

Digital Interactive Spectatorship in *Dream* (2021)

**Digital Interactive Spectatorship in *Dream* (2021): An
Experimental Holographic Adaptation of Shakespeare's *A
Midsummer Night's Dream***

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Abstract

The spectators' role has changed dramatically throughout the years. In the last couple of decades, terms like 'viewers/ recipients' could no longer be accurately used to fully describe the role of those who enjoy a dramatic performance. Digital ontology has led to more accurate descriptions of their role like participants and/or even influencers in the unfolding of the narrative. These descriptions fit users' role in the digital age. Participants are involved in the formation and progression of the events via theories of visual representation and interactive spectatorship. Most studies focused on the varying extent of digital involvement in different theatres but few attempted to examine spectatorship theories within the framework of digital performance tracing the shift of focus from the union between makers/ performers with computers to that between computers and spectators. This paper applies the Digital Interactive Spectatorship theory to 2021 performance *Dream* which is a virtual adaptation of Shakespeare's *A Midsummer Night's Dream*.

Introduction

In the last two decades of the twenty-first century, theatre has transformed significantly with the digital revolution that has affected various aspects of the contemporary individual's life. A new version of theatre has appeared as a new medium that makes theatre relatable for social media users who influence and are influenced by others. Digital interactivity has become the key element which shapes the aesthetics of responsive artworks (Salihbegovic 2013, 16). Most studies focused on the technical aspects of integrating technologies into digital performance in general and digital theatre in particular but few have attempted to examine spectatorship theories within the framework of digital performance. This paper attempts to tackle digital interactive spectatorship theory in modern theatrical form produced in cyberspace. The study traces the shift of focus from the union between makers/ performers with computers to that between computers and spectators to reflect the spectators' interactive role in the digital theatre environment. The study explores what is new in the practice of digital performance and how technology is changing the art of theatre and the roles of those included from within.

The study proceeds in three sections. The first section discusses the Cybernetic Theatre Model, how it works and how it paved the road to Cyberformance set in Cyberspace. The second section defines Cyberformance and the transformation of the spectator's position to an active participant through the Digital Interactive Spectatorship theory. The last section tackles Interactive Holographic Theatre; the latest techno-aesthetic genre of contemporary theatre and applies its characteristics to *Dream* which was a live virtual performance presented by the Royal Shakespeare Company in March 2021 as an adaptation of Shakespeare's *A Midsummer Night's Dream*.

Digital Interactive Spectatorship in *Dream* (2021) --- **Cybernetics**

Originally, cybernetics – in general – was studied with the goal of constructing artificial limbs that could be introduced to the body to function under the brain's control (britannica.com/science/cybernetics). With the technological advancements, a computer's function did not stop at the stage of bare calculations but it was used for processing information used in control systems. With Cybernetic theatre¹, audience's semiotics are processed giving feedback to the actors on stage – through a carefully designed computer program — in order to create knowledge and an epistemological network based on the given data. These epistemological networks are created from collecting thoughts and information over time. As a result, the physical stage is transformed into a multi-dimensional computer, in which the physical theatre and the cognitive virtual conversation spaces between actors and audience play an equal role (Werner 2018, 45). The controller of a theatrical performance was traditionally its stage director or dramatic advisor but Gordon Pask² originally suggested 'a feedback system that interfaces audience and actors and thus lets both of them act as participants in and control the conversation. In a cybernetic system, audience and actors are equally control systems—identified through the degree of interaction' (Werner 2018, 45).

