

An Exploration of Psychological Space-Time in Theatre and Its Manifestation through Stage Lighting

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Received: Nov 28, 2025 **Revised:** Dec 19, 2025 **Accepted:** Dec 26, 2025

Abstract

Drama is a form of art that involves the construction of time and space. With the development of modern theatre, psychological time-space has become increasingly important within stage-time structures. As a highly expressive component of visual design, stage lighting plays a significant role in shaping and transforming theatrical time and space. By utilizing lighting dynamics effectively, spatial-temporal relationships can be rendered more precise, layered, and emotionally compelling. This study examines the use of lighting elements to elaborate a character's psychological time-space to externalize inner emotions, enhance dramatic conflict, and strengthen the relationship between actor and audience.

It is the purpose of this article to examine the concept, importance, and function of psychological time-space and to demonstrate the inherent connections between lighting design and psychological time-space, as well as to summarize systematically various methods for treating psychological time-space through lighting. With reference to the principle of theatrical "fictionality" and supported by production examples, the aim of this article is to clarify the meanings and classifications of stage time-space, with an emphasis on the definition of psychological time-space and its use in dramaturgy.

Through a theoretical analysis and practical examples, this paper identifies key lighting elements, such as color, intensity, distribution, and movement, that contribute significantly to the construction of psychological time and space. The findings of this study will provide lighting designers with practical guidance for selecting appropriate techniques when shaping psychological time and space, while offering theatre practitioners new perspectives on integrating lighting into dramatic performance.

Keywords : Drama; Theatrical ictionality; Psychological time-space; Stage lighting; Expression

1. Introduction

Drama is fundamentally an art of time and space. Over the years, theatre-makers have carried out extensive explorations of dramatic time-space, and its modes of presentation have become increasingly diverse with the evolution of theatrical aesthetics. Contemporary theatre is no longer confined to linear temporal and spatial structures; intersecting, parallel, and composite forms of time-space occur frequently, allowing artists to construct relationships according to narrative and emotional needs. In particular, the emergence of the concept of psychological time-space has greatly expanded the possibilities of temporal and spatial expression in performance. Psychological time-space enables the externalization of a character's inner world, allowing artists to communicate emotions and ideas more directly and clearly through subjective temporal-spatial structures.

Drama is also a visual and auditory art. Theatre practitioners rely on visual and acoustic means to convey thoughts and emotions to the audience, and stage lighting is a vital part of the overall visual presentation. With the advancement of lighting technology and aesthetics, lighting in contemporary performance has moved far beyond simple illumination. Its capacity to shape and transform time-space has been widely recognized and extensively applied. As lighting evolved into an expressive medium, theorists such as Adolphe Appia underscored its temporal agency. Adolphe Appia argued that light is “the ideal means of expressing temporal rhythm on stage” (Adolphe Appia, 1899/1985), a view that highlights lighting's ability to support both spatial and psychological transformation. Therefore, examining psychological time-space through the lens of lighting design provides a distinct analytical perspective. If the treatment of dramatic time-space is considered a broad set, then the expression of psychological time-space forms a subset within it, and its intersection with lighting constitutes the central focus of this study.

2. An Overview of Psychological Space-Time

2.1 The Hypothetical Nature of Stage Space-Time in Drama

All forms of art are created within the framework of space and time. Generally, based on the spatiotemporal attributes of artistic genres, they are categorized as temporal arts, spatial arts, and spatiotemporal arts. Music, for instance, is classified as a temporal art, whereas painting and sculpture

are spatial arts. Dance and drama, by contrast, belong to the category of arts that occupy both time and space simultaneously.

Dramatic art is presented through both time and space; it is a dynamic art form; a four-dimensional art created within three-dimensional space through the passage of time. On the theatrical stage, time and space are inseparable and intimately interconnected. Consequently, the spatiotemporal nature of drama is characterized by the spatialization of time and the temporalization of space. Since drama possesses this dual spatiotemporal attribute, and the relationship between time and space is tightly interwoven, the question of how to employ space and time in dramatic representation remains a perpetual challenge for dramatists.

