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THE VIRTUAL STAGE: RETHINKING THEATER SPACE THROUGH ONLINE GAMES

ABSTRACT

This study investigates the theatrical space in digital environments, with a particular focus on online performances produced during the COVID-19 pandemic. While theater has historically relied on physical settings to structure audience-performer interactions, digital performances challenge conventional notions of space. In contrast, online games maintain a strong connection to the notion of space and architectural discipline by incorporating 3D worlds. Based on performance theories linking theater to games, this study develops an interdisciplinary relationship among theater, online gaming, and architecture to construct a framework for understanding digital performance space. The methodology employs a comparative case study, analyzing five online theater performances alongside representative examples from digital games. Based on a theoretically grounded analytical framework, the spatial components and configurations of digital performances are investigated through four criteria: host performance space, ghost performance space, host audience space (interactions), and ghost audience space (sense of community). Findings indicate that online theater's fragmented virtual and real spaces fail to foster a sense of community, which is vital for theatrical events. Conversely, online games merge real and fictional elements into collective, immersive virtual environments, offering a stronger model for online theater spaces.

Keywords: Theater Space, Online Theater, Virtual Space, Theater Architecture, Online Game Spaces

EXTENDED ABSTRACT

Introduction

Watching and being watched are frequently regarded as the fundamental components of theatrical events and spaces. Architecture, as a discipline, has produced a diverse range of theater spaces, but recently, digital technologies have developed as the platforms to watch and to be watched. This transition accelerated with the COVID-19 pandemic in 2020, and experiments concerning theater's presence in the digital world became widespread. This study addresses the necessity to construct an architectural understanding of online theater space and to borrow spatial approaches from other performative practices with stronger virtual spatiality. Based on Victor Turner and Richard Schechner's performance theories that connect theater and performance to the concepts of play and game, the study suggests referring to the online gaming culture's strategies of engaging with architecture and inhabiting digital space for interactive events to develop the notion of online theater space.

Purpose and scope

This study aims to theorize and critique the notion of theater space in the digital era. It asks, "How is theater space constructed in virtual environments and in what alternative ways can it be constructed?" It refers to online gaming, which maintains a strong relationship with architecture in the digital realm, to adopt its spatial structures and immersive qualities. Overall, this research aims to develop the interdisciplinary relationship among theater, online gaming, and architecture. More specifically, it takes a step toward the theorization of architecture in the virtual world by questioning the concept of space in digital events. As it speculates on how architectural discipline can be involved in the digitalization of theater, the study intends to contribute to the scholarship of theater spaces and architecture-theater relations. The scope is limited to online theater performances created during the COVID-19 pandemic and accessible for retrospective analysis, as well as representative examples from digital games, with attention to the spatial components and interactions, rather than the fictional content.

Method

The study employs a comparative case analysis informed by an interpretative approach and grounded in a theoretically constructed analytical framework. It is structured into two parts. The first is the analytical framework that determines the parameters to examine what the theater space is evolving into. To construct this framework, the study overviews the historical evolution of theater spaces, critically evaluates its enduring properties across different contexts, and synthesizes theories of Erica Fischer-Lichte, Gay McAuley, and Clifford McLucas about the complexity and multidimensionality of theater space. Based on these, it superimposes the dualities of audience-performer spaces and physical/real (host) space - play's fictional (ghost) space to determine the analytical parameters as host performance space (stage environment), ghost performance space (fictional space), host audience space (audience interactions and engagement) and ghost audience space (collective sense of community and co-presence). In the second part of the study, this framework is applied to a comparative case analysis to track how the components and essence of theatrical space are reconstructed in the digital world. Here, primarily the five selected online theater performances (*Macbeth Mutfakta, Watching Rosie, LAG: A Zoomsical Comedy, Citizen Detective and Alice: A Virtual Theme Park*) are analyzed through video recordings, promotional texts produced by the creators, reviews, and related screenshots. The comparative analysis continues by examining online games with a broader perspective, elaborating on it as a single case. The analysis ends with a discussion that provides a broader perspective by comparing the cases of online theater and online gaming.

Findings and conclusion

The historical evolution of theater buildings demonstrates that theater space's essence is the immediate contact and interaction that constitute a sense of community. The physical space is composed of audience and performance spaces that bring the participants together in physical/real (host) and fictional (ghost) layers to establish this sense of unity. In the case analysis, it is found that in the online theater performances held during COVID-19, the performer and audience spaces become fragmented, and fictional space and sense of community are constructed with digital tools. Although the communication platforms compensate for the architectural space by bringing people together, they fail to generate a strong sense of community as the performance space becomes fragmented into the real and digital realms. Conversely, in online games, the performance's real (host) and fictional (ghost) spaces remain in the digital universe since the participants expand to this medium via virtual characters and engage with 3D spaces interactively. In contrast to the fragmented spatiality of online theaters, the integrative and interactive spaces of online games provide an experience similar to real-life theatrical events. These findings show that online theater performances do not work properly when the real (host) and fictional (ghost) spaces are fragmented in real and virtual realms. Compared to the communication software, virtual universes offer a more unified, collective, interactive environment for performance. Given that space is an essential element of theater, 3D spaces of the game worlds should be explored and experimented with by performance artists and architects to house authentic performances.

