing; it can prematurely end the job prospect!

General Guidelines for the Job Interview:

Dress appropriately for the interview. For those applying for a master electrician position, wearing a miniskirt and stiletto heels may not be the best choice of attire. A neat, clean, cared-for appearance will speak volumes.

Be on time (which means five minutes early) and be prepared. Bring a pen and notepad. Prepare a list of questions about the company, its mission, and its operations. Listen, make eye contact, and answer questions thoughtfully, honestly, and succinctly. Stay positive, be polite, and remain calm.

CONCLUSION

Building a successful career as a theater designer takes years of training and work. Developing a body of knowledge about plays, learning to analyze them for meaning and intent, and interpreting the story visually are skills that should be constantly honed. The same is true with collaboration and communication skills. Theater is a very social art. It relies on relationships between large numbers of artists working together as a team of storytellers. The clarity of the story depends on each team member's ability to communicate clearly, with each other on an individual level and with the audience on a collective level. Additionally, the successful designer must master the technical skills of theater production, be it scenic, costume, or lighting technology. This is also an ongoing endeavor, as these technologies are ever changing and developing.

Any theater practitioner will attest that a life in the theater usually means many working hours with minimal pay. But a career in theater design is intellectually stimulating, artistically rewarding, and personally fulfilling. Theater designers are not typically those who seek wealth and fame; rather, they are artists, storytellers, and lifelong learners. They are participants and observers, travelers and not just tourists. In keeping with that, a career in the theater is not a destination where one suddenly arrives; it is an ongoing and ever-changing journey. Planning and preparation will ensure a successful journey, but as with any voyage, the unexpected events are what make the trip interesting.

EXERCISES

Exercise #1 – Observing Résumés
Supplies needed: computer with Internet access
Time limit: 20 minutes

- Go online and look at sample theater design and technology résumés. Observe the following:
  - How is the information arranged and prioritized?
  - What kinds of special skills are listed?
  - Are there résumés that are more eye-catching than others? If so, what makes them so?

Exercise #2 – Observing Portfolios
Supplies needed: computer with Internet access
Time limit: 20 minutes

- Go online and look at sample theater design and technology portfolios. Observe the following:
  - How is the collection arranged, prioritized, and labeled?
  - Are there design examples? Are there technical examples?
  - Is the résumé included? How and where?

Exercise #3 – Building a Résumé and Portfolio
Supplies needed: computer, portfolio case, art supplies

- Create a résumé and portfolio of your own work.
- Search for possible job opportunities.
- Create a cover letter for a job that interests you.
- Have a mentor conduct a mock interview in which you must present your résumé and portfolio.

Appendices

COLOR THEORY TERMINOLOGY

The following terms and definitions relating to color theory should be in every theatrical designer's vocabulary:

Color wheel: This term refers to the physical chart or model displaying the full range of hues or colors in the pigment or light color systems and the way these colors relate to one another. Precise color placement is imperative to the success of each model.

Hue: The names of all colors, such as red, blue, green, yellow, are also called hues.

Primary colors: Primary colors are the essentials: colors that cannot be obtained by mixing. All other colors are created using some combination of these essentials. In pigment, the primary colors consist of red, blue, and yellow. When the medium is light, the primary colors are red, blue, and green.

Secondary colors: Secondary colors are made by mixing equal parts of two primary colors. In pigment, if yellow and blue are mixed, the result will be green; red and yellow will yield orange; and blue and red will produce purple, otherwise called violet. In light, the secondary colors are cyan, created by mixing blue and green; amber, a mix of green and red; and magenta, a blend of red and blue.

Tertiary colors: Tertiary colors are made by mixing a primary and secondary color: for example, a red and orange mix results in red-orange; yellow and green create yellow-green, and so on. Note that the names of the tertiary colors always begin with the primary hue.

Complementary colors: These are colors that are opposite each other on the color wheel, for example, green and red on the pigment color wheel and amber and blue on the light color wheel. When complementary colors are placed side by side, the colors are in strong contrast with each other and seem more intense. Another important aspect of complementary colors happens when they are mixed together. In pigment, the result of mixing equal amounts of two complementary colors theoretically results in black—in theory because the impurities in pigment, and the filler and binder in paint, prevent the mixture from becoming true black. The actual result is typically a gray-brown. In light, mixing two complementary colors yields white, as white light is comprised of all of the colors in the visible spectrum.

Intensity: The purity or saturation of the color is known as the intensity. Intensity of a color can be changed by adding its complement.

Value: The relative lightness and darkness of the color—the amount of white or black contained in the color mix—is known as the value of a color. A low value is a color with black added; a high value color is one with white added.
Tint: This term refers to a higher value of a color. Pink is a tint of red, for example.
Shade: A shade is a lower value of a color. For example, when black is added to blue, a shade of blue is then created.
"Lights advance and darks recede": This phrase refers to the naturally occurring illusion where light-colored objects appear larger and closer to the viewer and dark-colored objects appear smaller and farther away from the viewer. Designers utilize this tenet when creating a sense of depth onstage and when directing the focus of the viewer.
Warm colors: Warm colors are those colors we typically associate with fire, namely, yellow, red, and orange.
Cool colors: Cool colors are those colors we typically associate with water, such as blue, green, and cool purple/violet. It is possible to have a warm blue and a cool blue; a blue that moves toward purple/violet on the color wheel will look warmer when placed next to a blue with a bit of green mixed into it.
"Warms advance and cools recede": This phrase refers to a naturally occurring phenomenon where warmer colors, such as reds, yellow, and oranges, appear to advance to the eye of the viewer, while cooler colors, such as blues, cool purple/violets, and cool greens, appear to recede away from the eye of the viewer. Designers utilize this tenet when creating a sense of depth onstage and when directing the focus of the viewer.
Monochromatic color scheme: When designers choose one color and then change only the value or intensity of that color throughout a composition, they are employing a monochromatic color scheme.
Analogous color scheme: These are colors adjacent to each other on the color wheel, e.g., red and red-orange or blue and purple/violet are analogous colors. While placing complementary colors side by side creates a great deal of energy and contrast, analogous colors placed together in a composition produce a harmonious and peaceful effect.
Pigment: Pigment refers to a material used to impart a particular color to paint, plastics, or other similar products. Paint is made of a pigment, which gives the paint its color; paint also contains a binder, which adheres the pigment to a surface. The pigment and binder are suspended in either water (water-based paint) or a chemical (oil-based paint), which evaporates away as the paint dries.

COLOR MEANINGS AND ASSOCIATIONS

- Blue is calming and tranquil, but can also be depressing and can symbolize sadness. Some claim that this color can improve productivity.

- Red is energizing, intense, and strongly emotional. It is associated with warmth and heat. Red is associated with sexual feelings in Western countries and is at times used for weddings in Eastern countries.
- Yellow is energizing, bright, warm, and cheery. Yellow is highly visible; according to some, it can cause feelings of frustration or anger.
- Purple can seem exotic and even spiritual or otherworldly. Since purple is a combination of red and blue, its emotional symbolism combines these two colors, at once tranquil and energizing, calming and emotional.
- Orange elicits responses similar to those evoked by the colors red and yellow: energy, warmth, and visibility.
- Green symbolizes serenity, fertility, and the natural world. This color is often used in green rooms backstage because of the associations with calm tranquility.
- White often symbolizes purity and wholesomeness. It can also represent death, the afterlife, or spirituality, particularly in Eastern cultures. The light-reflective qualities of white contribute to these symbolic attributes.
- Black can be menacing and can symbolize evil. This is perhaps because it absorbs rather than reflects light.

FABRICS

The word *fabric* is used synonymously with *textile*, *material*, and *cloth*. All garments worn by actors on stage are composed of some kind of fabric. Traditional fabrics can be broadly divided into two categories:

- Naturals
- Man-mades, otherwise known as artificials or synthetics

The distinction is very basic and easily understood: natural fabrics are composed of fibers made from sources grown or harvested from nature, such as cotton, linen, and hemp (plant fibers) and silk or wool (animal products). Artificial or synthetic fabrics come in a variety of textures and handling properties. They are composed of fibers enhanced by or made from manufactured sources, typically petroleum-based products, and are known on the market as polyester, nylon, and acrylic, among many other names.

Many of the most popular fabrics are called "blends," where a natural source fiber is blended with a synthetic source fiber in order to obtain the best qualities of each in one fabric. Naturals tend to be comfortable to wear, breathe, dye easily, and are easy to clean. However, naturals wrinkle easily and break down or wear out quickly. Synthetic fabrics are less comfortable, as they do not breathe well. Also, many synthetics do not take dye easily outside of a professional laboratory environment. However, synthetics are extremely durable and resistant to wrinkling. A fabric blend is a product that, as a result of the combination,

takes on the advantages of both types of fibers while minimizing the disadvantages of each. Most of us can look at the labels of our own clothing and find that they are made of fabric blends, most often a blend of cotton and polyester.

Fabrics vary vastly in terms of construction, strength, weight, surface quality, and durability. There are a variety of fabric construction methods: weaving, knitting, felting, and bonding, among others. The way a fabric is constructed will profoundly affect its drape ability, or "hand." All fabrics have a quality that is commonly called hand, which influences the way a garment hangs, or drapes, when worn. The fabric hand refers specifically to the tactile properties of a fabric, the way it feels when touched, and how it drapes. The drape of a fabric refers literally to the way it hangs on the body or a dress form—is it naturally stiff, limp, or fluid? Does it flow over the form? It is common for beginning designers to "work against the hand" of a fabric, or to try to make a fabric do something it doesn't naturally do, either visually or in terms of performance. Unfortunately, working against the hand of the fabric is the source of many costume failures.

Designers must learn the properties of all fabrics in order to optimize success when using them. Fabrics are the most vital, essential, and basic component of the costume, aside from the actor, of course. It is impossible to be a functional costume designer without an intimate understanding of all fabrics and their innate properties. Designers must set about to acquaint themselves with all available fabrics, and the best way to accomplish this is through exposure—visiting fabric stores, exploring fabric bins, observing personal clothing, as well as other costumes, and by draping, sewing, and doing! When it comes to fabrics, there is no substitute for experience.

FABRIC QUALITIES

Fiber Content

- **Naturals**
    - Animals
        - Hide: alligator, buffalo, cow, deer, ostrich, snake
        - Fur: fox, marten, mink, rabbit
        - Fur fibers: sheep, goat, angora rabbit, alpaca, llama, yak, camel
        - Silk: silkworms, both wild and cultivated
    - Types of natural fabrics from animal sources
        - Leather and furs are nonwoven animal hides. They are strong, durable, protective, malleable, and can be dyed and distressed.
        - Silk fabrics come from silk fibers that have been spun into cocoons by silkworms and harvested. They can be cultivated or uncultivated,

each having distinct properties. Typically drapes well, luxurious and strong, easy to dye and distress.

- Wool (fur) is the hair of an animal that is shorn, carded, and then spun into fibers, each having distinct properties determined by the characteristics of the hair itself. Breathable, warm, soft, strong, does not wrinkle, great for tailoring.

- Plants
  - Cotton
  - Flax
  - Cannabis
  - Ramie
  - Jute
- Types of natural fabrics from plant sources
  - Cotton—the fibers come from the boll of the cotton plant. Popular and comfortable to wear, cotton is versatile, durable, washable, dyeable, and absorbent. Many uses; commonly used for undergarments and bedding.
  - Flax, hemp, jute, ramie—these fabrics are similar because the source plants are harvested for bast (skin) fibers. Absorbent, strong, mold resistant. Typically strong and rough hewn, used for rope, carpeting, and burlap as well as clothing.
- General properties of natural fabric
  - Positive

    Naturals are breathable, dyeable, comfortable, versatile, strong, retain moisture, drape well, and some have natural UV protective qualities.
  - Negative

    Naturals break down with time and exposure to light and water, wrinkle easily, and can be vulnerable to bugs and mold. (Many of these qualities are also considered positive ones, because they make the fabrics easier to distress.)

- **Artificial (not technically synthetic—made from wood fibers, then chemically processed)**
  - Cellulosic
    - Rayon—created as an artificial silk that can also imitate linen and cotton. Has many of the properties of naturals, is durable and dyeable.

- Acetate—one of the earliest artificial fibers, it is crisp, affordable, and easily draped. Must be dry-cleaned. Also used to make film and playing cards.

- **Synthetics**
  - Created only through a chemical processes—noncellulosic
    - Polyester (Dacron)—strong, wrinkle-resistant, reduced fading, and the most common synthetic.
    - Acrylic—known as imitation wool, soft, comfortable, builds up static cling and must be laundered carefully because of the tendency to pill.
    - Nylon—originally created as a silk imitation in WWII, strong, will not soil or wrinkle, with many varied applications: seat belts, cording, and stockings.
    - Spandex (Lycra or elastane)—created as a synthetic rubber in the late 1950s, is more commonly used in a blend with other fibers. Revolutionized the swimsuit, underwear, and sock and stocking industries. Also used in girdles and orthopedic leg wraps.
  - Properties of synthetic fabrics
    - Positive

      Synthetics are durable, wrinkle-free, stain-resistant, versatile, and are not vulnerable to bugs or mold.
    - Negative

      Synthetics do not dye or distress easily**,** are less comfortable to wear than naturals because they don't breathe, and the process of creating synthetics can be toxic and harmful to the environment.

- **Blends**
  - Fabrics containing naturals and naturals, and naturals and synthetics, combine the best of both worlds.
    - Most common blends: cotton and polyester, nylon and wool
    - Natural and synthetic blends result in a product that exhibits comfort, breathability, dyeability (qualities from naturals), as well as durability and less wrinkling (qualities from synthetics).

- **Weaves**
  - Warp and weft weaves
    - Basket weave—monk's cloth. A variation of plain weave with two or more over, two or more under, and a flat and loose appearance.
    - Brocade weave—pattern woven into the fabric for a positive/negative effect. Technically, brocade is a satin weave combined with

a twill or plain weave, creating a distinct pattern that is visible on both sides of the fabric.

- Pile weave—velvets, velours, fake furs, terry cloth, corduroy, carpeting. Woven with an extra loop, creating a soft pile effect. The loops can be long or short and cut to vary effect.
- Plain weave—canvas, muslin, taffeta, organza, chiffon, shantung, gauze. A simple and common weave, alternating one over, one under; it is snag-resistant, wrinkles easily, and has a low tear strength.
- Satin weave—high sheen on one side, dull on the other. The face of the cloth is covered with warp yarns floating over many weft yarns made of silk or nylon.

  Sateen—like satin, only made of cotton.
- Twill weave—very durable weave, resistant to soiling, used originally in denim fabrics. Two or three warp threads pass over one to two filling threads in alternate rows. More pliable than plain or basket weave.

  - Single thread weaves
    - Knit—single and double. These fabrics are created by looping one thread onto itself in repeated rows and patterns

- **Nonwovens**
  - Felt—animal fibers that have been matted, condensed, and pressed together using heat and moisture; the oldest form of fabric.
  - Leather—the hide of an animal that has been tanned, or processed and preserved for use.
  - Fur—the skin or hide, processed and preserved, with the fur of the animal intact.

Some examples of other fabrics:
(Identified by fiber content, or by weave)

Burlap
Canvas
Chiffon
Chintz
Corduroy
Crepe
Denim
Dotted swiss
Drill

Flannel
Fur
Gabardine
Gauze
Gossamer
Lace
Leather
Naugahyde
Oxford cloth
Pleather
Seersucker
Terry cloth
Velour
Velvet

GENRE

Genre is a category of theater performance characterized by form, subject matter, or style. Comedy, drama, and musical theater are major categories of genre.

Comedy—A comedy is a humorous play with a happy ending. The subject matter of comedy can be serious, but it is treated in a way that elicits laughter and amusement.

Black comedy—A comedy that explores darker issues like violence, disease, racism, sexism, and death. Often considered in bad taste, black comedy simultaneously provokes laughter and discomfort in the audience.

Burlesque—This is a comedic play that parodies or ridicules another literary work or style through mockery, exaggeration, and irreverent imitation. Burlesque is also used to define a type of entertainment that mixes comic skits, song and dance, and striptease in a revue with a serial structure.