Drama operates according to the principle of hypotheticality. (China Encyclopedia Publishing House.1989))This principle refers to the varying degrees of transformation and adaptation of natural life forms by artists based on epistemological and aesthetic considerations. Artistic representation is a synthesis and refinement of reality rather than a mere replication of it. The manifestation of time and space in drama is also founded upon this principle of hypotheticality. A performance must occur within a specific space and within a finite duration, engaging the audience to create an immediate, tangible interactive relationship. Because the audience witnesses live performance art in real-time, the representation of spatiotemporal dimensions is inherently limited. Thus, by leveraging the principle of hypotheticality, dramatists use the limited temporal and spatial resources of the theater to represent the expansive temporal and spatial dimensions required by the narrative. Upon entering the theater, audiences implicitly accept this principle, transforming the stage's hypothetical space into a cognitively “real” space, co-constructing with the performers a shared spatiotemporal understanding that constitutes the dramatic creation process.

2.2 The Multiple Layers of Stage Space-Time

Based on the principle of hypotheticality, stage space-time can be analyzed in terms of three primary layers: the physical space-time of the performance, dramatic space-time, and the audience’s perceived space-time.

2.2.1 Physical Space-Time of the Performance

The physical space-time of a performance refers to the tangible spatial and temporal dimensions within which drama occurs in a theater—objective, natural time and space. A theater is a venue where the audience observes the performance. It simultaneously constitutes the space in which performance actions occur and the space in which spectators observe them. This space can be a fully equipped modern theater, a traditional performance hall, a street, or even a narrow open area; any location that establishes an observer-performer relationship may broadly be considered theatrical space. However, this space is always finite.

Similarly, within this limited space, the temporal duration from the opening to the closing of a performance constitutes the theater's physical time. This notion of space-time is uniform for both performers and audience members, as all participants experience the same objective time and share the same physical space.

2.2.2 Dramatic Space-Time

Dramatic space-time refers to the temporal and spatial experiences of characters within the drama. It is a unique creation by dramatists as the primary creators of the performance. This form of space-time conveys specific meaning through the spatiotemporal presence shared by performers and audience members, manifesting the narrative intended by the creators. Dramatic space-time is highly hypothetical; within the limited duration and confines of the stage, audiences can witness events taking place in any part of the world, experience decades or even centuries of time, and even perceive psychological space-time that does not objectively exist. All of this occurs based on the principle of hypotheticality.

For instance, dramatic time operates under rhythms and patterns entirely distinct from real-world time. It can be condensed, extended, or paused in accordance with the audience's aesthetic expectations. Thus, it is common in performances to compress extensive narrative activity into a short physical duration or expand brief actions across longer periods. In Beijing People's Art Theatre's production of *Teahouse*, Lao She selected three historical periods—the post-Wuxu Reform of the late Qing dynasty, the early Beiyang warlord era, and the final days of the Nationalist regime—and represented a span of fifty years in just a few hours of stage time. This temporal compression increases the dramatic capacity,

heightens narrative conflict, clarifies the hierarchy of events, and concentrates attention on the main plotlines.

Similarly, dramatic space is inseparable from dramatic time and is also hypothetical. Stage space establishes concrete locations for the unfolding narrative, provides environmental and contextual detail for events, facilitates stage blocking, heightens dramatic tension, and enables scene transitions. The fundamental purpose of dramatic space is to support stage action and ultimately to bear artistic emotion (Wang, 1995). In traditional Chinese opera, stage space is even more abstract and hypothetical. Actors often employ stylized movements combined with minimal props to represent spatial changes. For example, a table and two chairs may symbolize a hall, a single flagpole may represent surging waves, and a single horse whip may depict a journey spanning thousands of miles. Boarding a boat, riding in a carriage, entering a house, or riding a horse each follows a set stylized procedure. Audience members, guided by conventional viewing experience, mentally reconstruct these symbolic spaces and enter the spatial environment created by the performers.

2.2.3 Audience-Perceived Space-Time

Audience-perceived space-time refers to the temporal and spatial impressions experienced by viewers during the performance. Spectators' understanding of time is inseparable from their subjective perceptions and psychological experiences, forming the foundation of their recognition of stage space-time. Dramatists aim to create temporal and spatial dimensions that the audience can empathize with, enabling viewers to psychologically accept the performance's authenticity and experience corresponding spatiotemporal and emotional resonance. Both audience-perceived space-time and dramatic space-time are constructed based on the hypothetical nature of stage space-time, working together to achieve a unified spatiotemporal relationship in the observer-performer interaction.

Among these three layers, dramatic space-time represents the transformation, aggregation, and reconstruction of space and time according to hypotheticality by the dramatist. It is the ultimate reflection of the artist's subjective emotions and creative engagement with life on stage. Therefore, a thorough analysis of dramatic space-time is both essential and necessary. The subsequent discussion examines dramatic time and space separately.

2.3 Dramatic Time

Dramatic time can be categorized into narrative environment time and psychological time.

