Kirby Malone and Gail Scott White continually challenge the boundaries of live performance, art and creativity by embracing and artistically employing a full spectrum of dynamic media. **LIVE MOVIES** is a vitally original and compelling guide to the synergistic blending of theater, film and new technologies that is characteristic of their work in the Multimedia Performance Studio and Cyberbia Productions. Intellectually challenging and intuitively clear, **LIVE MOVIES** is an essential read.

— Darlanne Fluegel, Actress, and Professor in the School of Film and Digital Media, University of Central Florida

Multimedia Performance Studio is where new kinds of theatre — the edge, the synesthetic, the now that finds its way into what makes theatre great — is truly happening. This crucible for performance art is a beacon for the whole theatrical world.

— Richard Winkler, Lighting Designer

Malone and White, of MPS and Cyberbia, weave and integrate stunning multimedia imagery into the fabric of theatrical storytelling with boundless imagination and conceptual boldness. They are artistic and technical alchemists whose visual landscapes interact with live actors, music, sound, lighting and scenography to synthesize new languages of performance. What they do is new jack theater that packs a memorable wallop.

— Benny Sato Ambush, Director; Producer; Educator

**LIVE MOVIES**
A Field Guide to New Media For the Performing Arts

edited by
Kirby Malone and Gail Scott White

Multimedia Performance Studio
Department of Art and Visual Technology
College of Visual and Performing Arts

Documenting Multimedia Performance Studio’s New Stage Technology Project
New media theater and performance are nothing if not collaborative. And yet, most artists working in this field, especially in experimental and grassroots companies, lack the financial resources necessary for sustained new technology initiatives.

If an enlightened affiliation of venture philanthropists was to assemble a fund of $100 million dollars, which they would distribute (over five years at $2 million per year) to ten adventurous multimedia performance companies and ensembles, these philanthropic “angels” would enable new media artists to change the proverbial “face of the American theater.”

Such a program would allow new media theater companies to cover production costs and to pay a team of artists (writers, directors, singers/actors/dancers/musicians, composers, designers, animators, film and video artists, production and stage managers, dramaturgs, technicians, engineers, etc.) a “living wage” as they research, develop and perform new media works.

If you, or anyone you know, or anyone you ever heard of, would like to discuss or participate in this utopian program for opening doors to the future of new media theater and performance, please contact Multimedia Performance Studio at MSN IC3/C200 College Hall, George Mason University, Fairfax VA 22030 or at kmalone@gmu.edu, and we would be delighted to meet with you.

---

Live Movies: A Field Guide to New Media for the Performing Arts is also available online at www.avt.gmu.edu/mps

For more information:

kmalone@gmu.edu | (703) 993-8865
LIVE MOVIES
To Lorraine Brown

with gratitude for her passionate preservation
of the heritage of the Federal Theatre Project’s Living Newspaper
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- Laurie A. Meamber

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Reno Taini

Federal Theatre Project’s Living Newspaper
Special Collections, George Mason University Libraries
Our taverns and our metropolitan streets, our offices and furnished rooms, our railroad stations and our factories appeared to have us locked up hopelessly. Then came the film and burst this prison-world asunder by the dynamite of the tenth of a second, so that now, in the midst of its far-flung ruins and debris, we calmly and adventurously go traveling….

— Walter Benjamin (1936)
INTRODUCTION

This book came into being to serve a range of purposes.

To chronicle four years of Multimedia Performance Studio’s research into new media, the New Stage Technology Project (2001-2005).

To provide a service to the field of the performing arts, focusing particularly on how new media may be made available not only to large organizations but also to grassroots presenters, producers and performing arts ensembles.

To depict a historical and theoretical spectrum of the practices of projection design and multimedia performance.

To present an overview and documentation of MPS’s productions, as records of one group of artists’ research and exploration of the field.

MPS creates original productions, often drawing on historical or science fiction sources; innovative stagings of opera and new music theater; multimedia scenography for theater, dance and performance art; and indoor and outdoor projection installations. Under the sponsorship of the Department of Art and Visual Technology, MPS artists work in the Mason Media Lab and the Harris Theatre at George Mason University, where they experiment with new and traditional stage technologies, and develop imaginative approaches to the integration of these technologies with the live action and music of theater. Making these works, threaded and laced with new media, is the equivalent of creating a play (or opera), a movie, and a CD album, all at the same time.
Live Movies is constructed as a field guide to new media for the performing arts, not the guide. It is for the performing arts, both the artists and producers, and the disciplines, theater, opera, music theater, performance art, dance, dance theater, music concerts and puppetry (all divided from each other by the Industrial Revolution, according to Jacques Attali). It is also intended to prove useful to artists and organizations who create architectural installations, exhibitions, films, pageants, spectacles and any number of other projects which rely on, and are exploring, new media. This book is also addressed to the general reader who is curious about the interplay among humans, machines, information systems and culture(s).

•••

Cinematic and visual “literacy” have prepared today’s audience for new forms of narrative and stage design. This field guide is intended as a resource to the field(s) of the performing arts, new and traditional, for both experienced experimenters and for those just beginning to work with multimedia technologies, and most particularly those who work with a modest, limited budget.

•••

By “new media,” in MPS, we mean primarily digital projection and sound design; the term also can refer to breakthroughs in, and explorations of, new technologies in lighting, visual displays, automated kinetic scenery, animatronics and more being dreamed up even as you read this. Many of which we have explored, or are exploring, to a range of degrees. And of course it all revolves about the computer…

•••

This book is conceived as a record of (a) work in progress, and is presented as a series of voices and opinions as starting points for, or picking up in mid-sentence with, discussions and speculations in the broad field of performing artists oriented toward new media, and an interdisciplinary, multimedia sensibility. It is also a work in progress in that the material presented here (along with film and sound clips, additional still images, and an expanded bibliography) will be available online at a Live Movies web site <www.avt.gmu.edu/mps>.

(Also see <www.cyburbiaproductions.com/books> for a cyber-culture bibliography/filmography.)
Multimedia Multimedia: A Note on Terminology

In the 1970s and ‘80s (and even in the ‘60s), “multimedia” designated performance works that featured some combination of slides, film, video, music, sound, puppetry, light shows, overhead projectors, filmstrips, etc., in conjunction with live performers.

In the ‘90s the term “multimedia” was co-opted, one might say, by the corporate world, used by Microsoft, Adobe and others to describe “suites” of digital “applications,” thus thereby hijacking the term from the purer meaning it once had. (Still, we’ve chosen at MPS to use the term.)

Perhaps a more useful “contemporary” term is “new media,” useful in some ways, but best summed up simply in the title of the collection Lisa Gitelman and Geoffrey B. Pingree edited, New Media 1740-1915, which just about says it all: it is important in making cinematic theater, live movies, that artists transcend technological fetishism, realize that “new media” are always arriving, and focus on the content, the meaning(s), of the work they do. This may be a way to build a theater of the future, synthesizing theater, cinema and music for a profoundly different kind of audience.

A similar terminological quandary exists for designers: are we projection designers, or multimedia designers? The former can prove unproductively ephemeral (you’re providing pictures that move in the air, and then are gone), and the latter is fraught with the corporate-ness cited above. The former focuses on the act, not the process; the latter connotes a fuller picture of the complexity required to pull a live movie off.

Given the considerations above, what we artists, who are embracing technology (more or less) ambivalently in the performing arts, are creating is multimedia multimedia. We intertwine the curious interdisciplinarity of the earlier sense of the word, with employing and exploring the new tools cooked up for us by audio-visually inclined engineers and corporations.

For the purposes of this book, we have chosen not to select which terms to use, or exclude, but have left them as each of the writers conceive of, and use, them. This polyvocal process of mutating and transforming language is good for us, and encourages us to try to understand and envision, as exactly as possible, what we might mean, as both artists/writers, and as citizens.

Finally, you say theatre, I say theater…rather than engage in the debate over which means what, we have retained the spellings as we received them, in both new essays and historical sources, and have not subjected these writers to an editorial uniformity.
HISTORY / THEORY

In the simultaneous use of the living actor and the talking picture in the theatre lies a wholly new theatrical art, an art whose possibilities are as infinite as those of speech itself.

— Robert Edmond Jones (1929)
some of the widely ranging, rhizomic, dialectically branching sources and inspirations of contemporary multimedia scenography and performance, a lateral and looping subjective genealogy

Balinese shadow puppetry and Kabuki theater;
Pre-Socratic cosmology and Plato’s Allegory of the Cave;
Medieval stained glass windows and Mystery plays;
totem poles, wampum belts and cave paintings;
the paintings of Bruegel and Bosch;
Giordano Bruno’s Memory Theater;
Piranesi’s architectural dreamscapes;
Renaissance frescoes and Jonsonian masques;
18th Century automata;
19th Century panoramas, tableaux and magicians;
the films of Georges Méliès;
Kleist on puppets, and Wagner on “the total art work”;
Jonathan Swift, Samuel Taylor Coleridge, Edgar Allan Poe and Franz Kafka;
Michael Powell and Emeric Pressburger’s film of Offenbach’s Tales of Hoffmann;
Mary W. Shelley and Christopher Marlowe;
the montage theories of Sergei Eisenstein and Dziga Vertov;
the stylized Constructivist/Cubo-Futurist theater of Vsevolod Meyerhold and Vladimir Mayakovksy, and the “Fantastic Realism” of Evgeny Vakhtangov, in Russia in the 1920’s;
the cinematic, episodic Epic Theater of Erwin Piscator, Bertolt Brecht and Kurt Weill, and Oskar Schlemmer’s Bauhaus Theater, in Germany, also in the 1920’s;
the Federal Theater Project’s Living Newspaper in the 1930’s;
Dada cabarets and Expressionist cinema;
the theatrical experiments at Black Mountain College;
the revolutionary theater of Asja Lacis;
film noir and documentary film;

Robert Edmond Jones’s *Dramatic Imagination* and *Towards a New Theatre*;
Mordecai Gorelik’s *New Theatres for Old* and Lee Simonson’s *The Stage is Set*;
Antonin Artaud’s *The Theatre and Its Double* and Peter Brook’s *The Empty Space*;
histories of performance by Margaret Croyden, RoseLee Goldberg, Jonathan Kalb,
E.T. Kirby, Bonnie Marranca, Theodore Shank and John Willett;

Josef Svoboda’s ground-breaking multimedia scenography and his Laterna Magika;
the surrealism of Jean Cocteau’s films and Joseph Cornell’s boxes;
*Victory Over the Sun* (1913): Malevich, Kruchenykh, Khlebnikov and Matiushin,
and *Parade* (1917): Cocteau, Picasso, Satie and Massine;
the epic murals of Diego Rivera and David Alfaro Siqueiros, and
the illuminated manuscripts of William Blake;
Marcel Duchamp, Kurt Schwitters and Jean Tinguely;
drawings by George Grosz and photomontages by John Heartfield;
the sculptural tableaux of Ed Kienholz and Nancy Reddin Kienholz;

the scenic designs of Adolphe Appia, Edward Gordon Craig, Caspar Neher,
Traugott Müller, Liubov Popova, Alexander Rodchenko,
Warvara Stepanova, and the Stenberg Brothers;

the paintings of George Tooker, Frida Kahlo, and Komar & Melamid;
Magical Realists and Situationists:
the satirical documentary theater of Karl Kraus;
the film fantasies of George Pal and Ray Harryhausen;

filmmakers Craig Baldwin, Kathryn Bigelow, David Cronenberg,
Maya Deren, Terry Gilliam, Jean-Luc Godard, Peter Greenaway, David Lynch,
Chris Marker, Walter Murch, Yvonne Rainer, Zbigniew Rybczynski,
Eliseo Subiela, Hans Jürgen Syberberg and Stan Vanderbeek, and Wong Kar Wai;
Pink Floyd and David Bowie;
Andy Warhol and the Velvet Underground;

Afrika Bambaataa, Thomas Dolby, Michael Franti, Front Line Assembly, Nina Hagen,
KMFDM, Kraftwerk, Klaus Nomi, The Residents, Todd Rundgren and Sun Ra;
dub reggae and musique concrète;

Ernie Kovacs, Monty Python and Max Headroom;
Dennis Potter’s *The Singing Detective* and Patrick McGoohan’s *The Prisoner*;
*The Twilight Zone* and *Outer Limits*;

composers Robert Ashley, Brian Eno, Heiner Goebbels and R. Murray Schafer;
Fluxus and Happenings;
the stylized theaters of Pina Bausch, Caryl Churchill, Rainer Werner Fassbinder,
Dario Fo and Franca Rame, Elfriede Jelinek, Tadeusz Kantor, Charles Ludlum,
Ariane Mnouchkine, Yuri Lyubimov, Heiner Müller and José Rivera;
the filmic art-theater of Robert Whitman, Carolee Schneemann and Nam June Paik;
Jeffrey Shaw’s projection design for the band Genesis in the 1970’s;
Wendall Harrington’s projection design for
The Who’s TOMMY, directed by Des McAnuff;
the neo-gothic stop-motion animation of
Jan Svankmajer and the Brothers Quay;
Robert Smithson’s theory of future ruins;
the 1939 and 1964 New York World Fairs;
Disney animatronics and Vegas sensurround;
arena rock and trade shows;
‘60’s light shows and planetaria;
dystopic science fiction (Fritz Lang’s Metropolis, Orwell’s 1984, Huxley’s Brave New World, Karel Capek’s R.U.R., Ridley Scott’s Blade Runner and the writings of Philip K. Dick);
the Cyberpunk novels of William Gibson, Bruce Sterling, Pat Cadigan, John Shirley, Rudy Rucker, Kim Stanley Robinson, Lewis Shiner, Ian Watson, Robert Charles Wilson, Jack Womack, Justina Dobson, Neal Stephenson and Wilhelmina Baird;
the writings of cultural critics including Walter Benjamin, Susan Sontag, Erik Barnouw, Roland Barthes, Theodor Adorno, Donna Haraway, Alucquère Rosanne Stone, Avital Ronell, Michel Foucault, Scott Bukatman, Julia Kristeva, Stuart and Elizabeth Ewen, Lotte Eisner, Mark Dery, Peter Zweibel, Timothy Druckey, Mark Crispin Miller, Lawrence Levine, Brenda Laurel, Lisa Gitelman, Paul Virilio, Victoria Nelson, David F. Noble, Greil Marcus, Peter Lunenfeld, Susan Buck-Morss, Siegfried Kracauer, Gilles Deleuze and Félix Guattari, and Jean Baudrillard.
The business of workers in the theatre is, as I see it, to express a timeless theme by means of the tools of one’s own time. And we are not using the tools of our own time in the theatre.

— Robert Edmond Jones (1941/1952)

…A film is a matter of a few miles of celluloid in a tin box.

— Bertolt Brecht (c. 1930)

While other writers in this book document and discuss many contemporary new media artists in the performing arts, this essay is concerned primarily with historical precedents for the current wildfire of new technologies making their way onto the stage, and how these new technologies change methods of, and approaches to, performance and production.

New technologies come, and new technologies replicate, mutate, malfunction, evolve, devolve, obsolete, and go. When they first arrive, we tend to fetishize them, a feverishly melancholy act. This fervor for the machines can blot out what really matters...meaning, content, narrative, story...

The panoply of computer graphics and animation, video, data, film and slide projection, digital sound design, amplification and sound processing, and computer-control of scenic elements represents just some of the new devices and processes which are at the disposal of designers, technicians and other theater artists in the early 21st century. With the profoundly new kind of theater, opera, concerts and exhibitions which can be crafted with these innovative tools comes a whole range of challenges in how to use them, and especially in how to integrate them with live performers.

The singer-actor in new media theater today learns to deal with a wireless microphone, to treat sound design as another character, to talk and interact with projected characters, become a projected character and transform back again, to lip-synch and digitally ventriloquize. They are not acting like they’re
in a play. They’re not acting like they’re on film. They’re acting as one does in a live movie, interwoven, interspersed with phantoms of the same insubstantiality in which we dwell in the technospheric mediascape.

Not only actors have a different task before them in new media theater. So, too, do writers, directors, designers, composers, producers, stage managers and operators. Writers compose “sampling scripts” in “synthetic fragments.” New media (or multimedia, or projection) design shows up in the scenographic process and no one’s really sure what to do, or what to do with it.

Multimedia designers are essentially filmmakers. The good ones are skilled not only in creating on multiple two-dimensional picture planes, but also in three dimensions, and in four, through time. Some set and lighting designers are skeptical, even territorial, toward this (once again) new force in the theater; some resist, some try to do it themselves. But it’s a different medium and discipline than most are trained or adept in, so over the past ten years a growing number of artists now train (often themselves) to focus solely on multimedia design.

It is important to de-mystify so-called “new media,” with the realization that they simply are tools, and will soon be assimilated by theater’s production apparatus as were nautical rigging, electrical lighting, servo-mechanisms, film and slide projection, and sound sampling and amplification. Projections are simply another kind of light, and the set and the costumes form the screens. This inter-dependence necessarily leads to a unified, dialectical approach to scenography, and to the fabled Gesamtkunstwerk, the total artwork, total theater.

Multimedia design, in American regional theater, experimental groups and grassroots companies, university-based theater, and even on Broadway, finds itself in much the same position that sound design was ten or fifteen years ago, struggling to unfold as a new, dynamic facet of the production apparatus. Today most directors and production managers don’t ask whether a show needs sound design, but what will the sound design be? Ten or twenty years from now, multimedia design (with all the “new media” we can’t imagine yet) will inhabit an integral place in the design spectrum. In the meantime, it’s amusing and instructive to witness, and participate in, the growing pains, and the turf wars, and the experimentation and adaptation, and yet another new dawn of technologically-enhanced social and artistic change.

LIVE MOVIES

The epic style…made use of dramatic devices which had already been discovered, but whenever possible added technical innovations from the world of industry…we used film projections as a kind of classical chorus. Furthermore, the film was not just used instead of a painted back-drop, but in order to create a dynamic, moving world for the action on the stage.

— Erwin Piscator (1934)

As a multimedia designer and director, I work to integrate new technologies into live theater, opera and performance. I write, design, and direct “live movies” that
synthesize theatrical, musical and cinematic elements. I also stage ideas from non-fiction sources that I think have important things to say, but which I am aware most people will never read.

My life in performance began in the urban collectives I co-founded in Baltimore—CoAccident, Impossible Theater (where we first used the term *live movie* in 1985), Impossible Industrial Action, Desire Productions. From these Baltimore companies, I expanded my work into collaborations with opera companies, regional theaters, and theater ensembles across the country, working first as a projection designer (creating systems of up to 18 computer-synchronized slide projectors), and more recently as a multimedia designer, employing show control systems, multiple video projections and digital sound. I learned this succession of technologies in the trial-and-error heat of production, and in concerted research sessions when they have been possible.

Today I work in two ongoing collaborative ensembles (which I co-founded with multimedia designer Gail Scott White in the Virginia suburbs west of Washington DC), Multimedia Performance Studio and Cyburbia Productions, creating commissioned designs and original productions. These collaborative productions feature multiple projected imagery as characters, settings, environments, dreamscapes, language, and other scenographic elements. They interweave cinematic and televisual technologies, techniques, and narrative devices (such as flashback, slo-mo, rewind, lip-synch and simultaneous action). Live performers interact with, become, and transform from, pre-recorded and “live” projected characters. In order to accomplish this symbiosis, the company of collaborating artists often operates simultaneously as a performance ensemble, a film and animation production house, a digital garage band and a stagecraft laboratory, all geared toward producing dynamic and critical multimedia performance spectacles.

The concept of a new stage form, a “live movie,” is based on the premise that theater, performance art, opera, music theater, concerts, dance, puppetry and other forms of live art should reflect the society for, and in, which they are created. As photography challenged many of the traditional functions of painting and printmaking, so film and television operate like viruses in the theater, where they can change everything or wither in trivialization. They operate like a virus, an ambivalent one, like language, or the flickering image. Much new media theater employs new technologies, turning them in on themselves, to cast light on the ways they shape and re-configure our world. It is an experiment with new and traditional stage machines, developing imaginative approaches to the integration of these technologies with the live action and music of theater. While they may revel in the powerful beauty and narrative liberation which projections and cinematic techniques can bring
to theater, many artists resolve to learn new media and technologies, in part, so that they might use the machines to critique the machines. The result is a hybrid approach, part Luddite, part technophile.

If we stomp onto the stage, daubed in mud, and dance wildly with torches, chanting, “We hate computers! We hate computers!” who will believe us, or care? No one. But if we create sophisticated mosaics of new media and live performance, with the same tools used to sell and promote surveillance systems and SUV’s and predator drones and toothpaste and JawPhones and depleted uranium, then perhaps our critique achieves “credibility.” Textually or sub-textually we can encourage a collective investigation of humans and their machines, or even better, their technics (a great, fading, Lewis Mumford word which I take to mean not just the machines, but the systems we use to interact with them, and how we are attached to them). Is theater to be a palliative, a narcotic, a “time-killer”? Or, if not a call to action, at least a call to contemplation, research, analysis, imagining?