Commedia dell'arte—A style of comedy that originated during the Italian Renaissance in the sixteenth century and employs very stylized physical comedy, stock characters, and improvised scenarios.

Comedy of manners—Popular in France during the late seventeenth century and in England during the Restoration, the comedy of manners deals with the peculiarities, foibles, and affectations of the upper classes. It is characterized by witty and sometimes bawdy language.

Farce—A comedic play that is defined by broad physical comedy, stereotyped characters, and exaggerated, improbable situations with little to no intellectual pretense.

Romantic comedy—Comedies that take as their subject matter the foibles of courtship and romance.

Satire—A comedic play that seeks to reveal certain inane aspects of society, politics, or religion through ridicule, mockery, and irony. By its nature, satire contains a specific intellectual and moral viewpoint.

Tragicomedy—A play that combines elements of both serious drama and comedy and as a result is poignant and bittersweet.

Drama—Dramas are serious plays that treat their subject matter gravely. Drama takes an earnest, somber view of people in conflict. Types of drama include classical tragedy, domestic drama, melodrama, heroic drama, and passion plays.

Classical tragedy—Classical tragedies that are exemplified by the works of Sophocles, Aeschylus, and Shakespeare, among others, make use of elevated language and poetical structure. The subject matter revolves around a larger-than-life hero-protagonist who belongs to the nobility, suffers greatly for a particular cause, and ultimately suffers or dies at the end of the play.

Domestic drama—A serious play that takes as its subject matter the relationships and lives of everyday people and families.

Heroic drama—A play that has the characteristics of traditional tragedy, but with an optimistic view and a happy ending where the hero does not necessarily suffer or die.

Melodrama—A play with exaggerated action and heightened suspense, a clearly defined protagonist and antagonist, and a strong sense of morality and justice.

Passion play—Passion plays are religious plays that take as their subject matter the life and crucifixion of Jesus Christ.

Musical theater—Musical theater is a genre of theater that tells the story through song and dance in addition to dialogue.

Book musical—A musical based on a book, or libretto, which has the plot and dialogue structure of a play with song and dance pieces interspersed throughout.

Concept musical—A concept musical is built around an idea or a concept rather than a libretto or book. *A Chorus Line*, which was developed from taped workshops involving Broadway dancers, is an example of a concept musical.

Musical comedy—Musical comedies are book musicals that are comedic in nature.

Opera—Opera is often classified as a genre of music, as the entire performance is sung and there is little to no dialogue.

Additional genres relating to subject matter or content:

Avant-garde—French for vanguard, the term avant-garde refers to theater that is cutting-edge, pushing the boundary of accepted subject matter and the theatrical conventions of movement, language, sounds, and physical space.

Multimedia theater—Plays that mix several forms of media onstage at the same time, including live theater, video and film projection, and audio effects and music, are considered multimedia productions.

Theater for social change—Theater productions that have as their mission raising an awareness of a social issue or injustice in order to effect change.

Additional genres relating to a specific historical period, culture, or style:

Bunraku—A form of Japanese puppet theater that dates back several centuries. The puppets are two-thirds life size and require several puppeteers, traditionally dressed in black, to operate. The voices of the characters in Bunraku are usually performed by a single chanter who is accompanied by a shamisen (traditional musical instrument) player.

Classical drama—Classical dramas are plays dating from the classical periods of ancient Greece and Rome. Aeschylus, Sophocles, Euripides, and Seneca are all playwrights who wrote during the classical age.

Elizabethan theater—Named for Queen Elizabeth I, who ruled from 1558 to 1603, Elizabethan theater is also referred to as the English Renaissance theater. The dates for Elizabethan theater extend to 1642, the key date when theaters in England were closed by the Puritans. William Shakespeare and Christopher Marlowe are playwrights that exemplify Elizabethan theater.

Kabuki—A form of highly stylized, nonrealistic Japanese theater that combines music, dance, and drama. Kabuki dramas are episodic in structure and use elaborate makeup designs. While centuries old, Kabuki is considered more adaptive and less prescribed by tradition than Noh drama.

Medieval theater—After the period of the Dark Ages, drama resurfaced in the church in order to teach religious lessons and Bible stories to a predominately illiterate populace. Medieval theater consists of tropes, mystery plays, and morality plays.

Morality plays—Medieval plays popular in the fifteenth and sixteenth centuries that depicted allegorical characters. The intention of morality plays was to teach moral truths and Christian virtues.

Mystery plays—Medieval plays that depict events from the life of Christ, the saints, or other biblical stories of salvation are mystery plays. These were historically performed by towns as cycle plays that took place over one or several days, with trade guilds producing and performing specific portions of the cycle.

Noh—Classical Japanese music theater that originated in the fourteenth century. The masks, costumes, scenery, and scripts of Noh drama are prescribed by tradition.

Restoration theater—Restoration theater refers to the period in England that began in 1660, when Charles II was restored to the throne and the ban on theater was lifted. While Restoration theater included comedies, dramas, and histories, it is primarily the comedies

that continue to be produced in modern times. Restoration comedies are characterized by witty language and bawdy plots that satirize social mores.

Peking opera—Also known as Beijing opera, Peking opera developed in the late eighteenth and early nineteenth centuries and combines acrobatics, dance, mime, and music into popular entertainments.

Performance art—Theater that is not script- or character-based and combines elements of visual art, dance, and movement; the subject matter is often individualized or autobiographical and delivered directly to the audience as narrative or conversation, rather than fictionalized dialogue.

Shadow play—Centuries-old entertainment popular in Southeast Asia that uses shadows created by puppets or actors, cast onto a drop or screen, to tell a story.

Street theater—Theater that takes place outdoors, in parks, in shopping malls, or even in parking lots is referred to as street theater. The subject matter can range from civic history to political theater for social change.

Trope—The earliest form of medieval drama, tropes consisted of chanted dialogue performed by monks impersonating biblical figures and were interspersed during the liturgy in a church service.

Well-made play—A term that describes the realistic, climactic plays of the late nineteenth century, well-made plays are characterized by a strong cause-and-effect linear plot that is tightly constructed.

GLOSSARY

Abstract: A term describing the result when organic or geometric shapes and masses are reduced to the most simplistic expression or exaggerated and distorted to stylistic extremes. This is typically done for the purpose of emphasizing symbolic or metaphorical ideas, rather than concrete and tangible concepts.

Amperage: An ampere is unit of measurement of electrical flow. Amperes, or amps, are abbreviated by the lowercase letter *a*. Electrical equipment that creates a pathway for electrical flow, such as stage cables and connectors, should not exceed their amperage rating.

Antagonist: The character in any play who opposes the protagonist. An antagonist is any adversarial or oppositional character who targets their struggles specifically with the lead character or hero (protagonist) of a play.

Balcony rail: This is a front of house lighting position that runs horizontally in front of the balcony overhang in proscenium or thrust theaters.

Batten: This is a metal or wooden rod suspended above the stage with ropes that is used for the purpose of hanging scenery elements.

Blackout: A lighting cue that removes all light from the stage instantaneously is called a blackout.

Blacks: (1) A shortened term referring to black masking drapes, such as legs and borders used for masking offstage areas. (2) A shortened term referring to black clothing worn by stage management and technical crews during performances.
Boom: A vertical pipe for hanging stage lighting fixtures is referred to as a boom.
Border: A border is horizontal masking that is used to hide the flown scenery and lighting equipment above the stage. A border is often hung directly in front of a set of legs in order to conceal the top of the legs from the audience's view. Borders are typically made from black velour or similar opaque fabric that absorbs light.
Box boom: A box boom is a vertical light pipe in the front of house, usually located in the balcony or house boxes along the sides of the auditorium.
Build: The term used to describe the process of creating a completed garment, scenic element, or prop from basic raw materials. This term is also used in lighting to describe the process of composing lighting cues for a particular effect or scene.
Bump: A lighting cue that happens instantaneously with no fade time is referred to as a bump.
Ceiling cove: A front of house lighting position located in the ceiling over the audience area is called a ceiling cove.
Channel: A control path for a lighting (or sound) signal is called a channel. Lighting instruments onstage are patched into a specific channel on the lighting control console that controls the intensity of the instruments assigned to it.
Chiaroscuro: This word comes from the Italian words *chiaro* meaning bright and *oscuro* meaning dark. The term refers to any artist's use of lights and darks (tints and shades) in order to create a more three-dimensional illusion and an enhanced dramatic effect.
Circuit: In theater lighting, the term circuit can have two meanings: (1) A pathway for the flow of electricity; (2) a numbered receptacle located within the theater that lighting instruments can be plugged into.
Collage: Collage is the result or practice of compiling disparate materials into a composition for artistic, expressive, or creative purposes.
Connector: An electrical device that joins elements in an electrical circuit together, such as a lighting fixture and a cable end.
Counterweight system: This is a mechanical system for flying scenery and lighting equipment over the stage that employs ropes, pulleys, and an arbor with counterweights to counterbalance the load.
Cross fade: A cross fade happens when one lighting or sound cue is fading up while the previous cue is fading out.
Cutter: This person works in the professional costume shop creating patterns and cutting fabrics from these patterns into sectional pieces that ultimately form a garment. Often

called a cutter/draper, this individual's overriding goal is to interpret the costume designer's drawing or intent.

Cyclorama: A large backdrop that creates a visual wraparound effect, wrapping from stage right to stage left.

Detail drawings: Designers create these large-scale drawings in order to show the details of props or scenic elements, often from multiple vantage points.

Dimmer per circuit: A lighting system where each lighting circuit in the theater has its own dimmer, which eliminates patching between circuits and dimmers.

Draper: This term refers to the individual in a professional costume shop who makes patterns (either by draping or flat patterning techniques, or a combination of both) for the purpose of creating garments per the specifications of the costume designer. Distinguished from the cutter in that the draper makes the patterns and the cutter uses the patterns to cut the fabrics. (Often these two positions are combined into one.)

Dress form: A dress form is the common term for specialized male and female mannequins used in the process of garment construction and tailoring.

Drop: This scenic element is an unframed expanse of fabric, typically with grommets and ties at the top and a pipe sleeve at the bottom in order to facilitate hanging vertically onstage. It is called a backdrop when placed upstage.

Breakup patterns: See gobo.

Cut drop: A cut drop is a painted drop with parts cut away to create openings or portals. Often used with other drops to create perspective and depth.

Sky drop: A sky drop is a drop used to simulate sky. It can be blue fabric, or painted unbleached or white muslin that is "painted" with light.

Electrics: Lighting battens that hang upstage of the proscenium arch over the stage are referred to as electrics. Electrics are numbered from downstage to upstage, with the batten closest to the proscenium arch labeled First Electric.

Fade out: A fade out is a lighting or sound cue that goes to complete dark or silence in a specific time: for example, a three-count fade takes three seconds to go to complete black.

Fade up: A fade up is a lighting or sound cue that goes from complete dark or silence to the cue's full intensity in a specified amount of time.

Flat: A flat is a framed expanse of fabric or plywood used to create two-dimensional vertical scenic elements. Most theaters have a supply of stock flats in common sizes that are pulled, reconfigured, and repainted over and over.

Fly loft: The area over the stage that houses the flown scenery and lighting equipment, the fly loft is created architecturally when the walls of the stage house extend upward to enclose the fly loft and support the grid. Ideally, the fly loft should be twice the height of the proscenium arch in order to fly scenery completely out of the audience's sight lines.

Fly system: The ropes, counterweights, and pulleys installed in a theater space for the purpose of moving scenic elements and performers across stage, above the stage into the fly loft, or offstage into the wings.

Front elevation: A scaled mechanical drawing that shows each scenic unit from the front view. The front elevation is part of the scenic design package.

Front of house: The areas of the theater facility intended for the audience and the people who work in these areas. This includes the auditorium seating area, lobby, box office, restrooms, concessions, and gift shop. The people who work front of house include ushers, house managers, bartenders, and retail and box office personnel.

Geometric shapes: The term for simple shapes that are related to the principles of geometry. Geometric shapes are recognizable, human-constructed forms such as squares, triangles, and circles. The converse is organic shape.

Gobo: A gobo is also referred to as a cookie, pattern, or template and is defined as a thin metal disk with an etched or punched pattern or a thin glass plate with a colored pattern or image. When inserted into an ellipsoidal reflector spotlight, the gobo will create a light and shadow projection on the stage.

Ground plan: A scaled mechanical drawing that shows the set as it is located on the stage from the top view; the ground plan is part of the scenic design package.

Hand: The way a fabric is constructed will profoundly affect its ability to drape, also known as its hand. The fabric hand refers specifically to the tactile properties of a fabric, the way it feels when touched and how it drapes.

Hard patch: A hard patch involves physically connecting a lighting circuit to a dimmer or a dimmer to a control channel through a cross-connect or patch panel. Most patch panels employ a slider/groove or telephone jack and receptacle system of making assignments.

Hookup sheet: Information from the light plot in chart form with the data on the form organized by control channel is known as a hookup sheet.

Legs: Legs are vertical masking used to hide the wings. Often legs are hung in pairs, one stage left and one stage right. Legs are typically made from black velour or similar opaque fabric that absorbs light.

Light ladder: A light ladder is a metal structure resembling a ladder that typically hangs down from the end of an electric and provides high side lighting positions for lighting instruments.

Light plot: The light plot is a scaled mechanical drawing of the exact position in the theater of each lighting instrument used in the production. The instrument's symbol is labeled with the corresponding control channel, dimmer number, focus, and color.

Light tree: A light tree is a vertical pipe for hanging lights, sometimes referred to as a boom.

Magic sheet: Also known as a cheat sheet, the magic sheet is an abbreviated version of the light plot that shows the color, distribution, and focus of the instruments assigned to

specific control channels. The lighting designer uses a magic sheet in order to affect a more efficient cue-in of a production.

Masking: Drapes or neutral flats used to hide the wings, the fly loft, and other technical support areas from the audience's view are known as masking.

Model: A model is a prototype of an object, typically smaller and built to scale, which means it mathematically replicates the proportions of the intended design. Scenic designers use models in order to communicate design ideas. Directors and choreographers use models to plan blocking and movement for plays.

Negative spaces: The spaces around each of the objects placed on stage, or around the subject in a work of art, are called negative spaces. Scenic designers place objects such as platforms and furniture onstage, and these inhabit what is known as positive space; the spaces surrounding these objects are called the negative spaces.

Organic shapes: Typically curvilinear, these shapes are the shapes found in nature, or they are shapes inspired by shapes found in nature. The converse is geometric shape.

Paint elevation: A scaled painted drawing of a drop or piece of scenery that instructs the paint crew on what the finished product should look like. Paint elevations are part of the scene design package.

Perspective: Perspective is a method of creating the illusion of three dimensions using a two-dimensional media, such as a scenic rendering or painted drop. Perspective is achieved by manipulating the scale of objects in relation to each other, objects meant to appear more distant from the viewer are made smaller than those meant to appear closer to the viewer.

Pile-on: A pile-on is a lighting or sound cue that is added to an already-active cue, sometimes referred to as an add-on.

Platforms: Platforms are weight-bearing framed plywood structures used to create three-dimensional horizontal scenic elements, such as stair landings, balconies, or raised levels. Most theaters have a supply of stock platforms in common sizes that are pulled, reconfigured, and repainted over and over.

Positive spaces: The subject of a work of art inhabits what is called positive space. Similarly, scenic designers place objects such as platforms and furniture onstage, and these occupy what is known as positive space; the spaces surrounding these objects are called the negative spaces. Positive implies that the space has been "filled" or occupied; negative in this case suggests a void or space that is unoccupied.

Proscenium: It is the wall, and opening in the wall, separating the auditorium seats from the backstage area. The opening in the wall is called the proscenium arch. Seldom a true arch, this opening is most often rectangular and filled with a curtain. When the curtain opens, it in effect removes the "fourth wall," thus revealing the world of the play. This stage is sometimes called a picture frame stage.

