4 Set Design

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Our word *theatre* is derived from an ancient Greek word, *theatron*, a "seeing place" or "place for watching," which suggests that in its most elemental form, theatre involves *both* performers and spectators, joined together in a particular place. In other words, theatre occurs in an environment that enables the actors to bring the script to life and simultaneously becomes a part of the theatrical experience. If we hope to understand theatre and how it works, we must take the places of performance into account.

A simple way to explore the question of the theatrical environment might be to reduce it to two basic categories: the buildings or locations in which theatre takes place and the dramatic worlds of the plays that are performed within them. The former are usually built for the express purpose of housing theatrical events and address a range of functions. As a result, this category also provides a wealth of information for theatre scholars. Buildings are fixed in place, and while they might be altered for particular events, they retain a sense of permanence that transcends the duration of a given performance. The dramatic world, on the other hand, is created afresh for each production and lasts only as long as the needs of the production requires. Yet there is a complex interaction between the two, and the relationship has a profound bearing on the choices made in producing a play for performance.

The success of every theatre building depends on how well it meets three basic demands: facilities for the audience (including entrances into and exits out of the building, a lobby, the box office, restrooms, coat check and refreshment concessions, corridors and hallways for c irculation,

and finally seating for watching the performance); the stage and its equipment and control rooms or booths; and work and support spaces, such as dressing rooms, construction shops and storage areas for scenery, costumes and properties, and lighting and sound equipment. Typically, the parts of the building that serve the needs of the audience are given the highest priority from an architectural standpoint, the seating area or **house** being the most important. Economic considerations frequently drive the architect to maximize capacity by incorporating as many seats as possible into the design. At the same time, there is an expectation that the stage will be visible and the performers will be audible from every seat. There is also an expectation that the seating will be comfortable and that the auditorium will be reasonably well insulated from unwanted or extraneous light or sound.

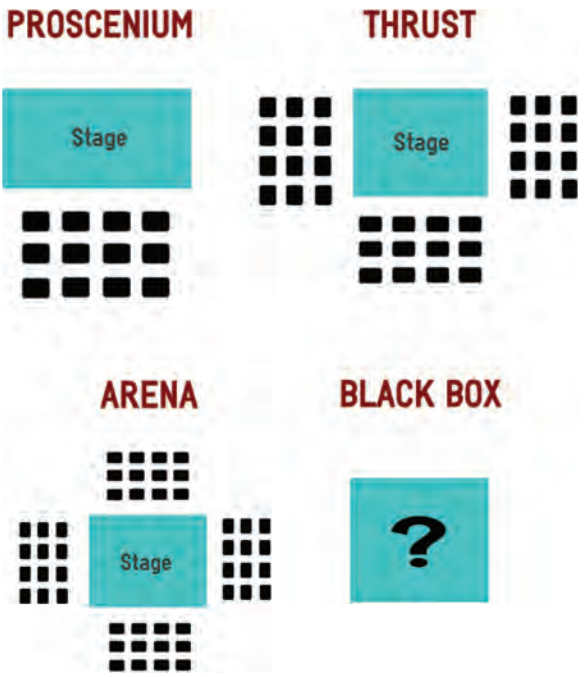
Theatres have developed in a variety of ways since their earliest days in Athens, Greece, in the fifth century BCE. They have moved from the outside, where lighting was provided by the sun and performances were always subject to the weather, to specially built rooms indoors where the environment of the performance is controlled artificially. Over the course of this development, it is important to note how the structure and nature of the theatre as a building has not only shaped the qualities of

The National Theatre of Great Britain's touring company production of *War Horse*, Sydney, Australia, 2013. Photo by Eva Rinaldi.

the performances but influenced the plays themselves. It is hard to imagine, for instance, the emergence of the illusionistic realism of modern drama, with its fine attention to scenic detail and representative interiors, without the development of the proscenium theatre. In a similar way, advances in technology, as expressed through theatre architecture, have shaped both the way we watch theatre and the kind of theatre available in our own time. From the introduction of gas lighting, which allowed the stage to be lit while the auditorium was kept dark, through the computerized mechanics and video effects of shows such as *Spiderman: Turn Off the Dark* or *War Horse*, our buildings have shaped the plays performed within them, even as emerging technologies such as holographic projections offer a promise of innovation in their "seeing place."