The “new media” entering the performing arts too often are greeted as something out of nowhere, a cool new thing to toss into the mix. But the hidden history of montage and projections and stylized performance and the incorporation of new technologies into the stage apparatus goes back (at least) about a hundred years, to collaborative experiments which arose in Russia and in Germany, and spread later to the United States in the Federal Theatre Project. The onslaught of WWII came down like a guillotine on these artistic experiments, and most of the artists and scholars in question found themselves exiled, imprisoned, tortured, executed, blacklisted or otherwise silenced. We emerged into the 1950’s with a limited (and limiting) mix of abstraction and realism that became the dominant aesthetics of the past half century.

LOST GHOSTS

All my life I have been opposed to realism in the theatre.

— Robert Edmond Jones (1952)

The 1920s and ‘30s, another time when “new media” showed up on the stage, gave rise to the Constructivist Theater of Vsevolod Meyerhold, the Fantastic Realism of Evgeny Vakhtangov, the Epic Theater of Erwin Piscator, the Federal Theatre Project’s Living Newspaper, and others who employed new technologies to cast light on social issues. They immersed themselves in searches for new ways to structure a show, and in how to perform it. These explorations led them to episodic construction (montage), and to new performance styles (stylization), ranging from over-the-top satire to radical juxtaposition to restrained “alienation.” They also rejected “realistic” scenic designs, and drew instead on new spatial and compositional ideas from the Dadaists, Cubo-Futurists and Expressionists.
We can graft decorative backdrops onto conventional productions, or, following the examples of our theatrical ancestors, we can use the introduction of new media into theater and performance to re-think and re-shape the entire way we compose and make productions, creating new narratives for times which oscillate between stupor and uproar.

The theater which grew to dominance (at least in the American arena) following WWII embraced and elaborated a psychological and scenographic realism, and the multimedia explorations between WWI and WWII drifted into hidden histories, inhabited by lost ghosts. But to try to foresee the “theater of the future,” we can look back to what Lawrence Levine calls “the unpredictable past.”

Rather than living at a time when we are making a wholly new theater, what we’re doing has its historical predecessors, whom we might consult, and from whom we doubtlessly have a lot to learn. We can talk with the dead. Or, at least, listen to them.

**FOUR POETS OF APOCALYPSE**

*Away with the author! Theatre shouldn’t be written in the study, but built on the stage.*

— Ilya Ehrenburg (1922)

As a poet (before I became a director and designer), I learned that early in the 20th century there were four poets in Europe who turned to the theater for something more — Antonin Artaud and Jean Cocteau in France, Bertolt Brecht in Germany, and Vladimir Mayakovsky in Russia. When poets turn to the theater it can mean that words are not enough, that perhaps these poets might even have grown to mistrust language. (The 20th century had a way of leading many writers to this conclusion.) In addition to gravitating toward theater, Artaud, Brecht, Cocteau and Mayakovsky also responded to the explosion of the moving image on the cultural radar screen — each of them even delved into film, “on the side,” with the exception of Cocteau, who plunged into the medium, taking Surrealism with him.

With Balinese inspiration, Artaud theorized some basic tenets of a theater of the future, in which narrative and (often multiple) focus move seamlessly among, through and from actor/singer/dancers, puppets, music and musicians, lighting, sculptural settings and objects, and, today we should include projections and sound design (these latter two diversely capable of serving as a kind of “Greek chorus”). It’s ironic that a theater theory envisioned by a poet should prove so central later in the Theater of Images, Environmental Theater, and many other avant-garde tributaries in which text and language took their place beside other elements of production, rather than above them.
This set the stage, so to speak, for a re-examination of the dominance of the “page-to-stage” approach to production which still forms the status quo of much theater today, coupled with a “simulated behavior” method of character portrayal (a method alien to the actor in Surrealist or Epic theater). In contrast to the psycho(logical) realist norm of conventional theater, poetic distillation and epic portrayal free the actor from the misconceived imperative to simulate “real world” behavior.

These theater poets, and their embroilment in the Surrealist, the German Expressionist and Epic, and the Russian Cubo-Futurist and Constructivist movements, encouraged me to seek and help create collaborative structures in which I might transform the solitary act of writing into the collective social experiment of making theater and live performance. They also inspired me to try to contribute to theater that is both cultural criticism and artistic criticism, hybrid collaboration, a utopian model in a dystopic world. Mayakovsky led me to Meyerhold, and Brecht, to Piscator.

**MYSTERY PLAY TO HISTORY PLAY**

As the earliest influences on my theatrical and design philosophies were the works created in Russia and Germany in the 1920s, by artists such as Meyerhold, Vakhtangov, Piscator and Brecht, I asked myself what led them to incorporate film and slide projections, moving scenery, loudspeakers, motorcycles and pyrotechnics into their stylized productions; I came to the conclusion that a central motivation for this approach was to assert and demonstrate that theater is a vital, contemporary force in the lives of the citizenry, and not a medium out of synch with its time.

Meyerhold and Piscator shared much in common: they rejected realism and saw theater as a force for social change; they worked with the best visual artists (painters and sculptors and photomontagists) of their day as designers; they possessed strong visions of what theater should (and could) be, but also established and encouraged dramaturgical and scenographic collectives, and explored collaborative writing projects; they explored new technologies and narrative forms appropriate to and arising from (and sometimes ahead of) their time.

Along with intensive research in contemporary technologies, these directors also embodied new and experimental conceptions of how theater is made and structured and presented. They drew on Commedia, Mystery Plays, Chinese and Japanese theater, music halls and boxing rings, as well as cinema, journalism and the circus, to create stylized, often satirical, stagings and portrayals, seeking a performance style that only could exist and flourish in the presence of a live audience. This new “epic” approach asked more of
the audience’s imaginations and critical abilities, and was geared to depict not isolated inter-personal conflicts, but the rips and tears in history’s social fabric.

We are ever in danger of losing sight of those in history who are of little use to the dominant culture. In our case, that culture has a vested interest in cultivating and maintaining the consumer (not the citizen) who is plugged in, overwhelmed, and feels relatively powerless to affect history, or even daily life.

STYLIZED

Now, I have seen a few things in my time... But not a single one can ever compare with the impressions made on me those three days of [Meyerhold’s 1922] rehearsal for The Doll’s House in that hall on Novinsky Boulevard. I remember shaking all the time. It wasn’t the cold, it was excitement, it was nerves stretched to the limit…

— Sergei Eisenstein (c. 1940)

Vsevolod Meyerhold (1874-1940) was the Russian pioneer of a stylized “theater of the grotesque,” of the “theater theatrical,” in response to the Naturalism and Realism which dominated early 20th century Russian theater. In 1905, he broke away from Stanislavski’s Moscow Art Theatre, and struck out on a theatrical journey, through Symbolism and Expressionism, to become closely allied with the poets and the painters of the Russian Cubo-Futurists, and the artists of Constructivism.

There was a time, in the late 19th Century, when realism was revolutionary, and Meyerhold’s time was not it. Over thirty-five years, Meyerhold led many theater lives: from 1905 (when he broke with Stanislavski) until the Revolution of 1917, he maintained a dual identity, directing plays and opera for the Imperial Theater in St. Petersburg, while working, often on the sly, in studios and lofts, on experimental productions with students, artists and more adventurous souls from the theater. He cultivated satire, in which the volume was turned up, and social insanities were made literal, so that they might be examined, critiqued and, perhaps in time, dispelled.

Following the Revolution he intensified his collaborations with artist-designers, was assisted by Sergei Eisenstein (who was on his way to invent montage in film), and created the first works of Constructivist theater, The Magnanimous Cuckold and Tarelkin’s Death, with the artists Liubov Popova and Warvara Stepanova, respectively, in 1922. This was a theater of ramps, chutes, slides, staircases, wagon stages, windmills, exploding chairs and moving walls. Soon he would import projections, loudspeakers and motorcycles into the theater. He directed Mayakovsky’s last two plays, the sci-fi satires The Bedbug and The Bath House (the latter designed by the sculptor/photomontagist Alexander Rodchenko), in the last year before the poet’s suicide in 1930.
Meyerhold tore down the show curtain, revealed the back wall of the theater, and shattered the barrier between the stage and the spectator. Like Brecht and Piscator, he formulated a “presentational” (rather than “representational”) style of theater. For Meyerhold, theater was a social art, in both the bond with an audience, and in the collaborative production process it takes to make it. He changed the way classical opera was staged, and proposed a musical approach to the stage rhythm of plays; he rejected realism in its many guises, denied the possibility or desirability of any kind of “naturalism,” and espoused an episodic method of structuring dramatic material.

Ultimately, the stylistic method presupposes a fourth creator in addition to the author, the director and the actor — namely, the spectator. The stylized theatre produces a play in such a way that the spectator is compelled to employ his imagination creatively in order to fill in those details suggested by the stage action.

— Vsevolod Meyerhold (1907)

But his most valuable contribution to new theater with new media was his creation of a theoretical and practical approach to performance, to stylization, developing a flexible method that found its way in the rehearsal and production process, through his actor-training system, biomechanics. When he called his work a “Theatre of the Grotesque,” he didn’t mean the word in any kind of gruesome, gory, eyeballs-popping-out sort of way; he meant a heightened, sometimes poetic, sometimes satirical, sometimes gymnastic approach that the actor takes to his or her material.

His closest compatriot in developing this kind of theater was Evgeny Vakhtangov, who, like Meyerhold, also left Stanislavski to discover and create his own work, which he came to call “Fantastic Realism.” In some ways, Vakhtangov surpassed Meyerhold (sometimes criticized as too much of a “puppeteer” with his actors) in the performance style he crafted, synthesizing Meyerhold’s
physicality, rhythm and visual composition with Stanislavski’s insistence on the actor’s personal connection with material. In Vakhtangov’s Fantastic Realism, in productions such as Maeterlinck’s The Miracle of St. Anthony, Strindberg’s Erik XIV, An-sky’s The Dybbuk and Gozzi’s Princess Turandot, the actor knew why he or she moved erratically, or glided at an angle in a sculpted grouping, made his or her face into a mask, or wore costumes painted with shadows, because the director worked dialectically with the actor to create the stylization. He died “prematurely” in 1922, at the age of thirty-nine, just after the opening of Turandot. Meyerhold helped Vakhtangov’s company survive after the death of their director.

Without Meyerhold, there probably would not have been a Vakhtangov as we (can) know him; the former’s split with Stanislavski surely inspired the latter to do the same. Meyerhold and Vaktangov, along with their contemporaries, Tairov, Okhlopow, Evreinov, and Asja Lacis, transformed Russian theater, before many were hounded and crushed by Stalin’s thought police. Meyerhold’s wife, actress Zinaida Raikh, was murdered in their flat in 1939, and Meyerhold was arrested, interrogated, tortured and executed in 1940. He was erased from Soviet history until the ‘50s, and his “rehabilitation,” when he was airbrushed back into the archive (with the latest photographic “new media,” no doubt).

**EPIC PROJECTIONS**

A complete revolution took place in stage design. By a free manipulation of Piscator’s principles it became possible to design a setting that was both instructive and beautiful…The playwright could work out his experiments in uninterrupted collaboration with actor and stage designer; he could influence and be influenced…The integrated work of art (or ‘Gesamtkunstwerk’) appeared before the spectator as a bundle of elements.

— Bertolt Brecht (1939)

The abyss which separates the actors from the audience like the dead from the living, the abyss whose silence heightens the sublime in drama and whose resonance heightens the intoxication of opera — this abyss which, of all the elements of the stage, bears most indelibly the traces of its sacral origins, has increasingly lost its significance.

The stage is still elevated. But it no longer rises from an immeasurable depth: it has become a public platform. Epic theater sets out to occupy this platform.

— Walter Benjamin (1939)

Erwin Piscator (1893-1966) was among the generation of Germans who came out of WWI feeling more solidarity with the Russian soldiers they’d fought against, than with the German business classes who had sent them to war in the first place. Piscator was associated with the Dada and Expressionist movements; in the 1920’s, in collaboration with artists George Grosz, John Heartfield and Lászlo Moholy-Nagy, designer Traugott Müller, architect Walter Gropius, composers Hanns Eisler and Kurt Weill, and the writers Leo Lania, Felix Gasbarra and Bertolt Brecht, he developed Epic Theater.
Piscator was the most radical, politically and artistically, of the other principal directors and designers discussed here. He used the tools of the Industrial Revolution to critique and oppose the injustices visited on the majority of society by the mercantile factory system, the growing “cities of strangers,” the alienation made inevitable in citizens bound up in the slow transformation from old-style imperialism to new-fangled “free market” global capitalism. Piscator’s generation of political artists imagined a social revolution in Germany to rival the Russians’.

Piscator pioneered documentary theater. He devised multi-level staging, and took advantage of improvements in stage lighting and mechanics. He introduced loudspeakers, film and slide projections, and industrially kinetic sets. Like Meyerhold he employed episodic narrative structure and montage methods of collective scriptwriting.

Epic theatre signified a performance free from the restrictions of realistic conventions, especially those of the tightly-knit well-made play…Piscator became well-known for his advocacy and use of any mechanical device that might help him. Unlike Victorian stage machinery, Piscator’s was used consciously to reflect a modern scientific society. From the beginning, it was the film used as an independent narrative device which enabled him to replace the lifeless scenery of the realistic stage, and he often projected more than one image simultaneously.

— J.L. Styan (1981)

As examples of the prodigious (almost stupendous) rate of production that Piscator generated in the 1920s, in one remarkable six month period (spanning 1927 and ’28), with his dramaturgical collective (Lania, Gasbarra, Brecht) and production company, he created three exemplary works in the history of proto-“new media” theater. The first was the pacifist Ernst Toller’s Hoppla, We Live!, staged on Müller’s revolving three-level set, with 3000 feet of film projected onto four screens.
Next, barely two months later, came *Rasputin, the Romanoffs, the War and the People That Rose Against Them*, by Alexei Tolstoy and P. Shchegolev, this time with 6000 feet of film projected onto Müller’s revolving hemispherical, multi-level set, framed by documentary screens.

And finally, three months later, the picaresque anti-war epic, *The Adventures of the Good Soldier Schweik*, adapted from Jaroslav Hasek’s comic novel by Max Brod and Hans Reimann; this production featured conveyor belts, or treadmills, to convey action and character movement, and George Grosz’s life-size cut-out marionettes and satirical cartoons.

It is now possible to have a still, then a moving film and then a still again. Thus film can be used to support, or to take further, or even to run ahead of the action, or it can be used as reportage; or quite simply as living film scenery (photomontage)—to portray for instance the sea, a factory or a street. Or as George Grosz used it in my production of *The Good Soldier Schweik*, with his excellent, grotesque animation film…

— Erwin Piscator (1933)

The scripts for each of these productions were re-fashioned and adapted by the dramaturgical collective. Schweik especially would prove to be a formative influence on Brecht, who soon left Piscator’s company, and embarked on his radical re-envisioning of music theater with Weill, Lotte Lenya, Caspar Neher, Helene Weigel and Elisabeth Hauptmann, who headed Brecht’s own dramaturgical collective.

As was the case with many progressive, leftist artists (and students and professors and writers), with the crumbling of Weimar Germany, Piscator went into exile, spent much of the ’30s in Russia and France, and then emigrated to the United States. In 1940, he founded the Dramatic Workshop at the New School for Social Research in New York City, whose students, bizarrely enough, included Harry Belafonte, Walter Matthau, Rod Steiger, Marlon Brando, Elaine Stritch, Sam Jaffe, Tony Curtis, Eli Wallach, Tennessee Williams, Judith Malina, and James Dean.

The 1950s found Piscator back in Germany, where he contributed to a sort of neo-Epic, documentary theater revival, directing Heinar Kipphardt’s *In the Matter of J. Robert Oppenheimer*, Rolf Hochhuth’s *The Deputy* and Peter Weiss’s *The Investigation*. He also staged an adaptation of Tolstoy’s *War and Peace* which featured armies of toy soldiers and a ghostly stage lit from below.

For us, man portrayed on the stage is significant as a social function. It is not his relationship to himself, nor his relationship to God, but his relationship to society which is central. Whenever he appears, his class or social stratum appears with him. His moral, spiritual or sexual conflicts are conflicts with society.

— Erwin Piscator (1929)
To witness theater that depicts the harrowing tribulations one individual visits on another (or others) might inform us of the sorrows in our vale of tears, but does little to illuminate the social causes and conditions which form and feed those tribulations. The artists of Epic Theater wanted to change all that, to speak truth to power in a sense, by presenting characters in the throes of the social forces which shape and destroy their dreams. Rather than settling dilemmas with a cathartic resolution, these artists left the contradictions and tensions and conflicts unresolved so that they might continue in constructive reflection and analysis, unspooling in the mind of each theatergoer, on his or her way out into the street, and a future for them to envision and construct.

MULTIMEDIA AMERICANA

[In a 1930s Living Newspaper] the scenic action was a mixture of different theatrical strategies… projected films, maps, and statistics… Satire, puppetry, visual projection, shadow-graphic acting, crowd scenes, and a fluid style of space-staging, in which characters were isolated by precise lighting plots, were all brought together within a single production.

— Stuart Cosgrove (1989)

Between the World Wars, American theater artists — among them Hallie Flanagan, Elmer Rice, Robert Edmond Jones, Mordecai Gorelik, Lee Simonson, Harold Clurman, Lee Strasberg, Stella Adler, Joseph Losey — gravitated toward European (particularly German and Russian) theater. The momentum away from Realism and Naturalism, through Expressionism, resulted in a steely flowering of Constructivist and Epic theaters, harnessing (and experimenting with) the “new media” of their time, to create multimedia productions, sometimes documentary, sometimes satirical, and almost always stylized.

In response to the effects of the Depression on performing artists, Hallie Flanagan was recruited by Harry Hopkins to form the Federal Theatre Project (1935-1939), which put artists to work in a way not seen before or since, and emphasized the importance of live theater across the American cultural landscape. (The FTP was therefore, of course, a predecessor of the National Endowment for the Arts.) The FTP created and produced many kinds of theater — Marc Blitzstein’s folk opera, The Cradle Will Rock (richly documented, along with the FTP itself, in Tim Robbins’ film, Cradle Will Rock); Orson Welles and John Houseman’s “voodoo Macbeth” with the New York City Negro Unit of the FTP; Paul Green’s outdoor pageant, The Lost Colony; and simultaneous performances around the country (22 productions in 18 cities) of Sinclair Lewis’s It Can’t Happen Here, which speculated a hypothetical fascist takeover of the United States.

Among the FTP’s many programs, the one which embodied, and responded most to, European theatrical advances was the Living Newspaper.
Flanagan, playwright (and one of the few American Expressionists) Elmer Rice, and Morris Watson (co-founder of the Newspaper Guild) conceived the Living Newspaper, and turned to directors Joseph Losey and Arthur Arent to bring it to life. In their work, many of the new ideas in, and revolutionary approaches to, multimedia, documentary Epic and Constructivist theater first appeared on American stages.

Projections, masks, spotlights, loudspeakers, ramps, and characters in the audience were some of the devices used [in the Living Newspaper's *Triple-A Plowed Under*, directed by Joseph Losey and H. Gordon Graham, NYC, 1936]…The projections, still a new theatrical concept in America, could include dates, statistics, charts, maps and headlines, or they could be more visual: photographs, animated cartoons, and short film sequences…

— John O’Connor and Lorraine Brown (1978)

In common with Piscator and Brecht, the Living Newspaper concerned itself with social forces rather than individual psychologies. Like Meyerhold, Losey and Arent conceived stylized performance in kinetic groupings who played on ramps, multi-level stages, and in the house among the audience. They created stage montages which investigated and depicted a panorama of characters in works such as *Triple-A Plowed Under* (on the economic crisis in farming), *One-Third of a Nation* (on the need for adequate housing), and *Injunction Granted* (on labor unions).

To frame and augment and dialectically complement their “American Epic” style of acting, the artists of the Living Newspaper plunged into the same technological experiments and discoveries that Piscator had pioneered a decade earlier. Living Newspapers featured multiple film and slide projections, amplified music and disembodied announcers, shadowplay, kinetic sets, and anything else they could concoct that would further their mission to engage timely ideas and issues with the newest artistic technologies of their time.

Of course it was too good to last. The Federal Theatre Project was brought to an abrupt end in 1939, in part in response to the Living Newspaper’s scripts collaging excerpts from actual Congressional transcripts, but more generally as a punitive measure against a mass coalition of artists suspected as a hotbed of progressive thoughts and leftist leanings. Thus the Living Newspaper, like its European counterparts, came to a conclusion in the darkening political times heading toward WWII. Once the smoke cleared from that war, American theater emerged a different animal, and for the most part, it remained for future generations to (re-)discover the lineage of the Living Newspaper, and the European artists it had drawn upon.
THEATER OF THE FUTURE?