Protagonist: A protagonist is the main character in a play, the one around whom the action revolves. The protagonist is the character in any play that is opposed by the antagonist.
Pull: In theater, when designers and technicians take things from existing stock, it is called pulling, or pulling from stock.
Rake: In order to improve sight lines, the stage or the audience area may be built on a rake. This means the stage or audience area is sloped. When the stage is raked, the stage area is angled or sloped higher upstage and lower downstage near the audience. When the audience is raked, the auditorium is higher in the back and lower closer to the stage. This allows clear visibility of all actors and scenery onstage.
Rear elevation: A scaled mechanical drawing that shows the construction detail of each scenic unit from the rear view is known as rear elevation. This is part of the scene design package.
Revolve: A revolve is a motorized turntable built into the stage floor that rotates 360 degrees. Multiple sets can be built on half or a third of a revolve turntable and rotated into view when needed. A related scenic element is called a rotating platform.
Rendering: A rendering is a portrayal or drawing of design ideas for a play. Renderings are typically in perspective and in color.
Rough sketch: A rough sketch is a quick rough drawing often composed early in the design process. Designers will often do multiple rough sketches in order to communicate a variety of ideas in the formative stage of the design process. The earliest rough sketches are thumbnail sketches.
Scale: Scale refers to an exact ratio of dimensions in a technical drawing. On a drawing drafted in ½" = 1'–0", every half-inch on the drawing represents one foot in reality. An architect's scale is a ruler that has several scales represented on each face of the ruler.
Sectional view: In theater, a sectional view is a view of the set on the stage in the theater, presented with the set, stage, and theater first halved front to back and then viewed from the side.
Show bible: A notebook containing all pertinent and significant information relating to a particular production is often called a show bible. Many different theater professionals, including individuals and entire shops, use bibles. For example, in professional costume shops the bible is the notebook containing piece lists, pulling and shopping lists, and the costume plot, in addition to other essential information.
Soft goods: Drops, drapes, ground cloths, or any large expanse of unframed fabric are known as soft goods.
Soft patch: The term soft patch is an electronic method of connecting a dimmer to a control channel through a connection in a computer control board.
Stage movement: Stage movement is specific movement terminology that is utilized by directors and actors and also referenced by designers. In reference to the actual

performance area of any proscenium stage: upstage means the area farthest away from the audience; downstage refers to the area closest to the audience; stage right is (from the actor's perspective) closest to the right side of the stage; and stage left is (from the actor's perspective) closest to the left side of the stage.

Stock: Scenery, costumes, and props that are owned by the producing organization are called stock items. Pulling from stock refers to taking items out of storage to be used in a current production.

Swatch: A sample of fabric or gel to be used in a theatrical design is called a swatch. Costume and scenic designers use fabric swatches in order to communicate design choices to directors, shop personnel, and other designers. Lighting designers use gel swatches in the process of selecting colors for lighting designs. Sample gels are available from the manufacturer in the form of swatch books.

Technical drawing: The technical drawing is a scale drawing that accurately describes objects from a particular vantage point. Front elevations, rear elevations, plan or top views, and sectional or side views are types of technical drawings and are all parts of the scene design package.

Thumbnail sketches: The earliest rough sketches are thumbnail sketches. Thumbnails are typically small, quick sketches created for the purpose of brainstorming ideas for a theatrical design.

Trap: A trap is an opening in the stage floor used for the purpose of scene change, special effect, or actor escape.

Visual metaphor: A visual metaphor is a representative visual image used to invoke a mood or theme. Designers use purposeful and significant visual imagery to help express conceptual ideas and ultimately larger emotional and thematic issues found in the play.

Voltage: Voltage is a unit of measurement of electrical potential and the source of electricity in a circuit. The abbreviation for voltage, or volts, is the lowercase letter *v*. Common voltage supplied in the United States is 120 volts (rounded up from 117 volts). Larger appliances like clothes dryers or electric ranges may operate on 240 volts. Batteries come in a variety of voltages, such as 12v, 9v, and so on.

Wagon: A wagon is a platform that has been mounted on casters to enable it to shift in and out of scenes with ease.

Wattage: Wattage is a unit of measurement of electrical consumption and measures the load on a circuit of electricity. Wattage, or watts, is abbreviated with a lowercase *w*. Stage lamps and motors all have wattage ratings. A stage lamp may be 1000w, 750w, 500w, and so forth. Dimmers in a lighting system are rated for a maximum wattage load. The most common dimmer load is 2400w.

Wing space: These are offstage spaces to left and right of the onstage acting area. The wings are created by the proscenium wall and are just off left and right of the proscenium arch.

LIGHT CUE LIST

Cue #	Page #	Cue Motivation	Action	Time	Notes
0	0	Before the house open	Preshow & House lights up	0	Work lights off - running lights on
1		Beat before Curtain Speech	House to Half	5 sec	
2		Beat after Curtain Speech	House out - Preshow out	5 sec	
3	194	Women in place on bench	Scene Lights up	9 sec	*COME AND GO*
4	195	3 beats after Flo: "I can feel the rings."	Fade to black	6 sec	
5		After women clear the stage	Transition lights up	5 sec	bench clears
6		Bench and stagehand clears	Fade to black	5 sec	*FOOTFALLS*
7	239	Several beats into footsteps	Scene Lights up	8 sec	Shin buster first - fill light follows
8	240	Several beats after V: "In your poor mind. It all. It all."	Fade to black	6 sec	
9	241	Several beats into footsteps	Scene Lights up	8 sec	Slightly dimmer than scene 1
10	241	Several Beats after V: "Tries to tell how it was. It all. It all."	Fade to black	6 sec	
11	242	Several beats into footsteps	Scene Lights up	8 sec	Slightly dimmer than scene 2

12	243	Several beats after M: "In your poor mind. It all. It all."	Fade to black	6 sec	
13	243	M clears stage. Several beats after.	Scene Lights up	6 sec	Slightly dimmer than scene 3
14	243	Several beats after Lights up Full	Fade to black	6 sec	
15		Two beats after fade out complete	Preshow & House up full	5 sec	Intermission
16		End of Intermission	House to Half	5 sec	
17		Two beats after house to half	House out - Preshow out	5 sec	*THE DUMB WAITER*
18	1	Actors in place in blackout	Scene Lights up	5 sec	
19	1	Ben: "Kaw. What about this?"	Slow fade in intensity	45 min	
20	29	Gus stumbles in through door. Ben levels revolver.	Fade to specials then black	8 sec	linked cues
21		Actors in place for Curtain Call	Curtain Call lights up	5 sec	
22		End of bows	Curtain Call fade to black	5 sec	
23		Actors clear the stage	House lights & post show up	5 sec	

LIGHTING FIXTURES

Lighting fixtures fall into two major categories: conventional lights and intelligent lights. Conventional fixtures are the basic lighting instruments that have been in existence for nearly eighty years, although modern fixtures resemble those early models in the same way a modern hybrid automobile resembles a Model T Ford. There are several types of conventional lighting instruments:

- The ellipsoidal reflector spotlight (ERS)
- The Fresnel spotlight
- The parabolic aluminized reflector (PAR)
- Several varieties of floodlights used to light drops and cycloramas

The mechanics and optics of stage lighting fixtures are complex. However, researching the properties of the various lighting units is relatively simple. All manufacturers have technical data on their products listed on their company Web sites. If you encounter a fixture you haven't yet worked with, learning its technical specs (basic information on the beam angle, the throw distance, and the output of light) is just a few keystrokes away.

Conventional Instruments

The Ellipsoidal Reflector Spotlight

The ellipsoidal reflector spotlight is the most controllable lighting instrument. Its optical design utilizes a plano-convex lens and ellipsoidal reflector, which creates an intense beam of light that can be sharpened to a very hard edge and shaped by means of four internal shutters. The shutters allow the beam to be framed tightly to a piece of scenery or an actor's face. The shutters can also be used to keep light from spilling onto masking or off of the stage into the auditorium. Some ERS units may be equipped with an iris. An iris can change the aperture of the instrument, which in turn narrows or widens the light beam. The ERS is also the only conventional unit that allows for the use of a metal template, called a gobo, to be inserted into the body of the instrument. The gobo is used to create a shadow pattern or a texture in the light. A recent development in lighting technology is the glass gobo, which can add both color and texture to the beam of light. The lens barrel of the ERS can be adjusted to deliver a very sharp-edged or a very soft-edged beam of light, as well as a sharply focused gobo pattern or a soft, fuzzy, textural effect. Because of its versatility, the ERS is the most widely used conventional instrument in stage lighting. Due to its high level of control, it is the instrument of choice in front light applications and for specials.

The Fresnel Spotlight

The Fresnel spotlight is a lighting instrument that can be adjusted to emit a narrow spot or a wide flood of light. The lamp of the Fresnel is mounted on a sled that can be moved inside the instrument. The beam is adjusted by changing the proximity of the lamp to the lens. The closer the lamp is to the lens, the wider the beam of light. The Fresnel gets its name from the type of lens the instrument employs. The Fresnel lens was developed for

lighthouses by Augustin Fresnel in the 1820s. The lens retains the same properties of a plano-convex lens but has the thickness of the lens cut away. As a result, the Fresnel has a softer, more diffuse beam of light.

The Fresnel spotlight has no internal shutters and cannot receive a gobo, but the shape of the light can be roughly controlled with the addition of an accessory called a barn door. A barn door has four hinged metal flaps and is inserted into the gel frame holder at the front of the instrument. The barn doors will cut light from spilling onto an area that is unwanted, but it is a crude cut in comparison to the ERS. The Fresnel has been widely used as a fixture in top light, backlight, and sidelight washes because its diffuse light blends well and the need for tight control is not as great.

The Parabolic Aluminized Reflector

Another common conventional fixture is the parabolic aluminized reflector. The PAR is a floodlight that emits a very strong, soft-edged, slightly oval-shaped beam of light that cannot be sharpened or shaped except by use of external shutters or barn doors. The beam of the PAR can be changed from very narrow to medium to a wide flood, either by changing the lamp in traditional PAR cans or the lens in newer PAR units. The light emitted from the PAR is strong enough that it can be gelled with a very saturated, heavy color and still have fairly good intensity when it strikes an object. Because it can produce a strong color wash, the PAR has been a standard unit in rock-and-roll concert lighting and in dance.

Recently, Electronic Theater Controls, one of the leading manufacturers of stage lighting equipment, has created a hybrid unit that combines the best qualities of the Fresnel and the PAR, called a PARnel.

Broad Cyc Lights and Strip Lights

There is a range of fixtures designed for lighting scenery, specifically drops and cycloramas. Strip lights are, as the name implies, a strip of lights that are joined together into a single unit. Typically, every third light is wired together in the strip. This allows for a three-color wash to light a cyclorama or a drop. (Often strip lights are colored with the three primary colors, allowing for a wide variety of mixing.)

Broad cyc lights are fixtures specifically designed for lighting drops. They employ a J-shaped reflector that eliminates the scalloping effect of the conical-shaped beams of most conventional lights on the drop. Broad cycs can be combined into multicell units. (Each individual unit is referred to as a cell.) Typically, three-cell cycs lights are the most popular, as they can be gelled with the three primary colors of light, giving the designer a wide possibility of color mixes.

Intelligent Lighting and LEDs

Intelligent lighting fixtures are computer-controlled units that have several motorized features. The beam of light emitted is moveable and is remotely focused by means of either a motorized mirror that reflects the light or by a motorized yoke that actually moves the

pan and tilt of the fixture. Additionally, the unit can have several internal motorized wheels that contain a variety of color and gobo texture choices. There may be a motorized iris that will narrow or widen the beam. As a result, one fixture can serve a multitude of functions in a single performance, or the unit can be used to create a variety of live kinetic effects in a nonrealistic production, such as a music or dance concert.

Stage lighting fixtures are rapidly evolving with new innovations in technology. Innovations and improvements revolutionized conventional fixtures in the 1970s and 1980s. Developments in intelligent lighting fixtures took center stage in the 1980s and 1990s. Most recently, LED (light-emitting diode) technology is expanding rapidly into stage lighting design and the conventional fixture market. Depending on the fixture, LEDs may have three to seven light-emitting diodes. Each of these diodes emits a specific color wavelength. LEDs can produce an astounding array of colors, as the color mixing takes place in the instrument by mixing the intensity output of the diodes in the fixture. In addition, in comparison to conventional fixtures, LEDs use very little energy, and because they receive a DMX address directly from the light control board to control the intensity and color mix, LEDs do not require connection to a dimmer rack.

Jane Doe
P.O. Box 1234
Anywhere, TN 67891
Phone: 234-555-6789

John Smith
Dream Theatre Company
1013 Main Street
Lexington, KY 12345
Phone: 888-555-1234

December 21, 2012

Dear Mr. Smith,

I am writing to apply for the position of Lighting Designer/Production Electrician that was recently posted on TheatreJobs.com. As you can see from the enclosed résumé, among other credits, I spent several years as a production electrician for the Example Theatre Company in New York City and recently served as lighting designer for two of their productions.

I am very interested in the Dream Theatre Company, as my goal is to work with a company that has as its mission creating theater for social change. While my employment experience has largely been with commercial theaters, over the past several years I have volunteered with several organizations: the Children's Advocacy Center, Autism Speaks, and Amnesty International. In addition to my résumé, I am enclosing an additional list of references and contact information from those organizations should you wish to contact them.

I believe that my experience in lighting design and production and my passion for social justice makes me an ideal candidate for your company. I will contact you via e-mail within the next week in case you have any questions or need any additional materials. Please do not hesitate to telephone me at 234-555-6789 or e-mail me at JaneDoeLighting@usa.net should you require further information. Thank you for your consideration.

Best wishes,

Jane Doe
Lighting Designer

Jane Doe
Lighting Designer

E-mail: JaneDoeLighting@usa.net
Phone: 234-555-6789
Mailing Address: P.O. Box 1234, Anywhere, TN 67891

Lighting Design Experience

A Cat on a Hot Tin Roof	The Example Theatre Company	dir. Everett Mann	NYC, NY	2012
Vinegar Tom	The Model Theatre Roadhouse	dir. Katy Elizabeth	Memphis, TN	2012
The Miracle Worker	Exemplar Stage Company	dir. Lynn Bitsy	St. Louis, MO	2011
In the Blood	The Example Theatre Company	dir. Everett Mann	NYC, NY	2011

Related Experience – Assistant Lighting Designer

The Kentucky Cycle	Exemplar Stage Company	L.D. John Sullivan	St. Louis, MO	2010
The Florida Skunk Ape	Sun Coast Little Theatre	L.D. Ed St. Marie	Tampa, FL	2010

Related Work Experience

Production Electrician	The Example Theatre Company	T.D. Will Shannon	NYC, NY	2009-2011
Electrician	The Example Theatre Company	T.D. Will Shannon	NYC, NY	2007-2009

Special Skills

- Programming on Whole Hog II & III, ETC Express Boards, ETC Expression 3, ETC EOS.
- Installation and programming Martin and High End Systems moving fixtures.
- Proficient with Lightwright, Vectorworks Spotlight, Adobe Photoshop, and Microsoft Office.
- Basic Carpentry, Rigging, MIG Welding.

Education

Bachelor of Arts in Technical Theatre	Ubiquitous University, AnyTown, PA	3.8 GPA	2007
Minor in History and Literature			

Awards and Honors

Promising New Artist, National Theatre Designer's Association, Washington, D.C. - 2010
Magna Cum Laude, Ubiquitous University - 2007
Technical Theatre Scholarship Recipient Ubiquitous University Theatre Department – 2004-2007

References Available Upon Request

Set Design Statement for Eugene O'Neill's *The Hairy Ape*

Generally, the intent of scenic design is to support the mood and themes contained within the script. This is the goal of the scenic design for this production of *The Hairy Ape,* Eugene O'Neill's 1922 Expressionist drama about one man's search for relevance. Yank's journey takes him to many locations. The first four scenes take place in and on an oceangoing luxury liner. Yank's world is confined to the lower depths of the steamer: the stokehole. And while he claims that he is the stuff that makes up the ship—"Sure, I'm part of de engines"—he is at the same time searching for what he is made up of. When Mildred visits the stokehole, her horror at Yank's existence shatters his reality and sends him on his odyssey to search for his lost sense of belonging. The last four scenes take him to a posh section of Fifth Avenue, to jail, to the IWW Union office, and finally, to the zoo, with Yank violently rejected at every turn.