'Cybernetic Theatre' was originally developed as a model in 1964 by Gordon Pask in a monograph entitled 'Proposal for a Cybernetic Theatre'; the only source of information on his project. Usually, members of the audience identify themselves to a certain character/actor or a group of characters/actors and start controlling them by supporting or disagreeing with their actions. As a pre-set rule, direct communication is forbidden due to the complexity of having parallel conversations between audience members and actors which may disrupt the performance. The

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dramatic experience is reconstructed or mutated from one-to-one conversations into a collective process of controlling the characters/actors according to the audience's understanding of the motivations and goals of each character (Werner 2018, 45). Throughout the performance³, spectators direct the improvised performance in real time since there are no lines, only story goals and the instructions necessary to accomplish them. Pask drew an architectural model of a theatre that uses colored lights as data carriers in his project 'Musicolour', developed by his colleague Robin McKinnon-Wood and himself. A combination of the data provided by the audience and computed by the Memory Control and Cueing Program is then displayed for the actors who are the representatives of the audience (2018, 45) to act accordingly. Different audience's responses were sometimes rehearsed before the performance.

In a recent application of the model, Berry College has announced to its users on its website the process of their nontraditional cybernetic theatre as follows:

At the beginning of each show, audience members will have the opportunity to use their personal devices to select the genre of the performance. Genre selections include drama, comedy, and supernatural scenarios. From there, prompts will appear regularly throughout the performance, allowing audience members to guide the plot in real-time. Audience selections are then relayed to actors on stage by the 'Ghost' ... who duals performing the action on stage through their headsets

(<https://calendar.berry.edu/articles/news/2021/cyber-theatre-show>).

Pask succeeded in setting up a cybernetic system for an interactive dramatic performance changing it from a static piece of drama to a changing response-based form of entertainment but his Cybernetic Theatre (entailing the use of colored lights as data

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carriers) was never built. His model paved the road for modern Cyberformance that does not have to be offered in an architecturally or appropriately built Cybernetic Theatre but alternatively takes place in cyber space.

The shift to Cyberformance/ Cybertheatre

The 'Cyberformance' term was first coined in 2000. The location of this new form is cyberspace which Benedikt described in his book as 'a parallel universe created and sustained by the world's computers and communication lines. A world in which the global traffic of knowledge, secrets, measurements, indicators, entertainments, and alter-human agency takes on form' (1992, 1). It is this fluid space that emerges between physical reality and ethereal digital or electric space. Cyberformance exists in cyberspaces made possible by working internet connections like chat rooms, virtual worlds or themed platforms. The time of Cyberformance is a certain limited shared time where performers and audiences come together to experience a live event (Jamieson 2008, 32).

Other than being set in Cyberspace and being live, its characteristics include bringing distributed performers/actors together in real-time via the internet connection. Its full dependence on internet connectivity is due to its telematic nature (Kac 2005, 163). Both traditional theatre and Cyberformance cannot happen without live performance; 'theatre in its poorest form is all about this direct, live communication between the performer and the spectator' (Papagiannouli 2016, 9). The scattered audience may also be virtual, attending in a physical space or both online and on-site. It is worth mentioning that the themes or plots often tackled in Cyberformance do not necessarily have to be digitally related. They can deal with contemporary problems often-relatable to average everyday users. They may also tackle classics with a twist; giving them a modernized treatment by means of post-modern techniques like

pastiche and/or intertextuality. Overall, Cyberformance depends on the same specificities of traditional drama but distinct in that it can only be performed on a networked computer (Selim 2020, 57). Typically, performers and spectators are given a premise from a literary work or just a chapter of it as a guide for improvisation. Reciprocity and audience's interaction are believed to have roots in Brecht's Epic Theatre or the Avant-garde's breaking of the fourth wall that separates the actors from the audience reminding them that what they see is fictional.

With the fall of the fourth wall, spectators are no longer the mere passive recipients whose responses do not exceed simple applause to the playwright's ideas. Spectators are now expected to show some practical engagement in the artistic process. They have human 'bodyless' (Papagiannouli 2011, 276) or virtual existence in the cyberspace and yet are able to claim authority over the performance with a click of their fingers. Jamieson uses the term 'intermedial' to describe this mediated position of the audience. This shift in the spectator's position transforms him/her into a computer-user whose role changes from an observer of the events to an influencer who influences them.