2.3.1 Narrative Environment Time

Narrative environment time refers to the starting time of dramatic action and the temporal span it encompasses. Temporally, it may refer to seasons, parts of the day, or precise moments in a specific year, month, or hour. Chronologically, it can span seconds, minutes, hours, days, years, or even centuries. Based on the principle of hypotheticality, this time may be compressed or extended relative to physical performance time. Compression is guided by artistic selection to simplify complexity and highlight central conflicts, while extension can emphasize and dramatize narrative events. Narrative environment time generally aligns with the audience's psychological perception of objective temporal logic. With the development of dramatic art, the hypothetical nature of time is increasingly recognized and utilized, granting dramatists considerable freedom to manipulate narrative sequence through techniques such as flashback or nonlinear storytelling.

2.3.2 Psychological Time

Psychological time is a subjective temporal embedding within the narrative, directly expressing characters' inner temporal states (Wu, 2001). It is manifested through memories, anticipations, dreams, imagination, and hallucinations. Psychological time is highly flexible, free, and plastic, and is fundamentally hypothetical. It can merge past, present, and future states to shape the character's inner world.

For instance, in the opera *Guests on the Iceberg* at the National Centre for the Performing Arts, Amir mistakes a character for his childhood friend, creating a stage-time transition from the narrative present to psychological past. Through this shift, the audience experiences Amir's recollection, blending narrative time and psychological time to heighten emotional contrast. Similarly, stage designer Schutz identifies two temporal dimensions in performance: (1) the duration occupied by narration itself and (2) the time required to narrate other events (Liu, 2010). The first equates to objective stage time, while the second encompasses both narrative environment time and psychological time.

In Tennessee Williams' *The Glass Menagerie*, Tom functions as both narrator and participant, oscillating between storytelling and enactment. The performance's temporal structure transitions

between psychological recollection and the re-enactment of events, guiding the audience from narrative exposition to inner character experience.

2.4 Dramatic Time

From the perspective of dramatic time, it can be divided into two major categories: narrative environment time and psychological time.

2.4.1 Narrative Environment Time

Narrative environment time refers to the temporal setting and the duration spanned by dramatic action. In terms of temporal designation, it may correspond to seasons of the year—spring, summer, autumn, winter—or to times of the day—morning, noon, night. It may even be specified with precision, such as the exact year, month, day, hour, minute, or moment. In terms of duration, it may last seconds, minutes, hours, days, years, or even centuries. According to the principle of hypotheticality, narrative environment time may be compressed or extended relative to the physical performance time. Compression serves the artistic principle of selective focus, simplifying complex events and emphasizing the primary dramatic conflicts. Conversely, temporal extension is used to highlight, dramatize, and intensify key plot developments. Narrative environment time generally corresponds to the audience's psychological perception of objective temporal logic.

With the evolution of dramatic art, however, the hypothetical nature of dramatic time has become increasingly acknowledged and utilized. This allows dramatists considerable creative freedom in designing narrative time, employing techniques such as flashbacks, nonlinear chronology, and temporal dislocation to suit the needs of the plot. Such flexibility enables the manipulation of audience perception and enhances dramatic effect (Wu, 2001).

2.4.2 Psychological Time

Psychological time constitutes a subjective temporal embedding within the narrative, directly expressing the temporal state of a character's inner world. It is achieved by depicting memories, anticipations, dreams, imaginings, and even hallucinations. Psychological time is highly flexible, free, and plastic, representing a highly hypothetical temporal structure. It allows past, present, and future temporal states to merge, collectively shaping the character's inner experience.

For example, in the opera *Guests on the Iceberg* performed at the National Centre for the Performing Arts, Amir mistakes a character at Nawruz's wedding for his childhood friend. At this moment, the narrative environment time of the stage freezes, and dramatic time transitions to Amir's psychological time. The character of Gulandam singing on the rear stage embodies Amir's recollections of joyful childhood experiences with his friend—a past-tense psychological time. As the memory concludes, psychological time shifts to the present tense, reflecting Amir's sorrow and anxiety over the impending marriage of the "false Gulandam." This transition from narrative environment time to psychological time introduces pauses and variations in dramatic time, emphasizing the inner emotional landscape of Amir and guiding the audience from the lively wedding scene to his introspective psychological world, thereby reinforcing contrast between joy and sorrow.

