Digital Theatre

Description

Digital theatre is primarily identified by the coexistence of "live" performers and digital media in the same unbroken space with a co-present audience. In addition to the necessity that its performance must be simultaneously "live" and digital, the event's secondary characteristics are that its content should retain some recognizable theatre roles (through limiting the level of interactivity) and a narrative element of spoken language or text. The four conditions of digital theatre are:

- 1. It is a "live" performance placing at least some performers in the same shared physical space with an audience.
- 2. The performance must use digital technology as an essential part of the primary artistic event.
- 3. The performance contains only limited levels of interactivity, in that its content is shaped primarily by the artist(s) for an audience.
- 4. The performance's content should contain either spoken language or text which might constitute a narrative or story, differentiating it from other events which are distinctly dance, art, or music.

"Live," Digital Media, Interactivity, and Narrative

A brief clarification of these terms in relation to Digital theatre is in order. The significance of the terms "live" or "liveness" as they occur in theatre can not be overemphasized, as it is set in opposition to digital in order to indicate the presence of both types of communication, human and computer created. Rather than considering the real-time or temporality of events, Digital Theatre concerns the interactions of people (audience and actors) sharing the same physical space (in at least one location, if multiple audiences exist). In the case of mass broadcast, it is essential that this sharing of public space occurs at the site of the primary artistic event. The next necessary condition for creating digital theatre is the presence of digital media in the performance. Digital media is not defined through the presence of one type of technology hardware or software configuration, but by its characteristics of being flexible, mutable, easily adapted, and able to be processed in real-time. It is the ability to change not only sound and light, but also images, video, animation, and other content into triggered, manipulated, and reconstituted data which is relayed or transmitted in relation to other impulses which defines the essential nature of the digital format. Digital information has the quality of pure computational potential, which can be seen as parallel to the potential of human imagination.

The remaining characteristics of limited interactivity and narrative or spoken word are secondary and less distinct parameters. While interactivity can apply to both the interaction between humans and machines and between humans, digital theatre is primarily concerned with the levels of interactivity occurring between audience and performers (as it is facilitated through technology). It is in this type of interactivity, similar to other types of heightened audience participation, that the roles of message

sender and receiver can dissolve to that of equal conversers, causing theatre to dissipate into conversation. The term "interactive" refers to any mutually or reciprocally active communication, whether it be a human-human or a human-machine communication.

The criteria of having narrative content through spoken language or text as part of the theatrical event is meant not to limit the range of what is already considered standard theatre (as there are examples in the works of Samuel Beckett in which the limits of verbal expression are tested), but to differentiate between that which is digital theatre and the currently more developed fields of digital dance9 and Art Technology.(10) This is necessary because of the mutability between art forms utilizing technology. It is also meant to suggest a wide range of works including dance theatre involving technology and spoken words such as Troika Ranch's *The Chemical Wedding of Christian Rosenkreutz* (Troika Ranch, 2000), to the creation of original text-based works online by performers like the Plain Text Players or collaborations such as Art Grid's *Interplay: Hallucinations*, to pre-scripted works such as the classics (*A Midsummer Night's Dream, The Tempest*) staged with technology at the University of Kansas and the University of Georgia.

These criteria or limiting parameters are flexible enough to allow for a wide range of theatrical activities while refining the scope of events to those which most resemble the hybrid "live"/mediated form of theatre described as digital theatre. digital theatre is separated from the larger category of digital performance (as expressed in the overabundance of a variety of items including installations, dance concerts, Compact discs, robot fights and other events found in the Digital Performance Archive).

History

In the early 1980s, video, satellites, fax machines, and other communications equipment began to be used as methods of creating art and performance.(14) The groups Fluxes and John Cage were among the early leaders in expanding what was considered art, technology, and performance. With the adaptation of personal computers in the 1980s, new possibilities for creating performance communications was born. Artists like Sherrie Rabinowitz and Kit Galloway began to transition from earlier, more costly experiments with satellite transmission to experiments with the developing internet. Online communities such as The Well and interactive writing offered new models for artistic creativity. With the 'Dot Com' boom of the 1990s, telematic artists including Roy Ascott began to develop greater significance as theatre groups like George Coates Performance Works and Gertrude Stein Repertory Theatre established partnerships with software and hardware companies encouraged by the technology boom. Researchers such as Claudio Pinanhez at MIT, David Saltz of The Interactive Performance Laboratory at the University of Georgia, and Mark Reaney head of the Virtual Reality Theatre Lab at the University of Kansas, as well as significant dance technology partnerships (including Riverbed and Riverbed's work with Merce Cunningham) led to an unprecedented expansion in the use of digital technology in creating media-rich performances (including the use of motion capture, 3D stereoscopic animation, and virtual reality as in The Virtual Theatricality Lab 's

production of The Skriker at Henry Ford Community College under the direction of Dr. George Popovich.

Early use of mechanical and projection devices for theatrical entertainments have a long history tracing back to mechanicals of ancient Greece and medieval magic lanterns. But the most significant precursors of digital theatre can be seen in the works of the early 20th century. It is in the ideas of artists including Edward Gordon Craig, Erwin Piscator (and to a limited degree Bertolt Brecht in their joint work on Epic Theatre), Josef Svoboda, and the Bauhaus and Futurists movements that we can see the strongest connections between today's use of digital media and live actors, and earlier, experimental theatrical use of non-human actors, broadcast technology, and filmic projections.

The presence of these theatrical progenitors using analog media, such as filmic projection, provides a bridge between Theatre and many of today's vast array of computer-art-performance-communication experiments. These past examples of theatre artists integrating their modern technology with theatre strengthens the argument that theatrical entertainment does not have to be either purist involving only "live" actors on stage, or be consumed by the dominant televisual mass media, but can gain from the strengths of both types of communication.

Other Terminology

Digital theatre does not exist in a vacuum but in relation to other terminology. It is a type of digital performance and may accommodate many types of "live"/mediated theatre including "VR Theatre" and "Computer Theatre," both of which involve specific types of computer media, "live" performers, story/words, and limited levels of interactivity. However, terms such as "Desktop Theatre," using animated computer avatars in online chat-rooms without co-present audiences falls outside digital theatre into the larger category of digital performance. Likewise, digital dance may fall outside the parameters of digital theatre, if it does not contain elements of story or spoken words.

DIGITAL THEATRE: A "LIVE" AND MEDIATED ART FORM EXPANDING PERCEPTIONS OF BODY, PLACE, AND COMMUNITY

by

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This work discusses Digital Theatre, a type of performance which utilizes both "live" actors and co-present audiences along with digital media to create a hybrid art form revitalizing theatre for contemporary audiences.

This work surveys a wide range of digital performances (with "live" and digital elements, limited interactivity/participation and spoken words) and identifies the group collectively as Digital Theatre, an art form with the flexibility and reach of digital data and the sense of community found in "live" theatre.

I offer performance examples from Mark Reaney, David Saltz, Troika Ranch, Gertrude Stein Repertory Theatre, Flying Karamazov Brothers, Talking Birds, Yacov Sharir, Studio Z, George Coates Performance Group, and ArtGrid. (The technologies utilized in performances include: video-conferencing, media projection, MIDI control, motion capture, VR animation, and AI). Rather than looking at these productions as isolated events, I identify them as a movement and link the use of digital techniques to continuing theatrical tradition of utilizing new technologies on the stage. The work ties many of the aesthetic choices explored in theatrical past by the likes of Piscator, Svoboda, Craig, and in Bauhaus and Futurist movements.

While it retains the essential qualities of public human connection and imaginative thought central to theatre, Digital Theatre can cause theatrical roles to merge as it extends the performer's body, expands our concept of place, and creates new models of global community.

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Chapter 1. Introduction

If the expression 'all the world is a stage' is (or seems to be) no longer just a metaphor, but on the contrary a characteristic feature of our mediatized culture, then we really do need a stage on which the staging of life can be staged in such away that it can be deconstructed and made visible again. Chiel Kattenbelt

In a global age where, through digital technology, the world has become the stage for the exchange of commerce, culture, interpersonal communication and other forms of information, we need a new understanding of theatre. As Chiel Kattenbelt indicates, to say 'all the world is a stage' is not just an expression, for electronic world stages are being constructed which link performance and public places across the globe. Theatre itself has become a metaphor for new forms of communication and technology. Artificial Intelligence (AI) scholar Julian Hilton uses the Globe to explain the importance of imagination to the functioning of theatre and intelligence. He writes:

The theatre is both simulated and real because the actors have to convince the audience that they are real. The theatre has been exploring the representation and simulation of people's behaviour for thousands of years. AI could learn from it. In the theatre art is enabled by technology—by staging, sets, lighting, costumes, effects and so on. It is a complex aesthetic machine. The effectiveness of simulation therefore depends of

¹ Chiel Kattenbelt, "Theatre as the Art of the Performer and the Stage of Intermediality," in *Intermediality in Theatre and Performance*, edited by Freda Chapple and Chiel Kattenbelt, 29-39 (Amsterdam and New York: Rodopi, 2006), 38.