A unit set is chosen for several reasons. The physical limitations of the performance space and the efficient transition from one scene to the next are two factors; a more important reason, however, is to visually create a collage of images. The works of 1920s modernist painters Charles Sheeler, Stefan Hirsch, Preston Dickinson, and Elsie Driggs serve as a major source of inspiration. Their works all contain a cacophony of sight, overlapping images that are so striking one can hear the noise of the paintings' industrial subject matter. Similarly, the script contains the same overlapping images and staccato rhythms. Loud whistles, horn blasts, screams, grunts, and growls punctuate Yank's violent frustration at this alien world. Further, actors can play the set like a musical instrument. Steel drums, pipe legs, and the cage all become objects to be beaten upon with various metal props. Visual rhythm is expressed through the repetition of straight vertical lines. It is crucial that the texture and color of the set be that of steel. Both the mood and theme of the play are reflected in Yank's relationship with steel, a very cold, hard, unyielding substance, which O'Neill uses as a metaphor for the world. It is steel that Yank identifies with; and it is that unyielding property that prevents him from adapting to his environment: "Steel was me, and I owned the woild. Now I ain't steel, and de woild owns me." Consequently, the design is an attempt to create an environment that at once belongs to Yank, but to which he himself does not belong.

STEP-BY-STEP PROCESS FOR DESIGNING

The timetable for a production varies from show to show and venue to venue. Many factors impact the amount of time needed to complete specific steps along the way. For example, the facility, staffing, budget, and complexity of the production all contribute to the amount of time needed to complete the planning and realization of a design. The key to avoiding crisis in theater production is to allow plenty of time in the production schedule to complete tasks and meet individual deadlines along the way.

Step-by-Step for Scenery

1. Read the play.
2. Meet with director and discuss directorial approach.
3. Reread the play to determine the given circumstances.
4. Reread the play again to determine the design objectives.
5. Meet with the director and other designers to discuss the play.
6. Research the play, the playwright, the givens, and the objectives.
7. Meet with the director and other designers to determine the production concept.
8. Obtain budget information from the director or business manager.
9. Look at the theater space.
10. Obtain the ground plan and sectional views of the theater space, or measure and create if necessary.
11. Consider stock sources.
12. Develop ideas from research and concept.
13. Begin designing—create rough sketches and ground plans.
14. Meet with the director and other designers to share initial ideas, rough sketches, or paper models.
15. Revise design ideas—prepare final renderings or models.
16. Meet with the director and other designers to obtain final rendering approval.
17. Draft front elevations, detail drawings, and paint elevations.
18. Attend design and production meetings regularly as set by stage management—typically once per week until dress rehearsals, then nightly until opening.
19. Meet with the technical director and shop managers and make adjustments to plan as necessary.
20. Meet with properties manager to discuss set dressing.
21. Meet with scenic artist to discuss paint details and techniques.
22. Be available as needed during the build to answer questions or concerns.
23. Attend technical rehearsals.

Step-by-Step for Costumes

1. Read the play.
2. Reread the play to determine the given circumstances.
3. Meet with the director to discuss the directorial approach.
4. Reread the play again to determine the design objectives.
5. Meet with the director and other designers to discuss the play.
6. Research the play, the playwright, the givens, and the objectives.
7. Meet with the director and other designers to determine the production concept.
8. Obtain budget information from the director or business manager.
9. Look at the theater space.
10. Obtain measurements and actor photos if possible.
11. Consider costume sources—will you pull, rent, borrow, build, or buy?
12. Begin designing—create rough sketches and pull possible costume elements.
13. Fit pulled items if possible—take digital photos of possibilities.
14. Meet with the director and other designers to share initial ideas, rough sketches, or collages.
15. Revise design ideas—prepare final renderings.
16. Meet with the director and other designers to obtain final rendering approval (must be timed with the needs of the costume shop and build time in mind).
17. Initial fabric swatching expedition—swatch renderings.
18. Devise costume plan, the final determination of where the costumes come from—pull, rent, borrow, build, or buy?
19. Meet with shop supervisor and draper to discuss the scope of show and make adjustments to the plan as necessary.
20. Fabric shopping and initial show shopping.
21. Show is officially "in the shop," meaning the costume shop team is actively working on the build, having fittings, doing notes.
22. Attend design and production meetings regularly as set by stage management—typically once per week until dress rehearsals, then nightly until opening.
23. Continue show shopping—this is ongoing as work proceeds in the shop.
24. Be available as needed for fittings and for the build.
25. Final shopping.
26. Final fittings.
27. Attend dress rehearsals.

Step-by-Step for Lighting

1. Read the play.
2. Meet with the director to discuss directorial approach.
3. Reread the play to determine the given circumstances.
4. Reread the play again to determine the design objectives.
5. Meet with the director and other designers to discuss the play.
6. Research the play, the playwright, the givens, and the objectives.
7. Meet with the director and other designers to determine the production concept.
8. Obtain budget information from the director or business manager.
9. Look at the theater space.
10. Obtain the ground plan and sectional views of the theater space from the scenic designer.
11. Obtain the equipment inventory list and theater ground plan with hanging positions from the technical director or facilities manager.
12. Develop ideas from research and concept.
13. Begin designing—create storyboards, light lab mock-ups, and pictorial collages.
14. Meet with the director and other designers to share initial ideas, storyboards, mock-ups, and collages.
15. Attend design and production meetings regularly as set by stage management—typically once per week until dress rehearsals, then nightly until opening.
16. Attend run-through and note blocking and lighting needs.
17. Revise design ideas.
18. Meet with the director and other designers to obtain final approval of ideas.
19. Draft light plot and create associated paperwork.
20. Meet with master electrician to go over paperwork.
21. After the plot is hung, meet with the electricians to focus.
22. Meet with the director, stage manager, and (possibly) sound designer for a paper tech to work through show cues.
23. Meet with the director, stage manager, sound designer, and board operators to dry tech the show.
24. Attend all technical rehearsals and fine-tune cues.

STYLE

Theatrical style refers to a particular technique or convention followed by all aspects of a play production. Style conventions are sometimes associated with a historical period or a philosophical movement. Generally, style is either representational (realistic) or presentational (containing abstractions, symbolism, fantasy, and allegory).

Absurdism—Absurdist drama views the world as cruel and unjust and human existence as meaningless. The absurdist movement developed in the aftermath of World War II as a response to the devastation of a global conflict that caused the deaths of more than fifty million people worldwide. Absurdist plays are characterized by illogical plots, senseless language, and irrational actions.

Constructivism—A movement in scenic design associated with the antirealist Russian director Vsevelod Meyerhold, who experimented with theatrical form in the 1920s after the Russian Revolution. Constructivism used ramps, platforms, and levels to create a sculptural, nonrealistic space, which allowed for greater actor movement.

Dadaism—Dadaism arose in the early twentieth century and was most popular during and immediately after World War I. Dadaism was antiwar and embraced the politics of the anarchy movement. Its theatrical presentations consisted of abstract art, spontaneous dance, and irrational poetry, seeking to confuse and outrage the audience by challenging traditional values and aesthetics in art and theatre.

Epic Theatre—Associated with the playwright Bertolt Brecht and directors Max Reinhart and Erwin Piscator, epic theatre developed in Germany during the 1920s and 1930s. Brecht utilized the techniques of theatricalism and alienation to illicit intellectual responses in the audience rather than emotional responses. His goal was to raise social awareness and spark social change. Theatricalism refers to a presentational style in which the audience is constantly made aware that they are viewing a play. Alienation (or in Brecht's terms historification) refers to the technique of setting dramas in the past or in a fictitious country, even though the theme of the play may be a contemporary topic.

Existentialism—The philosophical movement known as existentialism arose in France during and immediately after World War II. Existentialists believed that there is no meaning to life and that there is no God or morality; each individual is solely responsible for their own actions. The two most significant playwrights of the existentialist movement are Jean-Paul Sartre and Albert Camus. While the thematic content of their works is innovative, the dramatic structure of their plays is rather conventional.

Expressionism—Perhaps influenced by the creation and popularity of the new science of psychoanalysis, expressionism developed in the early twentieth century and explored darker aspects of the human psyche. Expressionistic plays have a singular point of view: the world is seen through the eyes of the protagonist. The play gives outward expression to the protagonist's inner emotion and therefore can have dreamlike or even nightmarish qualities.

Futurism—Futurism was an art movement that arose in early-twentieth-century Italy. Futurism embraced the political movement of fascism and extolled violence, power, speed, technology, and youth. While futurism died out in 1944 with the death of its leader Filippo Marinetti, it influenced many of the avant-garde art movements that followed.

Naturalism—Naturalism is an extension of realism that developed in the late nineteenth and early twentieth centuries and coincided with the emergence of naturalist Charles Darwin's theories on natural selection and evolution. In the theater, naturalism takes realism to the extreme and attempts to depict drama as a slice of life, with everything onstage appearing exactly as it would in everyday life.

Neoclassicism—Neoclassicism arose during the mid-eighteenth century and lasted into the mid-nineteenth century, a period of history sometimes referred to as the Age of Reason. It was in part sparked by the discovery and exploration of Herculaneum in 1738 and Pompeii in 1748. Neoclassical works revive the classical aesthetics of ancient Greece and Rome and their emphasis on order, rational thought, and emotional control.

Postmodernism—Postmodernism arose in the 1960s and challenged the accepted norms and conventions of theater. Typically, pieces are derived from improvisation and are developed in the rehearsal process. The subject matter and themes often have more than one focus. Storylines and representative characters may be fractured, complex, or incomplete. Scenes can take place on stage simultaneously. There is an emphasis on multimedia presentation: projections, scenery, costumes, lighting, and sound play important roles in the storytelling and can be considered as vital to the storytelling as the characters. Postmodernist plays raise questions and do not supply answers; rather, they rely upon the audience to draw their own conclusions and supply their own individual answers to the questions posed.

Realism—Realism is an attempt to depict ordinary human beings in everyday situations as they appear and behave in real life. Realism arose as an artistic and literary movement in the mid-nineteenth century during the industrialization of Western cultures. The introduction of photography was also influential to the movement.

Romanticism—The romantic movement began with the revolutionary age in the late eighteenth century and continued through the start of the industrial age in the mid-nineteenth century. Romantic plays are typically episodic in structure and are defined by an emphasis on inspiration, imagination, emotion, and on the heroic individual.

Surrealism—An outgrowth of dadaism, surrealism sought to depict deeper meaning than reality could portray. Using dream logic, the subconscious, and the juxtaposition or free association of ideas, surrealists such as Jean Cocteau sought to create theater that was a mystical and religious experience.

Symbolism—The symbolist movement arose in the late nineteenth and early twentieth centuries as a reaction against the realist movement. Symbolist drama had little plot or action and relied heavily on ritual, ceremony, myth, legend, and symbolic elements such as poetry, music, and metaphor. Maurice Maeterlinck is the dramatist most often associated with the symbolist movement.

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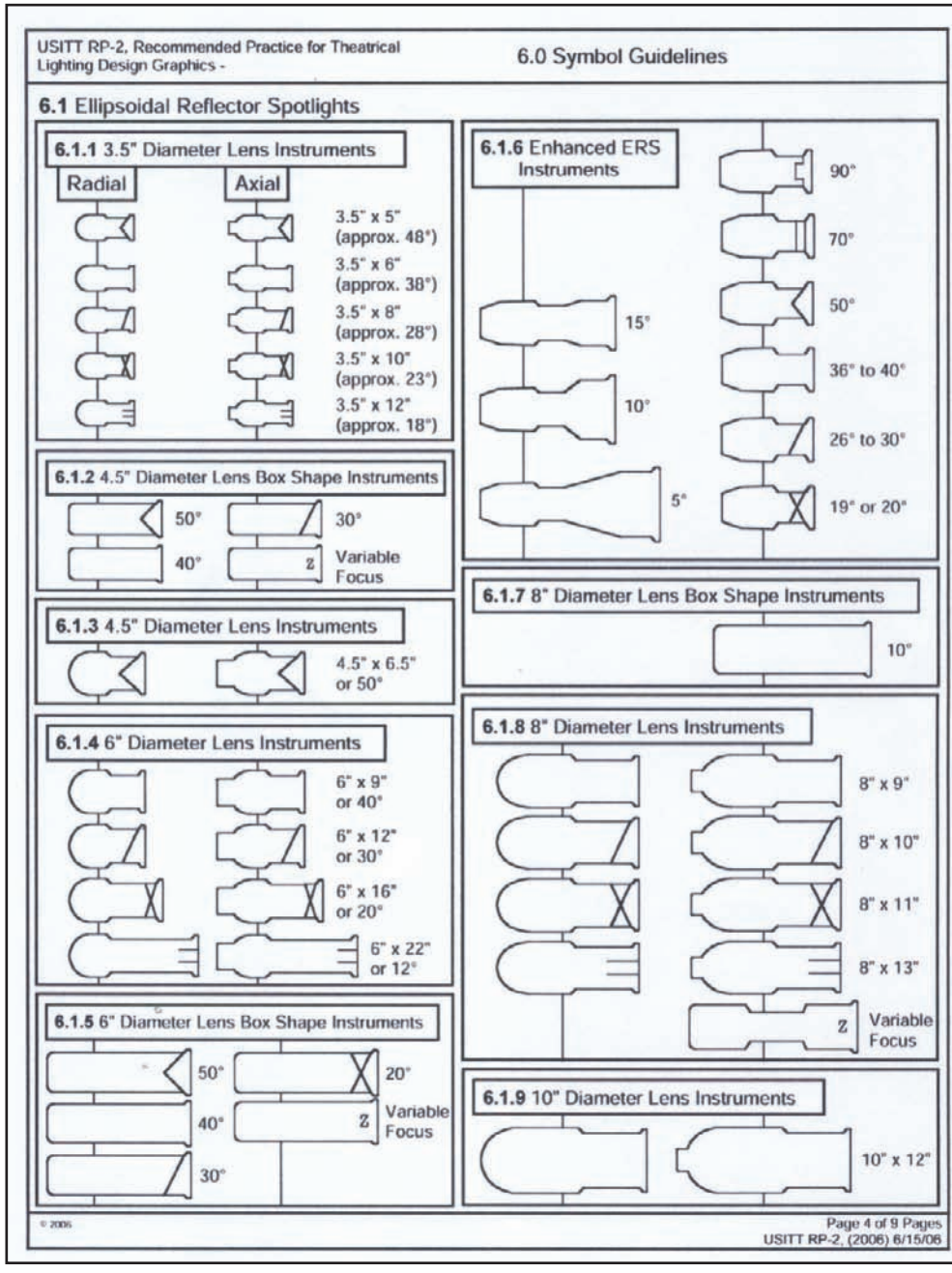