Robert Edmond Jones (1887-1954) was one of the leading American designers of the first half of the 20th Century. He was among the designers who wrote—his own Dramatic Imagination (1941), Mordecai Gorelik’s New Theatres for Old (1940) and Lee Simonson’s The Stage is Set (1932)—thus providing us with a spectrum of glimpses into just what American designers were thinking between the World Wars, and how they incorporated (consciously and not) the influence of the theater revolutions occurring in Europe.

Jones was known for his theory of cohesiveness of design; he created artful, poetic, evocative, often breathtaking designs for Shakespeare and O’Neill. He worked with the Washington Square Players, the Greenwich Village Theatre, and the Provincetown Players (a laboratory for new and experimental, usually “non-commercial” dramas). His designs could be grand and spare at the same time, and often featured daring experiments with color and stylized lighting, influenced by Symbolist, Expressionist and Epic theater.

During the last twenty-five years of his life (until his death in 1954), in response to the growing importance of photography and cinema on the cultural and artistic landscape, he returned from time to time to an artistic/philosophical preoccupation, a speculation on a “Theatre of the Future.”

The drama of the future will deal, not with objective experience or subjective experience, but with both varieties of experience at the same time, expressing our essential duality in a new theatrical idiom, involving the simultaneous use of the stage and the screen.

— Robert Edmond Jones (1943)

Why care about a “Theater of the Future”? To help it get there? To be there when it arrives? What led this lauded designer, used to working in “real world” materials and theatrical lighting, to focus on a kind of theater he did not even attempt to make himself, but could see on the horizon as one of the fruitful directions in which production and performance might move? Jones wrote of this concept in 1929, and again in 1943.

And then, in 1952 he delivered a series of lectures at Harvard, Towards a New Theatre (now available in book form, edited by Delbert Unruh), one of which was “The Theatre of the Future.” In these lectures, Jones crystallized his thinking on a new form of live theatre featuring cinema as a central component. In this, he was an American theatrical prophet of “new media theater,” perhaps half a century before his time.

A theater of the future? Not just one which grafts on new machines and technologies, but brings along with it a new way of creating productions, cognizant of the possibilities that unfold from a stylized, montage-based approach to composition and production.
SCENOGRAPHY

A dynamic, multi-layered notion of convergence can be found in the work and theories of the Czech designer Josef Svoboda (1920-2002), perhaps the original “scenographer,” and maker of “total theater,” who, much like Jones, espoused a unified approach to design. No doubt one of the reasons for this was Svoboda’s desire to blend and synchronize live and mediated performers, and “real” and projected, multi-planar settings. (These explorations are well documented in Svoboda’s *The Secret of Theatrical Space* and Jarka Burian’s *The Scenography of Josef Svoboda*, both indispensable titles in the library of any multimedia designer, or anyone headed for the crossroads of theater and film.)

Svoboda (along with a few others — Yuri Lyubimov, Tadeusz Kantor, Heiner Müller, Ariane Mnouchkine) provided us with a living link, in the second half of the 20th Century, to the pre-WWII art-theatrical avant-gardes. In his work — in opera, theater, exhibition/exposition design, and in the Laterna Magika — some of the myriad ways projections and new media might contribute to new stage forms come to light.

For Expo ’58 in Brussels, with director Alfred Radok, Svoboda introduced the Laterna Magika, which combined live and filmed actors and settings, and, with the multiple-screened Polyrekan, he set a new standard for multimedia exhibits in world fairs and expositions. He also enjoyed an illustrious career designing more than seven-hundred productions in more traditional theatrical contexts. Trained as a cabinet-maker, and in architecture, his theatrical design career more or less began in the wake of WWII, at the Theatre of the 5th of May, in Prague, and soon thereafter at the National Theatre, where he was head of design for almost fifty years. He also designed Goethe’s *Faust* with Giorgio Strehler at Milan’s Piccolo Theatre, Chekhov’s *Three Sisters* with Laurence Olivier at the Old Vic, and opera sets for (fellow Czech) Milos Forman’s film, *Amadeus*.

Svoboda’s legacy is multi-fold: he elaborated, in practice, a theory of scenography which called upon theatrical artists to engage in heightened collaboration; he envisioned design as revealing itself as a production unfolds; he projected large, custom-made transparencies and closed-circuit video onto actors, mirrors, floors, staircases, scrims, fog and string; and he emphasized the importance of technical and historical research and experimentation in the pursuit of artistic breakthroughs. Like Meyerhold and Piscator, he dreamed of a theater designed specifically for new multimedia technologies, and his plans, too, were never realized.

MONTAGE: CHANGING BRAINS

[Piscator and Brecht’s] Epic Theatre embraced certain elements…the principle of montage, which became the great new structural device of the 1920s; [and] the use of new technologies like photography and sound recording…

— John Willett (1988)
The brain has changed. Eisenstein changed it all, when, in the 1920’s, he broke up the static frame of film (into which characters mostly had thus far walked), into a linear mosaic, an image language, montage, that perpetually unfolds in cinema time, a language that forms itself in the brain as the viewer watches. Every jump cut, close-up, long fade, and succession of images that creates a visual narrative, owes its existence, at least in part, to the work of Eisenstein. And Eisenstein studied with Meyerhold, from whom, many have suggested, he borrowed the episodic montage method from their stylized work in the theater.

We don’t really know (let alone understand) what images flashing before our eyes at 24 or 30 frames per second might do to, and in, our brains. After almost a century of the flickering wraparound depictions in which we are increasingly immersed, we live in Guy Debord’s society of the spectacle, among Jean Baudrillard’s simulations, more real than what they simulate.

Recently I ventured to enlist the collaboration of a talented student digital artist for a production. His first response was, “You mean a play? I don’t like plays. All they do is talk, talk, talk…I need something to look at!”

Young audiences today might easily focus on five things at once, but may have trouble engaging a single phenomenon in depth for an extended period of time. They seem to have no interest in pondering a stage outfitted to stand in for a kitchen or a living room, where they are expected to sit as voyeurs to re-enacted psychological terror. We drift and stagger into becoming a society peopled by children whose attention spans have been zapped by the rapid-fire military-entertainment complex, and whose adults have begun to find the drudgery of daily consumerist existence too depressing for anti-depressants.

We can bemoan the collective attention span deficit that our technosphere has engendered in a new generation of theatergoers, but if there is to be a “theater of the future,” they will form the core of its audience. This transformation of multimedia sensibilities leads to a new kind of work for the stage. New media performance explores the traditional social and philosophical concerns with which most vital theater has always dealt, and seeks to transform the world, one roomful of engaged, imagining earthlings at a time.

Contradiction and paradox: theater artists using film to save theater from film, while the current immersive, manic social drive for mediated experience is fundamentally opposed to the live theater event. And the phantasm (mock/shock prophecy) of VR headset parties — partygoers alone together, and helmeted, nodding to and fro in the exurban “living room,” like drugged, mutant insects — flickers and looms in the ruins of the future.

If film was the medium of the 20th century, we have no inkling yet of what it might be for the 21st. In the performing arts, will it be New Media Theater? Multimedia Performance? Live Movies? Cyborg Theater? No agreed-upon name yet to call it (a good sign, most likely), but it’s alive, kicking and ticking.

For sources see Suggested Reading, p. 224.
Doctor Faustus stands alone, in a conjuring circle, at the center of a sixty-foot runway stage, surrounded on four sides by silvery-gray textured surfaces. At either end of the runway stand fourteen-foot walls, while down the length of both sides of the theater run narrower panels that float above the heads of the audience, which sits stadium-style on either side of the runway. Faustus conjures:

Now that the gloomy shadow of the earth,
Longing to view Orion’s drizzling look,
Leaps from th’ Antarctic world unto the sky,
And dims the welkin with her pitchy breath,
Faustus, begin thine incantations,
And try if devils will obey thy hest,
Seeing thou hast pray’d and sacrific’d to them.
Within this circle is Jehovah’s name,
Forward and backward anagrammatiz’d,
Th’ abbreviated names of holy saints,
Figures of every adjunct to the heavens,
And characters of signs and erring stars,
By which the spirits are enforc’d to rise:
Then fear not, Faustus, but be resolute,
And try the uttermost magic can perform. —
Sint mihi dei Acherontis propitii! Valeat numen triplex Jehovae!
Ignei, aerii, aquatani spiritus, salvete! Orientis princeps
Belzebub, inferni ardentis monarcha, et Demogorgon, propitiamus
vos, ut appareat et surgat Mephistophilis, quod tumeraris:
per Jehovam, Gehennam, et consecratam aquam quam nunc spargo,
signumque crucis quod nunc facio, et per vota nostra, ipse nunc
surgat nobis dicatus Mephistophilis!
In front of him, on one of the taller walls, a serpent’s head appears; the snake lunges, slithering to its full length across the side panels, leading Faustus’s gaze (and ours) down the runway where, in a flash of light, Mephistopheles makes his surprise appearance, to his (and our) wonderment.

Kinetic visual imagery reinforcing textual truth, visceral impact, and snazzy sleight-of-hand stagecraft: this moment from Doctor Faustus crystallizes, for me, the promise of deploying multimedia, or “new media,” in the service of the theater. When driven by a strong text, placed in a context where all the collaborative elements of the theater (at the risk of redundancy, let me enumerate them: text, acting, the various design elements, directing, dramaturgy, and that final collaborator, the audience) are given their proper weight, multimedia becomes a powerful and distinctive tool, capable of profoundly expanding the imaginative possibilities of the stage.

When employed for its own sake, however (defined perhaps by a selective diminution, by omission or commission, of one or more of those “elements” above), multimedia runs the risk — as do any of the elements — of weakening the impact of the theatrical event. The keys to the kingdom marked “Gesamtkunstwerk” on the gilt-edged maps are found on the ring of proportion, order, and balance.

Historical Excursus

Revolutionary moments in stage design and technology (for that is what we’re really talking about) have come before, and they have always had a push-pull relationship with their contemporary dramaturgy. Without the winch, the treadmill, the chariot-and-pole machinery of the late 18th and early 19th centuries, the great melodramatist Pixérécourt (he who famously said “I write my plays for those who cannot read”) could not have conceived of, let alone staged, his famous rescues, such as that in Le Chien de Montargis (The Dog of Montargis), the 1814 prologue to Rin Tin Tin and Lassie Come Home.

We sometimes forget, as our own pendulum of taste and practice swings, that the Realists and Naturalists of the late 19th century (a heterogeneous group that includes, somewhat uncomfortably, bits and pieces of Zola, Ibsen, Strindberg, Antoine, Chekhov, Stanislavski), were the visual innovators of their time, taking us beyond the world of two-dimensional canvas (complete with painted furniture and glassware) and semicircular conversational tableaux. We should not forget that the fourth wall was once a radical idea in service of a higher truth.

And then along came Appian and Craig, that strange Swiss/English amalgam of revolutionary aesthetic theories, with a welcome call for (a return to? a discovery of?) atmosphere and poetry and metaphor in stage
design. AppiandCraig brought a sense of the monumental and the abstract to their theories and applied them to Wagner, to Shakespeare, to Maeterlinck, even (and very usefully) to Ibsen. But the inevitable happened: designs for design’s sake, such as *The Steps* and *Scene*, in which Craig (and here it must be admitted that they were two people, though always spoken of as an elision) seemed to declare his independence from text and even from actors: as Hamlet never said, the set’s the thing wherein I’ll catch the conscience of the King.

But AppiandCraig’s work did start to clear the cobwebs of Realism, did make it possible for a theater of images and metaphors to emerge. In America, Robert Edmond Jones led a movement away from carpentered fidelity toward an Appian way of broad symbolic strokes and carefully chosen elemental details: a design aesthetic that perfectly matched (and perhaps encouraged) the emerging vigor of American dramaturgy in the voice of Eugene O’Neill. In this, he was helped beyond measure by a seemingly simple, taken-for-granted idea: the electric spotlight.

Once lighting became controllable (which, we must remember, initially meant the ability to use a lot less of it, concealing and revealing in purposeful, plastic ways that earlier technologies could not conceive) it became easy to
lead the spectator’s eye around the stage; to pick out the significant detail; to accelerate the rhythm of the visual text through quick blackouts. Lighting made sculptural approaches to design not only possible but almost essential, and brought new expressivity to the human face and figure. Lighting made the very air a poetic medium. Drop this book right now and pick up Jean Rosenthal’s *The Magic of Light*. She was, for a time, Orson Welles’s lighting designer (a term she probably invented, along with many of the practices of the profession) and Graham’s and Balanchine’s, and to read her words about the emotional value of light in the world and in the theater is to see both with new eyes.

Welcome back to this volume. Though Jean Rosenthal lit her share of Broadway musicals (up to *Fiddler on the Roof*), I doubt that she would recognize the form today. Gordon Craig’s dream of a design-driven, textless theater has come true, albeit in an ironically inverted paradigm. The ascent of the outsize tire, the descents of the chandelier and the helicopter, the dancing teapot, the pounding sound and the rock-show-style use of that oxymoronically-named tool, the “intelligent lighting fixture” (you’ve seen them — they’re the ones that have the unearthly, penetrating color temperature of those new BMW headlights, and their beams sweep and swoop down on their hapless actor-targets, hunting them like the latest Air Force “smart bombs”): all of these impressive effects have been harnessed in the service of — what? Or have I got the question backwards? Who is serving whom?

Theater historians (when they’re in a certain mood) like to chart the inverse relationship between the quality of the drama and the exuberance of the stagecraft in a given period. The Greeks and the Elizabethan theater made do with merely brilliant writing, and little or no scenic support beyond the architecture of the theater itself; the spectacles of the 18th and 19th centuries (see Pixérècourt, above) made stunning use of perspective painting and machinery, but the dramas themselves do not stand up. The Broadway musical’s pendulum reversed course in the early 1980’s and hasn’t stopped swinging toward spectacle. What happens? Do the big productions just *eat* the good scripts? Do audiences drive the transaction, seeking ever-stronger “hits” of this addictive drug, this uncontrolled lack of substance?

**Caveat Emptor**

What does this have to do with the emergence of multimedia design in contemporary theater? Let the buyer beware: we must struggle to harness this powerful tool only in pursuit of a unified vision of the theatrical event, the *Gesamtkunstwerk*, the “total work of art” that Wagner named and that still stands as both a theoretical ideal and a practical litmus test.
The appeal of projected images, these luminous, shape-shifting, seductive plays of color and light and shadow, is such that if we’re not careful, the “little people” whose task it is to enact the living story in their midst may become secondary players. Their contributions may go unattended, both in the creative phase of the production, and by the audience, sitting dazzled in their seats, cosseted by the charms of the moving image, now made reassuringly familiar by its sheer pervasiveness in every facet of public and private experience.

In a variety of experiences as a director, dramaturg, and spectator I have been reminded that, in a contest between the live actor and a projected (or televised) image of that actor, the image wins every time. Sometimes this is exactly the point; the framed simulacrum is by definition a more highly artificed object, and we willingly surrender our freedom of focus to it. The interplay between these layers of remove from reality becomes part of the action, either reinforcing or commenting (often ironically) on what we choose to believe and where we place our perceptive confidence.

Yet all too often the irony is absent, or unintentional. The image is there for its own sake, towering over (actually or metaphorically) the live actor, and the increased difficulty of concentration experienced by the audience is finally a barrier to experiencing the totality of the theatrical event. Even though this tends to happen in productions with a high level of intellectual and aesthetic ambition, is the effect really different from that achieved by the feline make-up and the crashing chandelier of the thematically innocuous Lloyd-Webber canon?

A New Poetics in Two Old Bottles?

Aristotle, master taxonomist and natural philosopher, set some difficult expectations for all who have attempted to define dramatic developments since the time of Oedipus. His “six elements of tragedy” in fact still cover the subject pretty well, though they are subject to endless argument about the order of importance. Here, as a refresher course, are the elements in their original hierarchy: Plot, Character, Thought (or Theme), Language (or Diction), Music, and Spectacle. That’s right, plot comes first and spectacle last.

This neat device can be used as a club with which to beat the Broadway mega-musical about the ears; but is it applicable to a poetics of theatrical multimedia? What if the Spectacle is the Thought (or Theme?); what if the Language of the production actually lives in its Spectacle (with the assistance of Music)? Can Spectacle be a vehicle for Plot and Character? Such heretical hierarchy-jumping is an intellectually attractive parlor game, but it may not pass the pragmatic test, the “know it when you see it” test applied famously to
art (by critics), pornography (by Supreme Court Justices), and productions by all theater folk everywhere in the phrases “that works” or “that doesn’t work.”

So let me jumble up Aristotle’s sacred six a little bit differently, recognizing that drama has, in fact, changed a bit in 2,500 years; that society has changed even a little bit more; and that human nature has changed perhaps the least of all. The scheme is to take the six elements and pour them into two bottles, one marked Load and one Delivery. Into the Load bottle flow Plot, Character, and Thought (or Theme), in whatever order and in whatever proportion is desired. Ibsen’s Load bottle is a different color from Chekhov’s; Kaiser’s from Brecht’s; but all are full. The bottle holds the “stuff,” the “quiddity,” of the dramatic event. How does it go, who’s in it, what are they like, and what’s it about? would be the relevant questions to ask and answer while filling up the Load bottle. The answers do not presuppose any particular world-view or style; the only mandate is to fill the bottle.

Into the Delivery bottle, we pour Language (or Diction), Music, and Spectacle, all the expressive tools of the trade. Again, the proportions will vary, and an almost infinite range of combinations is possible. August Wilson and Lanford Wilson and Robert Wilson, David Hare and David Edgar and Caryl Churchill, Shakespeare and Schiller and Wole Soyinka: compare authors (or auteurs) of real substance and, as with the Load, you’ll find full Delivery bottles with distinctly different mixtures.

My modest proposal for a new poetics of multimedia-in-theater comes down to this: balance the bottles. Be sure that Load=Delivery. Too much Load plays like lead. Too little Load plays like Cats. This great new tool, this brave new world of theatrical possibility is too beautiful to spoil through lack of rigor in its application. We need the great plots and characters and thoughts (or themes) to be delivered anew. We need new stories (events, characters, experiences) of our own devising that play with and around the new technology, that are inspired and enabled — but not dominated — by it.

Where Things Stand

One of the exciting and important things about this multimedia handbook, I believe, is its appearance at this moment in the history of theatrical production. I think multimedia-in-theater today stands in the same place as the Robert Edmond Jones/Jean Rosenthal-era practitioners did relative to their theater: holding new tools, already changing their worlds, on the verge of greater discoveries.
Multimedia design stands ready to be the “Leko” — the famous ellipsoidal-reflector spotlight that made Rosenthal’s poetry possible — of today in its ability to transform our image of the stage environment. Just as it took some years for stage lighting practice to be codified, written about, taught, and transmitted — demystified and brought to market, if you will — so multimedia design for the theater will emerge over the next decade as something that mere mortals can use.

Just as we assume that all productions today will be set and lit (though we make room for a vast range of styles and functions for scenery and lighting), we will begin to visualize the contribution of media as a consistently available and increasingly integral design element. The equipment must become even simpler to design with and operate, better able to coexist with stage lighting, more flexible in making changes in the fast-paced process of technical and dress rehearsals, and above all less expensive. All these things are happening, of course; I hope that in my lifetime as a director the process will speed up enough so that this lad who cut his theatrical teeth in the late 1960s on first- and second-generation lighting technology will be able to work as fluently with these incomparably powerful new tools.

And I hope that when that happens, the Two Bottles will both be full.

1 *Doctor Faustus* by Christopher Marlowe, Theater of the First Amendment, Fairfax, Virginia, 1998. Directed by Rick Davis, set design by Jason Rubin, lighting design by Martha Mountain, costume design by Howard Kurtz, multimedia design by Kirby Malone and Gail Scott White.

2 Whether playwrights should ever have been given access to that latter tool is a subject for a different essay, but I contend that the inability of many modern writers to complete the arc of a scene is due to the easy availability of the blackout switch.


4 I am reminded of a remark by the great Russian émigré designer, Alexander Okun, with whom I had the pleasure of working as dramaturg on a couple of projects at Center Stage in Baltimore in the 1980s. As he was designing *The Tempest* for us, he said that he stared at his blank sheet of drafting paper one day and “felt Shakespeare all the time sitting on my left shoulder, whispering, ‘Alex, who… needs… scenery?’”

5 A memorable coinage by one of multimedia’s pioneering practitioners.

6 This time you needn’t put the book down right this second, but sometime this week, go find and read the Václav Havel play of the same name.