Renowned stage designer Johannes Schutz also offers a significant perspective on dramatic time. He distinguishes between: (1) the duration occupied by narration itself, and (2) the time required to narrate other events (Liu, 2010). The first corresponds to objective, physical stage time, whereas the second encompasses both narrative environment time and psychological time. For example, in Tennessee Williams' *The Glass Menagerie*, Tom functions as both narrator and participant. As narrator, the time is the duration required to recount past events (psychological embedding of memory), whereas as participant, Tom experiences the events in real-time (narrative environment time). This dual role allows the audience to understand both the chronological context of the plot and the subjective temporal experience of the character, creating a multi-layered temporal perspective.

2.5 Dramatic Space

Dramatic space, like dramatic time, can be analyzed in terms of multiple layers: narrative environment space and symbolic or psychological space.

2.5.1 Narrative Environment Space

Narrative environment space refers to the spatial setting in which dramatic action occurs, established by the dramatist based on an overall understanding of the plot. It may be a dense forest, a vast field, the streets of Rome, a French palace, or under the red walls of the Forbidden City. Both indoor and outdoor locations, urban streets, and rural alleys can constitute narrative environment space.

The theater, however, does not replicate real-world locations; stage space cannot reproduce physical scenes literally. Instead, the creation of stage space relies on the collaboration of multiple production departments. For instance, actors' dialogue, stage design, lighting, and props collectively suggest the spatial environment. Dramatists must observe and select aspects of real life that can be referenced, then extract, reorganize, and construct these spatial elements to create the necessary stage environment. Director Chen Xinyi stated: "Too real is not drama; not real is not drama; only the balance of truth and artifice constitutes art" (Chen, cited in Zhang, 2018, p. 45). This illustrates that dramatic appeal emerges from life itself, refined and presented in an artistic and balanced manner, allowing the audience to relate, reflect, and aesthetically experience the transformation from "life" to "art."

From a scenographic perspective, the narrative environment space of a stage can follow this principle. In the Central Academy of Drama's production *Red and White Wedding*, the stage props—including paint-stained benches, water jars, carts, and ladders—were collected to reflect the fictionalized rural environment of Baoding. However, the stage was not a literal replication of a specific courtyard or farmland. The space was constructed through a method of "partial realism, overall impressionism," allowing the audience to psychologically accept the stage environment as authentic through the principle of hypotheticality.

With the development of drama, neutral, non-realistic, or abstract stage designs increasingly appear. These forms employ their own symbolic language to convey the spatial environment for dramatic action. When combined with actors' performance, the audience's imagination and associative thinking are engaged, allowing them to recognize and internalize the depicted space. In Chinese opera, this idea is exemplified through stylized gestures known as *zuo ke*, where minimal physical cues indicate spatial transformations. For example, raising a hand may indicate entering a room; turning and pulling may close a door. Paddling gestures indicate boating, and the lifting of a horsewhip suggests traveling across mountains. This highly impressionistic representation of space is likewise grounded in the principle of hypotheticality, co-constructed by actors and audience (Wang, 1995).

2.5.2 Psychological Space

Modern drama increasingly emphasizes complex character depiction. To reveal the inevitability of actions and the intricacies of psychological motivation, dramatists often need to delve deeply into

characters' inner worlds. Within the constraints of limited physical space and time, portraying a character's emotional universe with precision and capturing their destiny is a challenging task. Moreover, psychological phenomena such as memories, hallucinations, or fantasies are inherently invisible to the audience. In such cases, the principle of hypotheticality becomes crucial, externalizing characters' inner worlds so that the audience can visually and aurally perceive the mental imagery of the characters (Wu, 2001).

Psychological space may derive from associative projections of recalled narrative environment space, or it may emerge as an imagined or hypothetical spatial construct. This space can be concrete—for example, the location where a past event occurred in the character's memory—or it can be entirely abstract, vague, or chaotic. Even a small illuminated patch on the stage can represent the character's psychological space. Psychological space is extremely flexible; it can transcend the limitations of environmental space and follow the character's train of thought, exploring any imaginative spatial realm constructed by the playwright to serve the plot.

Through the above analysis, the concept of dramatic space-time becomes clearer. In contemporary performances, psychological space-time increasingly occupies a central role in the structuring of stage space-time. Numerous scripts and directorial approaches exploit this form of temporal and spatial arrangement. But what exactly constitutes psychological space-time?

2.5.3 Definition of Psychological Space-Time

Psychological space-time is a creative construct that transcends, and often abandons, the logic of real-world temporal and spatial continuity. Instead, it is structured according to emotional logic, philosophical reasoning, and imaginative invention. Its artistic value lies in providing a concrete temporal and spatial form for expressing deeply embedded emotions or abstract life philosophies, independent of the temporal-spatial constraints of everyday reality (Wang, 1995).