Keywords: Theater Space, Online Theater, Virtual Space, Theater Architecture, Online Game Spaces

INTRODUCTION

This study speculates on the notion of space in the digital performance and art practices, focusing on the transition of theater to the virtual realm. Etymologically derived from the Greek roots *thea*, meaning "a sight," and *theasthai*, meaning "to view" (Schechner, 1988: 337), theater is grounded in the actions of watching and being watched. Theater director Peter Brook (1968: 7) also denotes this in the widely appraised introductory lines of his book, *The Empty Space* by saying: "I CAN take any empty space and call it a bare stage. A man walks across this empty space whilst someone else is watching him, and this is all that is needed for an act of theater to be engaged." Currently, digital technologies offer various ways for people to watch and be watched. Social media and communication platforms emerged as open, decentralized, participative, and interactive tools, driven by developing Web technologies (Zheng & Lee, 2023), enabling various performative events to be seen by millions. Hence, theatrical art that is accustomed to being strongly engaged with material space gained an unclear presence in this new world.

Whereas the performance arts have been influenced by communication technologies and digital tools since the 1980s, as videos, satellites, and fax machines were used in art and performance (Masura, 2020: 2), the videoconferencing and telematic performance techniques have mainly been used to create hyper-places or multilayered presences within the real-life performances (Masura, 2020: 239). The experiments concerning theater's presence in the digital world became widespread in 2020, in line with the rules and regulations regarding the COVID-19 pandemic. For several years, many performance events were held online and reached their audience through online communication software such as Zoom or interactive live-stream platforms such as YouTube or Instagram. Even though the pandemic pushed theater practitioners to explore alternative ways to come together with the audiences, these experimentations decreased drastically with the end of the pandemic.

Given the importance of existing in virtual environments for art to resonate in a globalized and digitalized world, or during challenging situations like pandemics, it seems important to question the online presence of theater space. Research on digitalization of theater accelerated after COVID-19, yet most studies focus on the opportunities and challenges that digital media and software pose to performance and its industry (Brilli et al., 2023; Chatzichristodoulou et al., 2022; Karam & Naguib, 2022). Some discuss the spatiality of online theater, but mainly conceptually, addressing liveness and presence (Bay-Cheng, 2023) or using anthropological (Sterian, 2021) and dramaturgical (Fuchs, 2022; Liedke & Pietrzak-Franger, 2021) lenses. What remains underexplored is an architectural understanding of space and the borrowing of spatial approaches from other performative practices with stronger virtual spatiality. To fill this gap, this study aims to theorize and critique the notion of theater space in the digital era by asking, "How is theater space constructed in virtual environments?" Also, to interrogate how digital theater space can be developed, the study suggests referring to other performative practices that maintain a strong relationship with architecture in the digital realm. Thus, the study also asks, "In what ways can the spatial structures and immersive qualities of other digital events inform the reconfiguration of digital theater spaces?"

In contrast to theater, game-playing activity exists in the digital world very effectively and is strongly connected to the architectural discipline. Architectural practice engages with the game and film industries or the Metaverse by designing virtual environments, creating NFT designs, or building digital assets without the constraints of the physical world (Sun, 2021). In other words, virtual spaces of the digital world are developing as architectural discipline's new concerns. This study suggests that the online gaming culture's strategies of engaging with architecture and inhabiting digital space for interactive events, where people can watch and be watched, could be adopted by theatrical arts. The foundation for introducing gaming culture's spatial power in the digital world to theatrical arts is formed by theories that link theater and performance to the concepts of play and game. One of these prevalent theories belongs to the anthropologist Victor Turner. In the seminal book *From Ritual to Theater*, the author dwells on the concepts of game and play while discussing the common social functions of ritual and theater.

According to Turner, symbolic genres such as ritual, theater, or game involve a serious play that enables society to exceed the boundaries and rules of reality to produce new meanings (Turner, 1982). Turner's theory also had an impact on the studies of the renowned performance theorist Richard Schechner. According to Schechner (1988: 8), performance is an inclusive term, a continuum that includes rites, play, games, sports, entertainment, art-making, or ritualization, and theater is only a node in this continuum. These various categories share some basic qualities including "a special ordering of time, a special value attached to objects, non-productivity in terms of goods, [and] rules" to constitute a symbolic communication among people. Turner and Schechner's arguments also apply to online games, where the fun-based activities change the flow of daily life, as they have their own time span, attach values to virtual objects, are non-productive, and comprise specific rules that make attending challenging and fun. Besides, online role-playing games are specifically associated with theater for creating characters, depicting any imaginable space, performing improvisational scenes, and producing a fictional world (Mackay, 2001; Nellhaus, 2017; Newman, 2005).

Tobin Nellhaus examines whether online role-playing games qualify as theater, arguing they do by defining theater as a replication of society's ontology. The author also claims that theater and online role-playing games stand out from other modes of dramatic performances because both "involve a space meaningfully shared by both the audience and the performers" (2017: 357). This shared space commonality makes architecture a significant point of intersection for online games and theater. This study develops an interdisciplinary relationship among theater, online gaming, and architecture by conducting a comparative analysis of the spatial components and configurations of online theater and digital games, and through that, it proposes a framework for understanding space in digital performances. Overall, this research takes a step toward theorization of the architectural discipline's existence in the virtual world by questioning the concept of space in digital events. Moreover, as it speculates on how the architectural discipline can be involved in the digitalization of theater, the study intends to contribute to the scholarship of theater spaces and architecture-theater relations as well.