7 For these oppositional terms, I am indebted to a wonderful voice teacher, John Koopman (emeritus of Lawrence Conservatory), who used them to describe two equally important components of balanced vocal production.
Performance art is a term that often causes confusion if not fear, conjuring images of out-of-control artists thumbing their noses at both traditional arts practices as well as at the society from which these practices emerge. Much of the misunderstanding about the form has arisen as the result not only of the ways that performance art has challenged traditional arts and theatrical practices, but also by the way it has been characterized in the media. Performance art was singled out by political opponents of federal arts funding almost from the very inception of the war against art (a potent subdivision of the larger “culture wars”) that is still very much with us today. Almost immediately following the brouhaha over photographs by Robert Mapplethorpe and Andres Serrano instigated by critics of the National Endowment for the Arts, it was performance art that became the preferred target and favorite whipping boy of conservative commentators. The so-called “NEA Four” — Karen Finley, Holly Hughes, Tim Miller, and John Fleck — who successfully fought in court the rescission of their grants on the grounds that these decisions had been political were all performance artists. As a result, performance art became characterized in the media in sound bytes created for maximum sensationalism and infused with ridicule. Finley, whose evocatively heartbreaking works were written and performed with equal parts pain and anger, was reduced in the media to “the woman who smears her naked body with chocolate”; Fleck, the creator of resonant work of depth and urgency, became simply “the man who urinates on stage.” In having its elements presented out of context, performance art came to be thought of in the popular imagination as ridiculous, childish, tantrum-filled acting out, characterized by a lack of rigor and form.
The cultural imbroglio over performance art has largely hinged on misunderstandings surrounding the goals, concerns, and methods of this genre, which, like any art form, has developed its own aesthetics, styles, and practices that operate within a recognizable tradition. Because of the multidisciplinary nature of the form and the wide variety of activity it encompasses, however, performance art has always been loosely defined. By its very nature, it has aimed at experimentation, and like all avant-garde art, performance art has challenged the values of the mainstream in out-of-the-way venues. In fact, even within the precincts of contemporary art, performance art has often been seen as pushing the outside of this already-stretched envelope, and has even been referred to as “the avant-avant-garde.”

So what exactly is performance art? By its devotion to experimentation and its working at the boundaries, interstices, and cross-breeding of traditional artistic disciplines, performance art has been particularly elusive to define. It is, however, possible to draw some generalizations that distinguish it from other modes of performance. In her history of performance art, *Performance: Live Art from 1909 to the Present*, Rose Lee Goldberg defines performance as “the expression of artists who wish to challenge the viewers’ perception of art and the limits of those perceptions.” The work is, in fact, almost always deliberately provocative, unconventional, and even assaultive in its stance. In its first stages, it was done mostly by visual artists who wanted a larger canvas for their ideas — the canvas of action — and who wanted to take a stance in opposition to the political establishment in its dedication to traditional values and ideas, and against the artistic establishment in its commercialization of art. These artists were raising questions about their roles as artists, about the role of the audience, and about the nature of art itself. In testing the boundaries between art and life, performance art has traditionally centered in the expressiveness of the individual body, rejecting logical speech and thought, as well as exposition, symbolism, and psychologizing.

In the main, performance art has been concerned with reality rather than with the creation of illusion, the domain of traditional theater. It rejects notions of plot, character, setting, and dramatic text that can be performed by any number of interchangeable performers. Performance art is different from traditional theater in other respects as well: scripts are not as important in defining the work as are movement and visual imagery; there is typically a more direct relationship with the audience; the work is usually not performed on a proscenium stage; an implied “fourth wall” is often missing; and the artist very often appears as a “real” person. Performance artists do not usually create characters as playwrights do, but base their work on their own bodies, life stories, and experiences in personal identity. If we take acting to mean the attempt to imitate life in a realistic manner, then performance artists are rarely...
acting. They do not usually impersonate, represent, or simulate a character, nor are they pretending to be in a time and place different from the viewer.

Typically, performance art is a solo form, and there is not usually an elaborate set that attempts to create a simulation of reality. Instead, there might be a few props or bits of furniture and whatever costume might suit the situation, which sometimes includes nudity. The aesthetic has traditionally embraced a “Do It Yourself” ethos, so that the homemade and handmade look of these productions must be seen as a deliberate choice rather than as the result of amateurishness or carelessness.

Autobiography is central to performance art, including concerns with identity and with the exploration of alternative “selves” and the investigation of a transmutable psyche. Even when removed from the strictly autobiographical realm, performance artists do not present themselves as “characters” in the traditional theatrical sense. Rather, they employ self-transformational strategies that explore alternative, imaginary, or mythic aspects of the self. Artists working in this vein who have achieved widespread attention include Anna Deavere Smith, Eric Bogosian, Sarah Jones, Danny Hoch, and even Whoopi Goldberg.

In her history, RoseLee Goldberg traces the form to its links in the European avant-garde and its “isms,” including dadaism, futurism, and surrealism. The contemporary American form that we know as performance art, however, can be traced back to the 1960s when happenings, environmental performances, action art, and body art drew visual artists away from the canvas and gallery to set their ideas in action by way of the body and other means associated with dance, theater, cabaret, and new media and technology. In the 1970s, performance art began to emerge as a discipline in its own right, and toward the end of the decade, it became more visible and fashionable. At this time, performance art moved away from the cerebral concerns of Conceptual Art to quasi-narrative presentations that embraced more traditional performance values from vaudeville, dance, cabaret, television, and stand-up comedy. It also began to marry its high art origins to popular culture and employed and infiltrated mass media, while it also drew artists from other disciplines — dance, theater, poetry, and music — into collaborative experiments.

Performance art moved into the mainstream consciousness in 1980 with Laurie Anderson’s United States, which combined the two strains of performance art that had developed over the previous decade. The solo autobiographical work that had evolved from visual art origins was crossbred with the second strain of performance, sometimes called “The Theater of Images.” This variation on the genre was devoted to the assemblage of aural and visual images not based in text or the individual psyche, which culminated in elaborate spectacles embracing technology and mixed media. Sometimes, as in the “operas” of Robert Wilson, this work was performed
in theaters, but it also included site-specific or environmental performances, works made for and about the places where they were performed. In its hearkening back to traditional variety entertainments emphasizing physical achievements and skills such as mime, juggling, and clowning, another subcategory of performance art came to be known as “New Vaudeville.” New Vaudevillians including Bill Irwin, the Flying Karamazov Brothers, David Shiner, and Paul Zaloom performed in their own shows, created group efforts, and even took to the airwaves, film, and traditional drama as their gifts came to be appreciated in the mainstream. Yet another mode of performance art has absorbed the new poetry movement known as “spoken word,” where poetry has become a performative endeavor as well as a literary one. Such pioneers as Miguel Algarin and Miguel Piñero paved the way for the resuscitation of this oral tradition, which was also given a tremendous shot in the arm by hip hop culture. Henry Louis Gates, Jr. has termed the current generation of Nuyorican poets “rap meets poetry.”

In the last decade, embracing more traditional theatrical techniques, performance art has turned away from its emphasis on the body to re-embrace language and text. Performance artist Jacki Apple has written that performance artists today are functioning as poets, storytellers, preachers, and rappers using “image at the service of the text.” And as language has emerged as a central technique of performance art, the content of the work has shifted to political and social concerns, especially the performance created by individuals of marginalized status in American culture, including people of color, women, and gays and lesbians. Class, race, gender, and sexuality have emerged as the primary concerns of contemporary performance. Performance artists such as Guillermo Goméz-Peña, Coco Fusco, Ron Athey, Rachel Rosenthal, Diamanda Galás, Ishmael Houston-Jones, John Kelly, DANCENOISE, Lydia Lunch, and Robbie McCauley insist on self-definition that challenges the status and image that have been imposed on them as they explore a wide range of social, political, economic, and ecological concerns through the use of a vast array of performance activities and strategies.
I begin this essay with an intentional provocation: *There is no future but the cyborg theatre.* Certainly the classics will continue to be done earnestly, unmediated by external forms of obvious technology (excluding the now familiar conventional technologies of lighting, sound, even props), but if there is to be a future theatre, a legacy for upcoming generations, a new direction in live performance, it will be a cyborg theatre. Elsewhere I have laid out the parameters of cyborg theatre, a conceptual mode of analysis for a performance style that blends live bodies with technologized, digitized, and/or mediatized images in a re-imagining of the human subject: the cyborg theatre looks beyond binaries such as human/non-human, live/mediated, abled/dis-abled to construct new post-human models capable of blurring these distinctions.¹ The cyborg, a “cybernetic organism,” a blend of live/organic material and technology, has held a vivid place in the fictive imagination from depictions of the Golem to Frankenstein’s monster to the Terminator. Placed alongside automata and robots, cyborgs have often been feared and/or misunderstood, and all three have stood in for anxieties about technology and the diminishing human agent.² The concept of the cyborg took a radical turn in the mid-1980s when Donna Haraway’s now famous manifesto proposed a feminist, politicized cyborg that captured the imagination of scholars and theorists like myself.³ The manifesto, originally a feminist response to Reagan-era politics in the U.S., served also as an imaginative site for rethinking masculinist and militaristic appropriations of technology. Inspired by Haraway’s thinking and the later follow-up in which she writes, “I believe we must transform the despised metaphors of both organic and technological vision to foreground specific positioning, multiple mediation, partial perspective, and therefore a possible allegory for antiracist, feminist, scientific, and political knowledge,”⁴ I position the
cyborg as a productive metaphor for a new form of performance that makes possible a reconceptualization of “human” immersed in technologies that both enhance as well as trouble societies across the globe.

On a purely pragmatic level, a turn to cyborg theatre may facilitate a future of performance for generations glued to their gameboys, computer games, email, video games, screens; it may lure them out of their boxes, their I-pod solitude, their chat rooms and re-integrate them into the intersubjective space of the live theatre, the space of the face-to-face encounter. The cyborg theatre can blend the best of both worlds, allowing the continued development and growth of the live theatre while simultaneously interrogating and facilitating ongoing human integrations and interactions with technologies. The cyborg theatre explores how the virtual and the live merge on stage, serving as a staging ground, a rehearsal for inevitable mergings such as: implanted scannable microchips in the body (already commonly done to animals), desirable and “smart” bodily replacement parts (corrective eye surgeries might offer possibilities for extra-ability), and those perhaps more desirable mergings such as super high speed physical transport (“Beam me up Scotty”). The live theatrical site provides a space to rehearse not only these possibilities, but the anxieties of these possibilities as well.

As Kirby Malone has discussed in his introductory essay, “technological,” or “multimedia” theatre, as it is sometimes called, has a long history, and depending upon the definition of “technology,” can be traced in a multitude of ways: from an object/prop-based integration with the live body (the use of puppetry for example), to the artistic use of lighting (Appia and Craig), to the integration of projected images onto the stage (Piscator, Living Newspapers, Svoboda), to name just a few trajectories. Until perhaps ten years ago, these integrations were, for the most part, discretely discussed, in that they were looked on as individual forms to analyze (see, for example, volumes dedicated to lighting techniques, puppets, accounts of individual artists/innovators). Only in the past decade has there been an attempt to theorize the increasing use on stage of technologies that have rapidly infiltrated daily life — from the now “old” mediums of television and video to newer ones such as digital images, computer-generated images, web-based technologies, and forms of medical technologies — in terms of the integration with the body on stage. From authors who imagined high-tech science fiction scenarios, such as William Gibson, Octavia Butler, and Philip Dick, to Marshall McLuhan’s reading of media as an extension of the body, theorists have engaged deeply with the implications of technology and its impact upon what it means to be human in a given moment. In the realm of drama, theatre, and performance studies, technology has often been a given, framing the spaces and effects of production, providing perspective and light, and providing melodramatic
and spectacular thrills and effects. After about a decade of engagement with the ideas in Baudrillard’s *Simulations*, the science fiction of William Gibson, Teresa de Lauretis’s feminist critiques of technology, Deleuze and Guattari’s *Thousand Plateaus*, then on through Laura Mulvey’s analysis of the gaze in film, and Donna Haraway’s cyborg, in the mid-90s in-depth explorations of hyper-text, cyber-space and computer technologies began to appear in works by Brenda Laurel, Constance Penley and Andrew Ross, and Allucquère Rosanne Stone to name a few. These technological analyses made room for the further gender-driven work of Anne Balsamo, Elizabeth Grosz, Sue-Ellen Case, and Lisa Cartwright, *The Cyborg Handbook* edited by Chris Hables Gray, Katherine Hayles’s ideas of the posthuman, and the positing of “liveness” by theatre and performance studies scholar Philip Auslander, which may be a turning point back into the realm of theatre studies. Technology was no longer a “given” but something changing the face of live performance as it has done in feminist criticism, media studies, and cultural studies. A new genre of performance had emerged alongside the emergence of new computer and digital technologies. Mine is one of a few voices attempting to analyze and understand this new genre, this increasing form of “live” theatre and performance that is not fully live. Although I have theorized multimedia work around the ideas of the cyborg theatre because it specifically draws attention to the ways in which the integration with technology can frame and re-shape ideas of what it means to be human in a mediatized age, I have also observed several trends developing, both woven through my concept of the cyborg theatre and within a more generalized “multimedia theatre,” that I briefly highlight here. These categories are in no way meant to be fixed or conclusive, in fact they often overlap and filter into each other; the number of artists experimenting with multimedia in live performance is ever-growing, and with this growth yields unpredicted possibilities. However, trends are emerging and certain themes, techniques, and visual effects are being explored. The following outlines some of the trends, possibilities, and examples that the integration between bodies and technology has yielded in recent years.

I. New Scenography

One of the most commonly used applications of evident multimedia on stage is in stage design and scenography. Emerging from such innovations as Erwin Piscator’s use of documentary film and large scale projections on stage and his conceptions of a “Total Theatre” as well as from Josef Svoboda’s masterful compositions blending ideas of lighting and scene design, contemporary practitioners are increasingly allowing multimedia to stand in for “old
fashioned” painted flats, design and texture, and even actual physical objects such as doors, cupboards, or staircases. Translating the language of film and photography to the stage, scenery can shift rapidly on stage, scenes can abruptly switch from place to place in a seamless fashion, the colors and textures of a space can shift, mutate, and transform with a click. Corresponding in frequency to the decrease in actual costs, a scenographic use of multimedia on stage is often delivered by artists without critical attention to its reading qua multimedia and lately, in show after show, appears randomly as moving backdrop, projected texture, text, or tableaux. However, when executed with calculated thought, scenic projections can be both effective and visually exciting. For example, Laurie Anderson’s multimedia pieces, from her United States I-IV in the early 1980s to the more recent Songs and Stories from Moby Dick in 1999, have long featured a densely complicated array of projected still and moving images that saturate the space almost as “synesthesia,” or “visualized sound,” foregrounding both abstract and concrete inner workings of characters as well as providing mere visual integration with her unique sound compositions. In contrast, Robert Lepage realizes deliberate, slow and haunting projections which evoke in images what words cannot to create a landscape through time and space. Often understated, Lepage’s multimedia is such an integrated aspect of his dramaturgical spaces, providing spaces of memory and depth that are impossible to separate from the non-mediated images. Ridge Theatre/Bob McGrath and Laurie Olinder have also created a visual aesthetic using large scale projections that create stunning composite images, such as in their piece Jennie Ritchie, based on work of “outsider” artist Henry Darger, in which entire scenes of his drawings were replicated using projections and an ensemble of live actors.

Introducing languages of film, video, and computer imagery has provided innovative and flexible approaches to scenographic demands, as well as providing the basis for a new genre of multimedia, or cyborg performance, to which I return in point #4. (The examples I include here highlight some of the more memorable scenic possibilities, which also open up through further integrations with specific dramaturgical frameworks to provide a more challenging site for analysis.) The 3-D experiments of San Francisco-based director George Coates use a combination of computer projections, 3-D films and slides, and live actors, to draw viewers from location to location as if in a film, from rain forest to desert, from literal to abstract location. The British company Forkbeard Fantasy inverts classic cinema tricks and animates the live space with, for example, films of locations such as a long corridor with doors on each side through which actors enter and exit simultaneously on screen and off. The young company Big Art
Group uses cinematic backgrounds that sweep by as live actors integrate their bodies into the moving scenery. These are but a few of the more imaginative applications of a multimedia-based contemporary scenography.7

2. Transformations of the Body

Increasingly, practitioners are using technology explicitly to comment on the body’s relationship to technology. Concerned with isolation, fragmentation, and alienation, artists literally depict these concerns through the manipulation of the very technologies that cause these anxieties. In the contemporary moment, a time Katherine Hayles and others have called “posthuman,” the body is variously being questioned, augmented, made obsolete, transformed, and challenged in relationship to existing and emerging technologies. The term posthuman remains ironic in many ways, as the body is still at the center of these concerns, and instead, as Hayles formulates it, the posthuman can be read as a condition in contemporary society, one that “offers resources for rethinking the articulation of humans with intelligent machines.”8 Artists such as the Wooster Group, or New York based dancer-videographer Cathy Weis have repeatedly created mise-en-scènes full of fragmented body parts, sometimes live, sometimes prerecorded, larger than life, or out-of-focus to call attention to a diverse range of societal concerns, from the fragmentation of bodies to ideas of what it means to be “able-bodied” in society.9 Screens and televisions contain images of the live bodies on stage as trapped in these frames, exploring issues of isolation, medical imaging, or simply our increased computer time. Playing with the possibilities of new software programs, the collaboration between Builders Association and motiroti, Alladeen, dealt with questions of projected identity within Indian call centers as actors’ faces were projected on screens above their heads and morphed into characters from the television program Friends as they answered the phones with made up “American” names such as Rachel Green.10 Using these varied technologies, bodies can disappear, body parts can transform, and identities can merge, providing a space for the questioning of the relationship between body and technology — how has technology invaded or distanced the spaces between bodies? To what degree does technology aid and augment the body? Do cyborgized bodies threaten to displace notions of the “human”? What are the possibilities for technologies of alienation and separation; what are the disadvantages? The Wooster Group’s long standing relationship with technology exemplifies many of these concerns. Using photographic negatives to expose the technologization of race and gender issues in their version of Emperor Jones, or the use of multiple images on screen in House/Lights as representative of the fractured identities created by mass
media and internet technologies, as well as exploring the screen-imposed isolation of lead character Phèdre in *To You, The Birdie*, the Wooster Group has created a hybrid theatrical form intertwining technological, visual, and dramaturgical texts. Technological fragmentations and transformations to the body as seen on these innovative stages present thought-provoking stimulus and in turn, present possibilities for new visual and intellectual forms of dramaturgy for further expansion and exploration.

3. Linking Bodies

New technologies have always been integrated into the stage, from the latest forms of lighting, to pulleys, hydraulics, cars, conveyor belts, the list goes on — artists use the live performance site to question, expose, examine, and re-imagine the new technologies in a given contemporary moment. It is within this framework that artists are experimenting with VR technologies, infrared and other military derived technologies, and more commonly, internet and web-based technologies. The proliferation of personal computers and broadband internet connections has inspired many practitioners to develop work around the possibilities of these technologies. Used to connect home computer audiences to live performance, such as in some of the work of Stelarc and Orlan, or to link live audiences in remote locations, in such examples as Cathy Weis’s LIPS project, Yubiwa Hotel’s *Long Distance Love*, or the recent Stationhouse Opera’s *Live From Paradise*, these now pervasive technologies are being investigated on stage as both tool and plot device. In the telepresent productions I have been a part of as an audience member, the application of internet or linking technologies, while not yet perfected, has attempted to generate connectivity between communities, cultures, and locations that expands the boundaries of what it means to be an audience, as well as raising important issues of archiving such multi-sited performances. These performances often take place in different time zones and cultural contexts; for example Cathy Weis’s *Not So Fast, Kid!* took place between Macedonia at 3am and New York City at 9pm; Yubiwa Hotel’s *Long Distance Love* connected a site under the Manhattan Bridge called RedLab Theatre to a club Club AsiaP in Tokyo (which I saw just after 9/11 when phone lines to NYC were still down but through the computer connection audiences and performers could share and exchange experiences). Performances also take place by simply stretching audiences across several cities within a country — in Stationhouse Opera’s *Live From Paradise*, audiences in the London audience could recognize friends from their position at the Birmingham Fierce Festival location, and provide as well new choreographic possibilities for live and
telepresent performers to “dance” together, as in Weis’s piece, creating a form that is becoming a productive tool for new modes of spatio-temporal performance. Perhaps as an extension of Philip Auslander’s argument that “live” is not recognized and understood as a concept until placed alongside the “mediatized,” in terms of space, in this analysis the distance between communities has never been so visible, because of the connective technologies that foreground this very divide. However, artists making use of web-based technologies are exploring new modalities of connection that diminish the physical space and offer potential for political, intra-cultural, and artistic exchanges.