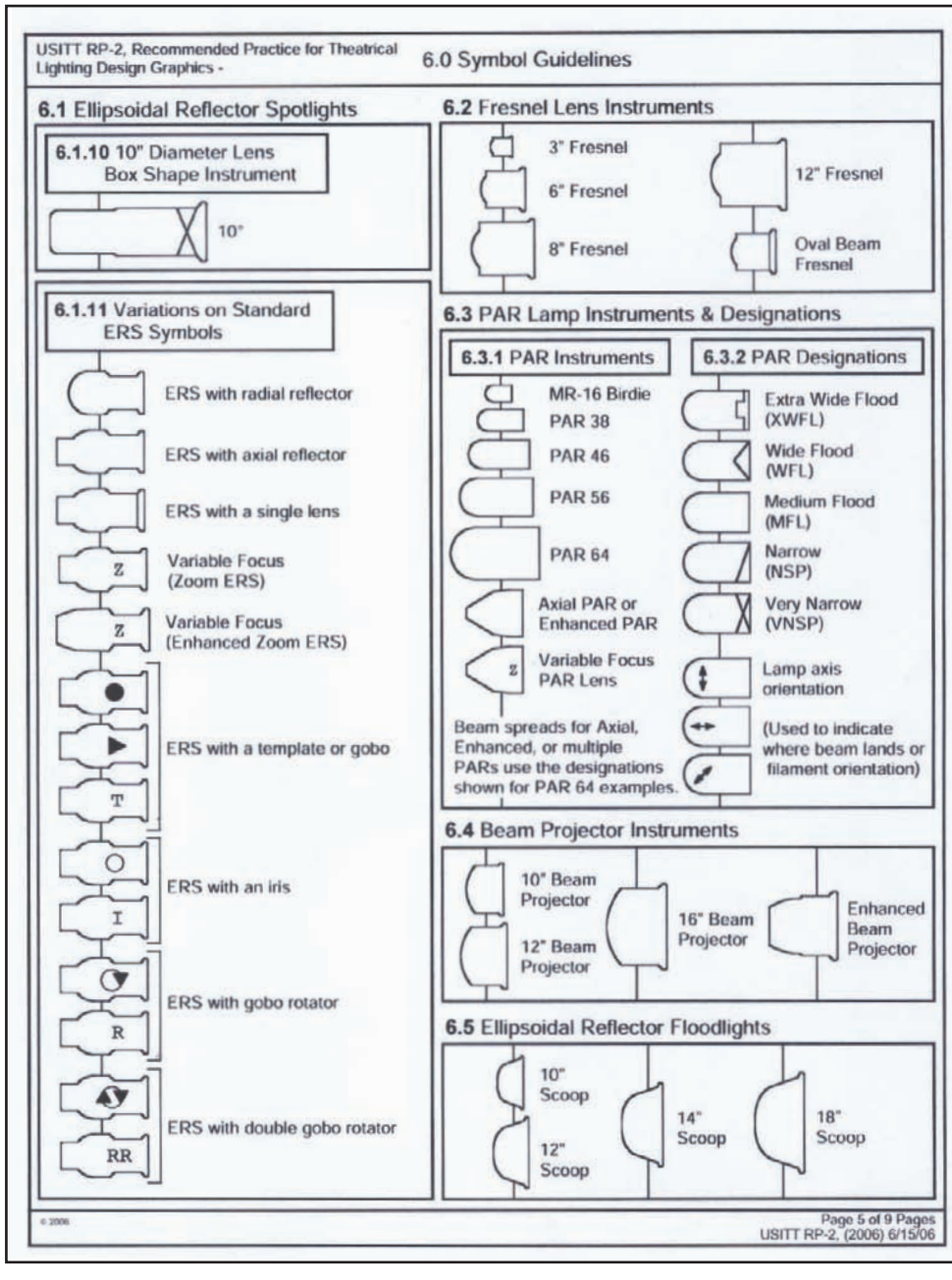
USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics -
6.0 Symbol Guidelines
6.1 Ellipsoidal Reflector Spotlights
6.1.10 10" Diameter Lens Box Shape Instrument
10"
6.1.11 Variations on Standard ERS Symbols
ERS with radial reflector
ERS with axial reflector
ERS with a single lens
Z
Variable Focus (Zoom ERS)
Z
Variable Focus (Enhanced Zoom ERS)
T
ERS with a template or gobo
I
ERS with an iris
R
ERS with gobo rotator
RR
ERS with double gobo rotator
6.2 Fresnel Lens Instruments
3" Fresnel
6" Fresnel
8" Fresnel
12" Fresnel
Oval Beam Fresnel
6.3 PAR Lamp Instruments & Designations
6.3.1 PAR Instruments
MR-16 Birdie
PAR 38
PAR 46
PAR 56
PAR 64
Axial PAR or Enhanced PAR
Z
Variable Focus PAR Lens
Beam spreads for Axial, Enhanced, or multiple PARs use the designations shown for PAR 64 examples.
6.3.2 PAR Designations
Extra Wide Flood (XWFL)
Wide Flood (WFL)
Medium Flood (MFL)
Narrow (NSP)
Very Narrow (VNSP)
Lamp axis orientation
(Used to indicate where beam lands or filament orientation)
6.4 Beam Projector Instruments
10" Beam Projector
12" Beam Projector
16" Beam Projector
Enhanced Beam Projector
6.5 Ellipsoidal Reflector Floodlights
10" Scoop
12" Scoop
14" Scoop
18" Scoop
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Page 5 of 9 Pages
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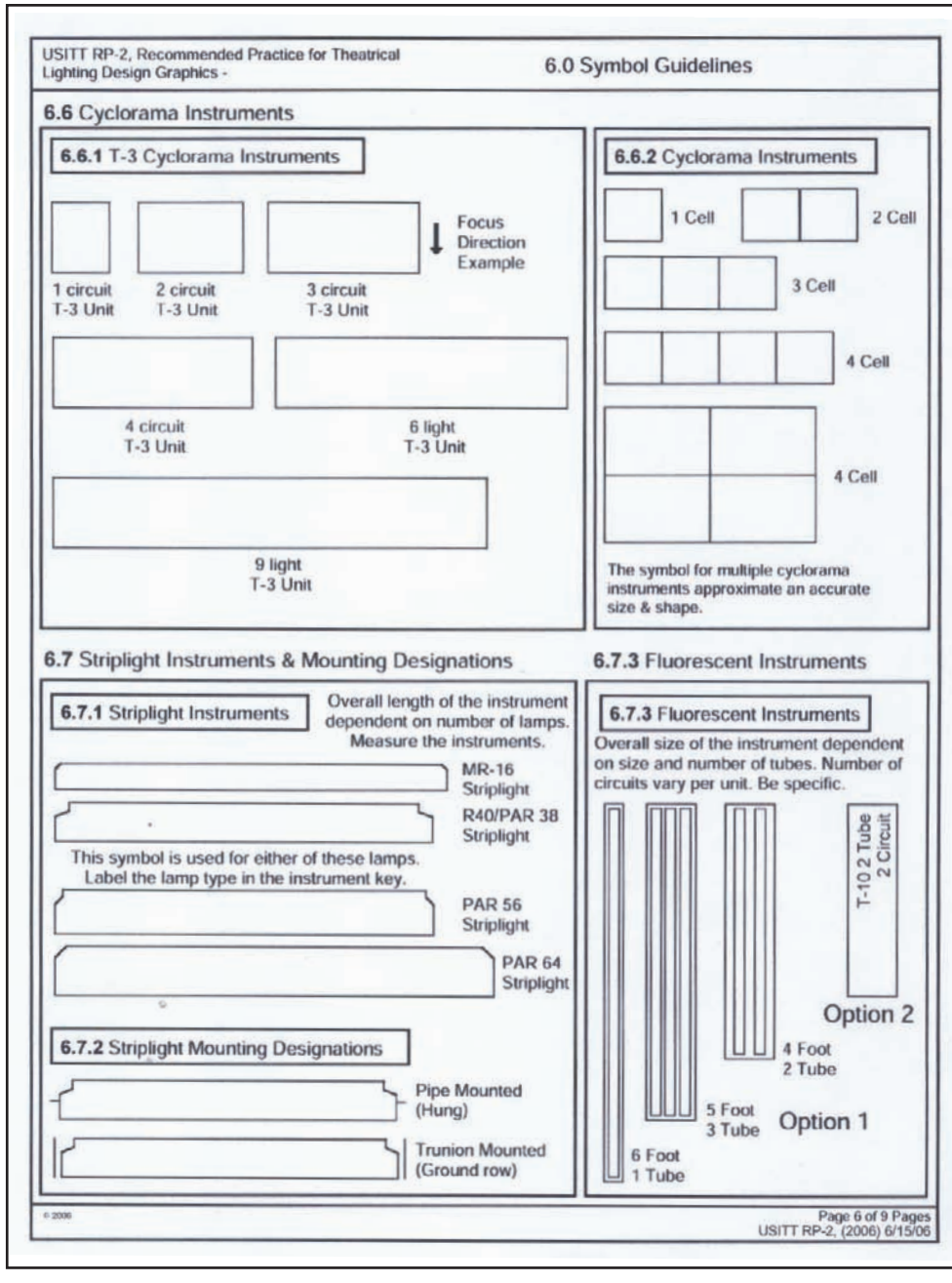
USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics -
6.0 Symbol Guidelines
6.6 Cyclorama Instruments
6.6.1 T-3 Cyclorama Instruments
Focus Direction Example
1 circuit T-3 Unit
2 circuit T-3 Unit
3 circuit T-3 Unit
4 circuit T-3 Unit
6 light T-3 Unit
9 light T-3 Unit
6.6.2 Cyclorama Instruments
1 Cell
2 Cell
3 Cell
4 Cell
4 Cell
The symbol for multiple cyclorama instruments approximate an accurate size & shape.
6.7 Striplight Instruments & Mounting Designations
6.7.1 Striplight Instruments
Overall length of the instrument dependent on number of lamps. Measure the instruments.
MR-16 Striplight
R40/PAR 38 Striplight
This symbol is used for either of these lamps. Label the lamp type in the instrument key.
PAR 56 Striplight
PAR 64 Striplight
6.7.2 Striplight Mounting Designations
Pipe Mounted (Hung)
Trunion Mounted (Ground row)
6.7.3 Fluorescent Instruments
6.7.3 Fluorescent Instruments
Overall size of the instrument dependent on size and number of tubes. Number of circuits vary per unit. Be specific.
T-10 2 Tube 2 Circuit
Option 2
4 Foot 2 Tube
5 Foot 3 Tube
Option 1
6 Foot 1 Tube
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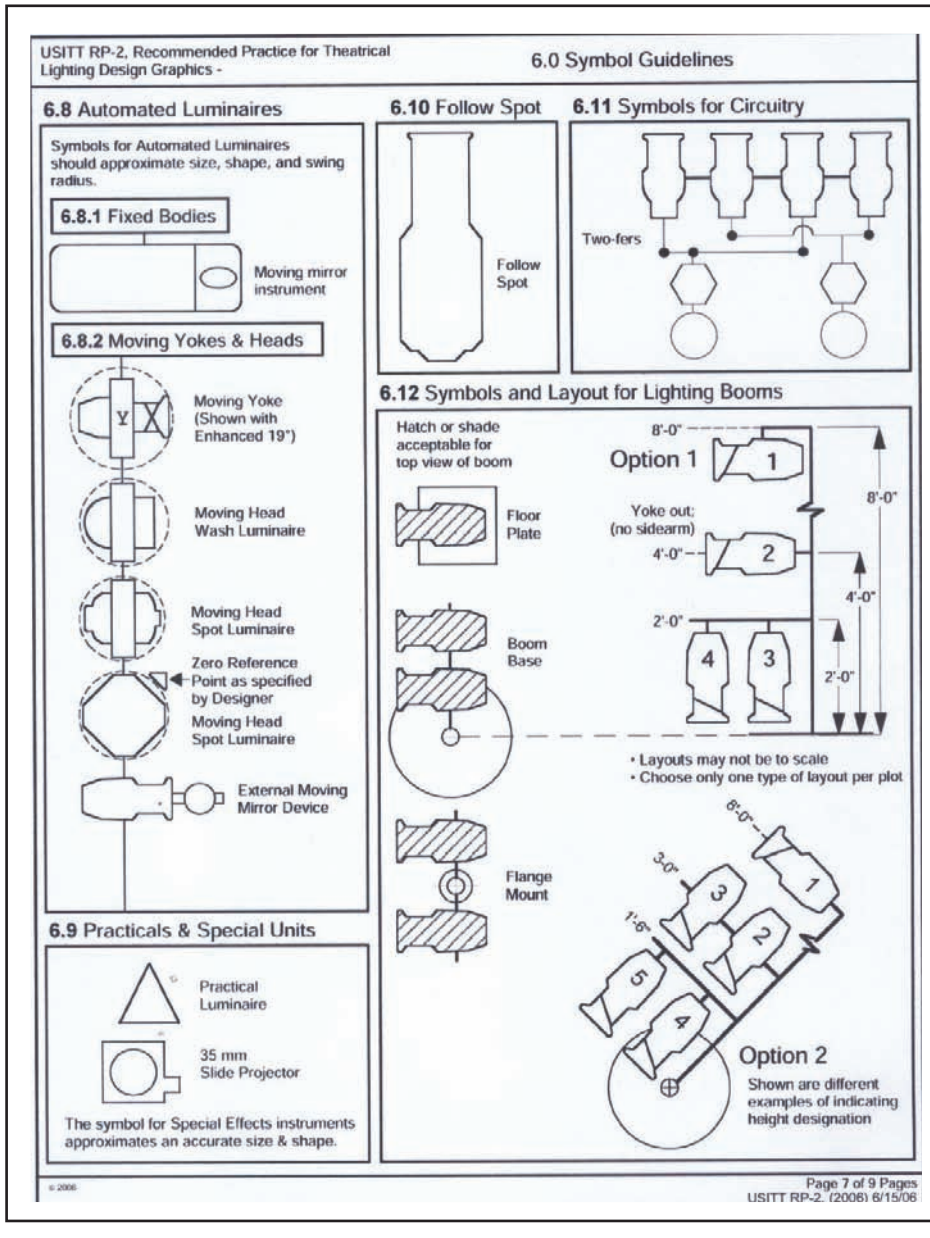
USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics -
6.0 Symbol Guidelines
6.8 Automated Luminaires
Symbols for Automated Luminaires should approximate size, shape, and swing radius.
6.8.1 Fixed Bodies
Moving mirror instrument
6.8.2 Moving Yokes & Heads
Moving Yoke (Shown with Enhanced 19")
Moving Head Wash Luminaire
Moving Head Spot Luminaire
Zero Reference Point as specified by Designer
Moving Head Spot Luminaire
External Moving Mirror Device
6.9 Practicals & Special Units
Practical Luminaire
35 mm Slide Projector
The symbol for Special Effects instruments approximates an accurate size & shape.
6.10 Follow Spot
Follow Spot
6.11 Symbols for Circuitry
Two-fers
6.12 Symbols and Layout for Lighting Booms
Hatch or shade acceptable for top view of boom
Floor Plate
Boom Base
Flange Mount
Option 1
8'-0"
Yoke out; (no sidearm)
4'-0"
2'-0"
• Layouts may not be to scale
• Choose only one type of layout per plot
Option 2
Shown are different examples of indicating height designation
Page 7 of 9 Pages
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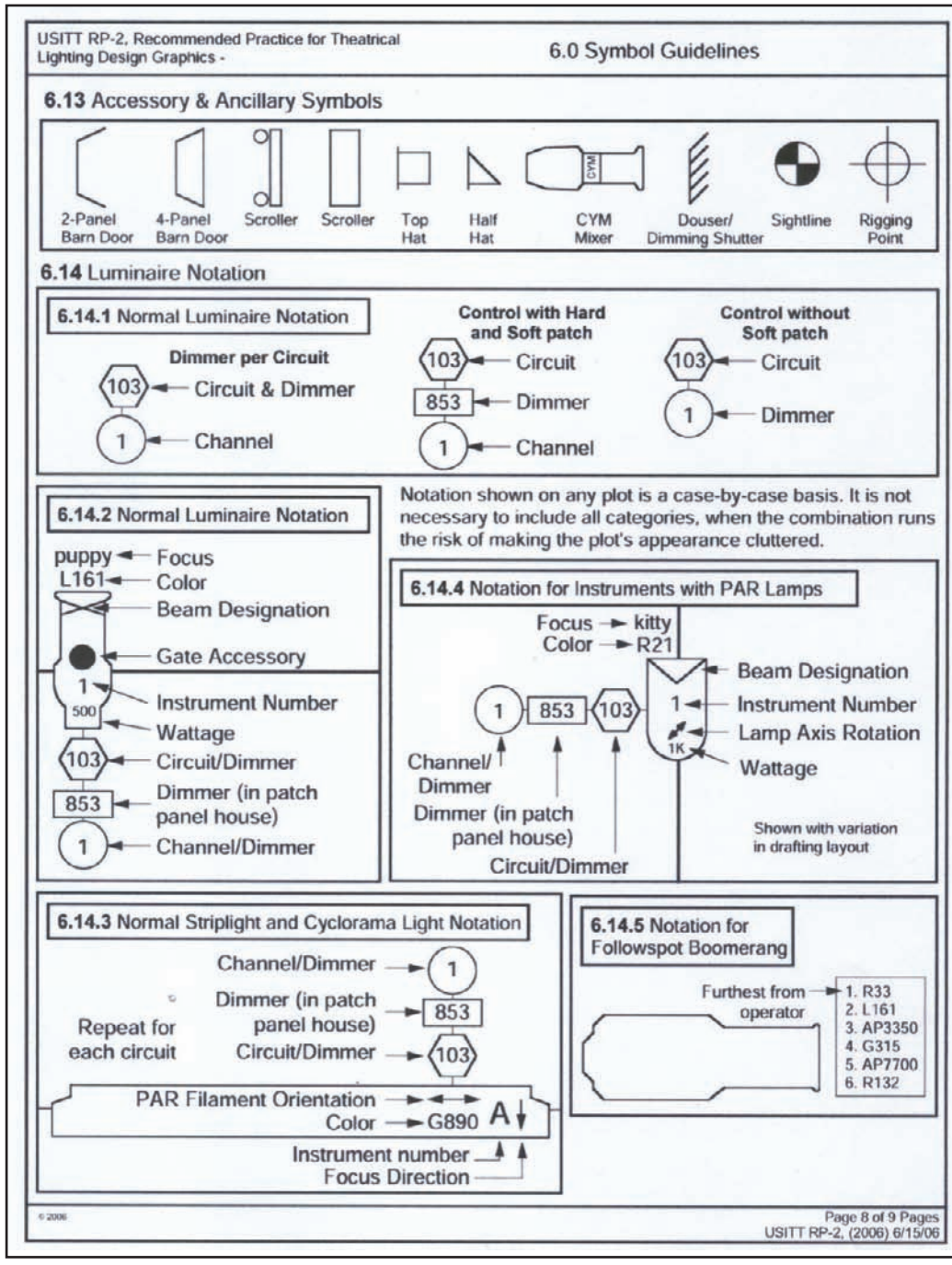
USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics -
6.0 Symbol Guidelines
6.13 Accessory & Ancillary Symbols
2-Panel Barn Door
4-Panel Barn Door
Scroller
Scroller
Top Hat
Half Hat
CYM
CYM Mixer
Douser/ Dimming Shutter
Sightline
Rigging Point
6.14 Luminaire Notation
6.14.1 Normal Luminaire Notation
Dimmer per Circuit
103
Circuit & Dimmer
1
Channel
Control with Hard and Soft patch
103
Circuit
853
Dimmer
1
Channel
Control without Soft patch
103
Circuit
1
Dimmer
6.14.2 Normal Luminaire Notation
puppy
Focus
L161
Color
Beam Designation
Gate Accessory
1
500
Instrument Number
Wattage
103
Circuit/Dimmer
853
Dimmer (in patch panel house)
1
Channel/Dimmer
Notation shown on any plot is a case-by-case basis. It is not necessary to include all categories, when the combination runs the risk of making the plot's appearance cluttered.
6.14.4 Notation for Instruments with PAR Lamps
Focus
kitty
Color
R21
Beam Designation
1
853
103
1
Instrument Number
Lamp Axis Rotation
1K
Wattage
Channel/ Dimmer
Dimmer (in patch panel house)
Circuit/Dimmer
Shown with variation in drafting layout
6.14.3 Normal Striplight and Cyclorama Light Notation
Channel/Dimmer
1
Dimmer (in patch panel house)
853
Repeat for each circuit
Circuit/Dimmer
103
PAR Filament Orientation
Color
G890
A
Instrument number
Focus Direction
6.14.5 Notation for Followspot Boomerang
Furthest from operator
1. R33
2. L161
3. AP3350
4. G315
5. AP7700
6. R132
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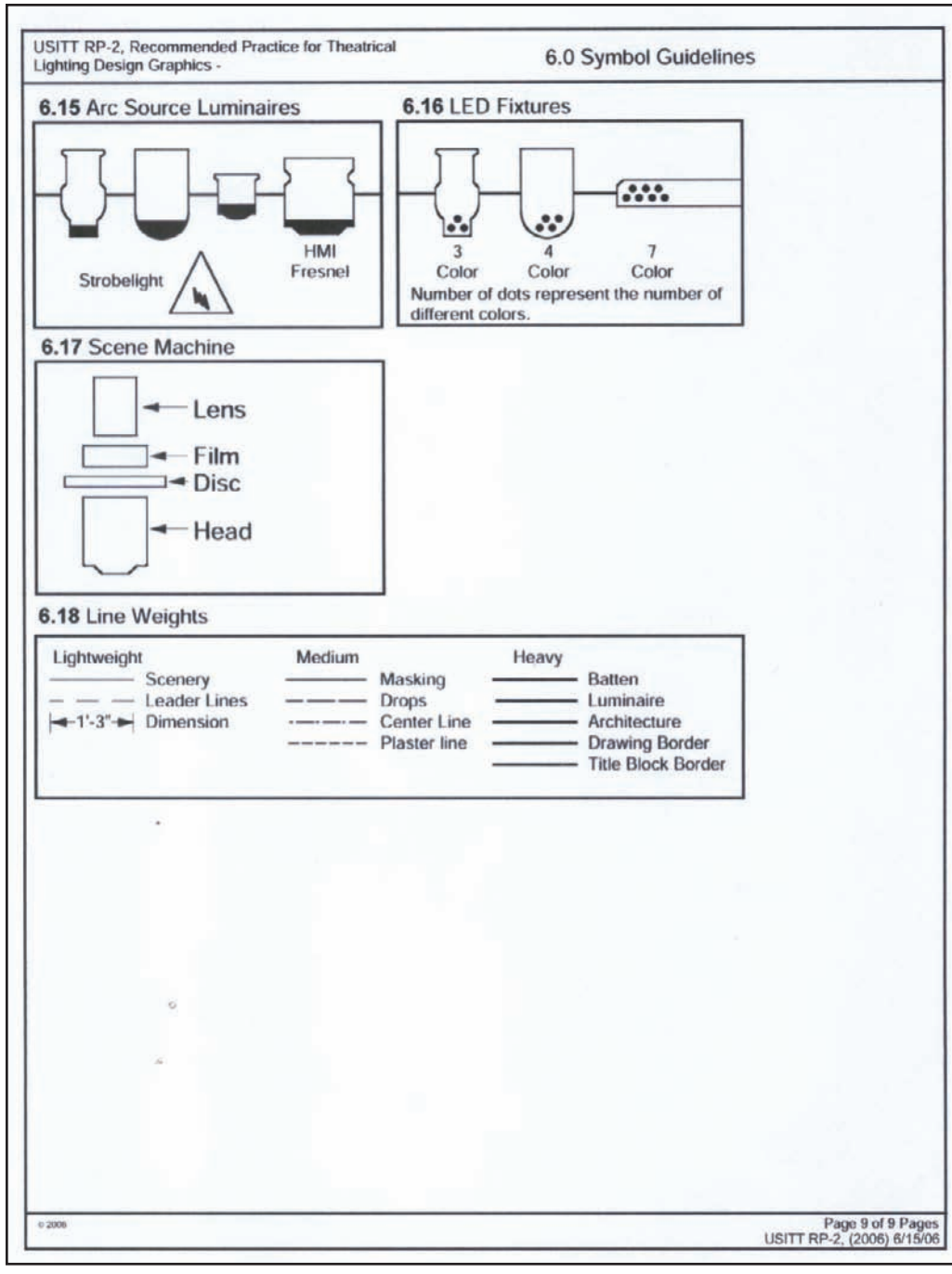
USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics -
6.0 Symbol Guidelines
6.15 Arc Source Luminaires
Strobelight
HMI Fresnel
6.16 LED Fixtures
3 Color
4 Color
7 Color
Number of dots represent the number of different colors.
6.17 Scene Machine
Lens
Film
Disc
Head
6.18 Line Weights
Lightweight
Scenery
Leader Lines
1'-3"
Dimension
Medium
Masking
Drops
Center Line
Plaster line
Heavy
Batten
Luminaire
Architecture
Drawing Border
Title Block Border
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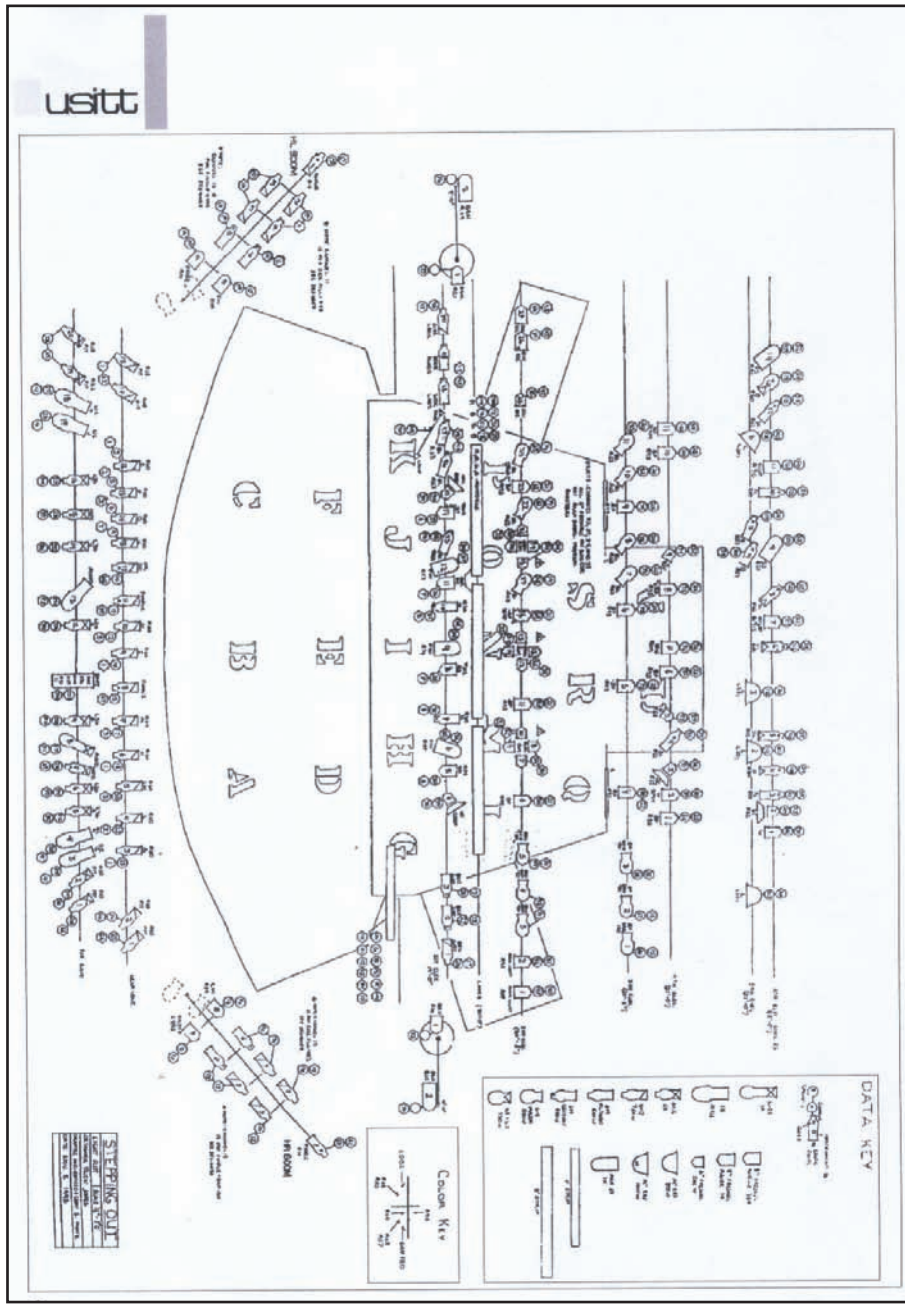