The 'Cyberformance' term perhaps is more inclusive than 'Cybertheatre' since it describes any event being a play, music or dance. Other than this distinction, both share the same characteristics. These are not the only two terms that scholars⁴ have often used interchangeably but a variety of terms including: *Cyber Theater* (Chatzichristodoulou, 2006), *Cyberperformance* (Causey, 2006), *Hyperformance* (Unterman, 2007) and *Virtual Theatre* (Giannachi, 2004) were used throughout the years. With the proliferation of many overlapping and mutating terms in the field of digital performance, the need for a proper taxonomy emerged.

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Digital performance in its very broad definition is any theatre or dance performance that uses a computer. Naturally, many believe that the term is too general and inclusive; since in the last twenty years having a fully non-digital performance is rare to find. Even the lowest equipped theatres, use at least one piece of digital equipment (Salihbegovic 2013, 75-76). So in 2007, Associate Professor of Theatre Arts Stephen Schrum⁵ proposed a new Taxonomy of Digital Performance in a conference in New Orleans to put the base for terms that are used in the field. His taxonomy covers eight different levels across the spectrum starting with the traditional; which does not include any digital aspects to the hypothetical or Interactive Holographic Theatre in which the audience interacts with the virtual world and is fully immersed in its experience.

Traditional	Digitally aided theatre	Digitally assisted theatre	Multimedia theatre	Digitally enhanced theatre	Cyber-adapted theatre	Computer-mediated performance	'Interactive holographic theatre'
Production methods that do not include any digital technology	Production methods include technology, but for pre-production; including computer-aided design for sets and lights, digital audio production, electronic communication. Example: Studio Z's Monologue Show (1995): distant playwrights communicate with directors and actors; event is staged live.	Technical elements are designed with or supplied by digital technology and are noticeably part of the performance. It includes computerized light board, digital sound elements.	Use of technology (though not necessarily digital) as part of the performance, in service to the play/production. Example: In Medea, a reporter does a lead-in to a video clip of Jason speaking. (Performed at Pittsburgh, March 2006.)	Technical elements are designed with or supplied by digital technology and are part of the performance; Effects are produced live or 'rendered in real time' rather than canned, pre-recorded, or preset; Suggests interaction between technicians, actors and/or the technology. Example: VR's The Adding Machine (1995; (Image from the Digital Performance Archive.)	Plays about cyberspace subjects; performed in Real Life (RL)	Performance happens through the computer screen. Interactivity limited to preprogrammed responses. Responses may not influence or be perceived by performers This category includes two types: RL - adapted performance Plays about Real Life (RL); performed in cyberspace And Cyberspace performance Plays created and set in cyberspace; performed in cyberspace Example: NetSeduction by Stephen Schrum	Full immersion in a virtual world with interaction with characters and objects

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Figure 1 Schrum's Taxonomy of Digital Performance

Revised 7/30/2007 following presentation at the ATHE conference.

According to Helen Varley Jamieson⁶, Cyberformance lies within the 'computer-mediated performance' category. In fact, it achieves the seventh level of complexity of digital mediation and one can safely say that it incorporates within its definition the other categories: 'the digitally-aided, digitally assisted multimedia, digitally-enhanced, cyber-adapted, computer-mediated theatre-performance' (2008, 31). However, Schrum's explanation of 'computer based performance' states that 'interactivity is limited to pre-programmed responses. Responses may not influence or be perceived by the performers (<http://www.musofyr.com/taxonomy/taxonomy.pdf>).

Schrum's taxonomy has proved to be useful to the epistemology and etymology used in the field of digital performance especially with the current technological revolution that has led to countless hybrids in the field of digital performance but his classification is based to a great extent on how much technology is involved in the performance and not the subject matter of the play⁷. For some⁸, his proposal attempts to impose a traditional classification on a field where distinctions are blurred (Bruns 2008, 192) since they can easily overlap. Just like total theatre's long-seen ability to absorb all other arts to keep pace with spectators' versatile tastes, the same process of absorption, borrowing, and adaptation (Salihbegovic 2013, 61) applies to digital performance.