² "On July 12, 2003, the 'First Virtual Square of World Culture' was opened in Dresden…it offers ideal preconditions for its linkage with further interactive public places in other countries. Hence, the idea of a new, interactive art in public space is to be used as an opportunity to install similar Squares…children at play, young skaters, curious tourists, art experts, dancers, architects, media artists, and composers, can play with each other, skate, make investigations, dance, create compositions and choreographies, simply interacting over their countries' borders by means of and within the virtual environments. ..EU-supported project 'Realtime & Presence.'...The results are sensitive virtual environments, or 'electronic stages,' in which human behaviour is transformed into colours, images, and sounds...The realisation of the First Virtual Square forms the vantage point for the international Project 'GEF – Global European Fields.' This project is designed to connect Dresden's sister cities via public virtual interactive squares by 2006 for Dresden's 800th anniversary. Artists from St. Petersburg, Columbus, Salzburg, Rotterdam Wroclaw, Florence etc can then transfer their audio-visual compositions to the other sister cities." Klaus Nicolai, "Virtual Squares of World Culture in Dresden's European Sister Cities," in *Body Space and Technology* 1, no. 4 (2001), http://people.brunel.ac.uk/bst/documents/klausnicolai.doc, (no pagination).

³ Brenda Laurel, *Computers as Theatre* (Reading, Massachusetts: Addison-Wesley Publishing Company, 1993), 10-15.

⁴ Julian Hilton, "Theatricality and Technology: Pygmalion and the Myth of the Intelligent Machine," in *Dialogue and Technology: Art and Knowledge*, edited by Bo Göranzon and Magnus Florin, 55-71 (London: Springer-Verlag, 1991). 55.

their imagination of the audience...For Shakespeare and his contemporaries the metaphoric proposition that the world is a stage (theatrum mundi) hardly needed defending. It was clear all human action was played out on a great universal stage, and that men and women were actors in some great play. The Globe Theatre was the globe in microcosm, it was a cipher for representing all knowledge.⁵

But Hilton also dismisses today's theatre itself, as an antiquated form of communication. Digital Theatre, as described in this work, refutes this claim by involving what is best of both theatrical (human) and digital (computer) communication.

Background

Before describing the methodology of this study in Digital Theater, I would like to give the reader a sense of how I came to my findings and what parameters frame the scope of the performances included in it.

Early in my investigations of theatre mixed with digital technology I encountered the Digital Performance Archive (or DPA).⁶ The Digital Performance Archive is an online research database, created through the remarkable combined efforts of the Nottingham Trent University, the University of Salford, and the Arts and Humanities Research Board. In addition to containing "live" performances which range from dance, theatre, and interactive art installation, the site contains websites, CDs, robotics, and other objects and events.⁷ This exceedingly broad scope became problematic when I was unable to limit data in terms of "live" theatre. Given my determination to get at this valuable data, I spent two years sifting through online records, studying the holdings of the DPA and cataloguing my results on a website.⁸ It was through my research into the

⁵ Hilton, "Theatricality and Technology," 55-57.

⁶ The Digital Performance Archive, http://dpa.ntu.ac.uk/dpa_site/, (Digital Research Unit of the Department of Visual and Performing Arts at The Nottingham Trent University and the Media and Performance Research Unit, School of Media, Music and Performance at the University of Salford; accessed November 8, 2002).

⁷ There was minimal effort to make searchable objects of study based on the "liveness" etc as all items were somehow considered performative, categories such as "staged interactions" and "participatory interactions" were not differentiated. "What, then, distinguishes the kind of 'live human activity' that performers engage in from the kind that audiences engage in? The simple answer is: performers perform for an audience, while audiences 'perform' only for themselves. Whether or not a work of interactive computer art is a 'performance,' then, depends on whether it is being performed for an audience. We must distinguish works of interactive computer art in which performers interact with the system while the audience looks on from those in which the audience interacts with the system directly. I will call works in the first category 'staged interactions,' and those in the second 'participatory interactions.' If we accept 'performing for an audience' as the distinguishing characteristic of performance, it follows that all staged interactions are performances, and all participatory interactions are not." David Z. Saltz, "The Art of Interactivity, Performativity, and Computers," in *The Journal of Aesthetics and Art Criticism* 55, no. 2 (Spring, 1997): 119.

⁸ My efforts to search for "theatre" or particular thematic content (often present in individual entrees). I became increasingly aware of a great number of items which seemed totally mechanical/technological while others seemed totally "live" using very little technology. Many lacked a sense of community performance as they were CD-ROMs to be viewed by individuals alone at their computers, or were staged before an audience but lacked human performers (in the case of animatronics

DPA that I realized the great variety of performances that were utilizing digital technology, and this lead me to see the pattern of Digital Theatre emerging from many sources, and from the process I began the task of defining the term Digital Theatre in relation to the broader spectrum of digital performance.

The four categories that I used to sort items in relation to Digital Theatre were (and remain):

- 1) "Liveness" or Co-presence: ⁹ It is a "live" performance placing at least some performers in the same shared physical space with an audience. ¹⁰ A brief clarification of these terms in relation to Digital Theatre is in order. The significance of the terms "live" or "liveness" as they occur in theatre can not be over-emphasized, as it is set in opposition to digital in order to indicate the presence of both types of communication, human and computer created. Rather than considering the real-time or temporality of events, I am interested in the interactions of people (audience and actors) sharing the same physical space (in at least one location, if multiple audiences exist). It is essential that a sharing of public space occurs at the site of the primary artistic event.
- 2) **Digitally Enabled:** The next necessary condition for creating Digital Theatre is the presence of digital media in the performance. The performance must use digital technology as an essential part of the primary artistic event (not solely for archival or broadcast purposes). Digital media is not defined through the

displays, robot fights, or online Flash animations). Alternatively, others were "live" stage shows which mentioned computers but gave no significant sign of using technology in their presentation before their inhouse audience. The inability to refine one's search to a dependable list of terms with standards applied uniformly across all entries, led me to a thorough two year investigation of the contents (both cloned and live external links) via the A-Z collaborators list. To this manual search I carefully applied limits, (defined later as "liveness," digital technology, interactivity, and story/spoken words) and examined the distinctions between categories in my own research website. Nadja Masura, "The Search for Digital Theatre," http://www.digthetcom. This would allow me to find and chart examples which were both digital and "live" theatre.

⁹ While TV studio audiences may feel that they are at a public "live" performance, these performances are often edited and remixed for the benefit of their intended primary audience, the home audiences which are viewing the mass broadcast in private. Broadcasts of "Great Performances" by PBS and other theatrical events broadcasted into private homes, give the TV viewers the sense that they are secondary viewers of a primary "live" event. In addition, archival or real-time web-casts which do not generate feedback influencing the "live" performances are not within the range of Digital Theatre. In each case, a visible interface such as TV or monitor screen, like a camera frames and interprets the original event for the viewers.

¹⁰ I would suggest a minimal audience of two or more is needed to keep a performance from being a conversation between parties. If additional online or mediated audiences exist, only one site need have a co-present audience/performer situation. See Rachel Zerihan, "Intimate Inter-actions: Returning to the Body in One to One Performance," *Body Space and Technology* 6 (2006), http://people.brunel.ac.uk/bst/vol06/rachelzerihan/zerihan.pdf, (no pagination). "While Grotowski has stated that it takes one spectator to make a performance, theatre productions generally seek a much larger audience." Bennett, *Theatre Audiences*, 140.

¹¹ Digital technology may be used to create, manipulate or influence content. However, the use of technology for transmission or archiving does not constitute a performance of Digital Theatre.

presence of one type of technology hardware or software configuration, but by its characteristics of being flexible, mutable, easily adapted, and able to be processed in real-time. It is the ability to change not only sound and light, but also images, video, animation, and other content into triggered, manipulated, and reconstituted data which is relayed or transmitted in relationship to other impulses which defines the essential nature of the digital format. Digital information has the quality of pure computational potential, which can be seen as parallel to the potential of human imagination.

3) Limited Interactivity (or Participation): ¹² The performance contains only limited levels of interactivity, in that its content is shaped primarily by the artist(s) for an audience. ¹³ While interactivity can apply to both the interaction between humans and machines and between humans, I will be primarily concerned with the levels of interactivity occurring between audience and performers (as it is facilitated through technology). Interactivity is defined as "existing in the relay of a message, in which the third or subsequent message refers back to the first." ¹⁴ This indicates an asymmetrical flow of information, rather than an equal exchange. In order to clarify that interactivity is not being used in terms of a computer's ability to react to a variety of input, but to indicate the level of participation of audience members in creating the total artistic project, I will be using the word participation in the paper to suggest that messages flow primarily from performers to the audience.

¹² An example of this is the case of internet chat which becomes the main text of be read or physically interpreted by performers on stage. Online input including content and directions can also have an effect of influencing "live" performance beyond the ability of "live" co-present audiences. It is in this type of interactivity, similar to other types of heightened audience participation, that the roles of message sender and receiver can dissolve to that of equal conversers, causing theatre to dissipate into conversation. The term "interactive" refers to any mutually or reciprocally active communication, whether it be a humanhuman or a human-machine communication. However, for purposes of clarification, I will specify digital interactivity when indicating computer-human interaction.

¹³ Though some of the content may be formed or manipulated by both groups, the flow of information is primarily from message creator or sender to receiver, thus maintaining the roles of author/performer and audience (rather than dissolving those roles into equal participants in a conversation). This also excludes gaming or VR environments in which the (usually isolated) participant is the director of the action which his actions drive.