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CUE SHEET FOR SPOT OPERATORS – MEREDITH

Q	COLOR	AREA	DESCRIPTION	LQ	FADE TIME
1	4	DSR	FULL BODY SHOT w/ ENTRANCE JUDAS	19	
2				24	5-sec. w/ end of song
3	2	CL	FULL BODY SHOT w/ BEG. OF SONG JESUS	25	
4				29	2-sec. w/ end of song
5	4	SR	JESUS–SR w/BEG OF SONG	29	
6				55	5-ct. w/ end of song
7	1	CS	MARY-FULL BODY SHOT w/ BEG OF SONG	34	
8	4	SL	JUDAS–W/BEG OF HER NUMBER FULL BODY SHOT	35	
9					2-ct. w/ end of song
10	2	C	UP ON JESUS FULL BODY SHOT	45.1	
11					2-ct. w/ end of song
11.5	1	C	PICK SHANNON UP w/ HER TUMBLING NUMBER		
12	4	DL	FULL BODY SHOT ON BABE w/ENTRANCE	47	
13				50	2-ct. w/ musical inter
14	2	CS	UP ON JC, FULL BODY SHOT w/SONG	51	
15					2-ct. w/ end of song
16	2	C	FULL BODY SHOT ON JC w/ENTRANCE	61	

Light Plot, opposite: Stepping Out—*Loyola University of Chicago; Ellen E. Jones, Lighting Designer; Corey S. Monk, Assistant LD (hand-drawn light plot by Mr. Monk)*

Magic Sheet, *p. 66: Jesus Christ Superstar—University of Florida, Gainesville; Ellen E. Jones, Lighting Designer*

Jesus Christ Superstar **CHANNEL HOOKUP** Page 1 of 12

Lighting Designer: Ellen E. Jones

Chn	Dim	Position	Unit	Type	Watts	Purpose	Color
(1)	2	37th Island	1	40-Deg Colortran	1kw	A	R305
(2)	18	28th Island	1	30-Deg Colortran	1kw	B	R05
(3)	17	28th Island	2	30-Deg Colortran	1kw	C	R05
(4)	19	27th Island	2	30-Deg Colortran	1kw	D	R05
(5)	20	27th Island	1	30-Deg Colortran	1kw	Steps	R05
(6)	6 "	35th Island "	1 3	20-Deg Colortran "	1kw "	a b	R05 "
(7)	8	34th Island	1	20-Deg Colortran	1kw	C	R05
(8)	11 "	32nd Island "	1 3	20-Deg Colortran "	1kw "	d e	R05 "
(9)	5	27th Island	3	30-Deg Colortran	1kw	f	R05
(10)	21	26th Island	2	30-Deg Colortran	1kw	g	R05

Examples of **lighting paperwork:** Jesus Christ Superstar—*University of Florida, Gainesville; Ellen E. Jones, Lighting Designer; Lauren Harton and Shamus McConney, Assistant LDs (follow spot cues were set by Ms. Harton; paperwork was done by Mr. McConney using Lightwright.)*