Types of Theatres

Today, the design of most theatre buildings falls into four fundamental types: the proscenium, the thrust, the arena, and the black box. The **proscenium** theatre is probably the most common and well-known arrangement today. It takes its name from its most prominent architectural feature, the **proscenium arch**, which frames the stage and separates the audience's space from the performers' space. The performance in a proscenium theatre is intended to be viewed from one perspective, the front of the stage, and the arch serves as a kind of picture frame around the dramatic world. This is the source of the "**fourth wall**" concept: the audience views the action of the play through the invisible wall in front of the stage. There is often a curtain behind the proscenium that conceals the stage until the performance begins that can be lowered to hide changes of scenery in the course of the performance. The proscenium stage also incorporates additional spaces beyond the performance area (**backstage**). On either side of the stage is called the **wings**, and the area above the playing space is referred to as the **fly space** or **flies**, where scenery might be raised or lowered through a system of lines and pulleys. One of the key conventions of the proscenium theatre is to prevent the audience from seeing these additional spaces through the use of **masking**, black draperies surrounding the performance area that limit what the audience can see. Masking can also be used to hide lighting and sound equipment and elements of scenery not currently in use, and to provide pathways for performers to enter or exit.



The **thrust** theatre has an opening on one wall, behind which might be found scenic and lighting equipment, but unlike a proscenium, the stage projects forward so that it is surrounded by the audience on three sides. Like the proscenium, there is access between the performance area and the backstage, but like the arena, the designation of the "front" of the stage is somewhat problematic; at any given moment, the actors will necessarily present a profile, if not their backs, to part of the audience. On the one hand, this may seem more "natural"—we do not typically see those around us in a front-on aspect in everyday life. But on the other hand, there is an expectation of the performers being "on display" when seen on stage, and this expectation may not be fully realized when the actors seem to be directing their performances to other different parts of the audience.

The arena stage also presents a complication for any play that requires set changes (different locales or times), because the scenic elements not in use need to be handy to the stage, for speedily and efficiently executing the required changes. While most arena theatres include scenic storage spaces near the stage, the absence of a curtain means that the changes

are carried out in full view of the audience. And because much of it is installed above the stage or the audience area, some vital theatre technology is at least partially visible and part of the stage picture. So there may well be provisions for hiding or concealing scenic elements and sound and lighting equipment, but the diversity of audience perspective means that the equipment will be difficult to effectively remove from the overall image of the dramatic world created.

In an **arena** theatre, also called theatre-in-the-round, no part of the stage can truly be considered the front, and there is no direct access between the stage and the backstage. It is very difficult to conceal lighting and sound equipment, so their presence is accepted as part of the performance picture. The stage might be at floor level, and the audience sits in riserlike tiers of seats or the seating may be on the floor while the performers use a raised platform as their stage.

The **black box** type of theatre has few fixed features. For each production, audience and performance spaces can be arranged into proscenium, thrust, arena, or other configurations. Dressing rooms, storage spaces, and the like are necessarily disconnected from the performance areas, and frequently from the room itself. For example, a true black box is essentially an empty room, with no designated stage area, let alone any "backstage" or "offstage" areas. An actor, therefore, might literally have to leave the room through a door near one side of the performance area, in order to get to a door on the other side of the room in order to make an entrance on the opposite side of the performance area. Likewise, lighting and sound equipment are in plain view and made a part of the overall scene. Audience seating is temporary, set up for the specific performance, and might consist of chairs on tiered risers or chairs set directly on the floor. Similarly, the performance space is determined by the needs of each production, and might be flat on the floor or raised above the audience level on a platform or platforms. Mostly, these theatres are small and utilized for more experimental shows. Often, they occupy a building that originally served a different purpose, such as a warehouse, school, or office building.