4. Deconstructions/Reconstructions of Film

Sometimes called “Live Film,” some of the most sophisticated multimedia based work being explored today falls into this category. Rather than alternate between one medium or the other, artists such as Builders Association, George Coates, Kirby Malone and Gail Scott White’s Cyburbia Productions, Big Art Group, and the UK-based companies Stationhouse Opera, Forkbeard Fantasy, The Chameleons Group, and imitating the dog (to name only a few) are working to integrate the techniques of theatre/performance and film in ways that continue to foreground the live qualities of the theatre. These companies facilitate integrations between the two forms that surpass the development of new scenographic techniques and propose a new genre of cyborg theatrical performance.

One distinguishing feature of this category is an examination and often a deconstruction of working film and video techniques and their translation into the live performance space. The artists transform the languages of the mediums they are working with to the stage — often quite literally. For example, in the Builders Association’s Xtravaganza, blue screen or Chroma Key techniques used in the creation of special effects in film and video are visibly exposed on stage. Actors standing downstage, before a large blue screen, create a scene that is simultaneously mixed into footage of a black and white film on a larger screen upstage, creating a living film in front of the audience. The use of multiple cameras on stage provides an experimental space for the development of techniques such as mixing images, as in Big Art Group’s House of No More, which in one instance highlighted an effective moment between two actors who stood at either end of a long narrow stage, acting their individual part in front of exposed cameras that then blended the two seamlessly into one impeccable kiss on screen. Big Art Group’s work, hi-tech, glossy, and slick, explores the mechanics of such techniques and
develops this new genre of liminal work, somewhere between what could be called either theatre or film, and due to the quality of the work emerges as a powerful cyborg theatrical form.

The UK-based Forkbeard Fantasy often uses cinematic techniques to discover the depth of possibilities on stage — for example, the audience watches as a person, projected upon a full-screen, braves a wind-swept terrain and approaches a house only to, in the moment of entry into the house, become a live actor on the other side of the door, entering into the live space as the projection shifts to a sliver of outside space, glimpsed behind a “flat” of the door on stage. Alternatively, an immersive form of “live film” can be traced through the trajectory of the work of George Coates Performance Works 3-D multimedia spectacles, especially throughout the 1990s, in which the layers of projection, film footage, objects, scenery, and actors were all blended together for the audience through 3-D glasses and the audience becomes immersed within a world in which objects “project” over your head, or into the scene from where you sit. Akin to this work, but without the 3-D glasses, is the trompe l’oeil composite images created by Cyburbia Productions, which often blur the distinction between the live and the mediated, incorporating live action with highly saturated moving imagery that draws the spectator into a new intermedial terrain.

Within the framework of these brief categories often runs the theme of technology itself. As practitioners shift their knowledge of technology to a hands-on approach, questions of technology’s deployment often come into focus within the content of the work. Beyond the examples mentioned here, many other artists explore themes revolving around television, film, computers, computer games, cell phones, virtual reality, military, or medical technologies. From individual pieces created by artists whose work does not always focus on technology, such as Miss Mobile, in which Slovenian performance artist Emil Hrvatin performs with a cell phone and asks his audiences to call their friends and have them call him to create the improvisatory performance, or Richard Maxwell’s Joe tracing seven stages in a man’s life and ending with an actual robot on stage as a projection into the future, to the ongoing interrogation of technology by the Builders Association whose Jet Lag contemplated media and relationships to the traveling body while Xtravaganza, and Alladeen examine the technologization of bodies from Ziegfield Follies performers to Indian call center workers, artists are increasingly weaving technology through their work both conceptually and via practical application.

These practitioners are all experimenting with diverse methods to expand, blur, and reintegrate the boundaries of theatre and film, thereby creating new working genres of cyborg theatre. The provocation with which I began is only half in jest. As the twenty-first century progresses technology
will become more pervasive, from technologies that continue to aid and enhance — cures for diseases, artificial replacement parts, filtration systems for pollutants, to those that destruct — those that do the polluting, war machines, excess disposable machinery that will not biodegrade. While it is not the responsibility, or most often within the power of the artist to solve political problems, within the live space of performance some of these issues can be addressed, entertained, explored, and ultimately, faced. The cyborg theatre is the future.

Footnotes

1 I am currently working on a book project developing the theories and ideas of the cyborg theatre entitled, *Cyborg Theatre: Corporeal/Technological Intersections in Multimedia.*

2 The human fear of being dis/re-placed by technology has a varied historical trajectory, as seen in the following few examples: in literature, E.T.A. Hoffmann’s 1815/16 *Der Sandmann,* and Villiers de l’Isle-Adam’s novel *Tomorrow’s Eve,* or *L’Eve future* (written between 1877 and 1879), in drama, Karel Čapek’s 1923 *R.U.R.,* and in film, Fritz Lang’s *Metropolis,* all stand out as key sites for the expression of human displacement.


MUSINGS ON MULTIMEDIA: THE CYBORG THEATRE AND BEYOND


7 For more information on these companies and in some cases examples of their work, see: <http://www.georgecoates.org>, <http://www.forkbeardfantasy.co.uk/>, and <http://www.bigartgroup.com/>.

8 N. Katherine Hayles, How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics (Chicago: University of Chicago Press, 1999), 287.


13 This is an ongoing project that has also included locations in different countries. See: <http://www.stationhouseopera.com/> for information on their current work.
Modal realism, according to its founding theorist, David Lewis, is the proposition that we must conceive of an infinite plentitude of alternate worlds in addition to the world or universe we inhabit. Each of these possible worlds we are to understand as varying from our own cosmos in an infinite gradation across every detail. In Lewis’ words, “absolutely every way that a world could possibly be is a way that some world is.” In some worlds you exist and in some worlds you do not. In this world, you may wear the blue t-shirt, while in this world the green sweater, and in this world, no shirt at all. Lewis demands that we accept the ontological equivalency of each of these worlds, that is we must accept that the blue shirt, green shirt, no shirt, and every other of the infinite variations on reality, some quite far-fetched and bizarre, are every bit as really real as the world in which we share this article. Lewis goes on to ask that we accept that these worlds are not temporally or spatially relatable to our own world. They are not later or sooner, nor over there or over here. Each simply is a complete universe sealed unto itself and causally isolated from our own world.

This infinite plentitude of alternate universes is very much like what jazz poet/philosopher Sun Ra had in mind when he spoke of an omniverse — the largest possible set of possible universes. Isn’t this exactly what we’re talking about when we talk about New Media? If the term has any seriousness at all, it must denote something much more than the exploration of new tools and techniques aimed at rehabilitating novelty in the studio.
arts or even serving as the basis for new modes of expression. At its best, the whole thrust of artistic activity can be seen as a sophisticated exploration of possible worlds, a virtual mapping of Sun Ra’s omniverse.

My medium is sound and music — music not as a particular habitus constraining the organization of sonic events, but music as a particular phenomenological stance in relation to auditory experience. Music is usually thought of as a special instance of sound. We may argue about what separates the good from the bad, but we are usually pretty sure when we are listening to music. Sound, likewise, is easy enough to talk about at its most generic and physical level. Pretty displays of sine waves with their microscopic fuzz of overtones, and demonstrations with vibrating strings, make for good classroom presentation. Over time, however, my attention has been less focused on what sound is, than the more obscure question of what a sound is and how this definitional chess game might be relevant to the meaning of the music of my time and its role in the evolution of human consciousness.

Just what is a single sound? From the vantage point of perceptual psychology a sound is a discrete compressed air event that falls between 20Hz and 20kHz above a certain energy threshold. Within the performance practice of western music, single musical tones are usually construed as individual sounds, but no orchestral instrument sounds a pure tone, an unadorned sound wave, each, even when sustaining a single note is actually presenting the ear with a complex of fundamental and secondary tones. Is this really one sound? Would a semiotician regard an anthem or a hymn as a single sound? It’s not an easy question, and of course its answer hinges on whether the ear you are using to make the distinction is a social-historical one or a physical-perceptual one. Sounds in this singular way are the atomic units of sampling. And sampling is one of a very small number of major developments in musical performance that separates today’s musical culture from most of prior musical history. Whether we’re talking about DJs biting records or synthesists reshaping waves through digital processors, sampling is about postulating possible worlds through a sonic code and subjecting them to a kind of reality testing that is visceral and intellectual, aesthetic and critical. If we are to speak cogently about a contemporary musical stratagem that is based in the reorganization of pre-existing sounds, then we should probably have some idea of what a sound is.

If all the mountains fell in the sea…

Why would anyone want to embrace David Lewis’ crazy ontology or ponder the limits of Sun Ra’s omniverse? Lewis offers his possible worlds theory as a means of systematizing and bringing analytic clarity to one of philosophy’s
most sticky arenas — that of modal logic. Modal logic is in play whenever we are asked to speculatively consider scenarios that differ from things as they actually are, which, if you think about it, is our nature as a species to do almost constantly. Human will is metered out by the careful and not so careful parsing of counterfactuals. Statements of the if…then variety are our navigational equipment for translation through the complex interstices of individual and collective will, time and space.

Sampling as a modus assemblage for mass musical culture started out in a highly localized context driven by the functional necessities of youth dance culture. Innovations sketched out with phonograph records in the Bronx during the seventies collided with digital information technology a decade later to yield an entirely new idea about the how and what of music. The first objective of pioneers like Clive Campbell (Kool Herc) and Joseph Saddler (Grandmaster Flash) was to technologically isolate and extract the “break” from soul records. That is to sample from recorded performances (both popular and obscure) a particularly beat-heavy, funky-sweaty section, often just a few bars in length and release it from its original context to serve in repetition as the basis for a fresh musical experience. The breakbeat represented a distillation and recovery of black musical essence at a time when disco (i.e., integration) and other changes in the political economy of African-American music were seen by many as diluting this essence. By alternately backspinning and re-cuing each of two identical records containing the break, a DJ with a pair of turntables could extend the funky apex of black diasporan musical realization, in theory, forever. Out of the protean skills of the first generation of turntablists, a new way of thinking about musical creation and musical time emerged alongside a new awareness of recorded music as a random access historical archive.

No sooner had hip hop escaped its birthplace in New York’s uptown slums than some artists began expanding sampling’s plunderphonic methodology while at the same time buffering and subverting the nationalistic and nostalgic goals that had spawned the approach. The Bomb Squad — Norman Rogers, Hank Boxley, Bill Stephany, Keith Shocklee, and Eric Sadler, the production team for political hip hop unit Public Enemy — found early success in using the basic model of sampling not simply to rehear the musical past, but to disturb the sonic present. In the mid-eighties, they set PE’s black power rap against apocalyptic soundscapes that roared with the discontent and doom that characterized black urban experience of the Reagan era. Their bed of samples was rich in the sources it appropriated from, adding sound effects and environmental sound to thick beats mined from the grooves of old soul records.

But no other artist has been as influential in defining the avant-garde horizons of sampling as Paul D. Miller a/k/a DJ Spooky. Miller a critical theorist and media artist whose sonic constructions in the mid-nineties
opened up an underground musical movement called *illbient* that pointed the logic of sampling and its powerful arsenal of tools towards the future. Spooky’s other nickname, That Subliminal Kid, is borrowed from the hero in William Burroughs’ *Nova Express*. In that story, human society is being bombarded with a stream of reactionary propaganda being beamed to earth. These destructive transmissions are seriously stressing humankind. So, according to Miller, the Subliminal Kid who inhabits a phantasmagoric world of disembodied sound “takes his electromagnetic scalpel and cuts the loops so the future can leak through.”

**Got my own world to live through…**

Sampling as the quintessential postmodern art form has attracted most of its critical attention for its facility in recontextualizing the sonic past, that is, its archival or conservative function. It is, however, the ability to create sonic fissures where “the future can leak through” that drew me into the game. As a consumer and student of music, I’ve never found the musical past to be anywhere near as interesting as the musical future. As a solo artist under the name Bushmeat and as a member of the trio Mind Over Matter Music Over Mind (MOM³), I’ve been applying the futuristic paradigms of sampling and digital sound production with the specific aim of poking holes in consensual consciousness and in so doing, redraw the boundaries of mental health thus (hopefully) creating an opening for the ingress of a posthuman reality.

Sun Ra used his cosmic circus of a big band as a platform to advocate for human pursuit of what he termed our “alter destiny.” If something called human nature is responsible for our most incorrigibly vile behavior (e.g., violence, greed, waste), he argued, then perhaps we have reached a point in history where we are ready to try another path for ourselves, a way out of our humanity. Maybe we would do better as something else. Unlike visual stimuli, sound embeds its presence in the same intimate recesses where the inner speech of thought refracts awareness and translates the jumble of experience into the portability of narrative. Tantric wisdom conceives of sound as a powerful agent for disciplining the mind. Science has confirmed the capacity of shamanic drumming, chanting, and mechanically produced binaural beats to induce the entrainment of brainwaves.

Ra called his attempts to use music to mold minds “tone science.” He was the first African American musician and among the first musicians of any background to avail himself of the unique timbral possibilities of
electronic instruments. In my own work, I am attempting to build on many of the basic laws of Sun Ra’s tone science within the limitations of my skill sets and chosen instrumentalities. My tools and methods are conducive to a sound product that is more a hypothesis about music. According to what mathematician John L. Casti calls the “science of surprise,” any such simulations of complex possible world scenarios are prone to extravagant and unexpected results due to paradoxes, instability, uncomputability, connectivity and emergence built into the problem and the tools applied to its solution. Paradoxes abound in my instrumentality. For example, I’ve programmed certain voices into my synthesizer in which the register suddenly reverses itself in the middle of the keyboard. In a similar fashion, my deliberate, exhaustive, but less than systematic efforts to de-temper the piano keyboard interface of my electronic synthesizer has resulted in a stubborn absence of computability or playability in the conventional sense. Rules are accrued slowly and are usually as tentative as they are vague. Indeterminacy can be reinstilled in sampled material with the application of secondary effects that are themselves unstable and unpredictable. Oscillating material can be overlaid in a way that takes advantage of the serendipitous gifts of audible and subaudible interference patterns without pretending to be able to bring such patterns under conscious control. My methods force me along a tightrope suspended over an ugly pit of disarticulated noise. And yes, I do fall a lot, but other than my pride, it doesn’t hurt much anymore.

My i-pod weighs a ton and yours probably does too. In practice, we modern folk have become quite accustomed to deliberately manipulating our private sonic worlds in a blatant effort to condition our consciousness. Music (and sound art presented in the same space as music) become less object for aesthetic contemplation than prosthetic struts inserted directly into the tissues of consciousness to achieve effects otherwise unattainable. We change the mix and we change our minds, literally. The new media I’m most interested in performing creative operations on is the mind of my listener. The samples and effects in my laptop and keyboards are a kind of pre-palette. What’s unique in their arrangement and deployment has everything to do with their immediate and transient impressions on consciousness and very little to do with how they reference or recapitulate any aspect of our shared sonic culture. To speak post-culturally, is, of course, to run a very high risk of mumbling or otherwise being misunderstood. It is, however, the only way to speak to the posthuman lurking in us, waiting to leak through.
Fall mountains, just don’t fall on me…

It’s not at all unexpected that African-Americans should have a lot to offer to the project of discovering a posthuman destiny. We have been on a trajectory towards just such an ontology ever since arriving on these shores defined by statute as prehuman. (What else would you call 3/5 of a human being?) It is the only authentic emancipation. What if the energy of moving out of a prehuman status was necessarily so intense that we are currently being catapulted right past human and into the posthuman? And as black culture has always led American culture, maybe this great liberating energy can pull others (those who have never enjoyed the benefits of prehumanity) along in its wake.

Modal logic. Counterfactuals. We already know what would happen if you built a city twenty feet under sea level between a massive river, a big lake, and the sea. In truth we live in a civilization that was built well below sea level and now the swollen surf of history’s impeccable failure to forget is crashing against the sea wall. Possible worlds theory kicks in: We’d like to find a Lewisonian world where we survive the flood, but to survive as the bloated beings we’ve become, well, we’d need a much bigger ark than even old Noah could muster. So, the secret in my samples is that we can all claim our alter destiny and become subliminal kids using our electromagnetic scalpels to hack little nicks into the levy. When the waters come, relax. These cursed streets will finally be clean and we posthumans will happily find something like gills have been added to our new morphology and that swimming with friends can be so much fun. What a surprise.
Images Propelled into the Night Sky

I was in Northern Michigan — I think it was in 1988 — and I was on the kind of solitary vacation I liked to take in those days. I heard that a community of poets near Elk Rapids had readings every Friday and Saturday night in a big field with boulders arranged in concentric circles around a bonfire. The public was invited so I went.

The group fittingly called itself the Stone Circle Poets. The six members had gathered around an old-styled, itinerant labor-organizing/hobo poet named Max who had settled down to a life of horticulture in the region. Horticulture and poetry were their way of life. The community, under Max’s guidance, had paid tribute to the oral tradition by committing thousands of poems to memory. Now Max was dead, but the remaining poets, each a formidable individual force, kept the Friday/Saturday tradition alive.

This is how it worked. At sundown, the Stone Circle Poets began to recite — all from memory. They started with a couple of sets, but eventually serendipity and free-association were the rule. The evening moved on and the booze kicked in — poems came in daisy-chains, one leading to the next. Pathways of association became streets became boulevards became superhighways. In the course of an evening, hundreds of poems and thousands of images sprang into the space over our heads in a meandering, surging river of imagery.

I passed in and out of sleep, awakening to another poem and then another — I remember Pound, Eliot, Plath, and, well, the illusion was that every poet was present, gently but insistently waiting in line for inclusion into an almost forgotten oral tradition. I remember labor chants, an ancient
Greek self-tribute, a South American pygmy funeral poem, African-American slave poems, improvised poems, surrealist poems — the Stone Circle folks were a living encyclopedia of *ars poetica.*

After about five hours of this, lying under the stars, I was intoxicated by the onslaught of images. (I assure the reader that I was completely sober in a chemical sense.) The effect was convulsive. I was lying under a constellation of rhetoric. I could pick and choose my favorite topics for consideration: politics, musings on mortality, metaphysical speculation. All were alive in a ravishing swirl of voice and imagery and, well, sex, written large on the landscape of northern Michigan but secretly communing only with my interiority. The night sky became my interiority. Miniscule breezes, bird sounds, hovering insects, the other bodies lying similarly close by, the images; all of it unified into a sort of vibrant and subtle weather system, one with a marked and singularly symphonic effect.

By the end of the evening I was pretty much glutted and gone — shit-faced in a storm of oral tradition. I began to wonder why many of my experiences in the theatre seemed a little wan in comparison.

**A Brief Discussion of the Phenomenology of Weather**

For our purposes here, a weather system is a series of natural phenomena that mark shifts in atmospheric conditions. The effects of this process of weather can be subtle or profound. They are certainly ephemeral. People captured within the boundaries of a particular weather system feel affected, as a community, by shifts in the weather. The changing of weather reminds us of the passage of time, and serves to synchronize our general experience with the vicissitudes of nature. Weather phenomena have a momentary, but sometimes momentous effect on the people contained within them.

A thunderstorm approaches and a series of subtle and not so subtle changes accrue. The barometric pressure drops, the humidity increases, the sky fills with clouds, the wind shifts, the birds stop chirping, the character of the light changes, the ionization in the air changes polarity, the leaves turn upwards, or inwards, the wind ups in speed, we begin to hear the distant sounds of thunder, the sky darkens more fully, rain appears in the distance, which slowly (or quickly) advances on us, and finally, we are in the midst of a storm — a host of atmospheric changes that have a profound effect on everything from our mood, to our ability to produce enough food for a population. I enumerate these aspects at length to underscore the depth and layered dimension of the event. And these phenomena occur as processes, some on a timeframe that is difficult for us to perceive. Many of them pass unnoticed into our subconscious awareness. But
perceive and notice we do, sometimes with a sense of awe. We feel swept up and fascinated, when we pay attention, impressed with our smallness, but also with our agency — minute, but significant — within the complexity and scale of the forces which surround us.

Combining these effects, we might imagine that, metaphorically, the “weather” of a human situation is the sum total of particularities surrounding the life of a community. Such a thing might also function on the stage as a way of imagining how the particularities of sight, sound, and story interact to create a performance experience. I like the way this allows both subtle, subconscious phenomena and grand, very conscious phenomena into consideration.

Murky Thoughts About the Ancient Greeks

It’s 1974 and I’m very lucky as a college student to be visiting Epidaurus, one of the main theatres of ancient Greece. I’m young and in love with the idea of the old Greek tragedies, though I can’t really imagine their much heralded and semi-well documented dramatic effect. Truthfully, I barely know how to read the things, but I’m all weak in the knees over the ancient theatre itself. I am enthralled by the exotic grandeur of the landscape, the sun, the crystal-clear air, the mountain panorama that formed the backdrop to every performance. It was a college cliché in those days that the Greek plays had a kind of power that our present theatre lacked and I sat there on the ancient bleachers trying to understand that power.