METHOD

This study employs a comparative case analysis informed by an interpretative approach and grounded in a theoretically constructed analytical framework. The case study approach follows the definition provided by Groat and Wang, who adapt Robert Yin's framework for architectural research. According to Groat and Wang (2013: 418-419), "a case study is an empirical inquiry that investigates a phenomenon or setting (...) especially when the boundaries between phenomenon and context are not clearly evident." This adaptation allows for the phenomenon of performance space to be studied within its unclear virtual context. In line with Groat and Wang's framework (2013: 418-419), this study examines multiple cases, includes multiple sources of evidence, theory development, and analysis of spatial components across cases.

The study is structured into two parts, the first one being the analytical framework that determines certain parameters to investigate what theater space is evolving into and what it can learn from online games. In doing so, it primarily overviews the historical evolution of theater spaces to critically evaluate their enduring properties across different contexts. Secondly, it synthesizes perspectives from various leading performance theorists, namely Erica Fischer-Lichte, Gay McAuley, and Clifford McLucas, who discuss the spatial dimensions of performance and conceptualize theater space not only as a physical entity but also as a socially produced construct. The dualities of audience-performer spaces as well as physical/real (host) space - play's fictional (ghost) are explained based on these theories and utilized to establish the analytical parameters as: host performance space (stage environment), ghost performance space (fictional space), host audience space (audience interactions and engagement) and ghost audience space (collective sense of community and co-presence).

In the second part of the study, this framework is applied to the comparative case analysis of selected online performances and online games. This part of the study is presented in three sub-sections. The first one presents the analysis of the five selected online theater performances: *Macbeth Mutfakta, Watching Rosie, LAG: A Zoomsical Comedy, Citizen Detective, and Alice: A Virtual Theme Park*. When selecting the theater performances for examination, the scope was limited to those produced and performed during the pandemic period and those for which data were accessible. According to Yin, in a multiple-case study, every case should serve a specific purpose rather than replicating the same purpose (Groat, 2013: 432; Yin, 2018: 102, 103). Therefore, from within this limitation, the performances that utilize different virtual-real space configurations were selected to provide different perspectives. In line with the research questions, the spatial compositions of the selected examples were examined through video recordings, promotional texts produced by the creators, reviews, and related screenshots. Rather than focusing on the narrative content or fictional setting of the performances, the analysis centered on visuals and expressions—such as audience comments and video footage—that reveal the spatial components and nature of interactions. The comparative analysis continues with a second sub-section that adds online games and the Metaverse as another case. Since the focus of the study is on theater, the examples in this section have been examined with a broader approach compared to the previous one, and the concept of online games and the Metaverse is interpreted as an individual case. Again, the focus was placed on how the virtual game spaces are constructed, supported by illustrative examples that demonstrate this spatial configuration. The last sub-section is the discussion that provides a broader perspective by comparing the cases of online theater and online gaming. Through this dual analysis, the study interprets how the use of space in online games can inform theater's connection to architecture in virtual worlds.

ANALYTICAL FRAMEWORK

It seems essential to understand the historical evolution of theater space while scrutinizing its transformation in the digital age. Throughout history, theater has located itself in distinct spaces. The most ancient and enduring artifacts associated with theater, ancient Greek and Roman theaters, have served as models in various eras and retained their usability. The fundamental aim of the ancient theater and its structures was to assemble individuals in a communal event, fostering a sense of unity with the divine (Tidworth, 1973: 8; Wiles, 2003: 12). In the Middle Ages, the liturgical drama replaced antique theater culture and theater performances favored going to public places rather than drawing the public into a specific place. From the late Middle Ages until the early Renaissance era, theater was performed in distinct spaces, including churches, streets, marketplaces, or city squares (Tidworth, 1973). Utilizing other spaces and having strong connections to daily life are also present in many non-Western cultures, namely Balinese, African, and Turkish theaters (And, 1992; Tekelek, 2010; Schechner, 1973: 22; IW Dibia, 2004: 9; Okagbue, 2007). As opposed to Medieval and non-Western theater cultures' fluidity in inhabiting other spaces, the convention of enclosed theater structures originated in Renaissance Europe and spread all over the world to obscure the cultural diversity of theater space. Various adaptations of this architectural model were built with varieties in the urban context, decorations, styles, or architectural programs (Tidworth, 1973; Carlson, 1989; Wiles, 2003). In the 20th century, avant-garde artists criticized this conventional model for limiting the interactions between art and life, or performers and spectators. Instead, avant-gardists advocated for spaces that would bring audience and performers closer (Artaud, 1958/1938; Tidworth, 1973; Hannah, 2018; Gropius, 1961). This experimental relationship with space established in the early 20th century subsequently facilitated the creation of more flexible spaces, such as the black box or studio theaters (Tidworth, 1973: 206-209). As a long-term consequence, the contemporary understanding of theater space does not adhere to a specific typology, but diverse approaches coexist to respond to global concerns about ecology, aligning with mobility and modularity

tendencies of architecture, immersing into urban and daily spaces, or focusing on the potential of digital tools.