Each of these architectural types offers a different set of advantages and disadvantages for theatre artists during the course of creating a theatrical production. The proscenium theatre, with its fixed frontal relationship between audience and performer, allows for a kind of realism by offering the prospect of viewing the dramatic world through an archi-

tectural picture frame without seeing audience members in the background. Its direct access to the backstage areas permits easy exits and entrances and there is little doubt, since performers disappear behind the masking, whether an actor is in the scene being viewed. **Sightlines**, the unobstructed view from the audience, can easily be controlled so lighting and sound equipment does not intrude visually into the stage picture, and with offstage and overhead facilities, scenic changes are easily effected in a proscenium theatre. Yet these qualities also lend a "two-dimensional" quality to the dramatic world: the depth of the stage is sometimes difficult to estimate, and performers must always direct their efforts toward the front of the stage. The arena and thrust theatres allow performers to be seen more "three-dimensionally," but because audience members must be able to see from three or four different seating areas, the use of scenery is rather limited. The wall with a door that seems so realistic in a proscenium theatre might well block the view of a significant portion of the audience in an arena or thrust theatre. In thrust and arena stages, performers must always be cognizant of the fact that they are being watched from several directions at once, and the director's blocking must move the actors in such a way that no one side of the audience gets a bad view. These are but a few of the ways that theatre architecture affects the presentation of a production.

Setting the Stage

Inextricably influenced by architecture, set design is concerned with the creation of the dramatic world in which a play takes place. It is the world in which the actors breathe life into their characters and the canvas on which directors paint their stage pictures. While actors and directors are intimately associated with the dramatic world, they are essentially users of it.

A set design is expected to be not only pleasing to the eye, but also functional, evocative, and part of an overall production concept. The set expresses the dramatic world as a kinetic space through which the actors move under the watchful eyes of the audience, who can frame the scene for themselves by taking in small details as well as the big picture. If the set moves, or changes, over the course of the play, its movements help to convey the rhythm and pace of the production. The set also becomes part of the performance through the actors' interaction with its elements—doorways, stairs, furniture, and boundaries.

This has not always been the case, nor is it necessarily the norm in theatre around the world. The role of the set in a performance, and of the set designer in particular, is a fairly recent development in the long history of theatre. In many global theatre traditions, scenery reflects a sense of and respect for continuity. Chinese opera, for instance, frequently features a simple arrangement of two chairs, a table, and a rug. Although these simple elements might be set up in different configurations, they are not intended to represent or evoke any particular setting or location. The way that they are used by the actors allows them to define any environment that might be called for by a particular play, from a room in a temple to a mountaintop. The stage used by Japanese *noh* theatre conjures up associations with a Shinto shrine with its highly polished cypress floor, distinctive curved roof supported by four pillars, and a modest backdrop with a painted pine tree. These pillars help actors in full masks to orient themselves while the audience knows that certain pillars are associated with certain characters and prominent actions. Portable scenic elements are used sparingly to create specific locales as needed.

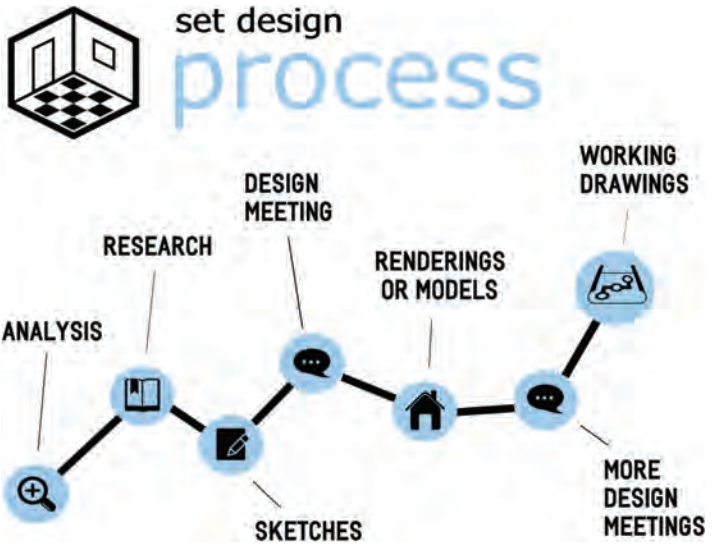
Though Western theatrical traditions followed a different path than those of Asia, a similar continuity and conformity can be seen in stage and scenic design in European and American theatre until the middle of the nineteenth century. Unlike the conventions of China and Japan, Western theatre has privileged innovation, but this is more the result of meeting audience expectations and following patterns that proved successful than of preserving historical practices. Yet even as Western drama evolved and progressed over the centuries, scenic elements—the dramatic world in which the play took place—was not seen as a critical aspect of performance until well into the eighteenth century; a short list of somewhat standardized settings served the needs of most dramas. Scenic elements were often the result of pragmatic financial considerations rather than artistic analysis.