Cyberformance has been subjected to its fair share of criticism as it has been accused of dehumanizing 'Total theatre'⁹. The latter term was first coined by László Moholy-Nagy to describe the theatrical practice characterized by the use of the 'multifarious complexities' of different art forms to create a unique art experience that appeals to all spectators' senses

(Moholy-Nagy [1924] 1971: 60). It included the potential of hosting a unification of all the arts (Wagner [1849] 1993: 185) incorporating both different art forms like dance, music, dialogue, costumes ...etc as well as advanced technology in the making of a play. In Moholy-Nagy's writings as well as Oskar Schlemmer's¹⁰ own words, the huge excitement with technology and the utopian hope for the ideal human-machine relationship is seen but it has not been long before the focus on the union between makers/ performers with computers shifted onto a whole new interaction of the audience with the computers leading to Digital Interactive Spectatorship.

Interactive Holographic Theatre

According to Schrum, the last and most advanced category which is the 'Interactive Holographic Theatre' is something we do not have yet or did not have when he first gave his presentation in front of the Association for Theatre in Higher Education in 2007. Interactive Holographic Theatre represents the latest techno-aesthetic genre of contemporary theatre.

Even before the latest announcement of the 'Metaverse', actors/directors had spoken of identifying themselves with avatars; deconstructing the necessity of identifying oneself with a physical body through placing its double in the cyberspace. In fact, the individual in the last two decades has been increasingly defined according to his/her participation and influence rather than simple physical co-presence. The use of virtual performers is believed to be related to an ecological less expensive performance-attending/participating experience.

The interrelation between performers and their computer-generated characters generate what cyber-academics refer to as avatars. The virtual platform of the Second Life¹¹ – where action virtually takes place onstage or in cyberspace - becomes the stage for a live theatrical performance. A performer controls the avatar's actions with an interface; either a mouse and a keyboard

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or an interactive floor mat (Koski 2010, 50). A performer's action often precedes that of an avatar. Theatrically, there are two types of Performer-Avatar relationships: the agent-avatar relationship, where the two form a unit and then the two-way interaction between the performer and the avatar in which an avatar is seen as a distinct character reacting to the performer's action (2010, 50). Holographic theatre may employ agent avatars solemnly or mix counter avatars with actual live actors and/or spectators. Sometimes spectators are even invited to stage (whether physical or cyber) to take part in the performance as actual actors or as representatives of themselves by having their own avatars.

While an actor's presence ceases to exist by the end of a traditional physical play, an avatar as a character remains visible even when the performer stops identifying with it or operating it with an interface: 'Only by logging out of the virtual world does a performer make his/her avatar untouchable for other SL characters' (2010, 54). Thus, an avatar has a longer presence in the virtual world (with changing possibilities) than that of an actual character on a physical stage.

It is worth mentioning that Interactive Holographic theatre is different from popular 3D Hologram projections where a hologram of a departed figure can be shown to the audience with a set pre-recorded song or monologue. One example of this is when Tupac Shakur appeared on stage in April 2012 at the Coachella festival in California and performed. The back-then audience was both shocked and amazed since he had been dead for sixteen years (theconversation.com/abba-and-tupac-in-the-metaverse-how-digital-avatars-could-be-the-bankable-future-of-band-touring-181222).

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Dream: a Live Interactive Holographic Adaptation of William Shakespeare's A Midsummer Night's Dream

In 2021¹², the Royal Shakespeare Company aimed at finding new ways to engage its audience by introducing *Dream: An Interactive Holographic 50-minute play* inspired by William Shakespeare's *A Midsummer Night's Dream*. It enables live audience interaction with actors through the screen. The camera hovers the three dimensional forest as if in a movie and the audience is able to see how E. M. Williams transforms into Puck; the digitally produced avatar.