Throughout these transformations, the persisting essence of theater space comes to the fore as gathering the participants together. Erika Fischer-Lichte (2008: 32) supports this by claiming that "the bodily co-presence of actors and spectators enables and constitutes performance." Similarly, Nadja Masura (2020: 41) claims that the most essential feature of the theater is the live togetherness which is enabled by a shared place. Therefore, we can highlight the immediate contact between the audience and performers as well as the sense of community between them as the essential quality of theater and underscore architectural space as what enables those. In online performances, the participants are not physically together, and the communicative power of media tools compensates for architectural space. The performance theorist Philip Auslander (2023: 24) claims that in mediatized performances, the sense of community is dependent not on the liveness of the performance but of the audience. According to the author, a sense of community can be created in online events when the audience interacts with each other for instance, through chat. Although Auslander's statement may seem to contradict Fischer-Lichte and Masura's arguments, all of them regard togetherness or sense of community as the essence of the live performance experience, with the physical or digital space acting as a framework that enables immediate contact and interaction.

The architectural space incorporates certain physical and functional components to establish a sense of community and togetherness. Gay McAuley (2000) dwells on the functions of theater space and claims that the theater building (the social reality of theater space) is composed of the audience, practitioner, performance, and rehearsal spaces. The audience spaces are the entrances, foyers, stairs, cafes, box offices, and the auditorium, while the performer spaces are the backstage and the stage. Audience and performer spaces intersect at the performance space, in which "the worlds of the audience and actor interconnect" in this "magical area" (Mackintosh, 1993: 144). This magical area is the place where, according to Schechner (1988: 8), the participants come together in "a special ordering of time, a special value attached to objects, non-productivity in terms of goods, rules."

Nevertheless, as the digital performance spaces lack those physical components, we need to look for further spatial components to define our analytical criteria. Theater cultures without established, permanent theater structures demonstrate that theater space has a special functioning beyond these components. Medieval, non-Western, or site-specific theaters transform other spaces as the event's alternative time and the intrinsic body of rules constructs a temporary space to superpose upon the physical spaces. This points out a duality in performance space that is exceptionally apparent in theater. Theater inhabits a physical architectural space and projects fictional spaces on it, represented by scenography or depicted by the performers' bodies. McAuley (2000: 27) refers to this as "the constant dual presence of the physical reality of the performance space and the fictional world or worlds created." Similarly, Masura (2020: 41) claims that "place is doubly present in theater" as the physical location of the event and the fictional location of the play. Moreover, Clifford McLucas, an interdisciplinary artist specializing in site-specific productions, explicates this duality as an overlay of the host – the extant architecture and the ghost –brought to the site temporarily (Pearson, 2010: 35). The host and ghost may conjure, confront, or ignore each other, but in all cases, "the spectator develops an interpretation of what she sees and understands of the two" (Pearson, 2010: 38).

When looking at digital performances, it seems essential to distinguish the fictional and real spaces and observe what they turn into or how they relate to each other. This framework can be further detailed by overlaying the components of the physical spaces with the concepts of host and ghost (Figures 1, 2). In a conventional theater space, the play inhabits the stage as the host and projects its fictional-ghost spaces here. The auditorium is where the spectators use as the host space. Moreover, Auslander's emphasis on the sense of community among spectatorship as the basis of liveness tells us that the audience has its own ghost

space. As the spectators come together in the auditorium and see each other watching the performance, their perception and experience of the space alter; thus, this communality creates the ghost of the audience space.
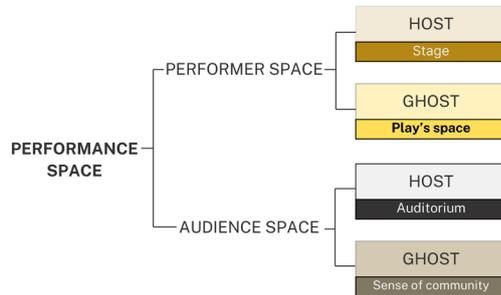

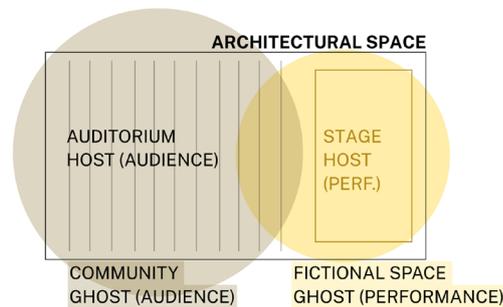**Figure 1.** The components of the performance space

Figure 2. Components of the performance space on a plan scheme of a conventional theater space

Accordingly, the components of the performance space will be evaluated here as the host and ghost of both performer and audience spaces. To elaborate, the case analysis will focus on four criteria with relevant questions as follows:

• Host performer space: Where do the performers act?

• Ghost performer space: How is the fictional space constructed?

• Host audience space: Where are the audiences positioned and how do they interact with the play and each other?

• Ghost audience space: How is the sense of community among the spectators constructed?