Process

As for even the most casual reader, a set designer's first experience of a new play is usually in the reading of the script. From this encounter, readers invariably find that their imaginations begin to create the world inhabited by the characters and events of the play, to a varying degree of detail and specificity. The role and artistry of the set designer, though,

lies in transforming the images that arise in the imagination into concrete tangible forms that will fulfill the requirements of the text within the reality of performance. The skills employed are diverse and various, but first and foremost, a set designer must be good at script analysis, able to dig into the text for the details of the characters' environments, and the individual details about each that are expressed by their environments—their economic status, their occupations, and their relationships with one another. The set design may be required to convey information about lo-cation, time of day, time of year, and era. Together with the director and other designers (costume designer, lighting, properties, and sound), the set designer creates the dramatic world of the play. And the world thus created must also be one inhabitable by the actors, be affordable and practical within the constraints of budgets and schedules, and comport comfortably with the architectural limits of the theatre itself.

Though each set designer has his or her own approach to these tasks, some common elements are shared by all. Among these are the establishment of time and place; the materialization of a setting that elaborates details of the characters' lives, circumstances, and relationships; the creation of mood and atmosphere appropriate to the production; and the relationship between the audience and the performance itself. Using



A medieval *pageant* wagon. From Charles Knight, *The Popular History of England* (London: Warne, 1874).

the tools of the craft the set designer—more than anything—helps to tell the story, through visual metaphors, and so facilitates the dramatic action. Starting with the premise that the audience will "read" every aspect of the visual manifestation presented on the stage for significance and symbolic meaning (even if only sub-consciously), the set designer is responsible for myriad details and deci-sions, each of which contributes to the overall theatrical experience and telling of the story. Along the way, there are many decisions driven by pragmatic concerns, such as how the design ideas are communicated to the technicians charged with realizing the design and the selection of materials, arrangements, and finishes applied to the scenic elements. A set designer is, in short, a scholar, researcher, sketch artist, draftsperson, model builder, and communicator.

The Teatro Olimpico. Photo by Graeme Churchard.

Many of a set designer's objectives can be considered under the broad heading of "telling the story." While the set designer, like all of the artists involved in mounting a play, forms initial impressions and understand-ings from the first readings of the script, these immediate reactions do not lead directly to the creation of a set design. Rather, the set designer shares these personal responses to the script with the rest of the creative team, especially the director. This is one of the first steps in the design process, and such discussions are often built into a production's schedule as design meetings or design conferences. The decisions arising from these meetings both form the agreed-upon vision and understanding of the play and the production and establish a clear set of standards for the individual artists involved to measure their work against.