¹⁴ Interactivity is more than choices on a navigation menu, low levels of participation or getting a desired response to a request. Sheizaf Rafaeli defines it as existing in the relay of a message, in which the third or subsequent message refers back to the first. "Formally stated, interactivity is an expression of the extent that in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions." Shezaf Rafaeli, "Interactivity, From New Media to Communication," In Advanced Communicational Science: Merging Mass and Interpersonal Processes, Robert P. Hawkins, John M. Wiemann, and Suzanne Pingree, eds. 110-134, (Newbury Park: Sage Publications, 1988), 111.

4) **Spoken or Language Content:** The performance's content should contain either spoken language or text which might constitute a narrative or story, differentiating it from other events which are distinctly dance, art or music. Thus Digital Theatre can be defined as demonstrating synthesis of coexistence of "live" performers and co-present audience with digital media in a manner which contains spoken words or narrative elements and limited interactivity/participation, thus retaining at least limited distinctions of performer/audience (or message sender and receiver) roles. Digital Theatre utilizes both the strengths of human connection found between "live" performers and their co-present audience, and the flexibility and global reach of digitally processed data.

It remains my hope that criteria or limiting parameters are flexible and permeable enough to allow for a wide range of theatrical activities while refining the scope of events to those which most resemble the hybrid form of "live" and mediated theatre, a subset of digital performance.

At the center of this definition is the idea of "liveness" or co-presence co-existing "onstage" with digital technology. This once hotly debated theoretical term remains the acknowledged core of digital performance praxis, as practicing theorizing performers depend on the "live" and media distinction to describe the process of bringing the two forms together on stage. "Liveness," as used in this work, indicates living bodies

¹⁵ The criteria of having narrative (in non-technical terms, no matter what the context—whether it be scientific, philosophical, legal, etc. —a narrative is a story) content through spoken language or text as part of the theatrical event is meant not to limit the range of what is already considered standard theatre (as there are examples like Beckett in which the limits of verbal expression are tested), but to differentiate between that which is Digital Theatre and the currently more developed fields of Digital Dance (such as the stunning visual media dance concerts like Ghostcatching by Merce Cunningham and Riverbed.) Riverbed, "Ghostcatching," Available from the World Wide Web in the Digital Performance Archive: http://dpa.ntu.ac.uk/dpa_search/result.php3?Project=67; and Merce Cunningham, "Merce Cunningham Dance," Available from the World Wide Web: http://www.merce.org/home.html; and Isabel C. Valverde, "Catching Ghosts in Ghostcatching: Choreographing Gender and Race in Riverbed/Bill T. Jones' Virtual Dance," Available from the World Wide Web: http://www.wac.ucla.edu/extensionsjournal/v2/ pdf/valverde.pdf.) and Art Technology. (Such as telematic pieces: "Telematic Dreaming" by Paul Sermon in which distant participants shared a bed through mixing projected video streams. Paul Sermon, "Telematic Dreaming," Available from the World Wide Web: http://www.hgb-eipzig.de/~sermon/dream/.) This is necessary because of the mutability between art forms utilizing technology. It is also meant to suggest a wide range of works including dance theatre involving technology and spoken words such as Troika Ranch's The Chemical Wedding of Christian Rosenkreutz (Troika Ranch, 2000), to the creation of original text-based works online by performers like the Plain Text Players or collaborations such as Art Grid's Interplay: Hallucinations, to pre-scripted works such as the classics (Midsummer Night's Dream, The Tempest) staged with technology at the University of Kansas and the University of Georgia.

¹⁶ Philip Auslander, "Ontology vs. History: Making Distinctions Between the Live and the Mediatized," http://webcast.gatech.edu/papers/arch/Auslander.html; "Some critics debate this premise. Philip Auslander, for example, in his book *Liveness: Performance in a Mediatized Culture* explicitly critiques as sentimental the notion that performance remains the domain of the live, that intimacy and immediacy are possible there in ways unavailable in other media, such as film or television....Auslander believes these terms set up a false binary between live and mediatized performance, one he very persuasively proves doesn't exist...But I must admit that I believe in all the things that Auslander disparages, mostly because as a onetime actor and sometime director, and as a writer, spectator, critic, and performance theorist, I've experienced them all. I've felt the magic of theater; I've been moved by the palpable energy that performances that work generate; and I've witnessed the potential of the temporary communities formed when groups of people gather to see other people labor in present, continuous time,

gathered in space (rather than real-time), and remains a central aspect of theatre.¹⁷ Perhaps the authors of *Intermediality in Theatre and Performance*, deal with this issue of "liveness" for the sake of determining hybridity:

...media objects have a different ontology from non-digital media objects on the stage, so there is an empirical and qualitative difference between the digital and non-digital objects operative in the stage space. Thus, digitization plays a part in conceptualising the changing space of theatre performance. It creates junction points where the different media meet and it is there — at the point of their meeting — that we locate intermediality in theatre and performance, which in turn triggers a response in the observer...A crucial element of digital media structures is hypermedia. ¹⁸

In another essay in the same critical work, Sigrid Merx comments on the effect of video (which can be a form of digital media) within theatre. She says that to her, the greatest potential of live video in live performance is to instill an awareness of the liveness of theatre in the audience, and that live video in the live performance can remind us of the fact that "this is live," "this is now." Essentially, live video has the potential to make us remember that we are in the theatre.

Peter M. Boenisch suggests that theatre can perform media: This trace of theatrical mediation is produced in the observers' perception alone: the actor on stage is no longer the actor, but the actor exposed on stage. That photo becomes a photo placed on stage and strangely different from the very same photo hanging stored back-stage before the show, not to mention my screensaver version of it. That video projected on stage is no longer the same as the very same tape I watched at home. As opposed

time in which something can always go wrong. But Auslander argues 'against the idea that live performance itself somehow generates whatever sense of community one may experience...performance makes just as effective a focal point for the gathering of a social group as live performance.' Surely any gathering can promote community." Quote by Jill Dolan, *Utopia in Performance: Finding Hope at the Theater* (Ann Arbor: University of Michigan Press, 2005), 40-41; Praxis: "For nearly two decades, performers have been engaging in digitally mediated performance practices. Though performance theorists have been debating the ontological status of performance that relies on digital and information technologies, practitioners have carried on without waiting for a scholarly verdict." Marcyrose Chvasta, "Remembering Praxis: Performance in the Digital Age," *Text and Performance Quarterly* 25, no. 2 (April 2005): 156.

¹⁷ "theatre .. being seen as the traditionally accepted holder of the concept of *live performance*." Freda Chapple, and Chiel Kattenbelt, "Key Issues in Intermediality in Theatre and Performance," in *Intermediality in Theatre and Performance*, edited by Freda Chapple and Chiel Kattenbelt, 11-25 (Amsterdam and New York: Rodopi, 2006), 15.

¹⁸ Freda Chapple, and Chiel Kattenbelt, "Key Issues in Intermediality in Theatre and Performance," 18.

¹⁹ Sigrid Merx, "Swann's Way: Video and Theatre as an Intermedial Stage for the Representation of Time," in *Intermediality in Theatre and Performance*, edited by Freda Chapple and Chiel Kattenbelt, 67-80 (Amsterdam and New York: Rodopi, 2006), 78.

to the digital transcoding into bits and bytes, theatre leaves the thing itself intact, yet the actor, picture, and tape, at the same time, are theatrically reproduced into something beyond their mere (even less: *pure*) original presence. They become signs representing a character, or any fictional world and, at the same time, they are always also something presented on stage, something presented to someone, and that is — far more essential than any represented meaning — the quintessential function of a sign. As a primarily semiotic practice, theatre turns all objects into signs to be/perceived. Compared with other media that transmit objects to another space and/or another time, or store them to make worlds out of them there and then, theatre processes these objects into worlds here and now, while simultaneously leaving them as they are...Any theatrical performance, thus, negotiates a multiple range of potential perspectives to be observed.²⁰

Why is it so essential that "live" flesh be set against the digital? To demonstrate their *différance*. To better understand the difference between the body (the ultimate physical manifestation of analogue and tactile human experience) and digital, I will provide some descriptions of what it is to be digital. Digital as been described as both protean and indifferent. Digitization allows for the manipulation and interchangeability of data. Author Vivian Sobchack writes, "What is historically and technologically novel about digitization is precisely its unique capacity to translate all other media representation into a homogeneous algorithmic mode of expression; nonetheless, we have come to recognize that digital representations are extraordinarily heterogeneous in form, diverse in function, and specific in practice."

On the surface the body of the performer and digital information could not be more different. But as Peter M. Boenisch points out, Theatre (an art of synthesis) and

²⁰ Peter M. Boenisch, "Aesthetic Art to Aisthetic Act: Theatre, Media, Intermedial Peformance," in *Intermediality in Theatre and Performance*, edited by Freda Chapple and Chiel Kattenbelt, 103-116 (Amsterdam and New York: Rodopi, 2006), 114.

²¹ I will define Jacques Derrida's term in detail later on page 34.