FINDINGS

The Use of Space in Online Theater During the Pandemic

With the COVID-19 outbreak, many performing arts institutions shared 2D or VR recordings of their performances. However, the lack of engagement and simultaneity pushed artists and institutions to look for other ways to reach their audience and experiment with interactive communication tools. Primarily, the artists tended to use social media platforms, such as YouTube and Instagram, to make live streams while interacting with the audience through comments or by inviting them to the stream. For instance, the theater company Kadro Pa performed their experimental play *Macbeth Mutfakta* through a YouTube live stream. The performance took place in a house, and the performers became visible to viewers via YouTube. Although the audience remained unseen, they communicated among themselves and with the performers through the chat section, as seen in Figure 3. Here, both the host and ghost of the performance space remained in the real world, in the performers' house. However, the host and ghost audience spaces are the YouTube interface, given that they watched the performance through it, and the sense of community is created by the chat section.

Figure 3. Kadro Pa's Live Broadcast of *Macbeth Mutfakta* and audience reactions in the chat section

Video conferencing has also been a prominent way to perform online theater because it enables all the participants to share video and sound, which supports interactivity. In addition to broadcasting the existing works on these platforms, some performances were explicitly designed for this medium. For instance, *Watching Rosie* by Original Theater Online portrayed the communication between an elderly woman experiencing dementia and her granddaughter through video chat during the lockdown, and is performed using a video chat program (Official London Theater, 2020). Another example was *LAG: A Zoomsical Comedy*, a musical comedy written to be performed over video conferencing and similarly staged the characters' experience of the "new normal" (Kime, 2020). As seen in Figure 4, the audience was not visible, and they passively witnessed the incidents in these performances, but some other performances utilized the reciprocity of video conferencing for more interactive experiences. To exemplify, the production *Citizen Detective* centered around audience participation, with viewers directed by a narrator to collectively solve a crime. Participants were assigned tasks and occasionally grouped into smaller breakout rooms to gather evidence and collectively deduce the show's conclusion (Geffen Stayhouse Theater, 2020). Figure 5 demonstrates that the participatory nature of the performance required the videos of spectators to be seen as well. Additionally, in some online performances, the virtual medium constructs the fictional space. For instance, *Alice: A Virtual Theme Park* is designed as an interactive multimedia experience that merges the videos of performers with virtual spaces (Figure 6). In this performance, the audience could not see the performer's real physical locations as they were in front of two-dimensional background images depicting Wonderland (The Family Stage, 2020; Bennet, n.d.).
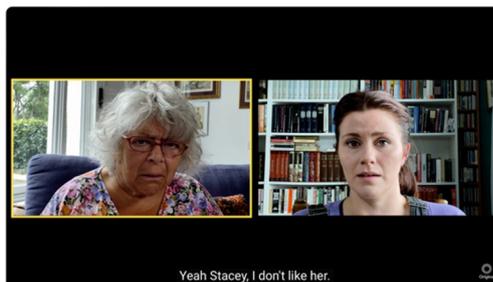

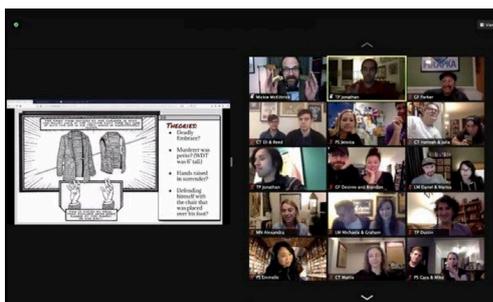**Figure 4.** A scene from *Watching Rosie* performed by Original Theater Online

Figure 5. *Citizen Detective* by Geffen Stayhouse Theater and audiences participating via video-call

Figure 6. Digitally produced ghost performance spaces of *Alice: A Virtual Theme Park*

In these performances utilizing videoconferencing, the host performer space remains in the physical-real space. However, the location of ghost performer space varies. Figure 7 demonstrates a graphic representation of our analysis of how the performance space elements are composed in these plays. Similar to *Macbeth Mutfakta*, in *Watching Rosie* and *LAG*, the ghost spaces also reside in the real world since the performers use their daily spaces as the spaces of fiction. In *Citizen Detective*, the audience's contribution to the plot expands the ghost of performance toward the spectators' daily spaces. Conversely, in Alice, the fictional ghost space of performance is constructed in the virtual universe. Moreover, in all these examples, the audiences are brought together and interact via the communication software, thus their host and ghost spaces are these digital tools.
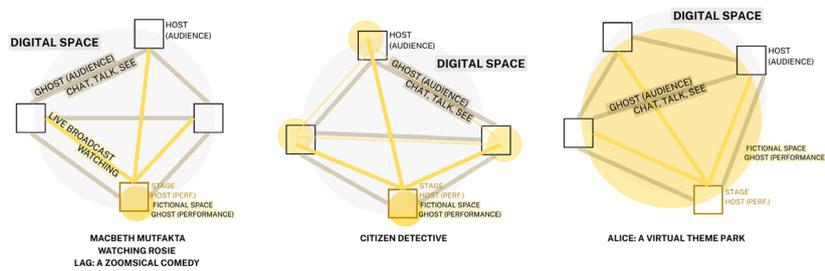

Figure 7. Compositions of performance space elements in the selected performances

Sense of Community in Online Game Spaces

In the virtual worlds, the presence of other users, shared activities, and interactions are regarded as necessary for a meaningful experience. Nellhaus claims that "the sense of presence in online role-playing can be stronger than in traditional theater, because players always interact with other players directly, whereas in most theater today the spectators' interaction with the actors is indirect" (2017: 356). Metaverse and gaming environments encapsulate extensive virtual realms where people can interact with their virtual characters, exhibit their NFT art collections, hang out with their friends, or even visit buildings and attend events (Sun, 2021). For instance, Sandbox is a Metaverse platform that allows users to create experiences, objects, and games in a common virtual land, and people can give concerts, play and watch sports matches, or arrange other performances (Figure 8).