I knew that the Greek dramatists told stories that everyone already knew in some way. So their narrative threads were not new. Those playwrights were not concerned with convincing the audience of some “original” narrative — they told a story which already reverberated with the audience in some provocative way. The plays might boldly refer to someone who was alive in the day, someone likely to be in the audience during the run of the show.

For instance, I knew of the famous and controversial General Cleon, who was pointedly referred to through the character of Creon in Sophocles’ Antigone. He was apparently sitting in the audience on opening night. I certainly got how that would have generated some heat — imagine an American president present and publicly visible at a production of a play dealing with current events (fat chance — we might get to see something revealed inadvertently on his face).

And I knew that the productions of the plays had some sort of liturgical significance in a broader sense within the culture where they were performed. And I understood that myths were stories that somehow reverberated as templates within the psyches of the receivers of the stories — but all these ideas, though captivating, were impossible to comprehend, much less put into action, except in the most romantic of terms.
And Aristotle bugged me. His mode of dramaturgical analysis illuminated the structure of the tragedies, but came up short in accounting for their vaunted effect. I didn’t recognize *catharsis* either as an aesthetic goal or as something I had experienced in an aesthetic situation.

**A Glimmer of Insight**

*It was after the Stone Circle Poets concert that something clicked.* The effect of that night could be described as a compendium of sight, sound, thought, and action; included in the glossary of necessary elements were serendipity and the unpredictability of nature, the formalized word-craft of the poems, along with the personalities of the speakers. Most important, though, was the comprehensive nature of what was expressed, the layering, the rhythm, the onslaught of words, words, words. It was the rock and roll of the event that swayed me. Everything conjoined to create a sort of compelling weather system — a meteorology of meaning that was, in that particular moment, generating an aesthetic thunderstorm. I could describe the effect as ecstatic, or, if not ecstatic, at least pleasantly stupor-making.

I got something about the Greeks. It was the way the Greeks constructed constellations of thought in the presence of “nature” that gave the plays some of their mysterious cultural power. They were born out of a physical dramaturgy that brought organized thought systems into contact with the unpredictability of a reverberant natural world and then introduced the result into the public sphere. They operated in a sizable and comprehensive phenomenological grid that was appropriate and stimulating to a kind of reverberating cultural feedback that gave tragedy, say, a psychic boost and rendered its effect personal and pertinent in a kind of symphonic and transporting way.

Over time it became clearer to me why the modern day theatre seemed wan and thin in comparison to that night in Michigan and what I imagined for the Greek theatre. Conversation, monologue, traditional story-line, and even non-linear narration, static lighting systems, music playing before and during the show — all of this together did not comprise “a sizable and comprehensive phenomenological grid.” We hadn’t conceived of the right spontaneous weather system — we had not assembled a meteorology of meaning for our era. And so, there wasn’t sufficient cultural reverberation in our compendium of sight, sound, and action to manufacture aesthetic ecstasy.

Which brings us to a point where we can discuss media in general, and approach a full media meteorology.
But First, a Couple of Comments about Intoxication

Technically, almost anything can be intoxicating — anger, anxiety, confusion, the defiant asking of questions in the face of permanent ontological uncertainty, sexual anticipation, the energy of scandal, the breaking of taboos — all can get us drunk; all can contribute to a transporting, symphonic effect.

You’ll notice that I’m assuming that getting aesthetically drunk is good. Or, at least, an antidote to all that might be considered stultifying and unnecessarily proscribed in the social realm. So, let’s be a little more specific there as well. As a viewer I want to teem with ideas when I leave the theatre, with images that I have to sort through; I want the frisson of unresolved questioning. Critics often seem to hope for the equivalent of a good meal in their theatre viewing — they want to feel satisfied. I appreciate a good meal as well, but I expect more from the theatre. Not only do I want to fly high when I leave, I want a piece to come along with me, to provide companionship. I want, at the very least, to feel tipsy and unhinged with a few glasses of figurative champagne or whiskey in my belly. This also assumes that the aesthetic equivalent of a triple hit of LSD might not be a bad thing either.

And I am assuming without critique, that this is a proper goal of theatre — this ecstatic, superego-defeating effect. Ecstasy interests me, because pleasure and beauty interest me and if art isn’t going to examine pleasure and beauty in the deepest sense, who is? The male magazine industry?

Anyway, when the great subjects of the theatre coalesce, become polyphonic, and explode, a potential is created for the emergence of some sort of psychologically and spiritually transformative event. It’s like the BEST music, the BEST visual art, the BEST vibe, the BEST crazy, captivating and/or liberating thoughts, wrapped in the rock-and-roll of a well-poured theatrical boilermaker.

What Do We Mean Here When We Say “Media”?

In this case, when you see the word medium, think “something in between that transfers meaning”. I like the pre-“multimedia” use of the term, insofar as it refers to, say, visual artists who work with “mixed media.” It would be useless, in the 21st century, to imagine a culture without electronic media, so, of necessity, we want to include it here as another tool in the kit. And, if we are to conceive of a “proper phenomenological grid” we are going to have to use our wits to include every ounce of our understanding of electronic media as it relates to our comprehension of time, space, and each other.

But I want to stress that an artist’s inclusion of electronic media into a theatre work does not necessarily mean that the artist has comprehended and evoked the modern phenomenological grid in that work. On the contrary, electronic media are often used simply as decoration. The hard part is
understanding the meaning and content of what we now call “multimedia effects” on a dramaturgical level. We must see how life, love, and thought are transformed by these new-ish media before we allow that their inclusion in a work heralds the appearance of something truly new.

I finally state something now that may feel repetitive: a theatrical weather system is an interlocking web of constellated thoughts that hover above, around, and through the actor’s bodies; these thoughts create the context for the actors’ physical lives and allow for our metaphysical framing of the actor’s physical life as we perceive it. So, see “multimedia” as elements of a weather system conceived in this mode.

**A Short Glossary Of Theatrical Media**

These media elements are intertwined and cross-referential.

They include but are not limited to:

- the bodies of the actors;
- the stuff that fills and animates their bodies — their experiences, personalities, psycho-neurological wiring, their physiognomies, etc. — along with their thoughts, words, dreams, gesture-style, habit; in other words, their souls;
- the sum total of physical life, gesture, rhythm, and physical architecture in a piece insofar as these elements contribute to the perception of a complete and present universe of meaning; this material comprises the object meaning of a piece for the stage;
- the voices of the actors;
- the subject matter of a theatre piece, as it manifests itself in story, verbal expression, and cultural reference; and insofar as it contributes to reverberation within the individual viewer;
- the architecture of environment that surrounds the actors in a piece and locates it in a hierarchy of spatial relationship;
- the primary musical text, or music accompaniment;
- and yes, the way that electronic-based expression — projections, animations, internet networking, cell phone calls, LEDs appearing like starry nights, switchers, computer screens, RP screen — all of this broadcast live or pre-recorded — is woven into the work.

All of these elements form the raw materials out of which the metaphoric weather system of a piece begins to form; the effects, signifiers, conceits, metaphor generators, narrative strands are the expressive tools that comprise the understanding of media I wish to refer to here.
Please note that, traditionally, theatre begins with the word. I’ve subverted this hierarchy by way of a concept I call **physical dramaturgy**. It is the ever-present, but oft ignored physical subtext to every text. It is the anchor for all discourse that emanates from the stage. It is the soup we all simmer in, but often ignore because we’ve gotten used to its temperature.

**I Have A Company Called NEW PARADISE LABORATORIES**

We come at last to the point where we may consider my company, New Paradise Laboratories (NPL), and its 10-year exploration into the nature of media weather systems. I convened NPL, or it was convened for me as a gathering storm, in 1996 in the midst of work on a graduate degree in directing at Virginia Polytechnic Institute in Blacksburg, Virginia. The program conferred a unique sort of mid-career MFA. Candidates for the program were head-hunted, and were invited to propose a course of study suited to their individual priorities; then they were given resources to bring some sort of exploration to fruition. I chose to lay the groundwork for a new company to explore the weather system idea.

The company is comprised of seven member actors, six who have worked with me since those earlier days, and one who has come into the process more recently. Their names are Lee Etzold, Rene Hartl, McKenna Kerrigan, Jeb Kreager, Mary McCool, Aaron Mumaw, and Matt Saunders. We now reside and work in Philadelphia PA, and have created nine original works together since the founding of the company. We have developed a pedagogy and, subsequently, a meteorology that is unusual, I think, and very specific to our work.

In general, we like to deal with subjects that connect modern popular phenomena with their classical antecedents. There are many reasons for this, but the main one refers back to the stories at the beginning of this article: we want to make work that has a sufficient density in its weather system to generate ringing image reverberation — something akin to acoustical feedback — in the audience.

As an example, I want to mention a series of three pieces called *The Loverboy Trilogy*. It deals with male pop-culture figures that managed to endure the American pop culture mill to survive through to the end of the 20th century and beyond.

The first piece in the series was GOLD RUSSIAN FINGER LOVE, which was a metaphysical James Bond exegesis. Next came THE FAB 4 REACH THE PEARLY GATES, which posited the Beatles at the end of time. Finally, we created THIS MANSION IS A HOLE: HUGH HEFNER THROWS A PARTY AT THE CENTER OF THE UNIVERSE, which held as its premise the conceit
that Hefner was a 20th century philosopher worthy of serious consideration. I will talk mostly here about THE FAB 4, because it does its work in ways that are more easily describable. I’ll refer also to THIS MANSION.

The three pieces have some elements in common:

- Much like the Greek dramas which they posit as antecedents, these pieces start with figures which pre-exist in the audience’s imagination. They trade on images that have a history and currency in each individual viewer. The pieces assume that these reference points will reverberate differently in each viewer, in accordance with his/her personal associations. The pieces leave wide open a latitude of potential interpretation. They purposely create meaning and then dissolve it. And pop figure subjects, whether emanating from a fictional or non-fictional source, are carefully constructed systems of sign and symbol. Thus, each piece starts with a figure whose primary features are allusive in addition to being actual.

- All three pieces evince an invented gesture world as the basis of communication that plays off of and against audience expectation. In this sense, each piece practices some degree of relationship to Brecht’s estrangement techniques, but not in the usual sense. For instance, the fictional afterlife of the Beatles in THE FAB 4 REACH THE PEARLY GATES is expressed through a gesture system invented out of paintings by Joan Miró mingled with stage violence choreography.

The mise en scène of FAB 4 pits three Catholic school girl/Beatlemaniac angels against the boys from Liverpool. The angels tenderize the boys psychologically, spiritually, and physically through punches, kicks, and flips as a counterpoint to actual interviews with the Beatles quoted, with hallucinatory changes, throughout the piece. In this way, the piece pits the semiotics of celebrity against a recognizable shared pleasure on the part of confirmed Beatles fans to somehow see the Boys “get the shit kicked out of them in the most delicious way” (in the words of one of the viewers of the piece).

- The environments created by company member, actor and scenic designer Matt Saunders, are geometric, architectural, and abstract. They mimic the formal intentions of the Greek amphitheatres, and seem, through their peculiar way of capturing space, to invite errant and obscure energies into the room. They tend to imitate geography.
Furthermore, they combine recognizable elements — an interview table and wrestling mats in FAB 4, with unrecognizable elements — a halo circle of lights and hundreds of hanging paper scrolls, to create an alien word of potential association. They are, in some way, also related to the Stone Circle Poets’ field of concentric circles of cyclopean boulders.

- The pieces all have an elaborate, very loud musical underscoring, comprised of samples from existing music related to the piece, cut, spliced, looped, and combined with drones, and other loops, to create a collage of musical “mantras” that recall music very familiar to most viewers. The effect is both alienating and reassuring. It is also an erotic tease, always dangling the potential resolution of familiar melodies and cadences in front of the audience without actually delivering on the promise. The purpose of this musical idea is to create a sort of running commentary of associations that moves both parallel and perpendicular to the direction of the piece. The underscoring rarely explicated the action of the piece, but, instead, brings it into high relief. It stands in, in some ways, for the forces of nature.
• There is no effort made to impersonate the well-known personae represented in each piece. Always, the intention is to highlight the difference between the actor portraying the character and the character him/herself. For instance, the four actors portraying the Beatles wear appropriate wigs and facsimiles of the Pierre Cardin suits made famous by the original Beatles, but they are clearly simulacra. There is no Beatles Tribute Band.

No attempt is made to submerge the personae of the actors into their roles. In many ways they evince their own personalities accurately while still referencing the signs and symbols of their characters. For instance, Matt Saunders was the actor in the company most McCartney-like in his overall affect — he played Matt Saunders playing Paul McCartney. The effect was both distancing and intimate. We see Matt, with his gently sympathetic personality, peering out from inside the elaborate semiotic mask of his portrayal. In this way, the mode of characterization mimics the effect of literal masking.

• There is text in every piece. In FAB 4, it springs from doctored pre-existing Beatles interviews. In GOLD RUSSIAN FINGER LOVE, it is doctored text from the movie, Goldfinger. THIS MANSION includes short, pornographic encounters as if written by a phenomenological philosopher.

In no sense is the text of these pieces deathless prose. On the contrary, the text provides continuity and connective tissue to the body of the work. The text functions very much like screenplay, where the visual component of the film supercedes the meaning and structure of language.

• There are a number of references in each piece to classical/historical antecedents. These references are made without irony. For instance, Jeb Kreager plays John Lennon in FAB 4. At one point in the piece, he is wrestled to the ground in an erotically charged bit of fight choreography by Mary McCool, who plays the Pink Angel. Blindfolded, she reveals a slit in Lennon/Kreager’s inner thigh from which she pulls a tiny baby. She then hands the baby to him — he views it with curiosity and flummoxed awe. The musical accompaniment is insistent and gigantic. It is a tender, funny, and strange moment that clearly refers to the birth of Dionysus, but stands alone on its own as an unprecedented moment.

Another example: at the end of THIS MANSION IS A HOLE, seven actors, male and female, with pipes, are dressed in satin dressing gowns in a simulation of a sort of pan-gendered Hugh Hefner. They sit on a
wrestling mat to hear a bedtime story — it’s Christmas Eve and Bing Crosby is repeatedly singing the looped phrase “Do you hear what I hear?” from the “Little Shepherd Boy” Christmas boy. This musical scoring is intermingled with riffs from Miles Davis. The bedtime story tells of a man who preserves a strange masochistic propensity for public voyeurism by burying himself in a concrete sidewalk in order that he might feel public footsteps on his body forever. As the story draws to a close, the seven Hefners are tucked into bed by a professional eunuch in a blue monkey head — he covers each Hefner completely with the grey wrestling mat. It is a very tender image combining memories of childhood with suffocation and mortality. Then, a nude actress in a Santa hat and beard enters the space through a fifteen-foot-high fireplace in order to place little wrapped gifts/headstones on the individual lumps of the bodies under the large mat.

The effect is beautiful — ravishing really — gently satiric, and genuinely sympathetic rather than ironic. The moment is a constellation of competing semiotic messages; the audience is left with an indelible meteorological zen koan that intoxicates with its simultaneous availability and impenetrability.
The overall experience of each piece, I think, is greater than the sum of its described elements. The pieces work best with an audience when the image density of the work reaches a critical mass and the elaborate distancing techniques in the piece unite into an effect that is very strongly experiential. The overall effect is not cool and ironic, but supercharged and involving. It verges, in some viewers, on the spiritual. It’s not just that questions are evoked, but a questing spirit is engendered in the viewer; a sensation that answers are just around the corner, but that fulfilling interpretability is dangling just out of reach. Viewers feel drawn forward into the piece not by traditional narrative suspense, but by a desire to resolve ontological mystery in general. The sensation and experience of the pieces is exotic, erotically charged, and ravishing.
Finally.

It is important to note, for our purposes here, that each of these pieces brings forth strategies that are drawn from a variety of contemporary media — and we come to why this is critical. Remember that we started with a discussion of a potential relationship between weather, geography, and image. We wanted to seek an elusive “proper phenomenological grid” that would somehow unlock a full spectrum of meaning so reverberant that it would engender a kind of intellectual and spiritual feedback in the viewer.

There is much more to be explored in understanding the relationship of bodies in space and time to grid in general. It has been noted that we function in a series of metaphor-laden grids: for instance, “up” into the space overhead generally signals aspiration. We move “up” in the world. Important thoughts hover overhead. “Up” is equated with goodness, and light. It is the source of emanations from God. “Moving forward” signals having somewhere to go. “Going” is equated with vitality and purpose. And on and on.

But in this study, suffice it to say that there is a grid formed by the sum total of communicative tools that hover, like weather, around the body in space. We can’t invite the winds of the Arkadian mountains around Epidaurus to blow across our stage, but we can simulate that sense of natural grandeur with a media equivalent. In a sense, the scale of our media environment simulates nature. We cannot conceive of our current phenomenological grid without including the metaphoric weather system of our media environment.

New Paradise Laboratories sees the body as a nexus where structures of meaning converge. The body represents an intersection, an accretion of metaphoric and perceptual effects. The body stands upright, alive and vibrant, but vulnerable in the face of a buffeting media storm.
MULTIMEDIA PERFORMANCE STUDIO
MULTIMEDIA PERFORMANCE STUDIO (MPS)

Multimedia Performance Studio is a “research and professional producing/presenting unit” of the Department of Art and Visual Technology (AVT), College of Visual and Performing Arts, George Mason University. MPS was founded by Kirby Malone and Gail Scott White as a studio and laboratory for new technologies in the performing arts. MPS currently maintains an evolving ensemble of actors, singers, musicians, composers, designers, writers, directors, stage and production managers, multimedia artists and animators, sculptors, inventors, dramaturgs, historians, mad scientists, technicians and engineers.

With animated digital projections, digital sound and innovative scenography, MPS stage shows combine elements of cinema, music and theater to create “live movies” for today’s multi-sensory young adult audience. A central object of MPS projects is to develop and extend technologies for performance while maintaining a critical eye toward these same technologies, and our technosphere in general. MPS productions include opera, performance art, music theater, dance and theater design, indoor and outdoor multimedia installations, and other new performance and exhibition forms for the 21st Century.

MPS is committed to creating innovative, thought-provoking productions which bring together collaborative teams of guest artists, resident faculty artists and student artists. This interdisciplinary work is carried out in the belief that it is just such a combination of talent, energy and commitment that led to many of the ground-breaking developments in music theater and performance, in new opera and dance theater, in the 20th Century, in centers of experiment such as the Bauhaus and Black Mountain College.