²² "Digital manipulations allow color film, with its verisimilitude and illusion of three dimensions, to assume the fluid state of plasma, challenging cinema's basic ontology and returning it to a seemingly previous state...." Matthew Solomon, "Twenty-Five Heads under One Hat: Quick-Change in the 1890s," in *Meta Morphing: Visual Transformation and the Culture of Quick-Change*, edited by Vivian Sobchack, 3-20 (Minneapolis and London: University of Minnesota Press, 2000), 17. The *protean element*, for the myth of Proteus...is based, of course, upon the omnipotence of plasma, which contains in 'liquid' form all possibilities of future species and forms. "Zeros and ones are utterly indiscriminate recognizing non of the old boundaries between passages and channels of communication." Sadie Plant, *Zeroes and Ones: Digital Women and the New Technoculture* (New York: Doubleday, 1997), 185.

²³ Vivian Sobchack, "Introduction," in *Meta Morphing: Visual Transformation and the Culture of Quick-Change*, edited by Vivian Sobchack, xi-xxiii (Minneapolis and London: University of Minnesota Press, 2000), xiv.

Computers both involve multiple media.²⁴ Likewise human bodies are carriers of information.²⁵

The essential nature of digital media is its flexibility and its mutability. In researching and writing about productions using various combinations of hardware and software tools to gather impulses (ideas, triggers, stimulus, expressions, artforms); then translate, shape and manipulate this data information; and finally export (via projection, sound, etc) media as an observable and essential part of the production's total theatrical experience—what is abundantly clear is that "digital" implies changeability and flux. Digital is a state of potential; it is a mixing between mediums. One could say that the liminal state of being converted to digital data, translates between observable forms and purely potential impulses. Because the protean nature of digitization mutates idea information into new forms (neither purely art, music, visual, etc., but potentially mixes between them), and most every Digital Theatre production mentioned in this work contains multiple uses of digital media (animation, triggered sound or video, Internet broadcast, etc), it follows that my format should parallel its content and allow for transitions between subjects. Through transitional sections which stand between chapters, I will blend between themes.

Digital Theatre as a term can relate to performances which utilize a large range of technologies and their multiple uses, including but not limited to: digital video, digital projection, animated sets and characters, virtual reality, digital robotics, online writing and real-time audience feedback, interactive content creation, motion capturing, motion triggering, web and video conferencing, and many other forms of digital media interplay. Examples might include using projected elements with "live" actors including animated sets, motion triggering controlled by performers to cue video or sound media, or online performances occurring between performers at locations in different rooms, states, or countries. They may even mix many of these elements together in one transformative wired event.

When I first began researching and writing about Digital Theatre five years ago, there were several similar terms being used, but 'digital theatre' was not in common use. Since then, the term has been seen with more frequency describing theatrical

²⁴ "For that reason, many describe the computer as a 'meta'-medium, which absorbs other media in its numerical logic of zeroes and ones. Theatre offers what appears at first sight an ability to soak up and trans-code other media. It combines texts, sounds, bodies, language, imagery, various visual and other sign systems in ever-new mixtures to create ever-new performances. The effects on these media remediated in theatrical performance, however, could not be more different from I their digital trans-coding: While computers indifferently digest any other medium in their giga-byte stomach of the microprocessor, theatre apparently very generously provides the stage to other media entirely according to their will. Theatre behaves as a fully transparent medium, a remarkable camera lucida, without any palpable fingerprints of its mediatization stamped on the primary media it relies on so heavily." Boenisch, "Aesthetic Art to Aisthetic Act." 112.

²⁵ "Every living being is built from an exchange of information and this exchange can just as easily be nongenetic as genetic. The living is a dynamic flow of information, and this flow also exists in the nonorganic realm." Ollivier Dyens, *Metal and Flesh: The Evolution of Man: Technology Takes Over*, translated by Evan J. Bibbee and Ollivier Dyens (Cambridge and London: The MIT Press, 2001), 13.

performances which are both live and mediated by practitioners described in this work.²⁶ Digital Theatre does not exist in a vacuum but in relation to other terminology. It is a type of digital performance and may accommodate many types of "live"/mediated theatre including "VR Theatre" and "Computer Theatre," both of which involve specific types of computer media, "live" performers, story/words, and limited levels of interactivity. However terms such as "Desktop Theatre," using animated computer avatars in online chat-rooms without co-present audiences falls outside Digital Theatre into the larger category of digital performance.²⁹ Likewise, Digital Dance may fall outside the parameters of Digital Theatre, if it does not contain elements of story or

²⁶ Such as the Gertrude Stein Repertory Theatre. See Cheryl Faver, and John Reaves, "The Making of Americans," Gertrude Stein Repertory Theatre website, http://www.gertstein.org/project1.html. (Accessed December, 2003).

²⁷ Mark Reaney, head of the Virtual Reality Theatre Lab at the University of Kansas, investigates the use of virtual reality ("and related technologies") in theatre. "VR Theatre" is one form or subset of Digital Theatre focusing on utilizing virtual reality immersion in mutual concession with traditional theatre practices (actors, directors, plays, a theatre environment). The group uses image projection and stereoscopic sets as their primary area of digital investigation.

²⁸ Another example of Digital Theatre is Computer Theatre, as defined by Claudio Pinhanez in his work *Computer Theatre* (in which he also gives the definition of "hyper-actor" as an actor whose expressive capabilities are extended through the use of technologies). "Computer Theatre, in my view, is about providing means to enhance the artistic possibilities and experiences of professional and amateur actors, or of audiences clearly engaged in a representational role in a performance." Claudio S. Pinhanez, "Computer Theater," (Cambridge: Perceptual Computing Group -- MIT Media Laboratory, May 1996) (under revision), 2. Pinhanez also saw this technology being explored more through dance than theatre. Claudio S. Pinhanez, "Computer Theater," 2. As suggested by his writing and shown in his productions of I/IT, "Computer Theatre" is Digital Theatre.

²⁹ On the far end of the spectrum, outside of the parameters of Digital Theatre, are what are called Desktop Theater and Virtual Theatre. These are digital performances or media events which are created and presented on computers utilizing intelligent agents or synthetic characters, called avatars. Often these are interactive computer programs or online conversations. Without human actors, or group audiences, these works are computer multimedia interfaces allowing a user to play at the roles of theatre rather than being theatre. Virtual Theatre is defined by the Virtual Theatre Project at Stanford on their website as a project which "aims to provide a multimedia environment in which user can play all of the creative roles associated with producing and performing plays and stories in an improvisational theatre company." Barbara Hayes-Roth, Director, "The Virtual Theatre Project," Stanford University, http://www-ksl.stanford.edu/projects/cait/.

spoken words. Additional relative terms include "Cyborg Theatre," "Cyber theatre," "Digitally Mediated Performance," "Intermediality," and "Virtual Theatre." "

One close relative of the term "Digital Theatre" is Jennifer Parker-Starbuck's term "Cyborg Theatre" which also requires a theatre event to contain "live" and mediated (by which she means both digital and non-digital video) elements. However, Parker-Starbuck's dissertation explores her term as it qualitatively expresses an essence of being cyborg or more than human through media. In her conclusion, she omitted some events which would qualify as Digital Theatre because they did not meet her criteria of strengthening a sense of human hybridity. It is my intention to leave the term Digital Theatre open for use by others to describe a wide range of theatrical events (within the given parameters), whether or not these future examples please my sensibilities or further all of my concepts of Body, Place, and Community. Digitally Mediated Performance refers to a wide range of performance modes involving digital media and may not have co-present audiences: "...if the DMP had no live audience to begin with other than the performers and producers on-site during its creation..." Intermedialty contains a broad mixing of media forms (digital and analogue including puppetry, sound, photography, etc). Freda Chapple, and Chiel Kattenbelt state:

...intermediality includes within its constituent elements a blend of the art forms of theatre, film, television and digital media, which lead to an engagement with theoretical frameworks drawn from selected areas of performance, perception and media theories, and philosophical approaches to performance...theatre is a hypermedium that incorporates all arts and media of intermediality...intermediality is an effect performed in-between mediality, supplying multiple perspectives and t the making of meaning by the receivers of the performance. ³⁴

³⁰ "Cyber theatre, not unlike film and television does not rely on the presence of a live actor or audience and an argument can be made that many examples of cyber theatre might be better described as interactive film/TV, installation art, new media art, or electronic communications. A major theoretical question is posed by these new forms: is it necessary that some live element be present in the performance of cyber theatre to make theatre a useful model? Theatre artists, but also artists working in areas of installations, video and art, and digital technologies, are undertaking the practice of cyber theatre." Dennis Kennedy, ed. *The Oxford Encyclopedia of Theatre and Performance*. Vol. 1, A-M. Oxford: Oxford University Press, 2003), 341.

³¹ "The Virtual Theatre. This theatre will consist of a single audience member putting on a headset and experiencing a virtual presentation. This will be considerably useful for theatre history classes because it puts theatre in context." Dan Zellner, "Definitions and Directions of the Theatre," in *Theatre in Cyberspace: Issues of Teaching, Acting, and Directing*, edited by Stephen A. Schrum, 19-29 (New York: Peter Lang Publishing, 1999), 27.

³² Jennifer Parker-Starbuck, "Cyborg Theatre: Corporeal/Technological Intersections in Multimedia," PhD diss, City University of New York, 2003.