Figure 2:



The actor playing Puck is seen first in a real life studio before transforming into an avatar on the spectators' screens (theguardian.com/stage/2021/mar/17/rsc-a-midsummer-nights-dream).

Audience members follow Puck through their computer and mobile screens into the generated forest where it meets Shakespeare's other fairies like 'Moth', 'Pease blossom', 'Cobweb', 'Sprites' and battles a storm. They are able to interact directly with the play by lighting the way for the character in the forest through becoming fireflies.



Figure 3:
Audience guide the character in the forest by lighting the way as fireflies

Actors are seen briefly backstage in the studio but most of the Holographic play is performed by avatars of actors in motion-capture suits and animated in real time. It is live-streamed to audiences who interact with the virtual avatars in cyberspace. Characters challenge the norms by reacting live to what the audience does¹³ and so actors and spectators unite as performers in the overall experience. In *Dream's* trailer, founder Robin McNicholas says 'There's space for performers to improvise and for us to allow for happy accidents to occur ... this just hasn't been done in the past' (dezeen.com/2021/03/09/royal-shakespeare-company-dream-marshmallow-laser-feast/). In this case, spectators or influencers are able to feature in *Dream's* virtual world via their laptops or mobile phones. Viewers are able to participate in the play as fireflies that appear on their screens as well as screens surrounding the performers. Thus, they become part characters with a click of their fingers. To interact directly with the performance, audience members pay 10 extra Euros to the originally free admission. The virtual adaptation was scheduled so that audiences all over the world can join the event.

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The show proved to be a success since twenty thousand people from all over the world watched it in three days. There was a degree of daily experimentation – even with music – since the show explored the future of live performance using interactive gaming technology. Spatial audio techniques like those used in real time games were used for immersive formats like Augmented, Virtual and Mixed Reality. Orchestral composer and coder Jesper Nordin used ‘gesturement’ or an interactive music engine which simply allowed audience members to play along to the music and remain in tune and in time. The actors’ movements were daily picked up by their motion-capture suits and fed into the ‘gesturement’ as well to be converted to music that perfectly reflected the actors’ performance and went in harmony with the prerecorded music (quaereliving.com/post/the-royal-shakespeare-company-dream-of-the-future). The collected input generated live music of a particular melody

(audiomediainternational.com/royal-shakespeare-company-interactive-dream-machine/) that changed from one



performance to the other.

The show is considered a convergence of multiple disciplines that easily reach contemporary audience members

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who are accustomed to being active users on social media rather than passive viewers. Spectators experience excitement when the technology behind the show is exposed to them and realize that none of what they see is recorded. The cameras show both the screen with the avatars adventuring the intricate forest along with their human counterparts enacting the drama in real-time motion.

Figure 4:

Spectators are able to see both actor and his avatar simultaneously in real-time motion

Dream is believed to be an unfinished experiment that RSC chose to share with the public at this stage before further enhancement in order to test the wide potential Interactive Holographic Theatre can have. It is a part of a funded research that was born out of the pandemic crisis that hit the world in 2019/2020 and called for more innovative ways to reach physically remote audiences.

Dream is not a typical adaptation of *A Midsummer Night's Dream* but "is created from the DNA of the play" as Lamb writes in her review of the play

(eandt.theiet.org/content/articles/2021/03/theatre-review-dream-the-royal-shakespeare-company/). It does not include all written characters but features only seven fairies. It is staged in a virtual forest inhabited by the fairies which are played by live-controlled avatars. It incorporates a nod to the themes of transformation and the supernatural found in the original play. One of Shakespeare's main literary sources in *A Midsummer Night's Dream* (1596) was Ovid's narrative poem *Metamorphosis* (8 AD) which chronicles the history of change in the world. Unsurprisingly, the theme of transformation dominates Shakespeare's characters and is considered the driving force behind the progress of his plot. Throughout the play, his characters undergo a number of physical changes. This theme has been captured in the virtual adaptation as characters are