As MPS’s focus is the collaborative creation of “live movies,” the company’s work employs digital projection and sound technologies, and filmic narrative techniques (such as flashback, lip-synch and slow motion), to construct moving stage pictures and sonic theater, in which live actors interact with animated performers, and emerge from or vanish into projected environments, settings and dreamscapes. This work is based on the premise that the audience of our new century desires a new live stage form which draws on and responds to global, contemporary, media-saturated existence. The artists who make this work engage with new media and new technologies, turning them in on themselves, to cast light on the way they shape and reconfigure our world.
Cybruria Productions’

SILENCE & DARKNESS

a workshop production

April/May 1999

Fine Arts Gallery | Center for the Arts
George Mason University, Fairfax VA

Cast: Charles Holley, Sarah Maxwell, Drew Myers, Chris Parson, Karen Rivera, Rebecca Wilbur, Amelia Winger-Bearskin

Directed by Kirby Malone

Written by Kirby Malone
with contributions by Jackie Donaldson, Marilyn Moran, Karen Rivera & E.M. West
& passages from Jean Baudrillard, Guy Debord, Heiner Müller & Roger Waters

Scenic & Lighting Design: Kevin March
Score & Sound Design: Martin Wright & Ziggy
Costume Design: Stephanie Lundy
Video Design: Greg Stein & Thomas W. McGuire
Projection Design: Karina Braszo, David Danner, Kirby Malone and Gail Scott White
Scenic Artist: Thomas W. McGuire
Slide Animators: Karina Braszo, Gary Comerford, David Danner, Marcela Lopez and Doug Vazquez

Production & Stage Manager: Stephen Balazs
Asst. Stage Manager: Michael West
Asst. Director: Michael Sherman
Asst. Scenic Designer: Doug Vazquez
Production Assistants: Ben Ashworth, Mike Ittner, Autumn Pike

Documentary Photographers: Gretchen Hilmer and Thomas W. McGuire

Produced by Kirby Malone and Gail Scott White
MULTIMEDIA PERFORMANCE STUDIO

Multimedia Performance Studio & Poetry Theater present

**AUTOBODIES: DIGITAL POETRY THEATER**

November 1999

A Collaboration between 14 Writing Program and 17 Visual Information Technologies (VIT) Graduate Students

Fine Arts Gallery | Center for the Arts
George Mason University, Fairfax WA

Directed by Kirby Malone
Multimedia Design by Gail Scott White
Set and Lighting Design by Kevin March
Sound Design by Martin Wright
Costume Design by Wajma Sultani

**WRITERS**
Jackie Donaldson, Rebecca Dunham, Carolyn Forché, Tony Gagliardi, Susan Gardner Dillon, Rebecca M. Knotts, Marilyn Moran, Mel Nichols, Lee Riley-Hammer, Kaia Sand, Lesley Smith, Peter Streckfus, Emily Tuszynska, Elizabeth A. Weiss, Joan Wilcox

**DIGITAL ARTISTS**
Karina A. Braszo, Sig Bruner, Neicy Buster, Chris Compy, Jon Goell, Kirsten T. Hallum, Maryam Kasmai, Valerie Kritter, Yolanda Mayers, David Mazanec, Deborah McFarlin, Sherri Norton, Cate Rodriguez, David P. Rueckert, Mauricio Sanchez, Wajma Sultani, Andrew Weyrich, Gail Scott White

**CAST**
Alecia Gower, Charles Lee Holley, Mike Ittner, Tacie Jones, Chris Parsons, Maria Río, Turtle Wegrzyn, Rebecca Wilbur, Amelia Winger-Bearskin

Stage Managers: Allison Bodwell, Micah Stromberg
Sound and Light Operators: Brian Allard and Rachel Gertz

Documentary Photographer: Mary Upton
Produced by Jackie Donaldson, Kirby Malone and Gail Scott White
MARISOL
by José Rivera

Rosslyn Spectrum, Arlington VA, April 2000

Keith Waters, artistic director/producer
Tom Mallan, director
Kirby Malone and Gail Scott White, multimedia designers
Ian Claridge and Ayun Fedorcha, lighting designers
Adrianna Daugherty, sound designer
Ina Claridge, Tom Mallan and Gail Scott White, set designers
Timm Burrow, costume designer
Micah Stromberg, stage manager

CAST
Bruce Holmes
Samantha Kearney
Maura McGinn
Vera Soltero
Yasmin Tuazon

MULTIMEDIA ARTISTS
Frank Blankenship, Karina Braszo, Kirsten Hallum,
Negar Nahidian, Lee Vaughan, Gail Scott White

MULTIMEDIA PRODUCTION ASSISTANTS
Alecia Gower, Davide Lorenzi, Suzanne Scott, Kelly Sleyman
Photographs by Mary Upton

Multimedia Production Studio and Cyburbia Productions co-produced Trumpet Vine Theatre Company’s production, Marisol by José Rivera, in April 2000. Marisol, written by a Puerto Rican playwright in 1992, is a tale of urban, millennial apocalypse. Kirby Malone and Gail Scott White worked as multimedia designers, in collaboration with a team of AVT undergraduate and MFA students, and the play’s director, Tom Mallan, to create a cinematic component of the production with full-stage, digital slide animation, depicting settings, character transformations, strange weather, and other special and peculiar effects.
Multimedia Performance Studio & Cyburbia Productions present

**SPLIT: Hive Mind**

Halloween Beach Party, November 2000  
Concert Hall Lawn | Center for the Arts  
George Mason University, Fairfax VA

an outdoor architectural multimedia installation  
by Kirby Malone and Gail Scott White

featuring animated video projections onto two sixty-foot  
cement towers with live music

a collaboration with David P. Rueckert, Sean Watkins,  
and the band Grommit

*SPLIT: Hive Mind* featured dual six-story high projections onto the Concert Hall’s twin towers, bathing the architecture in animated multimedia imagery ranging from brains to bees to bats and dolls, automata and geometrical forms. This project clearly demonstrated, and served as a model for, new uses and applications of projection and animation technologies for architectural and environmental settings and public events.

An earlier version of *SPLIT: Hive Mind* was featured in the Ocular Interactive Festival in 1998. This earlier work featured six computer-programmed slide projectors, while the 2000 version featured dual digital video projections.

*SPLIT* is available for touring as an outdoor or indoor installation.

Documentary Photography: Chris Ciccone/Trinity Tongg Osborn
Multimedia Performance Studio presents

Cyburbia Productions’

SILENCE & DARKNESS, a live movie for the cell phone age

a workshop production

March 2001

Harris Theatre | Center for the Arts
George Mason University, Fairfax VA

CAST
Sarah Hochkeppel, Charles Lee Holley, Joshua McCarthy, Drew Myers, Chris Parsons, Nicholas X. Parsons, Maria Rio, Turtle Wegrzyn, Rebecca Wilbur

GROMMIT
Nelson Cuellar (guitars), Mauricio Sanchez (guitars), Greg Stein (vocals, bass & guitar), and Joseph Stephens (drums), with Sarah Hochkeppel (vocals) and Rebecca Wilbur (vocals)

Written and Directed by Kirby Malone
Produced by Kirby Malone and Gail Scott White
Stage Manager: Nicole McClain
Multimedia & Set Design: Gail Scott White
Lighting & Set Design: Kevin March
Costume Design: Stephanie Lundy
Video Design: David P. Rueckert
Sound Design: Kevin Jerome
Prop Design: Jill Buxrud
Master Electrician: Rob Hencken
Sound Engineer: Grafton Cole
Company Manager: Marilyn Moran
Assistant Directors: Jeremy Frank and Julia Laxer
Asst. Sound Designer: Jill Buxrud
Asst. Costume Designer: Alecia Gower
Video Operators: Jill Buxrud and Dan Sharnoff
Documentary Photographer: Trinity Tongg Osborn
Production Assistants: Scott Rowan and Alexei Samsonovich
Stagehands: Chris Ashton, David Bjerke, Valerie Curry, Alecia Gower and Julia Laxer

MULTIMEDIA ARTISTS
Gail Scott White, David P. Rueckert, Chris Ashton, David Bjerke, Karina Braszo, Jill Buxrud, Nami Hashemizadeh, Maryam Kasmai, Dan Sharnoff, Greg Stein, Lee Vaughan,

The Cyburbia towers and fly-throughs are based on paintings by Thomas W. McGuire.
Jane Franklin Dance presents

IN THE BLINK OF AN EYE

Dance Place
Washington DC

November 2001

During the summer of 2001, Gail Scott White collaborated with Jane Franklin, to provide multimedia design for a new dance work, In the Blink of an Eye, which premiered in a concert by Jane Franklin Dance at Dance Place. The work has subsequently become part of Jane Franklin Dance’s touring repertoire, and has appeared at the Clarice Smith Performing Arts Center and other venues.

Produced with the assistance of the Multimedia Performance Studio.

CHOREOGRAPHY: Jane Franklin

DANCERS
Nicole Bradley Browning, Jennifer Rivers Pittman, Nicole Pouliot, Stefanie Quinones, Malcolm Shute, Amanda Smith

MULTIMEDIA DESIGN AND VIDEO: Gail Scott White

COSTUMES: Allen Smith

VIDEO PERFORMERS: Jane Franklin and Miss B

TODDLER WRANGLERS: Katie Chase and Rebecca Chase

MULTIMEDIA ADVISER: Kirby Malone

Video produced with the assistance of MPS, with additional support from the College of Visual and Performing Arts, with special thanks to Dan Hobson and Julie Thompson
Multimedia Performance Studio presents

**Komar & Melamid’s NAKED REVOLUTION, an opera**

November 2001
Harris Theatre | Center for the Arts
George Mason University, Fairfax VA

Throughout the first half of 2001, Kirby Malone and Gail Scott White worked with Russian artists Vitaly Komar and Alexander Melamid, and composer Dave Soldier, to plan an experimental multimedia staging of their opera **NAKED REVOLUTION**. This production garnered national press in the digital arts magazine *ARTBYTE* and a review in the Washington POST. The opera was performed by eighteen singers and an orchestra of eleven, interacting for seventy-minutes with full-stage digital video animation.

Conceived by Komar & Melamid
Composed by Dave Soldier
Libretto by Maita di Niscemi
Conductor/Music Director: Sybille Werner
Stage Director: Kirby Malone
Choreographer: Emily Berry
Multimedia and Set Design: Gail Scott White
— (based on paintings and collages by Komar & Melamid)
Lighting Design: Rob Hencken
Costume Design: Stephanie Lundy
Sound Design: Brian Keating
Producers: Kirby Malone and Gail Scott White

**SINGER/ACTORS**
Peter Joshua Burroughs, Loretta Giles, Eric Greene,
Alex Helsabeck, Anáa Hurwitz, Nick Spanos,
Terri Erchul Malone, Jennifer McGinnis, Andrea Schewe,
John Boulanger, Mark Cobb, Adam Hall, David Humphrey,
Susan Lloyd, Meaghan Rymer, Dennis Michael Stroud,
Steve Tipton and Kelly Wilson,
with Charles Lee Holley and Chris Parsons

Opera Coach/Music Preparation: Stephen Brown
Associate Music Director: Joel Lazar

**ORCHESTRA**
Julie Angelis (percussion), Joseph Blumka (accordion), Lawrence Bocaner (clarinet/bass clarinet), Zsuzsanna Emödi (violin), Ken Hall (guitar), Sonya Hayes (violin), Jonathan Kalbfleisch (synthesizer), James Nalley (piano), Matthew Nix (bass), Zoltan Racz (accordion),
of revolutionary lyricism, on subjects political and artistic.

sort of “live movie.” Washington, Lenin, Duchamp and Duncan gyrate in an operatic time-warp “fantastical realism.” The images come to life, and frame and interact with the singer-actors in a “fantastical realism.” The images come to life, and frame and interact with the singer-actors in a “fantastical realism.” The images come to life, and frame and interact with the singer-actors in a “fantastical realism.” The images come to life, and frame and interact with the singer-actors in a “fantastical realism.”

are animated in this production of NAKED REVOLUTION in a style that might be called and collages of eerie visions and juxtapositions from the dreams of a Russian immigrant

Dave Soldier, swoops through and weaves among an array of musical styles, combining strings, the importance (and the freedom) of the individual, the dreaming citizen. The opera’s score, by Marcel Duchamp and Isadora Duncan, whose idiosyncratic world views embrace and celebrate in their wake. To counter the juggernaut of ideologies, this opera conjures artistic revolutionaries wrought by revolution and political upheaval, and how these forces often leave a trail of corpses concerns with monumental propaganda into a fragmented depiction of the historical forces

Maita di Niscemi has fashioned the Russian artists (now American citizens) Komar & Melamid’s diorama, singing statuary, or flesh and blood? Before we can decide, they vanish. Librettist the likes of George Washington and Vladimir Lenin. Are they escapees from a wax museum NAKED REVOLUTION is a history dream opera. Shards of dreams materialize, inhabited by the likes of George Washington and Vladimir Lenin. Are they escapees from a wax museum diorama, singing statuary, or flesh and blood? Before we can decide, they vanish. Librettist Maita di Niscemi has fashioned the Russian artists (now American citizens) Komar & Melamid’s concerns with monumental propaganda into a fragmented depiction of the historical forces wrought by revolution and political upheaval, and how these forces often leave a trail of corpses in their wake. To counter the juggernaut of ideologies, this opera conjures artistic revolutionaries Marcel Duchamp and Isadora Duncan, whose idiosyncratic world views embrace and celebrate the importance (and the freedom) of the individual, the dreaming citizen. The opera’s score, by Dave Soldier, swoops through and weaves among an array of musical styles, combining strings, woodwinds, keyboards, percussion, accordion, and electronics. Komar & Melamid’s paintings and collages of eerie visions and juxtapositions from the dreams of a Russian immigrant are animated in this production of NAKED REVOLUTION in a style that might be called “fantastical realism.” The images come to life, and frame and interact with the singer-actors in a sort of “live movie.” Washington, Lenin, Duchamp and Duncan gyrate in an operatic time-warp of revolutionary lyricism, on subjects political and artistic.

— Kirby Malone
Encompass New Opera Theatre
with the assistance of Multimedia Performance Studio presents

APPROACHING INFINITY
an operatic double bill

THE END OF A WORLD
Composed by Hans Werner Henze
Libretto by Wolfgang Hildesheimer (trans. Wesley Balk)

A FULL MOON IN MARCH
Composed by John Harbison
Libretto by the composer (based on a W.B. Yeats play)

March 2003
Connelly Theatre
New York City

Nancy Rhodes, artistic and stage director
Joseph McConnell, managing director
Kenneth Hamrick, music director
Sarah Lewis, stage manager
John C. Scheffler, set and costume designer
Izzy Einsidler, lighting designer
Kirby Malone and Gail Scott White, multimedia designers
Laura Sue Nova and Amanda Ward, multimedia operators
SINGER-ACTORS
Alison Davy
David Dorsey
Brannon Hall-Garcia
Désirée Halac
Kevin Hanek
Dominic Inferrera
Jean Marie Miller
Pedro Porro
Derek Lee Ragin
Kerry Stichweh
Christopher Vettel
Wilma H. Wever

ORCHESTRA
Kenneth Hamrick, conductor & harpsichord
Jack Chan, bassoon
Richard Cohen, clarinet
Joan Dawidziak, oboe
Jon Holden, piano & keyboards,
Don Hulbert, flute
John Kneiling, cello
Brian Lang, viola
Daniel Mallon, percussion
Mark Wade, double bass

MULTIMEDIA ARTISTS
Mark Alyea-Cheu, Jesse Cowan, Corey Hall, Ricardo Real,
Andrew Stubbs-Johnston, Anita Salinas, Tate Siev Srey, and Gail Scott White

Photographs by Gail Scott White
Cyburbia Productions'

TIME TRAVELER ZERO ZERO — A Story of John Titor

a workshop production

April 2004

Harris Theatre | Center for the Arts
George Mason University, Fairfax VA

Written and directed by Kirby Malone

Music composed by Amelia Winger-Bearskin and Sean Lovelace

Multimedia and Set Design by Gail Scott White

Lighting Design by Rob Hencken

Costume Design by Paul K. Stolen

Hair and Make-up Design by Kathy Kachelries

Sound Design by Bryan Burket

Documentary Photographers
Kelly Carr-Shaffer, Ioulia Kouskova, Noah Heller, and Gail Scott White

Documentary Videographers
Scott Cunningham, Jason Kott and Shawn Taylor

Web Design and Development
Pat Kelly, Clairvoyant Media

Actors, Singers and Musicians
Howard Brown-Santos, Bryan Burket, Viraj DeSilva, Craig Garrett, Emery Britton Haefeli, Alison Krayar, Janel Lepin, Sean Lovelace, Joshua McCarthy, Matt McGarraghy, Brianna Moran, James Murphy, Chris Parsons, Maria Rio, Prince Rozario, Mike Solo, Jeff Wall, Kelly Wilson, Amelia Winger-Bearskin and Tristan Winger-Bearskin
**Animators and Multimedia Artists**
Tate Siev Srey, Noah Melnick, Mark Alyea-Chew, Chris Andrews, Howard Brown-Santos, Sal Castaneda, Scott Cunningham, Ahmet Dillice, Thomas Dyman, Carlos Foxworthy, Jen Haefeli, Meredith Harris, Solomon Jagwe, Pat Kelly, Rebecca Kimmel, Jason Kott, Hye-kyung Emily Lee, Meredith Lydon, Brenden Moran, James Murphy, Ricardo Real, Prince Rozario, Mike Solo, Shawn Taylor and Gail Scott White

**Stage Managers:** Liz Welke, Kira Hoffmann
**Assistant Stage Manager:** Laura Rozmeski

**Production Manager:** Dan Hobson
**Technical Director:** Allison Bodwell
**Scene Shop Supervisor:** Ethan Osborne
**Audio Producer:** Chris Andrews, The Basement Recording Studio
**Audio Engineer:** Mike Leach
**Lighting Operator:** Mike Novakowski
**Video Operators:** Jill Buxrud and Beth Logan
**Costume Assistants:** Jen Haefeli and Rebecca Prater

**Dramaturgs**
Tom Dyman, David Gouldsmith, Rebecca Prater, Mike Solo

**Mad Science Advisers**
Alexei Samsonovich and Karl Simanonok

**Production Assistants**
Ben Ashworth, Jill Buxrud, Kathy Kachelries, Melissa Kurabatchew, Beth Logan, Adriana Lubenova, Susan Serafin, Noah Smith

**Director’s Note**
With multiple video projections, a cast of eight singer-actors, and an eight-piece band, *Time Traveler Zero Zero* presents an apocalyptic critique of consumer culture, and a chilling vision of a near-future dystopia brought about by a growing police state. A team of more than twenty multimedia artists created state-of-the-art animations and video montages for the innovative scenography which depicts time travel and the worlds of 1975, 2000, 2015 and 2036, in this tale of John Titor, a mysterious figure who posted voluminously on the Internet for six months from late 2000 to early 2001. Was he a time traveler from thirty years in the future, or a hoax? Was he a crackpot or a prophet? Was he science fiction or living proof of the latest theories of quantum physics? With a score that features original songs and soundscapes, and also draws on a dialectical blend of industrial music, trip-hop, rap, country, opera and Bengali singing, *Time Traveler Zero Zero* is part rock opera, part hybrid cinematic/theatrical performance, designed to provoke thought, and provide listening and viewing pleasure, for young adult audiences of all ages.

— Kirby Malone

For more Information on John Titor:
www.johntitor.strategicbrains.com
www.johntitor.com

*Time Traveler Zero Zero* will be available for touring in 2007.
Cybruria Productions’

**SILENCE & DARKNESS, a live movie for the cell phone age**

SEPTEMBER / OCTOBER 2004

**Harris Theatre | Center for the Arts**
**George Mason University, Fairfax VA**

It does not matter if the war is not real, or when it is, that victory is not possible. The war is not meant to be won. It is meant to be continuous. The essential act of modern warfare is to destroy the production of human labor.

— George Orwell, *Nineteen Eighty-four*

Written and directed by Kirby Malone
Multimedia and Scenic Design by Gail Scott White
Lighting and Scenic Design by Dan Hobson
Costume Design by Terral Bolton
Associate Costume Designer: Stephanie Lundy
Music composed by Sean Lovelace, Kelly Wilson, Matt Cain, Matt McGarraghy, Grant J. Wylie and Robert J. Friedman
Sound Design by Sean Lovelace
Automaton Designer/Sculptor: Robin Hernandez

**Cast**
Taylor Coffman, Viraj DeSilva, Jen Haefeli, Joshua McCarthy, Chris Parsons, Prince Rozario, Mike Solo, Kelly Wilson, Grant J. Wylie, and Alexander Graham Bell automaton

**Musicians**
Matt Cain (turntables and conga), Sean Lovelace, (laptop, samplers and other electronics, conga), Matt McGarraghy (electric guitars)

Production Manager: Dan Hobson
Stage Managers: Kira Hoffmann and Liz Welke
Assistant Stage Manager: Laura Rozmeski
Harris Technical Director: Allison Bodwell
Assistant Director: Chris Parsons
Music Director: Kelly Wilson
Assistant Multimedia Designers: Rebecca Kimmel and Eric Brody
Multimedia Advisor: Ruppert Bohle

Multimedia Performance Studio presents
MULTIMEDIA PERFORMANCE STUDIO

Come here. I want to see you.
—Alexander Graham Bell

Animators and Multimedia Artists
Chris Andrews, Soo Jeong Bae, Eric Brody, David Danner, Ahmet Dillice, Young Gi Hong, Won Hee Jung, Pat Kelly, Rebecca Kimmel, Jayeun Ko, Ioulia Kouskova, Hyé-kyung Emily Lee, Hyeki Min, James Allen Orr, Jin Hee Pak, Sunyoung Park, Prince Rozario, David P. Rueckert, Mike Solo, Tate Siev Srey, J Stutt and Gail Scott White

Master Electrician: Mike Novakowski
Production Assistant: Viraj DeSilva
Prop Master: Renee E. Giamette
Paint Charge: Laura Rozmeski
Audio Engineer: Jason Roberts
Video Operator: Eric Brody
Lighting Operator: Mike Novakowski
Electrician: Micah Stromberg
Set Construction: Ethan C. Osborne, CVPA Scene Shop Supervisor
Christian Hershey, Master Carpenter
Documentary Photographers: Ioulia Kouskova and Gail Scott White
Web Design: Pat Kelly, Clairvoyant Media

Director’s Note
Silence & Darkness uses cyber-tools to depict, dissect and critique cyber-culture. The show cinematically unfolds a world in which humans attempt to connect in the flesh, enmeshed in a technosphere of cell phones and satellite dishes, chat rooms and web servers, spy cams and predator drones. In the form of a “live movie,” a fragmented space-age love story of digitized desire is punctuated by passages from Jean Baudrillard’s Simulations, Guy Debord’s Society of the Spectacle, and Heiner Müller’s Hamletmachine.