³³ Marcyrose Chvasta, "Remembering Praxis: Performance in the Digital Age," *Text and Performance Quarterly* 25, no. 2 (April 2005): 164.

³⁴ Freda Chapple, and Chiel Kattenbelt, "Key Issues in Intermediality in Theatre and Performance," in *Intermediality in Theatre and Performance*, edited by Freda Chapple and Chiel Kattenbelt, 11-25 (Amsterdam and New York: Rodopi, 2006), 20.

Perhaps the most compelling related term is "Enhanced Theatre" which featured practitioner Dan Zellner defines, saying, "This theatre will consist of virtual sets, live actors, and virtual actors. Audience will come to the theatre and see new creations and new interpretations of classics." 35

At this point I do not see my primary duty as being the definition or explication of the term, but to establish Digital Theatre as a movement through a historically and theoretically contextualized survey.

Methodology and Scope

I believe that through providing semi-permeable boundaries for Digital Theatre's definition and revealing the connections to past theatrical art forms, many seemingly isolated or disparate examples can be drawn together into a larger movement (or type of theatre), one with great potential and relevance for reaching today's computer and media savvy audiences.

What I mean by suggesting that I have approached these performances as part of historically and theoretically contextualized survey is to indicate that I see value in not only describing performances as a breadth of related Digital Theatre works, but putting them in the context of theatre's continuing tradition of utilizing new technologies to enhance stage spectacle and communicate ideas. In addition these performances are considered in terms of current theory relating to the concepts of body, place, and community.

It has been brought to my attention that many of the examples in this work are experimental, and it's true that the range of performances included spans works from demonstrations of Digital Theatre ideas and techniques (in staged monologues and the like) to fully mounted theatrical productions. The reason for this broad selection, is that there is no one ideal example of what Digital Theatre is, instead the sum total of these works demonstrates the reach and potential value of Digital Theatre. At this point, Digital Theatre is the total of these possibilities. It would be presumptuous of me to select one model, (since there are so many theatrical models in existence and so many technologized variations). I present the examples, ideas, and techniques they utilize to the reader, in the hope that they inspire new work that might someday be considered a more complete work of Digital Theatre.

The scope of this inquiry is directly confined to the criteria of Digital Theatre, a movement which has been flourishing internationally for more almost two decades. Though there are examples of media integration and satellite broadcast dating back into the 1970s, this study will primarily examine works occurring from the 1990s on, a period coinciding with the PC/Internet boom and the rise of public digital literacy.

³⁵ Zellner, "Definitions and Directions of the Theatre," 27.

³⁶ "Since the early 1990s, performers in the United Kingdom have been producing DMP—or, in the terms of performance archivist Barry Smith, taking 'dramatic forays into IT'—despite the fact that many performance artists in academia were faithful to the notion that performance is executed only by 'live' bodies. The bias against DMP still exists, Smith notes, but he argues that perceptions are changing, for IT." Marcyrose Chvasta, "Remembering Praxis: Performance in the Digital Age," *Text and Performance Quarterly* 25, no. 2 (April 2005): 161.

In the early 1980s, video, satellites, fax machines, and other communications equipment began to be used as methods of creating art and performance.³⁷ John Cage and the group Fluxes were among the early leaders in expanding what was considered art. technology, and performance. With the adaptation of personal computers in the 1980s, new possibilities for creating performance communications was born. Artists like Sherrie Rabinowitz and Kit Galloway began to transition from earlier, more costly experiments with satellite transmission to experiments with the developing Internet. Online communities such as "The Well" and interactive writing offered new models for artistic creativity. With the "Dot Com" boom of the 1990s, telematic artists including Roy Ascott began to take on greater significance as theatre groups like George Coates Performance Works and Gertrude Stein Repertory Theatre established partnerships with software and hardware companies encouraged by the technology boom. Researchers such as Claudio Pinanhez at MIT, David Saltz of The Interactive Performance Laboratory at the University of Georgia, and Mark Reaney head of the Virtual Reality Theatre Lab at the University of Kansas, as well as significant dance technology partnerships (including Riverbed and Riverbed's work with Merce Cunningham) led to an unprecedented expansion in the use of digital technology in creating media-rich performances (including the use of motion capture, 3D animation, and virtual reality). It is these boom days which are captured in the Digital Performance Archive, an online research database which provides information on digital performances from multiple countries from 1990 to 2000. It is time to look at these and other performances in relationship to each other, mapping out a larger tradition.

Historical Legacy

Because the history of digital performance is so recent, I will be looking toward the past to give context to our developing present.³⁸ Through acknowledging aesthetic ties to theatrical precursors exploring similar theatrical effects through the technologies of their day, Digital Theatre becomes part of the tradition of theatrical innovation.

Early use of mechanical and projection devices for theatrical entertainments have a long history tracing back to mechanicals of ancient Greece and medieval magic lanterns. But the most significant precursors of Digital Theatre can be seen in the works of the early 20th century. It is in the ideas of artists including Edward Gordon Craig, Erwin Piscator, Josef Svoboda, and the Bauhaus and Futurists movements that we can see the strongest connections between today's use of digital media and live actors. In their

³⁷ For more information, see Randall Packer and Ken Jordan, editors, *Multimedia: From Wagner to Virtual Reality* (New York and London: W.W. Norton and Company, 2001); Eduardo Kac, *Telepresence and Bio Art: Networking Humans, Rabbits, and Robots* (Ann Arbor: University of Michigan Press, 2005); and Gabriella Giannachi, *Virtual Theatres: An Introduction* (London: Routledge, 2004).

³⁸ "Theatre is an ancient craft with a set of time-honored traditions. The art and practice of theatre is rooted in performances that we can trace back over two thousand years to classical Greece. The proscenium theatre dates back more than four centuries; the production hierarchy was established almost a hundred years ago and methods of rehearsing and preparing actors are decades old. The personal computer has been around for less than 20 years, but computers have had an astonishing impact in virtually every aspect of theatre." Patrick Finelli, "Computer Technology for Theatre: The Next Ten Years," Prepublication Draft, "Product Reviews: Ten Ways Technology Will Change in Theatre," 1998, http://www.connectedcourseware.com/ccweb/prodrevs/ 10ways

ideas we also see earlier, experimental theatrical use of non-human actors, broadcast technology, and filmic projections. But similarities can also be seen in the spectacle of transforming place in Italianate scenery, and other physical staging methods. In their time Craig, Svoboda, and Walter Gropius supported the integration of new use of new technology in theatre. Oskar Schlemmer states, "The theater, which should be the image of our time and perhaps the one art form most peculiarly conditioned by it, must not ignore these signs."

Like me, noted digital performance scholar Scott deLahunta believes that there need not be a conceptual break between considering old and new methods of achieving similar effects. He writes:

Going even further back, the phenomenon of 'telepresence' and 'instantaneous remote communication' was initiated by the first telegraphic transmission in 1845, something easily forgotten as we respond to the excitement generated around e-mail. These are just some examples of the ways in which the past can be connected with the present—and complicate this tendency towards a separation between 'old' and 'new'...In technological terms, 'old' usually refers to analog and 'new' to digital technologies...Suffice it to say: *Our tools shape us as we shape them.*⁴¹

How then do we join past to present, and gather examples from multiple times and places which inform this developing art form? For this work the answer lies in observing aesthetic similarities in the treatment of body, place, and community.

Theory: Body, Place, and Community

These three concepts (body, place and community) each affected by today's digital staging practices, are perhaps the central aspects of theatre (over-simplified as the performer, stage, audience) and of life.

To discuss the ideas of body, place, and community, I will be enlisting various theoretical concepts including: embodiment and observation of the "other" to define self, the neo-Bakhtinian rebellious body defiant of the Sadian mass media image-body. Terms such as "liveness," différance, and agency are employed to tease out paths of meaning from the technologized body of the actor or the actor faced with his digital other. Issues of place, landscape, and space help unravel expectations of public and private in relation

³⁹ Craig said that good theatre is achieved "Not by rejecting electricity because of its defects: not by returning to tallow candles: not by returning to masks: by avoidance of nothing, by returning to nothing — but by this process...By reviewing all the theatrical things known of or once known of as serviceable to the stage...test whether or no they are capable of expression. That and little else. We must ask ourselves — Does a wax candle serve us to express the rising sun? — If yes, then use it. Does it not serve?" Edward Gordon Craig, "Towards a New Theater — Craig on his Screens," in *Edward Gordon Craig: A Vision of Theatre* by Christopher Innes. Ontario: York University, 1998), 274-5.

⁴⁰ Oskar Schlemmer, "Man and Art Figure," in *The Theater of the Bauhaus*, edited by Walter Gropius, and Arthur S. Wensinger, 17-46 (Baltimore: The Johns Hopkins University Press, 1961), 18.

⁴¹ Scott deLahunta, "Speculative Paper: Theater/ Dance and New Media and Information Technologies," written and presented to the Working Groups on Dance and Drama, Research Group on Reorganisation of Professional Arts Education, Amsterdam, April 1998, http://www.art.net/resources/dtz/scott3.html.

to the body and performance locations. Community is explored in terms of online venues (or computer mediated communications), which simultaneously create perceived place (cyber-place) through telematics and telepresence performer and audience participation. Some ideas explored will be utopia, communitas, devising, play, interactivity/ participation, and issues of co-presence. Digital Theatre has the power to challenge our assumptions about the borders between body, place, and community, and thus extend them in our consciousness.