Figure 8. Various performative events in Sandbox Metaverse

The images from Sandbox demonstrate that the participants attend the events in virtual concert halls and sports fields that imitate real-life spaces. According to Nellhaus, the visual scene makes the virtual worlds what they are because the sense of place and space are crucial for embodying these worlds (Nellhaus, 2017: 356). The author also claims that the graphical representations of computer systems enable game developers to create virtual worlds that can depict any imaginable place (Nellhaus, 2017: 346). This is reminiscent of creating the ghost space of a theatrical performance with scenography and acting. Moreover, the visuals of interactive video games are based on 3D digital models, which draws architects to the gaming industry (See for instance Levine, 2024). Patrik Schumacher from Zaha Hadid Architects argues that architects, rather than graphic designers, will soon play a central role in designing virtual environments of video games and the Metaverse since the seamless web of virtual spaces is analogous to a city (Schumacher, 2022). The author claims that with the development of immersive tools, the internet has turned into a space-like platform for social interaction, where people can co-locate, navigate, and encounter.

Figure 9. Somnium Space Builder tutorial

Moreover, in some platforms, game designers create interfaces, objects, or building materials to let gamers co-create a shared universe. For instance, the popular video game Minecraft allows users to design buildings, cities, or topographies using 3D textured cubes. Also, as Figure 9 demonstrates, the virtual game Somnium Space has a space-builder interface like the modeling programs used in architectural design. Thus, the Metaverse has been developing as a free, interactive, collaborative world for distant encounters, and it is expected to be an interoperable system that values everyone's contributions (Sun, 2021). In our case, creating and sharing a common universe collectively is particularly important since it constructs a sense of community and belonging required by theatrical encounters.

Comparison and Discussion

In the online theater events, it is seen that the play spaces are fragmented among various real and virtual spaces. The host performer spaces remain in the real world while the audience spaces are replaced by digital tools such as chat windows or conference grids. The ghost of the audience (sense of community) is attempted to be created through sharing videos and chat sections. However, in his post-COVID interpretation of mediatized performances, Auslander claims that the teleconferencing grid cannot represent something other than itself (2023: 63); thus, these tools cannot give a sense of shared space. Therefore, the fragmentation of the audience and performer spaces seen in Figure 7 and the limited interactive capacity of the digital tools cause a disconnection among the audiences, disabling them from building a strong sense of community.
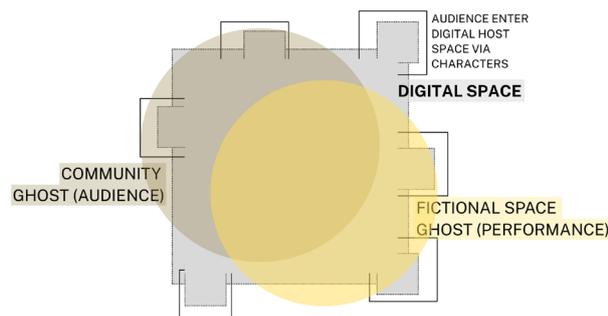

Figure 10. Compositions of performance space elements in online games

In contrast, although online games or Metaverse lack material and sensory components and are disconnected from the human body, the participants interact with virtual spaces and other participants through their avatars. In the collectively designed virtual universes, space and the bodies interacting with and within it meet in the same medium. Nellhaus (2017) implies that online games create a second reality, and here, the expression virtual *reality* seems important to highlight. According to Elizabeth Grosz, virtual reality is an oxymoron, implying that the virtual resides in the real (2001: 89) and vice versa. If reality also resides in the virtual, it can be stated that the performance's both real (host) and fictional (ghost) spaces remain in the digital universe, which becomes its reality (Figure 10). Moreover, the distinction between performer and audience disappears, and all gamers participate in the narrative through improvisation, and they can even build and arrange the shared virtual spaces collectively. The overlap of the host-ghost and audience-performer spaces, as well as the collective and interactive nature of online gaming, generates a sense of community and belonging which is evident in the growing influence of video games.

Table 1. Comparison of online theater and game spaces according to the analytical parameters

	Performer Space		Audience Space	
	Host (Stage)	Ghost (Play's space)	Host (Interactions)	Ghost (Sense of community)
Online Theather	Real spaces (Performer's daily spaces)	Varies: Real-virtual mixed (Videos of performer's daily spaces or created by special effects)	Limited (Through chat or teleconference grid)	Weak, fragmented
Online Games	Virtual universe	Virtual universe,3D digital environments – Ghost space constructed collectively by the users.	Host space constructed collectively. Active interactions through avatars.	Strong sense of community, simultaneous presence in the same space.