Originating in the creative psychology of the dramatist, psychological space-time is constructed based on the internal emotional states of characters. It is inherently subjective, allowing extreme freedom of combination and decomposition. Psychological space-time can directly display conscious and subconscious thought, converting these mental processes into stage imagery perceptible to the audience. It allows the dramatist to amplify even fleeting moments of consciousness and to manifest

the deepest, most foundational impressions in the character's psyche. It can also articulate desires and motivations that are otherwise ineffable.

Through psychological space-time, sudden thoughts, reflective deliberations, memories, imagination, desires, conscious awareness, and nebulous subconscious elements can all be transformed into perceptible forms for the audience. This construct is structured according to the character's mental activity, employing techniques such as subjective narration, internal monologue, and recollection to concretize inner life. By creating an internalized temporality and spatiality, abstract mental states are made tangible, and invisible thoughts are rendered visible. It allows the audience to observe the interplay between the character's inner world and external reality from multiple perspectives and layers, providing a direct window into the character's consciousness and emotional core.

For example, in the Kunqu opera *The Peony Pavilion*, psychological space is vividly manifested in the dream sequence of the scene *Awakening from a Dream*. The protagonist Du Liniang, confined for a long time within her boudoir, is led by her maid Chunxiang to secretly stroll through the garden. She dreams of a scholar holding a willow branch, composing poetry with her, and meeting him at the Peony Pavilion in a romantic encounter. Upon awakening and returning to the garden, she finds only emptiness, which triggers her lingering yearning and gradual decline. Here, the dream as a psychological space-time expresses Du Liniang's pent-up frustration and desire for love, simultaneously advancing the narrative and foreshadowing subsequent developments.

In the play *The Field*, psychological space-time is also employed to depict hallucinations. After murdering Daxing, Qiu Hu flees to the hill with gold. Surrounded by the pursuing detective squad, he becomes trapped and enters a hallucinatory state, "seeing" himself back in the prison from which he had escaped. Former inmates call to him to flee, guards raise whips to recapture him, and Qiu Hu resists in his illusion. This hallucinatory temporal-spatial arrangement not only contextualizes his tragic past but also externalizes his desperation, anxiety, and struggle in the face of imminent capture.

2.6 Classification of Psychological Space-Time

Psychological space-time in drama can be categorized based on the type of inner process it represents. These categories include past tense scenes, future tense scenes, and present continuous tense scenes.

2.6.1 Past Tense Scenes

Past tense scenes depict the influence of previously experienced events on the character's current psychological state. This includes memories, flashbacks, dreams, and impressions embedded in the subconscious. Typically, past tense scenes begin with present reality, guiding the audience through the character's recollection into a former temporal domain. This allows the narrative to condense and refine the dramatic structure.

For example, in Arthur Miller's *Death of a Salesman*, the physical temporal frame covers only two days and one night, and the physical locations include the Loman household's kitchen, backyard, and bedrooms, as well as an office in New York and a hotel room in Boston. However, the drama depicts far more than these actual locations. Through techniques such as recollection, imagination, and narrative perspective, the play establishes a flexible temporal-spatial relationship, oscillating between reality and mental projections. This structure conveys Willy Loman's futile struggle and attempt to escape unemployment before his eventual suicide. When Willy enters a memory during a quarrel with Charley, his deceased brother Ben appears, and conversations from earlier events are fully portrayed to the audience. These fragmented scenes externalize Willy's internal pain, disappointment, and unfulfilled aspirations, vividly reflecting the impact of past experiences on present consciousness (Zhang, 1989).

2.6.2 Future Tense Scenes

Future tense scenes express the character's genuine desires and anticipatory projections of the consequences of their future actions. Imagination, hallucination, and dreams are commonly used to depict such temporal-spatial configurations. In the silent drama *Evening Crane* performed at the Central Academy of Drama, a hunter narrates to Yu Ping the splendor of the capital city after purchasing a rare brocade. The stage temporality transitions from the immediate present to Yu Ping's imagined experience of life in the capital, expressed through dance and physical gestures that illustrate luxury, enjoyment, and aesthetic pleasure. This transition demonstrates how future tense scenes allow the audience to visualize the character's aspirations and projected experiences.