In my initial chapter, **Body and Its Digital Other**, I will be talking about "live" human performers performing with their video other (Jet Lag), animated, AI and robotic others (performances by Yacov Sharir, The Tempest, Dinosaurus, Blue Bloodshot Flowers), use of screens and projectionist costuming (in The Magic Flute and the Gertrude Stein Repertory Theatre's Making of Americans). Next, in **Body Places**, the performer's body becomes the place of performance (Stellarc, Hollowman, Minimally *Invasive*). In **Performer's Body Extended**, I will be addressing the performer's ability to shape their media environment through motion tracking-triggering-and-sensing technology, (Troika Ranch, L'Universe, The Tempest, and The Magic Flute). In **Digital Illusionary Place** I will demonstrate how digital technology fulfills a continuing desire to see places transform on stage (*The Magic Flute*), and create visions of new types of place such as cyberspace (Midsummer Night's Dream and Alladeen). In Performance Places, I discuss how Digital technology's effect on performance places includes: portability (studioZ), site specific performance (Talking Birds – *Undercurrents*, *Blind Messengers*), Intelligent spaces (Arizona State University, and Kaspar), linked places (Beckett Space and Interplay at Utah). In Performance and Community in Cyberplace, I discuss how perceived place is expanded through telematic and multi-site performances, and how community and multi-layered place are mutually formed in online performance (FIRT(ive) Encounter, UBU Project, World Wide Simultaneous Dance, ArtGrid and Interplay). Lastly, in Audience Participation and Creative Community, I describe ways in which online and other interactive audiences become participants as authors and commentators (Crazy Wisdom Sho, Living Newspaper), audio and media providers (M@ggie's Love Bytes) and therefore members of the creative community, often multiplying (ArtGrid) and complicating (the use of virtual reality, Wings) the idea of audience. Finally, in my conclusion I return to the idea of old/new, discuss praxis and digital objects, give a short summary, and end with closing remarks on the value of Digital Theatre in a global community.

The goal of this work is to describe Digital Theatre through the gathered examples, as a growing movement and an art form uniquely suited to our current digital sensibilities which both challenges and retains the essential theatre qualities of public human connection, imaginative thought, and idea transmission. Digital Theatre extends our understanding of central concepts of body, place, and community, creating new ideas and new opportunities for creative communication and human connection. The use of digital technologies in "live" performance can reshape our understandings of fundamental theatrical and social concepts.

In these productions, visual and perceptual boundaries blur between illusion and reality in compelling new ways. Digital Theatre gives us the ability to stir the space of spectacle, extending illusion and often merging the body of the performer into the playing space and set. It creates the interplay between theatrical roles; between performers and

audience and it offers a sense of networked or even global place and creates connections between people. As a theatrical form developing in a liminal space of creativity poised between disciplines and techniques, Digital Theatre offers us a new way to embody the theoretical and social concerns of our world. Through aesthetically incorporating digital media in processes of artistic questioning, we can take moral ownership of the technology which shapes our mediated lives.

Digital Theatre is a hybrid art form of great potential, gaining strength from theatre's ability to facilitate imagination and create human connections, and digital technology's ability extend the reach of communication and visualization. The dual presence of the "live" actor and mediated digital elements creates performance events which allow us to better understand, respond to, and shape our changing world, both on stage and beyond the theatre building.

Chapter 9: Conclusion

I have mentioned that today's Total Theatre, a new performance space equipped to combine the technologies of today (including animated scenery, motionsensing/capture, midi-triggering, video and projection, teleconferencing etc.) has yet to be built. However, things are beginning to change, as digital performance and Digital Theatre become more main-stream, new architectures rise to meet the needs of the performers and performances I've discussed.

On April 7, 2007, I attended an exhibition at the National Building Museum in Washington DC called Reinventing the Globe: A Shakespearean Theater for the 21st Century. I was struck by the integration of elements for creating Digital Theatre in at least four designs envisioning the Globe. The significance of this is two-fold. Firstly these theatres, when they are built, will help us define how we see the body of the performer, transform illusionary and performance places, and create the audiences which will form theatre's temporary communities. And secondly, these projects join the traditions of the past with the technology of the future.

I'd like to briefly respond to three of the designs displayed including plans for a traveling caravan, a festival venue, and a telematic theatre. The "Globe Trotter, A Portable Shakespeare Theatre for the 21st Century" by Office of Mobile Design, resembles a mars rover when "deployed" from it truck trailer "on any relatively flat surface." The unit is designed to both house a traveling troupe and act as complete mobile theatre unit (with box-office, stage/backstage, electric LED advertising, lights/sound, and photovoltaic power source). In addition to wings for scenic projection (and acoustics), it feature web-casting equipment. Despite the humorous looking inflatable pod rooms, the design realizes the portability which digital (and Digital Theatre) technology provides. Like Studio Z's updating of Comedia Improv through

¹ Martin Moeller, curator, *Reinventing the Globe: A Shakespearean Theater for the 21st Century*, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007.

² The fourth work will not be discussed in any detail as it proposes graphing actor's movements in space with motion-capture technology, had this idea been translated into creating visual depictions for Virtual Reality performance venues, it would be of significant interest.

³ Office of Mobile Design, "Globe Trotter, A Portable Shakespeare Theatre for the 21st Century," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007. "Reviving the tradition of 17th century traveling Shakespeare troupes OMD - working in conjunction with Shakespeare Festival LA – has designed a mobile, modular, vehicle able to transform into a fully equipped theatre on any relatively flat site." Project team: Jennifer Siegal, Principal; Mark Stankerd, Project Architect; Matthew Fellows, Design Associate; and Erica Hernandez, Research.

⁴ The wings are projection screens. "Wing walls unfold from the side to enliven acoustics, provide scenery surfaces and filmed actor-close ups, and support lighting." Office of Mobile Design, "Globe Trotter, A Portable Shakespeare Theatre for the 21st Century," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007.

portable scenery,⁵ this project re-invasions the tradition of 17th traveling Shakespeare troupes with current technology, bringing theatre to diverse communities.⁶

The next design I'd like to discuss, "Transparent Theatre: Alchemy and Transformation" by the Rockwell Group, re-imagines the Globe as an outdoor structure constructed out of scaffolding and screens which surround the audience/participants in spectacle and envisions digital performance in terms of a festival environment. The design statement reads, "In re-imagining the Globe, Rockwell Group proposes a space that celebrates the ephemeral experience of live theatre by breaking down the formality of a structured theatrical environment, opening it up to the sky and the surrounding landscape. It immerses the audience in the experience allowing spectators to become active influencers and the theatre itself to become a performer." Participation of the crowd is encouraged and interwoven into the design of the structure and its use.⁸ The language used to describe audience behavior and the model design suggests that the venue is intended for rock concerts or other festival events, but not specifically for the creation of theatre. The design which surrounds the audience in the spectacle does not indicate significant audience focus or provide for the creation of illusionary place. 10 (This is because the projections spillover onto them and with the spectator is immersed in projections illusionary place cannot be divorced from the shapes of those watching.) The place of performance is performing itself.¹¹ It is clearly designed for highly participatory performance.

⁵ Unlike Studio Z, this unit is self-sufficient and can be taken outside.

⁶ "...a carnival-like atmosphere and entertain a wide variety of changing audiences." Office of Mobile Design, "Globe Trotter, A Portable Shakespeare Theatre for the 21st Century," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007

⁷ The Rockwell Group, "Transparent Theater: Alchemy and Transformation," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007.

⁸ "The 'pit' becomes the prime location; theatre goers can climb the tiers to see or be seen...spectators can flow freely into the 'moshpit' stage area. The audience can also migrated to the exterior balcony and watch the overall festival, where many smaller fringe stages create a whole new level of interactive spectacle." The Rockwell Group, "Transparent Theater: Alchemy and Transformation," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007.

⁹ The structure may have been designed with Burning Man in mind, where audiences are participants and performers in the total spectacle.

¹⁰ Although one main screen is provided where the Globe tiring house would stand, additional screens surround and compose the framework. An inner and outer set of screens encircle the audience, with a set of five staggered pivoting screens behind the audience, and two on either side of their seats, along each section of the circle. The total impression is of a Roman amphitheatre made of screens, projections and light; it gives the sense of being a building meant to be viewed from the outside. The animation of the model shows the structure lit up with spot-lights swirling spotlights like a rock concert, and near-by screens demonstrate that the spectator mixes with the projections.