Jesus Christ Superstar **CHEAT SHEET** Pg 1 of 5

Lighting Designer: Ellen E. Jones

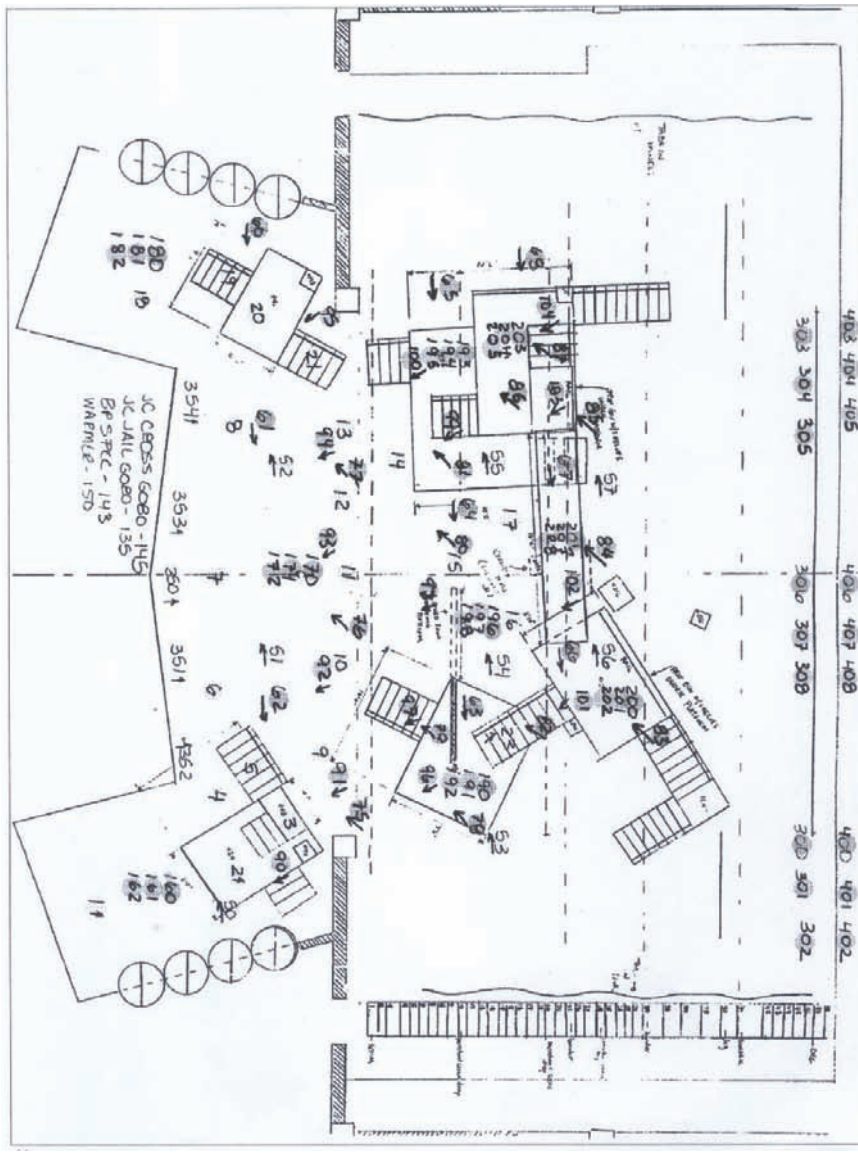
Chn	Purpose	Color	Chn
(1)	A	R305	(1)
(2)	B	R05	(2)
(3)	C	R05	(3)
(4)	D	R05	(4)
(5)	Steps	R05	(5)
(6)	a c	R05	(6)
(7)	C	R05	(7)
(8)	d e	R05	(8)
(9)	f	R05	(9)
(10)	g	R05	(10)
(11)	h	R05	(11)
(12)	J	R05	(12)
(13)	K	R05	(13)
(14)	L	R05	(14)
(15)	m	R05	(15)
(16)	n	R05	(16)
(17)	O	N/C	(17)
(18)	P	N/C	(18)
(19)	E	R05	(19)
(20)	F	R05	(20)
(21)	G	R05	(21)
(22)	BACK SL PLT	R05	(22)
(23)	FOH SL PLT Steps FOH SL UPPER PLT	R05	(23)
(24)	FOH SL TOP PLT	R05	(24)
(25)	FOH BRIDGE	R05	(25)
(26)	FOH SR PIT	R05	(26)
(27)	FOH SR PLT	R05	(27)
(28)	FOH SR MID PLT	R05	(28)
(29)	FOH SR PLT/BRIDGE	R05	(29)
(30)	FOH SR PLT	R05	(30)

Jesus Christ Superstar **INSTRUMENT SCHEDULE** Page 1 of 13

Lighting Designer: Ellen E. Jones

First Electric

Unit	Chn	Dim	Type	Watts	Purpose	Color
1	(22)	89	40-Deg Colortran	1kw	BACK DSL PIT	R05
2	(75)	91	"	"	"	L142
3	(120)	90	FAR 64 MFL	"	"	R17
4	(75)	91	40-Deg Colortran	"	BACK DSL DECK	L142
5	(53)	92	FAR 64 MFL	"	SIDE CS	R21
6	(120)	90	"	"	BACK CS	R17
7	(95)	94	8- Kliegl Fresnel	"	BACK DSL	R65
8	(54)	96	FAR 64 MFL	"	SIDE SL	R21
9	(76)	95	40-Deg Colortran	"	BACK DSC	L142
10	(54)	96	FAR 64 MFL	"	SIDE SL	R21
11	(96)	97	8- Kliegl Fresnel	"	BACK DSC	R65
12	(77)	98	40-Deg Colortran	"	BACK DSR	L142
13	(66)	99	FAR 64 MFL	"	SIDE SR	R50
14	(26)	100	6X9 Altman 360Q	"	FOH SR PLT	R05
15	(27)	101	"	"	"	"
16	(96)	97	8- Kliegl Fresnel	"	BACK DSR	R65
17	(28)	102	6X9 Altman 360Q	"	FOH SR MID PLT	R05
18	(67)	93	FAR 64 MFL	"	SIDE	R50
19	"	"	"	"	"	"


JC CROSS GOBO - 145
JC JAIL GOBO - 135
BP SPEC - 143
WARMER - 150

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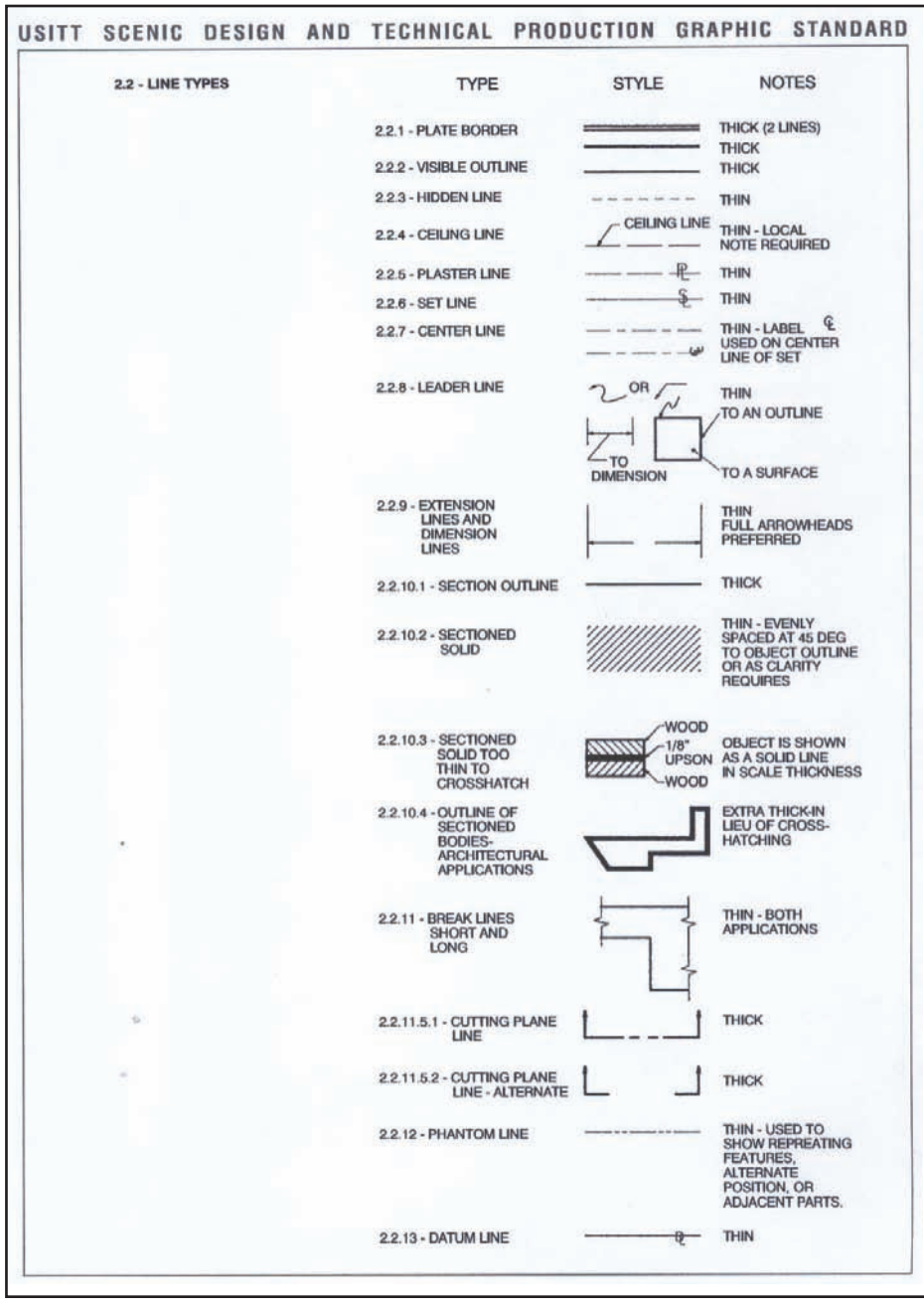

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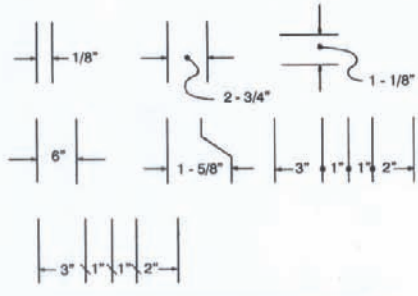
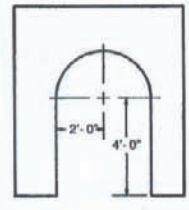
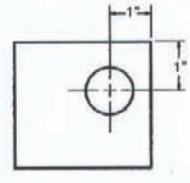
3.0 - DIMENSIONING



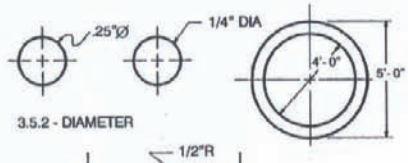
3.4 - ALL OF THE ABOVE FOR CROWDED DIMENSIONS ONLY