2.6.3 Present Continuous Tense Scenes

Present continuous tense scenes capture the character's ongoing internal analysis, depicting intense cognitive conflicts, moral dilemmas, or inter-personal struggles within the same physical space and

event. When multiple characters experience simultaneous events but possess contrasting inner thoughts, the present continuous tense facilitates the externalization of these conflicts. This approach enables the audience to perceive each participant's mental processes directly and fully, highlighting the dynamics of internal struggle and cognitive tension.

Because psychological space-time is highly flexible, these temporal categories are often interwoven within a single performance according to narrative needs. The fluid interplay between past, present, and future tense scenes enhances dramatic depth and allows for multi-layered exploration of characters' inner worlds.

3. The Relationship Between Stage Lighting Art and Psychological Time-Space

Stage lighting, also known as theatrical illumination, is the art of shaping characters and scenes through controlled lighting techniques. Its function is to cooperate with actors' performances by utilizing technical equipment and methods according to the overall conception of stage design, thereby creating visual images on stage. The artistic effects of stage lighting unfold dynamically as the performance progresses and as the stage atmosphere shifts. As a synthesis of temporal and spatial arts, stage lighting in modern performances serves multiple functions: (1) illuminating the stage to allow the audience to clearly see actors and scenery; (2) directing audience attention; (3) shaping character images, enhancing emotions, and presenting stage illusions; (4) creating the spatial environment required by the drama; (5) enhancing the dramatic atmosphere; and (6) signaling temporal and spatial transformations, highlighting dramatic conflicts, reinforcing stage rhythm, and enriching artistic impact (China Encyclopedia Publishing House, 1989).

From this definition and these functions, it is evident that stage lighting is an art form deeply rooted in time and space. It plays a crucial role in representing theatrical time-space, both by creating the temporal-spatial environment required within the drama and by signaling shifts in time and space, which facilitates audience comprehension and emotional engagement. Psychological time-space is a vital component of theatrical time-space and holds particular significance in modern drama. As discussed in the previous chapter, this chapter explores the relationship between stage lighting and the expression of psychological time-space.

3.1 The Development of Stage Lighting and Its Contribution to Psychological Time-Space

Initially, stage lighting served merely as a functional illumination tool. For a long period after the emergence of drama, performances relied on natural light or, for nighttime shows, the burning of torches and candles. Audiences understood the alternation of day and night, the passage of time, and the changing locations of the narrative solely through actors' performances and scene transitions. Lighting at this stage could not guide audience perception; viewers relied on their own life experiences to mentally supplement the transformation of time and space.

With the advancement of dramatic arts, technological progress, and rising aesthetic standards, lighting became increasingly integrated into theatrical creation. As color, intensity, and coverage became easier to control, stage designers began to use lighting to mimic natural light, employing effects to represent indoor and outdoor environments, sunrise and sunset, storms, and landscapes. This enabled the visualization and transformation of stage time-space, helping audiences better perceive narrative developments. Particularly during the late 19th and early 20th centuries, the heyday of naturalistic drama, lighting combined with illusionistic scenery to create conditions for realistic stage representation.

However, as naturalistic drama reached its extreme, opposition emerged. Artists such as Swiss designer Adolphe Appia and British designer-director Edward Gordon Craig challenged naturalism and established new theatrical perspectives. Adolphe Appia, for example, emphasized the integration of lighting with actors' spatial movements and music, advocating for a continuous and harmonious effect. He conceptualized lighting as a visual analog to music, expressing the inner emotions of drama. This liberated stage lighting from strict naturalism and established a new expressive design philosophy, focusing on the conveyance of artistic emotion. Adolphe Appia is thus regarded as the "father of lighting design" (Hu, 1985).

The development of stage lighting illustrates a gradual enrichment of its function, evolving from basic illumination to the recreation of everyday life, and eventually to the expression of dramatic emotions. Later, Josef Svoboda's concept of "psychological modeling space" further enhanced the expressive capacity of lighting for psychological time-space. Svoboda advocated for the creation of

spaces that dynamically evolve with dramatic action and character psychology, achieving a high degree of synthesis among space, time, and movement. He stated:

"Psychological modeling space is a variable three-dimensional space capable of responding flexibly to the rises and falls of the dramatic action's psychological pulse. This concept embodies the integration of time and space, as well as the integration of time, space, and movement. Stage sets are not merely visual compositions but consist of multiple factors, including shape, color, speed, and rhythm—all elements governed by actors. These factors enter into a dynamic interaction with performers, adapting to the development of action, emotional progress, thought processes, and dramatic lines." (Hu, 1985)

Since then, stage lighting has increasingly participated in shaping and expressing psychological time-space. The conceptual evolution of lighting design has, in turn, facilitated modern drama's capacity to construct psychological time-space. Contemporary dramatists pay growing attention to the use of lighting in the formation of psychological time-space, highlighting the mutually reinforcing relationship between the two.