¹¹ The "theatre itself to become a performer." The Rockwell Group, "Transparent Theater: Alchemy and Transformation," Reinventing the Globe: A Shakespearean Theater for the 21st Century,

The final piece by John Coyne, is a theatre constructed around multi-site performance. Coyne designed a theatre space which would link three similar sets in "different locations around the world" via Internet2 videoconfrencing. 12 Major characters would act from each of the three sites, two of which would broadcast via livestreaming technologies into large screens in the relative 'local' venue(s). It is unclear from Coyne's sketches or description how aesthetic decisions about splitting a cast between sites might be made, or how the large scale projections or visual sightlines obstructed by scrims might effect the productions. However his use of digital technology to introduce challenging new ideas into productions is quite effective. ¹³ Covne also shows an interest in audience participation and the growing nature of community in a global world, by inserting monitors into the audience which allow for broadcast of performers and for across-site or multi-local audience interaction.¹⁴ Coyne writes: "Electronic technology allows us to communicate like never before. What if we were to use that technology in theatre, expand upon it, and dramatize it? Could theatre in the round imply not just a physical shape, but a production exploiting the full range of possibilities afforded by modern communications?"¹⁵

While none of these is truly a Total Theatre, these are three very different and compelling conceptualizations of the digitally enabled theatres for out near future, each expressing unique ideas of the place of performance and illusion, the importance and scale of the actor's body, and the level of participation in the audience. In addition to their individual value, cumulatively the exhibit represents a relevant shift in thought. Instead of anchoring new forms of Digital Theatre in the historical context of theatre's past traditions of utilizing new technologies as I have done, now it is the past which comes to today's technology for inspiration. Throughout this work, I have used theatrical precursors to anchor Digital Theatre within the continuing tradition of theatre. Now accepted forms are re-envisioning past models with the use of digital technology.

As venerated theatre traditions such as Shakespeare's Globe and Coventry's Miracle Plays as well as the Olympics begin to reach out to digital technologies, they are re-imagined for current audiences. In the 2006 Coventry Mystery Plays (a community revival of an ancient tradition featuring choruses of local citizens, puppets, and an

exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007. Perhaps it may become too much of a character in the show. The spectacle of self, and festival performance indicates a cumulative spectacle of environment, participants, and any staged action.

¹² John Coyne, "A New Global Theatre," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007.

¹³ He uses the idea of staging *Macbeth* to illustrate his plans to utilize a three sided theatre shape fitted with screens for remote viewing of distant actors.

¹⁴ "Through an integrated display of monitors, audiences of different cultures would see each other's reactions to the same performance and perhaps communicated among themselves." John Coyne, "A New Global Theatre," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007. It is likely that this type of audience to audience interaction would be distracting if available during the dramatic action.

¹⁵ John Coyne, "A New Global Theatre," Reinventing the Globe: A Shakespearean Theater for the 21st Century, exhibition at the National Building Museum, Washington, DC, January 13-August 27, 2007.

updated place specific script) great use was made of digital projection. The Mystery Cycle, which continues to be staged in Coventry's war-ravaged cathedral, utilized digital real-time video effects to project close-ups of action and to create a sense of the place being animated with the past. One particularly moving and effective use of digital technology was the overlay of a real-time feed of the actor playing Jesus' face projecting onto a mammoth stone face in the cathedral's shell, connecting layers of ancient, current, and belief-based place or reality. Likewise, the Olympics have begun to use digital performance techniques to great effect. The Opening Ceremonies of the 2004 Summer Olympics in Athens featured digital performance including a telematic duet between a drummer on site in Athens and one at the sacred site of Delphi miles away, giving both the gathered crowd and the international broadcast audience a sense of expanded or linked place via technology. The content of the sacred site of Delphi miles away, giving both the gathered crowd and the international broadcast audience a sense of expanded or linked place via technology.

In essence, whereas (in this work) Digital Theatre has been looking to the past to substantiate the evolving theatre forms of the future, now past traditions are being reenvisioned through Digital Theatre technology. Everything old is new again, everything new is old again; evidencing that theatre is an ever-evolving evocative form of human communication utilizing the body and the tools available.

In this work I have described a variety of performances utilizing digital technology in terms of the way that they expand notions of body, place and community. But I have also made connections between these new works and the ideas of past theatre artists including Craig's Über-Marionette, Futurist "actor-gases," Bauhaus experiments with space and the plans for the Total Theatre, the spectacle of transforming place in Italianate scenery, and the projectionist theatre of Piscator and Svoboda. For, "Without this glace backwards, a vision of the world of today would be unthinkable," to lend

¹⁶ On July 25, 2006, I attended the Coventry Mystery Plays at the Belgrade Theatre in Coventry, England, which date back to the 12th Century (with the creation and migration of the festival of Corpus Christi in 1311to a summer week-long fair). According to the Program Notes the "last complete cycle was performed in 1579, 1962 marks the first performance of the Mystery Plays since the bombing of the cathedral in WWII." Community and tradition are invoked by statements in the program, such as "for the people, by the people," made in reference to the company's composition and the message of the performance and intended audience. Because they were telling a (post)modern version of the stories, it seems only fitting that they included the digital media with which today's society is so accustomed. In one case, the resurrection of the dead child, a real-time camera feed shot a close up on the girl and Jesus as the mother looked on and cried. This gave a play-by-play sports or live news close-up to the event, mediatizing it and putting it in context of what we see today as breaking news or important public (televised) events. The use of real-time projection on to the walls of the cathedral of Jesus, face when dead/risen and talking to his disciple was brilliant. By projecting the actor's face over a large stone monolithic sculpture of a man—face on top of stone face (although I do not know if this was a genuine statue or a set piece)—gave the sense the mediated divine presence of the Jesus character was speaking through the past into the present. This was perhaps one of the most effective uses of live digital projection to invoke a sense of connection between bodies/ideas of the past and the present moment and place. It seemed as though the idea of the Christ (perhaps depicted in stone) was given new life and meaning through it's moving, live animation.

¹⁷ Dimitris Papaioannou, director, 2004 Summer Olympics Opening Ceremony, Athens, Greece, August 13, 2004. In April, 2007, at Artists as Creative Catalysts, I talked briefly with Laurie Anderson who consulted on the staging of the Athens Olympics. She indicated that her suggestion to the staging committee was that technology should be used to say something rather than just showing it off, to which I agreed.

weight to Digital Theatre by grounding it in the continued tradition of utilizing new technologies.¹⁸

You will recall that in the first chapters the body of the performer was looked at first in contrast with his digital other (video, animated, or metal), then in terms of increased agency as their bodies extended their reach into and control over their performance space, lastly I discussed the neo-Bakhtinian unbound body which reaches beyond the bounds of public and private and becomes a playing space itself. Through the simultaneously "live" and mediated nature of Digital Theatre, the performer's rebellious body onstage engages in dialogue with its image-body, contesting the societal dominance of the image over the real. The human body is introduced to animated, AI, and robotic bodies which stir genuine emotion in audience, prompting us to reexamine our similarities and differences with our creations and re-evaluate live as the soul "which can move itself." Through the concurrent difference and similarity, we glimpse our own nature, potentials, and limitations. We both acknowledge and span the gap between the world of these modern Über-Marionettes, and the human actor with screen-play and projectionist costuming which can layer multiple characters onto one actor. Our bodies overlap, reach into space, extending influence on media, singing or dancing the images out. We even let out bodies become the puppets of others, with the boundaries between internal and external, public and private, individual and universal transgressed through the internet stimulation of muscles.

Next I discussed place in terms of illusionary place created through digital media and performance places enhanced, even made active through the addition of digital technology. I examined theatre's continued interest in illusionary place and its transformation and motion on stage in terms of digital projections. Like early depictions of the New World onstage through Italianate scenery, cyberspace is materialized on stage for us to explore. The visual beauty of animated scenery demonstrated by Reaney's rotating moon and blushing landscapes, are lush and filled with movement, occasionally seeming alive. The scenery itself becomes another actor (the actor's other). Performance places become portable, flexible, linked, playful spaces, but also transform existing sites into environments where real and illusionary places overlap. These mixing and mutations of real and imagined place provoke the question: if intelligent spaces were truly intelligent (or given its nature as a whole responsive data system) then couldn't it be said that we would be performing inside its body?

In the last two chapters I discussed communities; the performance community of actors in cyberplace, and audiences becoming members of creative communities through their online participation in Digital Theatre productions via interactive interfaces. Cyberplace, you may recall is the term used to describe a feeling or perception of cumulative place in telematic and especially multi-site performances. In these meetingpoints between distanced collaborators with similar interests in the cyber-environment, a sense of place and of community are formed. In online performance/performative

¹⁸ Klaus Bartels, "The Box of Digital Images: The World as Computer Theater," *Diogenes* 163, 45-70 (Fall, 1993): 46.

¹⁹ Including but not limited to Perkowitz, *Digital People*, 53, and Robert S. Brumbaugh, *Ancient Greek Gadgets and Machines* (Westport, Connecticut: Greenwood Press, 1966), 113.

communities deep play, a sense of communitas form around collaborative performance creating utopia through process. Through digital technologies, places, bodies, and art forms are layered and composited. At the same time, multiple places linked together can seem like a theatrical portal connecting different geographical environments and people. Performers and audiences from multiple locations interact lending a sense of perceived proximity to interactions. Audiences are multiplied and the roles of audience and performer/creative source are mixed through online participation including text, visual, audio and performative input. The reach of the internet beyond public and private locations complicates our expectations of audience location and behavior, and the limits of participation and reception are tested in the interaction between Virtual Reality environments and theatre.