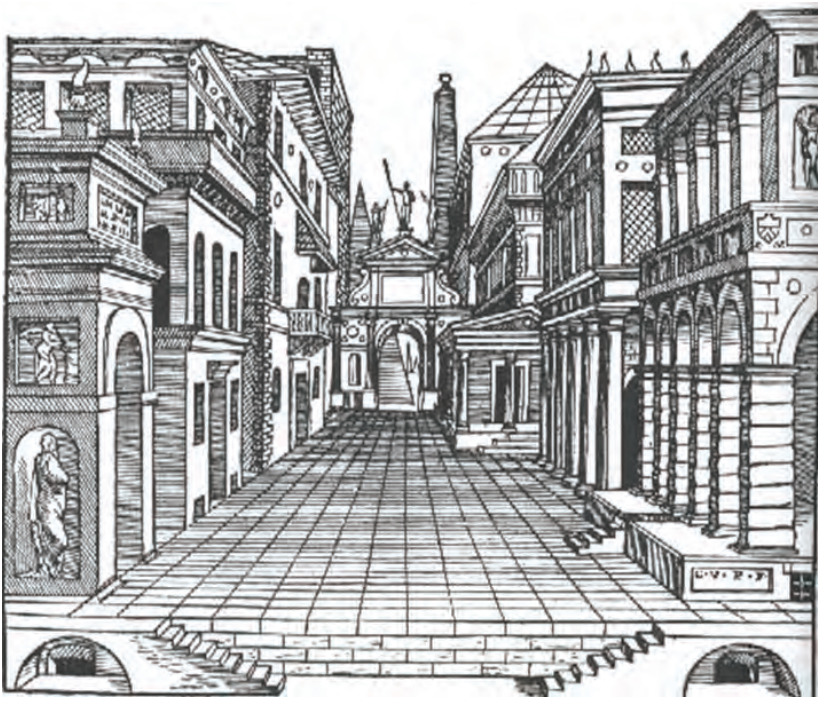
In today's theatre, a set designer might also have available some amaz-ing technology, including projections, lasers, and automated mechan-ics. Indeed, many Broadway hits probably would not have been possible without recent technological innovations.

The set designer's penultimate step in the design process is recording and communicating the myriad details that comprise the design to the technicians and artisans who bring it to life. This can be a rather large set of information and may be communicated through many channels.

Among the most important types of information are the spatial arrangement of scenic elements in the stage space, the kinds and dimensions of the scenic elements, their colors and textures, and any changes in the set over the course of the performance. But a set designer must also provide details on the furnishings and decoration of the set.

Some theatres employ a **props designer**, and part of that job involves assisting the set designer, but in many cases the set designer must also include the selection of furniture, carpets, draperies, and lighting fix-tures, as well as decorative items like paintings, knickknacks, books on the shelves, and "memorabilia." This last category of prop often affords the set designer great opportunity to help the audience understand the characters' lives. For example, a college pennant on the bedroom wall might recall happier days as a football hero for the character of Brick in Tennessee Williams's play *Cat on a Hot Tin Roof*.

No single channel can communicate all of the details comprising a set design, and so a designer employs several. The sketches mentioned earlier may be refined, with adjustments made to accurately convey pro-portions and placements, and color can be added to the sketches. In a finalized form, such sketches become **renderings** and these become the guide for building and finishing the set. Some of the detailed infor-mation, though, is quite technical—the dimensions of individual scenic elements and their precise placement on the stage, for example—and is best conveyed in mathematical terms. This information is best conveyed by a more formal type of drawing. Whether they are drafted by hand us-ing a straightedge and pencil or digitally through software like AutoCAD or VectorWorks, these mechanical drawings provide accurate measurements that can easily be transferred to the materials in use, as well as particular details about an object (a rounded edge on a piece of wall trim, maybe) or its placement on the stage.



Serlio's stock setting for tragedy. Courtesy of Hekman Digital Archive.

Two special types of mechanical drawing are predominant in the theatre: the groundplan view, which represents the stage or object as if looking down on it from above; and the elevation, which represents the stage or object as if looking at it directly from one side. These two types of drawings always include the dimensions of each aspect of the object or space, and they complement one another; a single object may require two, three, four, or more drawings to convey all of the information rel-evant to it.