3.2 Key Characteristics of Stage Lighting Art

Stage lighting's significant role in representing psychological time-space stems from its flexibility, plasticity, and expressive richness.

Its flexibility derives from precise controllability: each lighting instrument can be manipulated via a control console according to the designer's requirements. Changes in lighting cues can align closely with the dramatic action, offering instantaneous control over stage conditions. If one conceptualizes theatrical time and space as two axes, each lighting change can be seen as a point on this coordinate plane. Transformations in lighting effects can complement actors' performances, shape the required psychological time-space, and facilitate seamless transitions between psychological and environmental time-space, providing a high degree of freedom and fluidity.

For example, in the Beijing People's Art Theatre production of *Death of a Salesman*, when Willy Loman recalls his past affair with another woman, a separate lighting zone representing this memory is illuminated while the physical space dims. The stage instantly transitions into Willy's psychological time-space, and once the scene concludes, the memory's lighting fades, returning the stage to real-time

space. Such rapid and flexible temporal-spatial shifts are beyond the capability of sets or other stage elements, underscoring lighting's unique ability to represent psychological time-space in real time.

The plasticity of stage lighting lies in its remarkable capacity for visual shaping. Lighting provides a rich repertoire of design techniques: variations in brightness, color changes, repositioning, adjustments of beam size and aperture, pattern transformations, and selective illumination zones can all be achieved through the manipulation of lighting instruments. In contemporary theatre, the widespread use of intelligent, computer-controlled lighting fixtures has further expanded these possibilities. Color, projection position, beam size, light quality, and pattern can now be altered with ease, allowing a single light to serve multiple purposes and enabling highly flexible, nuanced effects. Such versatility significantly enhances the ability of lighting to shape psychological time-space.

In the musical "Crazy for You", (Figure 3&4) Bobby, a young man with a passion for drama, gives up his inheritance as the heir of a banking family to seek employment at the renowned Zangler's Theatre. After a clumsy performance, he is ruthlessly rejected by Zangler. Disappointed and frustrated, Bobby is further criticized and nagged by his fiancée who comes to force him into marriage and his mother who urges him to take over the family business. Annoyed, Bobby longs for his own pursuit and career. At this moment, the music suddenly changes, and the stage shifts from the setting of "the street outside Zangler's Theatre at night" to Bobby's inner world. As shown in Figure 3, the stage imitates real life, and the lighting effect of the night street rapidly changes. The overall light intensity weakens, and a distinct top light shines vertically down, illuminating only Bobby. Bobby begins to sing about his inner dreams. He hopes to one day become a true actor and shine on the stage. The lighting designer, in coordination with Bobby's singing, transforms the scene into the lighting effect of a real stage performance. Under the pink light, Bobby is surrounded by numerous dancers, shining brightly and pursued by everyone, freely pursuing his artistic dreams, as shown in Figure 4. The lighting designer uses the movement of various stage elements such as light intensity, color, beam, and position, combined with the form of song and dance music, to complete the transformation from the setting environment to the inner world and shape and express Bobby's inner world. It visually and intuitively presents to the audience Bobby's inner thoughts of becoming a highly regarded artist through his own efforts and his longing for a carefree life as an artist. This example is a comprehensive application of

using the movement of light to represent the inner world, fully demonstrating that the movement of light can effectively complete the task of transforming time and space and expressing the inner world.

The expressiveness of stage lighting builds upon its flexibility and plasticity. Lighting functions as the “brush of the mind,” capable of translating psychological time-space into visual forms that are directly perceivable by the audience. By doing so, it resonates with the viewers’ inner world, eliciting emotional and cognitive responses. The language of light is rich, delicate, and evocative; a single beam can convey a character’s internal struggle, evoke memory, or even suggest the presence of a lost soul. This simplicity and efficiency make lighting an ideal tool for shaping psychological time-space.

In constructing psychological time-space, stage lighting plays a further critical role by facilitating audience engagement and emotional resonance. Contemporary audiences increasingly desire an active role in interpreting the performance, seeking to follow a character’s mental processes and to form personal interpretations. As viewers perceive the psychological states of characters, they often draw upon their own experiences to generate imaginative associations and self-reflection. Additionally, audiences have grown accustomed to relying on visual representation to satisfy their appreciation of dramatic narratives (Ding, 1985). Stage lighting effectively mobilizes the audience’s visual perception and imaginative faculties, thereby enhancing the impact of psychological time-space.