introduced to the audience in new digital representations that have wider capabilities. In the original play, the natural world is also subjected to transformation for example the night turns to day and the moon waxes and wanes. The medium the Holographic play uses also transforms from a conventional restricting physical stage that no longer fits the majority of scattered and remote audiences to fluid cyberspace instead. Another theme found in Shakespeare's original play is dealing with the supernatural. Spectators/ readers experience different versions of reality perceived by different characters. Differing perspectives are crucial to the original play because they show that there are various versions of reality that are not all sensible or meaningful for the rest. *Dream* introduces different versions of reality that fit the contemporary audience as well including: Virtual Reality and Augmented Reality where audience members are immersed in the experience through Digital Interactive Spectatorship. The blurred boundaries between reality and simulation of reality allow the audience to unleash their imagination in an unbelievable experience that is best described as a dream.

Conclusion

Theatre has proved to be capable of absorbing and integrating different art forms into a performance. Theatrical categories and concepts are substituted, on the level of meaning, and/or language, by new ones that derive from computer's ontology leading to new interdisciplinary re-conceptualization that keeps pace with the technological advancements. Conventional genres have been replaced with new ones to keep pace with the rapid change. The separating line between theatre, visual arts, architecture, and digital arts has become blurred. Similarly, the role of the audience and its relationship with the performer and the performance has also changed. Instead of being a mere passive recipient whose response does not exceed

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simple applause to the playwright's ideas, the spectator now expects to show some practical engagement in the artistic process. The space where the theatre work is presented has also changed since artists search for alternative spaces that can provide the desired intimacy with the audience and offer an ecological advantage. Virtual spaces like the Internet or cyberspace are used as a stage: overcoming physical distance and breaking the geographical borders that stand between the artists and their remote but engaged audience (Salihbegovic 2013, 60).

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¹ Wiener defined cybernetics as ‘the science of control and communications in the animal and machine’. This definition relates cybernetics with the theory of control over the physiology of the nervous system.

² Andrew Gordon Speedie Pask (1928 –1996) was an English author, educational theorist and psychologist who made significant contributions to cybernetics, instructional psychology, experimental epistemology and educational technology. He held three doctorate degrees.

³ Often referred to as Interactive Cyber Theatre or (ICT)

⁴ ‘I contend that the boundaries between the terms that describe digital performance are so vague that they could be used in many cases interchangeably’ (Selim 2022, 56).

⁵ Holds a PhD in Dramatic Art from the University of California, Berkeley.

⁶ She is credited with coining the term in 2000. ‘Cyberformance’ is a blend of the two words ‘cyberspace’ and ‘performance’. The term describes the experiments of internet live performance she was working on with her Avatar Body Collision team (Selim 2020, 56).

⁷ As he reaches the highest levels of his taxonomy, the subject matter of the work becomes part of the criteria.

⁸ According to Bruns, traditional paradigm of classification according to fixed schemata is unable to cope with the range of information and knowledge now available (2008, 192).

⁹ a production style that makes free use of all the many resources of the stage and theatre in general: drama, music, dance, song, film, slide projection and technological effects.

¹⁰ Schlemmer wrote back in the 1970s, ‘possibilities are extraordinary in light of today’s technological advancements: precision machinery, scientific apparatus of glass and metal, the artificial limbs developed by surgery, the fantastic costumes of the deep-sea diver and the modern soldier, and so forth’ (1971: 28-29).

¹¹ Second Life (SL) environment features self-identification with one’s avatar combined with an interactive nature. Every avatar in SL has a human being guiding it, and one can easily sense his/her presence behind the avatar.

¹² *Dream* was due to open in 2020 as an in-person and online live performance but has been recreated during the Covid pandemic that hit the world to fit online interactive spectators as an immersive virtual adaptation of *A Midsummer Night’s Dream*.

¹³ Despite being minimal for a trial play