Imagine a simple cube. To represent it by mechanical drawing, a set designer might offer a plan that shows the top of the cube. This draw-ing would be accompanied by four elevation views—one for each of the four sides. Finally, a special inversion of the groundplan view (called a reflected plan) would present the bottom of the cube. Because the mechanical drawings are fundamentally a channel of communication, though, the set designer can use some

Site-specific refers to theatrical works presented outside traditional theatre spaces. A straightforward use of this technique is to transplant a play to a setting suggested by the text (*A Midsummer Night's Dream* in a forest, *The Pirates of Penzance* on a ship, etc.). Performances devised specifically for a found space are capable of more complexity. They can allow the environment and the play to be reconsidered at the same time and can challenge the boundaries between actor and audience.

A 2007 production of *Waiting for Godot* (featuring T. Ryder Smith, J. Kyle Manzay, Wendell Pierce, and Mark McLaughlin; directed by Christopher McElroen) presented in the Ninth Ward of New Orleans, an area devastated by Hurricane Katrina. Seating was set up for five hundred, but hundreds had to be turned away. Photo courtesy of Christopher McElroen.

This set design for the 2012 production of the opera *André Chénier* was built on Lake Constance, Austria, for the Bregenz Festspiel. The design is based on the famous painting *The Death of Marat*, which depicts the radical French revolutionary Jean-Paul Marat murdered in his bathtub. Photo by Kecko/Flickr.com.

A computer rendering of a box set. 2008 production of *The Late Henry Moss*, St. Louis Actors' Studio, set design by Patrick Huber.

obvious shortcuts. In the case of the cube, for instance, a plan view and one elevation might suffice, if the set designer includes a written note stating that the bottom will be a mir-ror image of the top, and that all four sides are the same.

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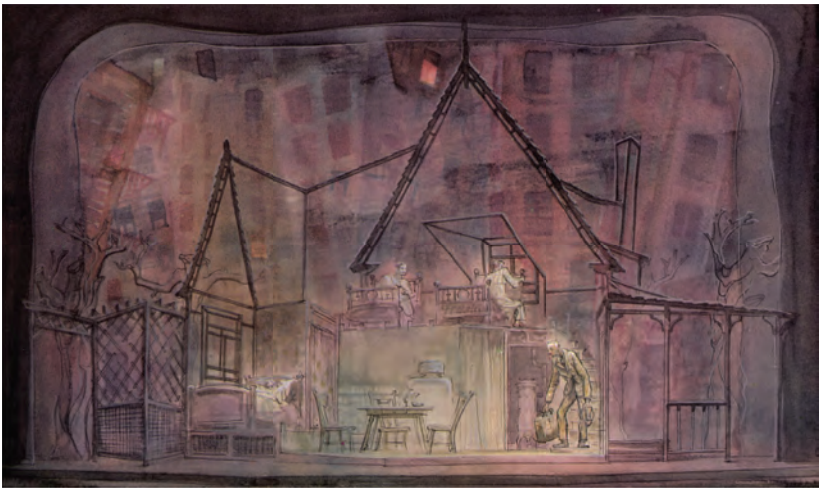
The 2010 We Players production of *Hamlet* on Alcatraz Island. The site of the former prison highlights issues of justice and punishment. Photo by Katie Hatey.

The 2006 production of *Roam* at Edinburgh Airport, a co-production between Grid Iron Theatre Company and the National Theatre of Scotland. It was billed as an "imaginative journey through, in and around the possibilities of air travel"; audiences were moved to a different location for each scene, from check-in to the departure gate and eventually baggage claim. The production was nominated for a Scottish Critics Award for Best Design. Photo by Richard Campbell, www.richardcampbell.co.uk.

to the set. Called paint elevations, these drawings usually convey not only the final "look" of the set but also details on the number of different colors that might be used, how these should be applied, and special application information.

The set designer might also build a model of the set, which provides a three-dimensional rendering of the scenic space that is often especially useful to the director. With a model, blocking problems can be worked out, stage pictures can be planned, and a virtual sense of how the per-formance will appear to the audience can be imagined. A full model is completely and accurately painted, furnished, and decorated just as the actual set will be and can take many hours to complete. It is not unusual, therefore, that either the set designer or the theatre company keeps the models as part of a portfolio or archive. And one final use of the set designer's sketches, renderings, and model might be by the marketing department, as images to be used in advertisements or posters.