The graphic representations of our analysis seen in Figures 7 and 10 as well as the comparison in Table 1 offer a concise overview of how the host and ghost of performances inhabit spaces in online theater and games, allowing for a clearer evaluation. In online theater, the performance spaces mainly remain in the real world, while host and ghost audience spaces were compensated with digital tools. These tools cannot behave like a shared space that establishes a strong sense of community. Instead, they disjoin the performer and audience spaces and fragment the ghost space that provides the audience with a sense of unity. A strong sense of community could not be established in these performances, as the fragmentation of the performance space elements obstructs strong interactions. In contrast, in online games, not only the spaces and performance but also the participants expand to the digital realm via virtual characters or avatars. Instead of viewing the flat interfaces of the communication platforms, the participants engage with 3D spaces interactively. In this way, the players meet in the same *virtual* space to participate in the game. In contrast to the fragmented spatiality of online theaters, the integrative and interactive spaces of online games provide an experience similar to real-life theatrical events. Thus, the oxymoron of virtual reality provides a consistent performance space by holding real (host) and fictional (ghost) spaces at the same level.

CONCLUSION

Theater is a spatial form of art that necessitates the audience and performers to share a space to watch and to be watched. Although this intrinsic quality of theater connects it with architecture, with the development of digital communication, the shift of both disciplines to the digital realm carries their relationship to an ambiguous point. Focusing on this ambiguity, this study scrutinized the spatial composition of performance in digital environments by comparing online theater and digital games through a case study. It demonstrated that while digital theater attempts to maintain interactivity and collectivity through shared virtual presence, it often struggles to reconstruct the architectural and communal depth.

The comparative analysis revealed that online games achieve a stronger sense of community and audience engagement by enabling participation through avatars and the collective construction of virtual space. In this sense, the 3D spaces of the game worlds, allowing multi-way interactions, provide valuable insights for reimagining theater in virtual contexts.

By conducting a comparative analysis of the spatial components and configurations of online theater and digital games, the study addressed a notable gap in the literature concerning their spatial parallels and potential intersections. However, the study's scope was limited to performances created during the COVID-19 quarantine period and to cases for which retrospective data were accessible. Given its aim to examine how the notion of theater space is challenged by the online performances, focusing on a limited number of performances proved insufficient. Thus, future research could expand this inquiry by exploring post-pandemic digital performance practices. Moreover, as the study defines theater and its space through the audience-performance interactions, the qualitative and quantitative data about the spectators' interactions and experience remained insufficient. Thus, future studies may benefit from incorporating broader audience data as well.

Despite these limitations, the findings suggest that integrating architectural thinking into digital theater design could enhance the sense of place and presence in online performances. Although online games and the Metaverse have a major drawback of being devoid of sensory and material components, the currently developing augmented reality (AR) and mixed reality (MR) technologies attempt to resolve this problem via simulating materiality for sensory experience. With these developing technologies, the collective 3D virtual universes are waiting to be explored by theater artists to generate authentic performances beyond the imitation of reality and free from the constraints of the real world. Therefore, further studies are needed to expand this inquiry by exploring how emerging sensory and immersive technologies can facilitate embodiment and audience immersion in digital theater, to enable theater to reclaim its spatial and social vitality within digital realms. The framework proposed by this study, which outlines the components of digital theater space, is expected to provide an architecture-based theoretical foundation for further studies of this kind.

Author's Contributions

The author contributed 100% to the study.

Competing Interests

There is no potential conflict of interest.

Ethics Committee Declaration

This study does not require ethics committee approval.

REFERENCES

And, M. (1992). *Başlangıcından 1983'e Türk tiyatro tarihi*. İletişim Yayınları.

Artaud, A. (1958). *The theater and its double*. Grove Press. (Original work published 1938)

Auslander, P. (2023). *Liveness: Performance in a mediatized culture*. Routledge.

Bay-Cheng, S. (2023). Digital performance and its discontents (or, problems of presence in pandemic performance). *Theatre Research International, 48*(1), 9-23. https://doi.org/10.1017/S0307883322000372

Bennet, S. (n.d.). *Alice - A virtual theme park review*. OX Magazine. https://www.oxmag.co.uk/articles/alice-a-virtual-theme-park-review/ (30.04.2025).

Brilli, S., Gemini, L., & Giuliani, F. (2023). Theatre without theatres: Investigating access barriers to mediatized theatre and digital liveness during the COVID-19 pandemic. *Poetics, 97*, 1-13. https://doi.org/10.1016/j.poetic.2023.101840

Brook, P. (1968). *The empty space*. Simon & Schuster.

Carlson, M. A. (1989). *Places of performance: The semiotics of theatre architecture*. Cornell University Press.

Fischer-Lichte, E. (2008). *The transformative power of performance: a new aesthetics*. (S. I. Jain, Trans.) Routledge.

Fuchs, B. (2022). *Theater of lockdown: Digital and distanced performance in a time of pandemic*. Methuen Drama.

Geffen Stayhouse Theater. (2020). *Citizen detective*. Geffen Playhouse. https://www.geffenplayhouse.org/shows/citizen-detective/ (30.04.2025).

Groat L., Wang, D. (2013). *Architectural research methods* (2nd ed). John Wiley & Sons.

Gropius, W. (1961). Introduction. In O. Schlemmer, L. Moholy-Nagy, & F. Molnár, *The theater of the Bauhaus* (pp. 7-16). Wesleyan University Press.

Grosz, E. (2001). Cyberspace, virtuality, and the real: some architectural reflections. In E. Grosz, *Architecture from outside* (pp. 75-90). The MIT Press.