Thus, stage lighting contributes to psychological time-space on two levels. First, it externalizes the internal psychological space of characters, transforming abstract mental states into visible, tangible images that allow the audience to directly engage with the drama. Second, it enables the audience, through these visual cues, to empathize with the characters’ inner experiences, facilitating deeper understanding of the narrative. In this sense, lighting acts as a bridge that unites performers and viewers within the same psychological time-space.

Foundational Factors for Representing Psychological Time-Space through Stage Lighting

The Script

The script constitutes the fundamental basis of theatrical creation. As the primary creative work, it provides the premise and foundation for subsequent secondary creation. For lighting designers, the script is the foremost reference; reading it allows designers to mentally associate textual content with preliminary visual impressions. These impressions, though often vague, constitute the initial

“inspiration” that guides lighting design. Subsequent analysis involves a detailed examination of plot, thematic content, historical context, genre, characters, spatial settings, temporal transitions, conflicts, and event relationships. This process establishes the foundational framework for representing psychological time-space through lighting. Designers can identify character-specific psychological spaces, analyze their emotional and cognitive states, and form preliminary design concepts aligned with the dramatic narrative.

Directorial Interpretation

In contemporary theatre, the director-centered approach is widely recognized. Analogous to a conductor orchestrating a symphony, the director integrates actors' performances, stage design, lighting, costumes, makeup, props, and multimedia effects to achieve a coherent and stylistically unified production. Director Wang Xiaoying asserts:

"Psychological time-space fundamentally does not originate from the characters' psychological activities within the script, but from the creative psyche of the theatrical creator, represented by the director"(Wang, 1995).

This statement highlights the essence of psychological time-space as the creator's intention to convey deeper layers of thought and emotion to the audience. Directorial interpretation establishes the foundation upon which lighting design translates these ideas into visual form, ensuring that lighting effects align with the director's conception of character and emotional space.

Audience Emotional Needs

With the evolution of theatre, audience expectations have changed considerably. Modern viewers increasingly seek an active interpretive role, desiring access to characters' mental processes and forming personal judgments about their motivations. Simultaneously, audiences draw upon their experiences to engage in imaginative reflection (Ding, 1985). Stage lighting, as a visual medium closely integrated with performance, becomes crucial in fulfilling these needs. Lighting serves as a bridge connecting the script, directorial intent, and audience perception, enabling the audience to grasp both the narrative and its underlying emotional significance.

4. Actor Performance

While the script and director provide structural and conceptual frameworks, the ultimate realization of theatre relies on actors. Actors directly mediate the audience's visual and auditory experience, and stage lighting, with its flexibility and plasticity, must adapt in real time to actors' lines, movements, and spatial positioning. Psychological time-space is largely shaped by actor performance, and lighting must respond to this dynamic. Conversely, the atmosphere created by lighting can enhance actors' embodiment of characters, enriching the representation of psychological space.

Stage Design

Stage and lighting design constitute two macro-level elements of theatrical visual art that must operate in harmony. Without lighting, even the most elaborate set remains unseen; without sets, lighting loses a spatial medium through which to articulate form. Modern stage design not only constructs the physical environment but also contributes to the expression of psychological space. As Svoboda emphasizes, stage design should be adaptable, evolving in concert with dramatic action and character psychology. Lighting must coordinate with these changes, rendering psychological time-space perceptible.

In conclusion, theatre is a multidisciplinary art form, and stage lighting alone cannot effectively shape psychological time-space. Lighting design must serve the drama, the performance, and integrate with the script, director, design, and actors. Yet lighting remains indispensable: it translates character psychology into visible form, bridges creators and audience, and facilitates the emotional reception of drama. Its ultimate function is to convey human emotion, rendering it the visual language that connects the creators' intent with the audience's perception. As audiences' comprehension and appreciation of time-space relations advance, lighting and its technological innovations will continue to expand the expressive possibilities of psychological time-space. Nonetheless, regardless of technical advancement, the central principle remains—lighting must convey emotion to achieve its full artistic potential.



Figure 1: *The hunter recounts the grandeur of the capital to Yohei.*



Figure 2: *Yohei's imagination of the capital.*

(Figure 1&2 Image from the author and the Central Academy of Drama, Beijing, China. All rights reserved)



Figure 3: *Crazy for You*



Figure 4: *Crazy for You*

(Image courtesy of the author and the Central Academy of Drama, Beijing, China. All rights reserved)

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