While the set designer might be intimately involved in the realization of the design as a finished set, once the design has been recorded in prose, graphically, or as a complete model, it becomes the responsibility of the technical director and a group of skilled technicians and artisans to bring it into being. The technical director oversees all aspects of engi-neering and fabricating the scenic

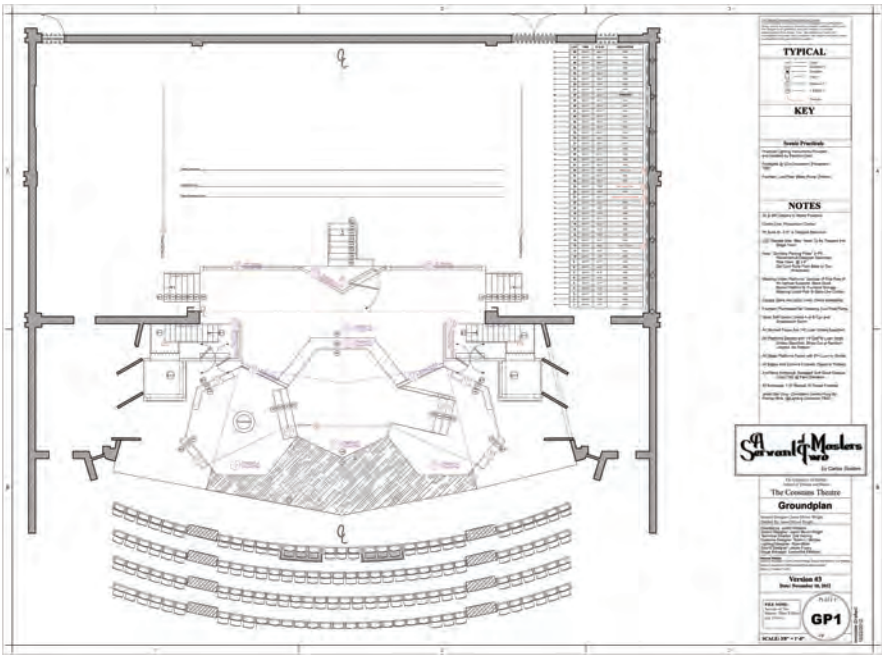


Rendering of the original 1949 production of *Death of a Salesman* by Jo Mielziner. Courtesy of Bud H. Gibbs.

The 2010 production of *Brighton Beach Memoirs* at the Old Globe Theatre. Directed by Scott Schwartz, set design by Ralph Funicello, lighting design by Matthew McCarthy, and costume design by Alejo Vietti. Photo by Ralph Funicello.

elements and installing them on the stage in accordance with the set designer's intents. The technical direc-tor, additionally, oversees the operation of the scene shop, where much of the construction takes place. This work is performed by the scenic carpenters, usually led by a master carpenter, and it includes every step from the selection of raw materials, such as lumber, through the dimen-sioning and shaping of the materials to assembling the parts into com-pleted scenic elements. Scenic carpenters often employ metalworking skills, such as welding and shaping metals, as well as molding, carving, and casting plastics and synthetic foams in today's scene shops as pro-ductions adopt new technologies. The constructed scenic elements are finished by the painting crew, often under the guidance of charge artists. These artisans are skilled painters, of course, as their crew name suggests, but their purview also includes applied finishes, such as textured plaster, powdered metals, and carved foams.

Together, all of the artists, artisans, and technicians discussed in this chapter collaborate to create the theatrical world in which a play lives.



Example of a groundplan. Designed and drafted by Jason Myron Wright.

The set designer is the theatre artist directly responsible, of course, but at every stage there is an ongoing conversation—between the director and designers, between the designer and the researcher, and between the designer and the technicians and artisans—informing and shaping the set design's intentions, style, and shape. Throughout the process, and across all of the conversations, telling the play's story and making the telling as clear and comprehensible as possible is the prime objective. As the most solid visual aspect of a production, the work of the set designer is an embodiment of the production concept.