Hannah, D. (2018). *Event-space: Theater architecture and the historical avant-garde*. Routledge.

IW Dibia, Ballinger, R. (2004). *A guide to the performing arts of Bali: Balinese dance, drama & music*. Tutte Publishing.

Karam, K. M., & Naguib, G. M. (2022). The potentials and challenges of Zoom live theatre during coronavirus lockdown: Pandemic therapy and Corona Chicken (Part Two). *New Theatre Quarterly, 38*(2), 151-171. https://doi.org/10.1017/S0266464X22000057

Kime, H. (2020). *LAG: A zoomsical comedy*. Film Freeway. https://filmfreeway.com/zoomsical (30.04.2025).

Levine, Q. (n.d.). *The role of architects in VR, AR, and video game*. Bergmeyer. https://www.bergmeyer.com/trending/the-role-of-architects-in-vr-ar-and-video-games (12.06.2024).

Mackay, D. (2001). *The fantasy role-playing game: A new performing art*. McFarland & Company.

Mackintosh, I. (1993). *Architecture, actor and audience*. Routledge.

Masura, M. (2020). *Digital theatre: The making and meaning of live mediated performance*, US & UK 1990-2020. Palgrave MacMillan.

McAuley, G. (2000). *Space in performance: Making meaning in the theatre*. Ann Arbor.

Nellhaus, T. (2017). Online role-playing games and the definition of theatre. *New Theatre Quarterly, 33*(4), 345-359. https://doi.org/10.1017/S0266464X17000483

Newman, K. (2005). Albert in Africa: Online role-playing and lessons from improvisational theatre. *Computers in Entertainment (CIE), 3*(3), 1-18. https://doi.org/10.1145/1077246.1077260

Official London Theatre. (2024). *Watching Rosie starring Miriam Margolyes and Amit Shah to be re-released online from 12 November*. Official London Theatre. https://officiallondontheatre.com/news/watching-rosie-starring-miriam-margolyes-re-released-online-12-november/ (30.04.2025).

Okagbue, O. (2007). *African theatres and performances*. Routledge.

Pearson, M. (2010). *Site-specific performance*. Palgrave Macmillan.

Schechner, R. (1973). *Environmental theater*. Applause.

Schechner, R. (1988). *Performance theory*. Routledge.

Schumacher, P. (2022). The metaverse as opportunity for architecture and society: design drivers, core competencies. *Architectural Intelligence, 1*(1), 1-11. https://doi.org/10.1007/s44223-022-00010-z

Sterian, J.-I. (2021). At home on Zoom: Theatre shows during the quarantine time. *Istanbul Anthropological Review, 1*, 33-57. https://doi.org/10.26650/IAR2021-1012

Sun, C. (2021). *Architecting the Metaverse*. Archdaily. https://www.archdaily.com/968905/architecting-the-metaverse (30.04.2025).

Tekelek, N. (2010). Bellek, gelenek ve köy tiyatrosu geleneğimiz. *Tiyatro Araştırmaları Dergisi, 29*, 25-42. https://doi.org/10.1501/TAD_0000000237

The Family Stage. (2020). *Review (from a distance): Alice, a virtual theme park (CreationTheatre, Big Telly Theatre Company and Charisma.AI)*. The Family Stage. http://www.thefamilystage.co.uk/2020/08/10/review-from-a-distance-alice-a-virtual-theme-park-creation-theatre-big-telly-theatre-company-and-charisma-ai/ (30.04.2025).

Tidworth, S. (1973). *Theatres: An architectural and cultural history*. Praeger Publishers.

Turner, V. (1982). *From ritual to theatre: The human seriousness of play*. Paj Publications.

Wiles, D. (2003). *A short history of western performance space*. Cambridge University Press.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.

Figure References

Figure 3: Kadro Pa. (2020, March 27). *Live Broadcast of "Macbeth Mutfakta" and audience reactions in the chat section* [Screenshot]. YouTube. https://www.youtube.com/watch?v=OhgD8UcIE0I&t=2438s (15.03.2021).

Figure 4: Original Theatre Online. (2020, July 27). *A scene from Watching Rosie* [Screenshot]. YouTube. https://www.youtube.com/watch?v=Zzw-8fvhMts (03.05.2024).

Figure 5: Soloski, A. (2020, November 20). *Review: Open chat windows and closed cases in "Citizen Detective"* [Screenshot]. The New York Times. https://www.nytimes.com/2020/11/20/theater/citizen-detective-review.html (03.05.2024).

Figure 6: The Family Stage. (2020, August 10). *Scenes from Alice: A virtual theme park*. The Family Stage. http://www.thefamilystage.co.uk/2020/08/10/review-from-a-distance-alice-a-virtual-theme-park-creation-theatre-big-telly-theatre-company-and-charisma-ai/ (03.05.2024).

Figure 8: Sandbox. (n.d.). *Various performative events in Sandbox Metaverse* [Screenshots]. Sandbox. https://www.sandbox.game/tr/ (11.05.2024).

Figure 9: Somnium Space VR. (2019, October 19). *Somnium Space builder tutorial* [Screenshot]. YouTube. https://www.youtube.com/watch?v=O8l4XA4R_nU (04.04.2021).