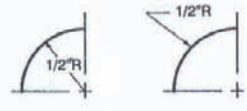
3.5.1.1 - CENTERS



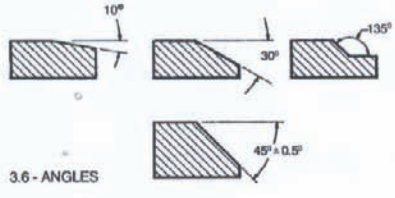
3.5.1.2 -CENTER LINES OFF OBJECT



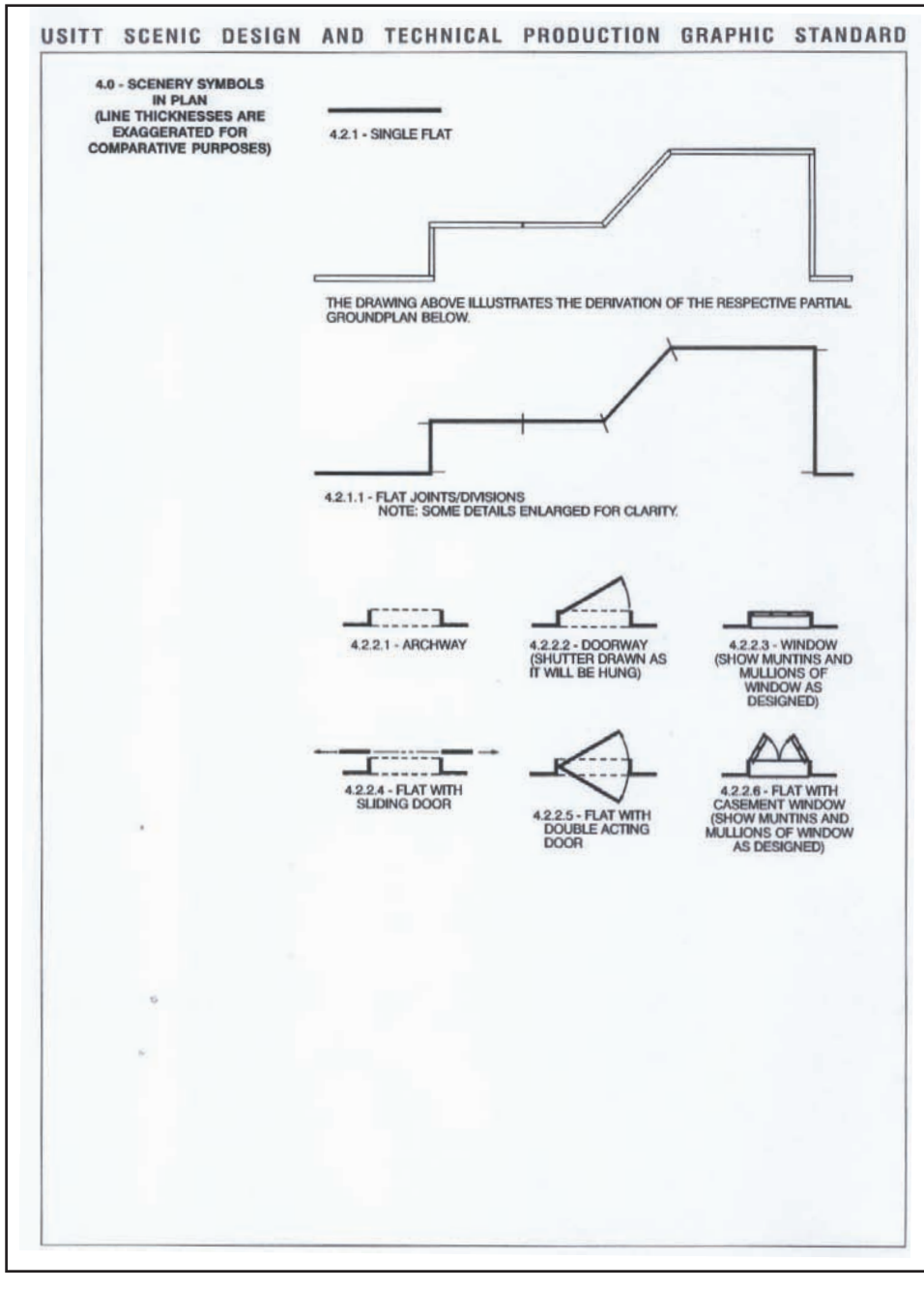
3.5.2 - DIAMETER

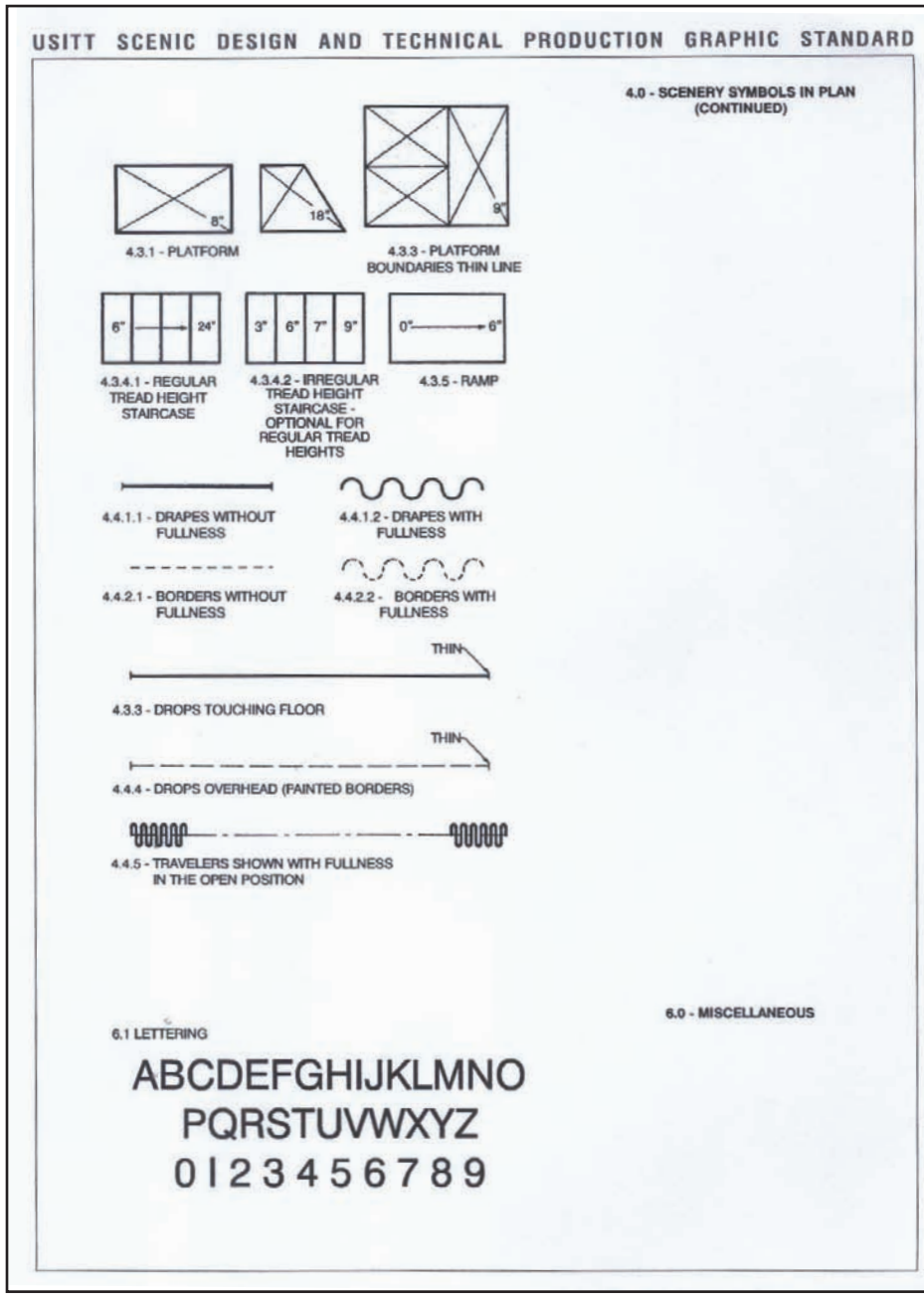


3.5.3 - RADII



3.6 - ANGLES


USITT SCENIC DESIGN AND TECHNICAL PRODUCTION GRAPHIC STANDARD
4.0 - SCENERY SYMBOLS IN PLAN (LINE THICKNESSES ARE EXAGGERATED FOR COMPARATIVE PURPOSES)
4.2.1 - SINGLE FLAT
THE DRAWING ABOVE ILLUSTRATES THE DERIVATION OF THE RESPECTIVE PARTIAL GROUNDPLAN BELOW.
4.2.1.1 - FLAT JOINTS/DIVISIONS
NOTE: SOME DETAILS ENLARGED FOR CLARITY.
4.2.2.1 - ARCHWAY
4.2.2.2 - DOORWAY (SHUTTER DRAWN AS IT WILL BE HUNG)
4.2.2.3 - WINDOW (SHOW MUNTINS AND MULLIONS OF WINDOW AS DESIGNED)
4.2.2.4 - FLAT WITH SLIDING DOOR
4.2.2.5 - FLAT WITH DOUBLE ACTING DOOR
4.2.2.6 - FLAT WITH CASEMENT WINDOW (SHOW MUNTINS AND MULLIONS OF WINDOW AS DESIGNED)


USITT SCENIC DESIGN AND TECHNICAL PRODUCTION GRAPHIC STANDARD
4.0 - SCENERY SYMBOLS IN PLAN (CONTINUED)
8"
18"
9"
4.3.1 - PLATFORM
4.3.3 - PLATFORM BOUNDARIES THIN LINE
6"
24"
3"
6"
7"
9"
0"
6"
4.3.4.1 - REGULAR TREAD HEIGHT STAIRCASE
4.3.4.2 - IRREGULAR TREAD HEIGHT STAIRCASE - OPTIONAL FOR REGULAR TREAD HEIGHTS
4.3.5 - RAMP
4.4.1.1 - DRAPES WITHOUT FULLNESS
4.4.1.2 - DRAPES WITH FULLNESS
4.4.2.1 - BORDERS WITHOUT FULLNESS
4.4.2.2 - BORDERS WITH FULLNESS
THIN
4.3.3 - DROPS TOUCHING FLOOR
THIN
4.4.4 - DROPS OVERHEAD (FAINTED BORDERS)
4.4.5 - TRAVELERS SHOWN WITH FULLNESS IN THE OPEN POSITION
6.0 - MISCELLANEOUS
6.1 LETTERING
ABCDEFGHIJKLMNO
PQRSTUVWXYZ
0123456789

INDEX

A
abstract shapes, 94,
Actors' Equity Association, 179
acts, 28,
Adding Machine, The (Rice), 125–26
additive color mixing, 196
American Daughter, An (Wasserstein), 127
antecedent action, 32. *See also* exposition
area lighting, 204–6
arena stage, 129–31, 151
Aristotle
    Poetics, 29
Arms and the Man (Shaw), 23–24
asymmetrical balance, 106–8, 110, 119–20
atmospheric perspective, 93
Auburn, David
    Proof, 25–26, 132
August: Osage County (Letts), 153
avant-garde theater, 30, 129–30

B
"back matters," 24
balance, 106–10, 119–20
balcony rail, 198
battens, 198, 212
beam angle, 198
Beckett, Samuel
    Endgame, 155
    Happy Days, 43
Bharata
    Natyasastra, 29
"bhava," 29
Black box theaters, 130
book musicals, 27–28
box booms, 198
box set, 132, 207
business etiquette, 80

C
catastrophe. *See* denouement
catharsis, 29
ceiling coves, 198
channel schedules, 214
character, revealing. *See* revealing character
chiaroscuro, 92–93, 201
circuit, lighting, 208
climactic plays, 28–29
climax, 30
collaboration
    communication challenges in, 79–81
    process involved in, 74–85
color
    as indicator of character, 157, 164
    in lighting, 195
    psychology of, 97
    value, 96
color theory, 95
color wheel, 96
complementary colors, 96, 101, 196–97
cool colors, 102
construction drawings. *See* rear elevations
contrast, 112–113
control console, 194, 208, 210
costume design

costume designer's process in, 168–73
design objectives and, 154–67
financial considerations, 183
given circumstances and, 153
implementing the design, 176–81
costume
building, 180–81, 184
buying, 181
pulling, 177
renderings, 173–74
rental, 178
cover letter, 223
created space, 130
Crucible, The (Miller), 40–41, 65–66
cue lists, 215

D
Dead Man's Cell Phone (Ruhl), 123,
Death of a Salesman (Miller), 190
denouement, 30
detail drawings, 141, 144
dialogue, 22–27, 153, 155
dimmer, 209
distribution, 194
DMX, 210
Doll's House, A (Ibsen), 34, 36, 132, 136, 138
dry tech, 215–16

E
Edwards, Betty
The New Drawing on the Right Side of the Brain, 171
Endgame (Beckett), 155
episodic plays, 28
exposition, 29, 32. *See also* antecedent action

F
fabrics, 97, 181–82, 185, 237–38
falling action, 29–30
fill light, 203–6
flats, 90, 122, 134
footlights, 192, 198
Foreigner, The (Shue), 62
form. *See* mass
found space, 130
Freytag, Gustav
Technik des Dramas, 29
Freytag's Pyramid, 29
front elevations, 142, 229
"front of house" pipes, 195, 213
Frost/Nixon (Morgan), 163

G
genre, 35, 39, 50, 60–61, 124, 155, 161
geometric shapes, 91, 94
"given circumstances," 33–36
Glass Menagerie, The (Williams), 33, 136, 207
gobo, 98, 195–97, 216
God of Carnage (Reza), 25–26, 50
Godspell (Schwartz and Tebelak), 46
ground plans, 137, 140, 151, 229–30

H
Hairy Ape, The (O'Neill), 49, 189
Hamlet (Shakespeare), 32, 45, 136, 138, 157, 159, 207
Hansberry, Lorraine
A Raisin in the Sun, 56–57
Happy Days (Beckett), 43
hard patch, 209–10, 214
Harling, Robert
Steel Magnolias, 164
harmony, 114–15

I
Ibsen, Henrik
A Doll's House, 34, 36, 132, 136, 138
imaginative engagement, 31–32, 36
implied action, 32
Importance of Being Earnest, The (Wilde), 124, 127, 142–44
impromptu discussion, 79–80
In the Blood (Lori-Parks), 44, 49, 59
inciting incident, 29–30
Inherit the Wind (Lawrence and Lee), 65
instrument schedule, 213–14, 216
intensity

chart, 103
in lighting, 194

J
job interview, 231–33

K
Keatley, Charlotte
My Mother Said I Never Should, 41
key light, 203, 205–6

L
Lawrence, Jerome
Inherit the Wind, 65
League of Resident Theatres, 221
Lee, Edward
Inherit the Wind, 65
Lee, Eugene, 66
Letts, Tracy
August: Osage County, 153
light hanging positions, 194, 198
light plot, 187, 202, 212–14, 216–17
lighting control, 208–10
lighting design
deadlines in, 215
design objectives, 188–90
finalizing, 211–15
implementing, 216–17
lighting designer's process in, 199–201
theater space, physical impact of on, 198
lighting lab, 201
Lindsay-Abaire, David
Rabbit Hole, 153
line, 89–90
locale, 42–44
Logan, John
Red, 36, 48, 50,
Lori-Parks, Susan
In the Blood, 44, 49, 59
LORT. *See* League of Resident Theatres

M
magic sheet, 214–15
Maguire, Gregory
Wicked, 66
mass, 92–94
master electrician, 212, 216, 226, 233
McCandless, Stanley
A Method of Lighting the Stage, 197, 204
mechanical draftings, 141
Method of Lighting the Stage, A (McCandless), 197, 204
Midsummer Night's Dream (Shakespeare), 114
Miller, Arthur
Death of a Salesman, 190
The Crucible, 40–41, 65–66
Mineola Twins, The (Vogel), 154
modeling, 192, 195, 198
Molière
Tartuffe, 125
The Miser, 153
mood, 45–46, 59, 124, 156, 193
Morgan, Peter
Frost/Nixon, 163
motivated lighting, 188–89
movement, in lighting, 197, 206
multiple sets, 132–33, 216
musical reviews, 28
My Mother Said I Never Should (Keatley), 41

N
Natyasastra (Bharata), 29
negative space, 92, 116–17, 139
New Drawing on the Right Side of the Brain, The (Edwards), 171
non-motivated lighting, 189–90

O
Of Mice and Men (Steinbeck), 110–12, 199
O'Neill, Eugene
The Hairy Ape, 49, 189
On the Verge (Overmeyer), 43
organic shapes, 90–92, 99
Our Town (Wilder), 59

Overmeyer, Eric
On the Verge, 43
overt action, 32–33

P
painter's elevation, 141
paper model, 140
passages, descriptive, 31, 153, 156
patch panel, 209
performance space, 129–33
period, 40–41, 58, 123, 154
period style, 48, 53, 61
perspective drawing,146
photometrics, 198
place, 41–43
plagiarism, 68
platforms, 134
play
immersion, 38–39
production, 48, 52, 159
reading, 25–28
structure, 28–31
playwright, 56–58
plot, 29–31
Poetics (Aristotle), 29
point, 88–89
point of view, 118
portfolio, 228–31
positive space, 92, 116
potential action, 33
practical problems, solving, 33, 50, 61, 165, 190
"practicals," 188
presentational model, 141, 147
primary colors, 196
production concept, 74–75, 78–79
Proof (Auburn), 25–26, 132
proportion, 109–10
proscenium stage, 129, 131–32, 151, 195, 207, 214
"pulling," 177–78
punch list, 134–35, 200

R
Rabbit Hole (Lindsay-Abaire), 153
radial balance, 106–8
Raisin in the Sun, A (Hansberry), 56–57
"rasa," 29
reading plays. *See under* play
rear elevations, 141–43
Red (Logan), 36, 48, 50
repetition, 28, 110
research, 55–70
developing "storehouse" for, 67–68
given circumstances, 58–62
importance of, 69–70
"informed intuition" in, 55, 69
sources for, 62–66
résumé, 224–28
revealing character, 46–47, 60, 126, 161, 190
Reza, Yasmina
God of Carnage, 25–26, 50
rhythm, 110–11
Rice, Elmer
The Adding Machine, 125–26
Riders to the Sea (Singe), 156
Rimers of Eldritch, The (Wilson), 31
rising action, 29–30
ritual, 28, 138
Rose, Rick, 84, 91, 148
Ruhl, Sarah
Dead Man's Cell Phone, 123

S
Samuel French, Inc., 22, 24
scale, 109, 141, 167
scenery, 98, 122
traditional types, 132–34
scenic design
communicating ideas in, 141–49
defined, 122
design objectives and, 123–28
implementation of, 150
"playing against type" in, 131
scenic designer's process in, 134–40
and theater space, 131–32
scenic units, 134
Schwartz, Stephen
Godspell, 46

script
action in, 25–26
formatting in, 22–23
reading, 27
secondary colors, 95, 101–2, 196
sectional view, 132, 144, 211–12
selective focus, 193
set design, 113, 127
set rendering, 146–47
shade, 102–3
Shakespeare, William
A Midsummer Night's Dream, 114
Hamlet, 32, 45, 136, 138, 157, 159, 207
shape, 90–92
Shaw, George Bernard
Arms and the Man, 23–24
"show bible," 81, 177
Shue, Larry
The Foreigner, 62
simultaneous staging, 133
single set, 132–33
soft goods, 134
soft patch, 210–11, 214
special effects, 62, 128, 191, 210
"specials," 207
"spidering," 209
stage light,
controllable qualities of, 193–97
functions of, 192–93
stage lighting
design objectives, 188–91
finalizing the design, 211–15
implementing the design, 216–17
lighting designer's process in, 199–202
methods of, 203–7
stage movement, 139
Stanislavski, Constantin, 33
Steel Magnolias (Harling), 164
Steinbeck, John
Of Mice and Men, 110–12, 199
storyboard, 120–21, 202
Streetcar Named Desire, A (Williams), 42–43, 113, 133
Strindberg, August, 49
style
literary, 48, 60–61
period, 48, 53, 61
visual, 61, 132
subtext, 25–26, 31, 44, 74
subtractive color filtering, 196
summer theater work, 221
symmetrical balance, 106–9
synergy, 118–19
Synge, John Millington
Riders to the Sea, 156

T
Talley's Folly (Lanford), 33–34, 40, 58
Tartuffe (Molière), 125
Tebelak, John-Michael
Godspell, 46
technical director, 141–44, 150, 211
technical drawings, 141, 149, 211, 230
technical rehearsals, 216–17
Technik des Dramas (Freytag), 29
tertiary colors, 95, 101–2
texture, 97–98
theater
as collaborative art form, 72–73. *See also* collaboration
society and culture in, 74
theater designer,
building a career as, 220–23
director, relationship with, 75
solving practical problems, role in, 31
Theatre of the Absurd, 26–27, 30, 43
theme, 44, 59, 125, 157
thirds, rule of, 117
throw distance, 198, 204
thrust stage, 129–30
thumbnail sketches, 137–40
time
as objective of theatrical design, 39, 58, 123, 154
in relation to labor and budget, 84
tint, 97, 102–3
tragedy, 29–30, 36

U
unit set, 132–33
unity, 113–15

V
value chart, 102
variation, 111–12
visibility, 192
visual balance. *See* balance
visual imagery, 59, 65
visual metaphor, 34–35,136–37
Vogel, Paula
The Mineola Twins, 154

W
warm colors, 95, 102
wash lighting, 205
Wasserstein, Wendy
An American Daughter, 127
white model, 140
Wicked (Maguire), 66
Wilde, Oscar
The Importance of Being Earnest, 124, 127, 142–44
Wilder, Thornton
Our Town, 53
Williams, Tennessee
A Streetcar Named Desire, 42–43, 113, 133
The Glass Menagerie, 33, 136, 207
Wilson, Lanford
Talley's Folly, 33–34, 40, 58
The Rimers of Eldritch, 31

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