Given the extensive overview of types of digital performance, I believe that I have demonstrated that Digital Theatre is a hybrid art form of great potential, gaining strength from theatre's ability to facilitate imagination and create human connections, and digital technology's ability extend the reach of communication and visualization. I have shown that the dual presence of the "live" actor and mediated digital elements creates performance events which allow us to better understand, respond to, and shape our changing world, both on stage and beyond the theatre building. It can be surmised from this examination of Digital Theatre that because "technology defines our being-in-theworld and the way in which we exist alongside other beings," live performance can benefit from the inclusion of digital technology.

Digital technology helps us create theatre appropriate for our interpretation of our time. Digital Theatre (or digitally enabled theatre), exemplified by the performances discussed in this work, allows us to unpack our assumptions about body, place, and community and reexamine who we are, where we are, and our relationship to others in a global world. The combination of human and digital communications formats allows us to better try to understand what it means to inhabit our world and flesh out these ideas on stage.

Throughout my research in Digital Theatre, from my years online investigating the resources of the Digital Performance Archive, and throughout my readings, interviews, and audience experiences, I have repeatedly found that praxis lies at the heart of understanding this evolving art-form. Although it can be said that some learn better from doing, it is also equally important to acknowledge that the hands-on training I received both on campus, through AG performances, and through workshops like SDAT at ASU and Troika Ranch prepared me to more fully appreciate the complexities and nuances of digital performance and understand the difficulty and value the techniques demonstrated by the artist/performer/technologists in this work. In her article

²⁰ Ellen Mortensen, *Touching Thought: Ontology and Sexual Difference* (Lanham: Lexington Books, 2002), 101.

²¹ "As DMP is often captured digitally in its entirety, DMP is often archived online, thereby existing in contradiction to Phelan's desire to keep performance independent from mass mediation and recording. Materially, the DMP archived is not wholly different from the 'original' DMP—especially if the DMP had no live audience to begin with other than the performers and producers on-site during its creation." Marcyrose Chvasta, "Remembering Praxis: Performance in the Digital Age," *Text and Performance Quarterly* 25, no. 2 (April 2005): 164.

"Remembering Praxis: Performance in the Digital Age," Marcyrose Chavata reminds us of the value of performing our scholarship. She writes:

Ultimately, this essay serves as a reminder to myself and others to remember and perform the kind of work that we do. As performance studies scholars, we engage in praxis: the theoretically informed practice that yields further practice and theory—our own kind of grounded theory designed to share with others what we have come to know through our *doing*. ²²

Alternative forms of research are also essential, including the objects of study (the performances), their transmission and archiving (often in the form of websites), and my analysis and creation of new objects of study (including performances and this dissertation) are essential to this project. Each of these is, at some point, digital. Given the subject of Digital Theatre, it is especially fitting that a segment of my dissertation be in a digital format. In her reflections on documenting the multi-site performance *Cosine* (which resembles *InterPlay* in its description of mixing multiple video streams of interdisciplinary performance), Heather Raikes writes that the pluralistic form raises questions about:

appropriate forms for documentation. The written word is a linear, consecutive, hierarchical medium that meets structural limitation when confronted with the depiction of an interdisciplinary multimedia mosaic. To document a nonlinear expression in linear form is to flatten its dimensionality, and, to refer to modern physics, to collapse the dynamic potential of the wave into the definitive experience of the particle.²³

The same can be said of many forms of Digital Theatre which might be best documented in digital format.

Readers will find a CD with a website featuring text, video, and images describing the production of *Elements*. This original work, which I coordinated, was staged in the Dance Department at the University of Maryland by an interdisciplinary group of staff, faculty, and graduate students called the Digital Performance Group. We worked collaboratively and devised a piece of Digital Theatre and performance which reflected a collective work fed by our individual skills and aesthetics.

Through the CD, the process and product may be viewed. The *Elements* project is evidence of a collaborative model and of my assimilation of many of the ideas in this paper. Reactive scenery or synthesis and projectionist costuming (seen in *The Magic Flute* and GSRT respectively) were employed in the first scene, Air. In the second scene, Earth, a collaboratively scripted work was telematically performed via the Access Grid with ArtGrid community members, in front of animated scenery (demonstrating digital illusionary place and expanded place of performance). MIDI tap tiles and motion sensing

²² Chvasta, "Remembering Praxis," 157.

²³ Heather Raikes, "Fluid Architectures and Sample Spaces: Reflections on a New Media/Architecture Performance," *Body Space and Technology* 3, no. 1 (2002), http://people.brunel.ac.uk/bst/documents/heatherraikes.doc, (no pagination).

were utilized in the Fire scene. The last scene, Water, featured a dancer performing with her digital other as the real-time video silhouette of her body was filled with water imagery (as she danced with her form as the illusionary place). Perhaps the primary achievement of the project was that we temporarily converted the Dance Theatre into an active space (like ASU's intelligent space) for digital play and collaboration. Ollivier Dyens states:

One may also conceive of the performing body as extended by a musical instrument; this is seen as a kind of transferring of the body onto the instrument, with which one communicates to the world: a voicing of one's body; a body drawn out of itself. In this light, performance is seen as a transfer of information from one's body to the instrument, from the body to the world, or from the body to another body. In any case, the formula "from-to" prevails...evolution is oriented toward placing-outside ourselves, and we often see this reflected in a rather centrifugal perspective of performance as an activity of reaching out from our body via hand and tool to the world. Performance is always wished to be a giving from us to the Other. We may ask when is it that we reach this point, the point at which we touch the Other, or differently put, in order to touch the world, which part of us is doing the touching, the body, the hand, the instrument?²⁴

Today many performers are reaching out through digitally enabled bodies. Digital Theatre and performance which involves both the communal connection between "live" co-present audience and performers, but also utilizes the flexibility and reach of the digital tools and techniques available to us. Through Digital Theater we can better create theatre which relates to the world around us and imagines the theatre of tomorrow.²⁵

Theatre is a medium of questioning, hope, and insight.²⁶ Digital technology is the transformation and flow of information. Their synthesis creates a powerful tool for communication both locally and globally. In its widest reach, Digital Theatre is a performance method which can be used as a tool to reassess the direction of globalism, challenging dominant models of mass culture and reinvesting value in individuals while

²⁴ Ollivier Dyens, quoted in Franziska Schroeder, "The Touching of the Touch – Performance as Itching and Scratching a Quasi-Incestuous Object," *Ectensions: The Online Journal of Embodied Technology* 2 (2005): 6.

²⁵ "Technologies give access to different, multiple, and unknown levels of reality, and by its mere presence, this access alters the encoding of our world." Olliver Dyens, *Metal and Flesh: The Evolution of Man: Technology Takes Over*, Translated by Evan J. Bibbee and Ollivier Dyens (Cambridge and London: The MIT Press, 2001), 35.

²⁶ "Audiences are compelled to gather with others, to see people perform live, hoping, perhaps, for moments of transformation that might let them reconsider the world outside the theater, from its micro to its macro arrangements. Perhaps part of the desire to attend theater and performance is to reach for something better, for new ideas about how to be and how to be with each other to articulate a common, different future." Jill Dolan, *Utopia in Performance: Finding Hope at the Theater* (Ann Arbor: University of Michigan Press, 2005), 36.

reevaluating their relationship to the ecology and larger human community.²⁷ Digital Theatre is a "moving metaphor" which allows for the celebration of différance and the active recontexualization of elements which shape our world.²⁸ Digital Theatre is a hopeful act of creative intervention.

²⁷ Telematic performance can create a space of translation, and act as a mobile metaphor, creating momentary alignments within (societal) ambiguity via brief moments interconnectedness in performance. "The corporate world has colonized everywhere: from television to classrooms, painting themselves green, supporting women's initiatives, <u>universalizing the consumer, and commercializing youth</u>. Multinational corporations are involved in energy, biotechnology, agriculture, food-processing, manufacturing and retail, communications, transportation, media, health, and education…" Heather Eaton, and Lois Ann Lorentzen, eds. *Ecofeminism and Globalization: Exploring Culture, Context, and Religion* (Lanham: Rowman and Littlefield Publishers, Inc., 2003), 30-31; "Humanity is beginning to perceive the planet as a closed ecological and economic system for the first time. The sustainability of humanity, as opposed to a national society, is emerging as a major challenge." Kennedy Graham, ed. *The Planetary Interest: A New Concept for the Global Age* (New Brunswick, New Jersey: Rutgers University Press, 1999), 12.

[&]quot;...the moving metaphor, a ambivalent space of shifting codes/meaning. It is that third space, though unrepresentable in itself, which constitutes the discursive conditions of enunciation that ensure that the meaning and symbols of culture have no primordial unity of fixty; that even the same signs can be appropriated, rehistoricized and read anew...even beyond intracultural translation, this idea of a moving metaphor, of a third space implies a contingency in creation of meaning which allows for new interpretations of 'truth' It is the third space which 'makes the structure of meaning and reference an ambivalent process, destroys this mirror of representation in which cultural knowledge is a customarily revealed as an integrated, open, expanding code." Homi K. Bhaba, *The Location of Culture* (London: Routledge, 1994), 37; "It is in the emergence of the interstices—the overlap and displacement of domains of difference—that the intersubjective and collective experiences of *nationness*, community interest, or cultural value are negotiated." Bhabha, *The Location of Culture*, 2.