Malfunctioning animatronic simulacra of Alexander Graham Bell and Thomas Alva Edison, and ghostly prom queens gliding and twitching like high-voltage music-box automata, swirl in an audio-visual time warp, and gyrate to cybernetic songs and soundscapes. Carbon-based lifeforms intertwine with silicon beings, as performers blur from stage to screen and back again — images, words and voices encoded in bits and atoms.

Full-stage, multi-screen, animated digital video projections construct a poor man’s virtual reality, a scenographic montage of global environments, disembodied characters, implanted memories, and strange weather. This “live movie” crosses the machinic-organic divide and examines human myths, tools and consciousness illuminated by the glow of synthetic fire. Cell phoners travel from their corporate barracks, through frenzied streets, to electro-cash markets, cyber-bedrooms, data cubicles, and transhuman clubs, filled with an insatiable desire to “be there now,” ensnared in the beeps and flashes of a world that is no longer ever silent or dark.

— Kirby Malone

Silence & Darkness is in part a “sampling” script, or “synthetic fragments,” and contains passages from: Jean Baudrillard, Alexander Graham Bell, Guy Debord, Gilles Deleuze and Félix Guattari, Thomas Alva Edison, Donna Haraway, Arthur Kroker and Marilouise Kroker, Heiner Müller, George Orwell, Roger Waters, and Hank Williams

The script includes some material written in collaboration with Jackie Donaldson, Marilyn Moran, Chris Parsons, Karen Rivera and Mike Solo.

Silence & Darkness is available for touring.
Multimedia Performance Studio (MPS)
Department of Art and Visual Technology (AVT)

Other Presentations, Co-Productions and Collaborations

Rose Caruso’s *Shamanism in New Jersey*, Smallbeer Theater
Directed by Lynnie Raybuck with Multimedia Design by Kirby Malone and Gail Scott White
Theaterspace, Center for the Arts, Fairfax VA, June 1998

Christopher Marlowe’s *Doctor Faustus*, Theater of the First Amendment
Directed by Rick Davis with Multimedia Design by Kirby Malone and Gail Scott White
Theaterspace, Center for the Arts, Fairfax VA, November 1998

*Langston Hughes: A Global Citizen of the Arts*: provided multimedia design for this Centennial Celebration Concert, produced by George Mason University, in collaboration with the Duke Ellington School for the Arts and George Washington University, Center for the Arts Concert Hall, Fairfax VA, February 2002

*Technocracy*, a multimedia performance showcase by AVT’s InterArts Performance Studio, produced by Kirby Malone, Dan Hobson, Gail Scott White
Created by Gregg Deal, Craig Garrett, Dan Joyce, Rich Lankford, Loren Livick, Will Prutzman, Sabrina Santiago and Lee Vaughan, with Bilal Awan, Jill Buxrud, Emily Berry, Renee Brozic, Rocky Carlson, Sean Gaëtjen, Charles Lee Holley, Jon Laine, Chris Parsons, Dan Sharnoff and Rebecca Wilbur
Harris Theatre, Center for the Arts, April 2002

*Star Path*: multimedia design for choreographer Elizabeth Price, GMU Dance Company Concert, Center for the Arts Concert Hall, May 2002

*Flesh-Bot*, a multimedia performance showcase by AVT’s InterArts Performance Studio, produced by Kirby Malone, Meg Hoyecki, Dan Hobson
Harris Theatre, April 2003

AVT InterArts Performance Showcases produced by MPS

*Stupid Frailty*, three performance works by Laura Zam
Harris Theatre, September 2004

*Mind Over Matter Music Over Mind = MOM*,
Cosmic tones and animated soundscapes by Bobby Hill, Thomas Stanley, Chris Downing
Harris Theatre, April 2005

*Endangered Species*, an experimental/documentary/dance film centered on the tour-de-force solo by Philadelphia-based hip hop pioneer, Rennie Harris.
Producer: Carmella Vassor-Johnson, Co-producer: Suzanne Carbonneau
Harris Theatre, April 2005
ON THE MULTIMEDIA PERFORMANCE STUDIO’S LIVE MOVIES: A SENSORIAL EXPERIENCE IN AN AGE OF SIMULATION (Part 1)

Introduction

The Multimedia Performance Studio (MPS) was started in the Department of Art and Visual Technology (AVT), College of Visual and Performing Arts (CVPA), at George Mason University by two new media artists, Kirby Malone and Gail Scott White. MPS has been and continues to be an innovative research and presenting/producing unit of this “entrepreneurial” university. MPS explores the creation and application of multimedia technology in performance. Recognizing the importance of such artistic experimentation, the National Endowment for the Arts awarded MPS a prestigious “New Stage Technology Project” grant. The grant funded investigations that blended new technologies for the stage (e.g., video projections, 2D and 3D animations) in combination with live performers — i.e., the live movie format. Over the last six years, in addition to original productions, MPS has developed multimedia scenic designs and outdoor projection installations for works that have been shown in the New York and mid-Atlantic region. In 2001, members of MPS worked with visual artists Komar & Melamid to create and stage a groundbreaking multimedia performance of Naked Revolution, an opera.

Cyburbia Productions is Malone and White’s professional multimedia performance company. Cyburbia Productions developed and produced two full-length original performance pieces in conjunction with MPS — Silence & Darkness, a live movie for the cell phone age, and the workshop production of Time Traveler Zero Zero: A Story of John Titor. Both of these pieces utilized state of the art performance technology in order to comment on our technologically mediated consumer culture within a “cyberpunk” aesthetic. Silence & Darkness,
as a performance piece, did not rely upon a conventional plot structure, but consisted of a series of fragmented scenes. The show was unified by the following elements: a recurring visual narrative (images of “cyburbia” = cyber suburbia), reappearing sets of characters, and a premise — two lovers who are unable to connect emotionally or physically in Cyburbia. Each of the scenes made a distinct statement on cyberculture. In contrast, *Time Traveler Zero Zero* followed a more traditional narrative structure. The story was anchored upon a man sent from the future to retrieve a computer from his grandfather in order to save his future world. While in the past, he posted information on what his life was like in the future and remarked upon events that may occur in the future.

This essay is organized in the following manner. First, I will describe each of these three shows: *Naked Revolution*, *Silence & Darkness*, and *Time Traveler Zero Zero* as experienced by me as an audience member. Next, I will write on the experience of these pieces using alternative theatre as a framework. I will then discuss the work in terms of postmodern performance, postmodernism and its critique of a cyber-consumer culture. I will end by commenting upon the live movie experience as a catalyst for social change at the level of the individual.

**The Live Movie Experience**

This section describes my experience of four MPS productions: *Naked Revolution, Silence & Darkness, a live movie for the cell phone age*(2001, 2004), and *Time Traveler Zero Zero, a Story of John Titor*. I was fortunate to see *Naked Revolution* twice during its run. I also witnessed *Silence and Darkness* (2001) on two separate occasions. I was privileged to attend an early reading of *Time Traveler Zero Zero*, to watch a dress rehearsal, and attend the performance. Finally, I watched a rehearsal of *Silence & Darkness* (2004) and also went to two performances. While I do not equate my own responses with those of the entire audience, I, as an audience member, critic, and writer on consumer culture, offer one reaction to the work. In writing this account, I relied on my notes taken during and after the performances, upon newspaper reviews/feature articles, program notes, and still images provided to me from the performances.

**Naked Revolution**

The opera, *Naked Revolution*, was conceived by the legendary artists Vitaly Komar and Alexander Melamid, and composer Dave Soldier. The opera was staged twice prior to the 2001 presentation offered jointly by MPS and George
Mason University’s College of Arts and Sciences. The production involved thirty-five members of the Mason community, and twenty-five guest artists. The performance, while being 75 minutes in length, was rich and satisfying in terms of visual, musical, and political content. Billed as a history dream opera, the subject of the show was political evolution. The piece presented examples of how political ideologies and resulting revolutions have been recycled over and over throughout history. Historical figures, including leaders George Washington and Vladimir Lenin, artists Marcel Duchamp and Isadora Duncan, were portrayed by animated figures and live actors. The recognizable characters anchored the ideas and made them tangible for the audience. The performance consisted of a series of stage pictures, opera, and dance.

The performance took place in four acts. Act I took place in New York City. The action concerned the dismantling of an equestrian statue of George III. During the beginning of the act, George Washington appeared and reflected on his career. Eventually, the statue’s head rose to the sky and George III grieved his loss of power. Act II was placed in Russia. It began with the reading of an important historical document. A student and his female muse spoke to a crowd of revolutionary minded peasants. Act III focused on the student’s younger brother, Lenin, who gave a speech that concerned his loss of his brother and his power. Act IV returned to NYC. Two statues of Washington came alive. Lenin appeared on stage to ask the Washington duo to help appease Isadora Duncan. Lenin boasted of his superiority, and Marcel Duchamp entered the scene and introduced Isadora Duncan to the other characters. Isadora Duncan wanted support for her ballet school (symbolic of the individual, of freedom, of the artist), but she did not find assistance from the Lenin and the Washington figures. Towards the end of Act IV, the images of George Washington began to multiply, as Duchamp and Duncan danced a waltz around the stage. Lenin hailed a taxi.

Images for the multimedia projections and set were based on the visual art of Komar & Melamid. Artworks by Komar and Melamid were placed on both sides of the stage, forming a frame for the performance space. Visually, the work was abstract in nature. Images floated in and out around the stage. The production encouraged the audience to experience the work as a dream, although the liveliness of the aesthetic did not lull them into a dreamlike state. In addition to the projections, visual elements included the live performers — a cast of nine, plus other singers. The performers, wearing colorful costumes, played the historical leaders who strutted around the stage, or were carried on wagons, all the while they struck archetypal poses. In Acts II and III, citizens/peasants/workers raised their fists symbolic of protest and revolution. Often the images were combined with projections of the leaders serving as backdrop for the performers who “embodied” the characters (see Figures 1 and 2). Visual
elements were recycled and updated to portray the march through history. For example, a set of concrete housing towers were “branded” at various points in the performance. The branding consisted of projected images of the hammer and sickle, dollar signs, and Western corporate logos on the exteriors of the buildings. In a shocking ending, the towers eventually succumbed to fireballs – imagery that appeared to be reminiscent of the destruction of the World Trade Center towers that had occurred one month prior to the run of the performance.

Musically, because of the strong voices, and twelve instrumental musicians, the work was very powerful. Instruments and instrumental styles were intermixed to create a surreal musical experience that felt both nostalgic and contemporary.

As an audience member, I found the staging of *Naked Revolution* to juxtapose surface with substance. The aesthetic worked to engage the ear, eye and mind. I was fascinated by the use of projected images that worked in concert with or against the live action. The double images of the historic figures as projections and live performers, who, despite the costumes did not always resemble the images, made their essence stronger. I experienced the performance as a postmodern play of surfaces; the representations on stage were engaging – simultaneously humorous and disturbing, yet pleasurable. On the other hand, the message underneath the entertainment was rich and thought provoking. I had a deeply moving experience, and I found myself thinking about issues such as the centralization and diffusion of power in society long after the performance ended.
**Silence & Darkness, a live movie for the cell phone age**

Over a period of five years, *Silence & Darkness*, evolved from a studio presentation associated with a digital theatre class in 1999, to a full-fledged multimedia production in 2001, to a tighter, fast-moving, richly layered 90-minute presentation in 2004. Because of its subject matter and the future advances in stage technology, *Silence & Darkness* is a piece that, as it is restaged, will continue to be updated and will never truly exist in a finalized form.

The subject matter of *Silence & Darkness*, in all its incarnations performed to date, centered on communication technologies (including cell phones, e-commerce, genetic mutation, prosthetic implants, the Internet, and Virtual Reality experiences) and their influence on our lives and society. The show consisted of a series of fragments, thoughts or images, designed to encourage audiences to consider the state of their present lives and their potential future existence. The performance was organized into the following sections labeled as: Static, Fever, Internal Combustion, Panic, and Frenzy.

“Static” concerned the inertia of the current age — the way in which technology promotes endless and sometimes pointless conversational strategies. The piece started with characters that acted as if they were under the influence of technology and out of touch with their feelings. Other scenes portrayed the collective worship of corporate life and consumer culture, and humans becoming part machine. “Fever” was rich with material on the environmental consequences of consumer culture, feelings of isolation, and the consequences of being a “connected” society — including: identity theft, electronic voting, and electronic surveillance. “Internal Combustion” started with an introduction to Baudrillard’s three orders of appearance, and continued with the themes of loneliness, mediated conversations, and consumer identity premised upon brands. “Panic” was a frenetic section of the piece, replete with cyber-acronyms, more praise of multinational brands adapted from text found in Heiner Müller’s *Hamletmachine*, and camera surveillance. “Frenzy” showed the impossibility of face-to-face communication in the midst of technology that interrupts every attempt for humans to connect with each other. The piece ends by acknowledging the unending nature of technological development, of immateriality, and virtual reality.

Throughout the show, figures, both historical and fictional, attempted to interact with each other in ways that were both amusing and disturbing at times. The pieces were held together by the figures of Alexander Graham Bell and Thomas Alva Edison, who, as malfunctioning animatronic figures, witnessed how their inventions were extended to create a future that was noisy (i.e., the end of silence) and never turned off (i.e., the end of darkness).
(see Figure 3). Other character dyads were central to the show – a set of prom queens (modeled on Patti Page) who acted as interpreters or commentators, and the two lovers, Zeta and Alpha. Three businessmen (in addition to Alpha) also reappeared throughout the show (see Figure 4).

Audience members, including myself, were able to relate to scenarios and themes in the show. This happened to me when two of the businessmen who were physically present with each other at a restaurant were unable to carry on a conversation because they were simultaneously speaking to others on their cell phones. Another occasion that received a hearty laugh and some head nodding from the audience members occurred when two of the businessmen repeated the same dialogue in succession and the audience was asked to consider which individual was speaking on a “hands-free” cell phone and which was mentally ill. Audience members may also have been able to project themselves into the future when experiencing a scene where the two lovers, Alpha and Zeta, settle back in their VR chairs, plug into the VR headsets (projections) and attempt to have cybersex (see Figure 5). The couple began speaking to, and sometimes out of context with, each other — using phrases that expressed longing for human contact — “Can you feel me?” “Do you remember?” “I’m gone.” Their exchanges were punctuated by commercial interruptions for the JawPhone (phone implanted in the jaw) and Tatvert (advertising message implanted on the forehead) (see Figure 6). The themes that resonated strongly with me were loneliness, longing, and desire — the desire for authentic relationships in the midst of a (consumer) culture that attempts to fill that desire by offering us technological products and the promise of technologically mediated interaction.

Recurring images placed the audience into an altered state of heightened visual acuity. Some of the techniques utilized in the show were digital projections, and film techniques such as flashback, lip-synch, and slow motion. The succession of images was almost too much for my eye to take in, but so mesmerizing, it was difficult, if not impossible, to look away. For example, at the beginning of the show the audience experienced moving images of a cityscape (Cyburbia), a world that is instantly familiar, and yet as the images continued I became uncomfortable. These
Cybrbia images depicted a sterile world, a future without human presence. Other haunting images for me included: metal worker robots with rabbit heads that multiplied and marched with their wrenches and suitcases; and likewise, praying mantises that grew in number and size as they typed on computer keyboards. These images reinforced the notion of humans as corporate drones. Peeping eyes popped out of holes in every direction reminding me that we are often under surveillance. An antique talking doll was configured and reconfigured out of body parts; later, a naked woman’s body is covered or obliterated by machine parts (see Figure 7). Both of these sequences commented on the human-machine relationship. In another scene, a doctor treated a patient whose insides appeared to be on fire (a projection of images — boiling sky, volcanic explosions, and storms on a live performer). The doctor encouraged his patient to “behave” by entering “the shopping zone.” The doctor’s cure forced the patient to respond passively to the television screen, and then to become overstimulated and agitated, alternating continuously between these two states (see Figure 8). In this scene the audience was confronted with the notion that they are consumers who exist in a consumer society.
The aural elements of the performance combined original dialogue, some of which was performed live and some of which was recorded, with snippets of writings by prominent thinkers such as Jean Baudrillard, Guy Debord, Gilles Deleuze and Félix Guattari, Donna Haraway, and George Orwell; historical figures such as Alexander Graham Bell and Thomas Alva Edison and playwright Heiner Müller. Soundscapes and sound effects also supported the live action sequences.

Original music was also a prominent element in the show. The tunes were often discordant in nature, and had titles like “Silicon Altar” and “Pleasure Under Pressure.” The music beckoned the audience, even summoned the audience, to be cognizant of their mind-numbing, media-saturated lives. The dialogue, as spoken by the live performers was often exaggerated or bereft of emotion, with the actors often sounding like machines. The voices in the songs were haunting, beautiful, and blended with the images and live action to engender what was for me, a slightly uncomfortable, insecure sense of being.

The 2001 performance featured nine live actors, a six person band (instrumentals and vocal), and eleven multimedia artists, in addition to the numerous production designers and operators. The 2004 show featured nine live actors, three instrumental musicians, twenty-two multimedia artists and animators, and a large production staff.

In terms of its representations of the present and future, the differences between the 2001 and 2004 versions were striking to me. In particular, the 2001 production featured two live performers portraying the inventors. The projected images, while effective, did not fill up the stage. In contrast, the 2004 performance used an animatronic Alexander Graham Bell that lip-synched to a recording of the actual voice of Bell. The projections were huge, encompassing the entire stage. Multi-screen digital projections created a juxtaposition of multiple images on the stage. One particular scene that involved projecting technological lingo (acronyms) as a sort of digital ticker tape with the businessmen on cell phones dressed in various women’s undergarments and spouting off descriptions of themselves as hybrid, mongrel, half breed, and parasite, was effective as a commentary on our media-saturated society (see Figure 9). Overall, in the 2004 performance, there were more images presented in quick succession. The images were more precise and multidimensional — such as the peeping eyeballs (see Figure 10). The 3D animation and video was of the quality of animated Hollywood movies and therefore was extremely realistic. The entire production was synchronized around the movements of the performers. Both the 2001 and 2004 performances, because of the multimedia aesthetics, did not allow me or others to go “deep under” (a phrase used by Alpha and Zeta while in VR) and escape into a fictional world. Instead, the audience was kept alert, which allowed them to think about the effects of technology, of being consumers, and of being “Cyburbians” in an indeterminate future that was closer than they may have “dreamed” of previously.
Time Traveler Zero Zero — a story of John Titor, was a tremendous leap forward from my experiences of Naked Revolution and Silence & Darkness (2001) in terms of complexity and sophistication of the live movie format. This show, which included more 3D animation and video than MPS had presented previously, cycled through four distinct time periods — 1975, 2000, 2015, and 2036, each constituting a unique multi-sensorial audience experience. While this piece was driven much more by narrative than the other shows already discussed, it was the spectacle itself — a unique blend of storyline, live instrumental music, live actors/singers and multimedia projections — that made the production so compelling.

The show asked the audience to “wake up” and look at the warning signs or signposts as to where their future was heading. The message was delivered via storyline that concerned a (real? fictional?) time traveler, John Titor, who was sent from the year 2036 back to 1975. [In real life, a person calling himself John Titor, posted on the WWW in 2000 - 2001. His postings were the inspiration for the script.] John Titor’s mission was to ask his grandfather, an IBM engineer, to provide him with a 5100 portable computer that he could take back to his future. The computer was needed to prevent a catastrophic computer code disaster that was to occur in 2038. Before returning to 2036, John Titor visited his parents and young self in 2000, where he began to post and exchange information on the Internet. Among other topics, he wrote about “Hell’s Kitchen” (WWIII) occurring in 2015, and the aftermath. His postings warned the citizens of 2000 - 2001 about their fate if they continued on our path of unbridled consumerism, and continued to allow their individual rights and freedoms to be taken from them. He told the Internet posters (and thus the audience) that our time and history is not predetermined and that we could alter our future. After six months, he left 2001 and returned to his timeline.

The show included genre-defying original music performed by an eight-piece band. Individual pieces were a blend or pastiche of many musical forms including:
industrial, trip-hop, rap, country, opera, and some Bengali singing. Eight actors/singers performed multiple roles (except for the actor who portrayed John Titor), demonstrating their flexibility and extraordinary talent in their ability to interact with each other, with the instrumental musicians, and with the multimedia projections.

The multimedia projections of *Time Traveler Zero Zero* were created by twenty-plus designers, animators and artists, working on individual pieces that were compiled for the performance. The effect of viewing the cacophony of formats — including 2D and 3D animation, video montages, and still graphics on a large, sixteen by twenty-four foot scrim — was stimulating, a feast for the eyes that never remained static for longer than a few seconds. As an audience member, at times, I was unable to discern what was created live and what pre-recorded, such as when the narrator, Noxi, and John Titor appear inside the “soft machine” as she sings (live?), and when John Titor chats online (his voice is a voice-over … I was never completely certain about the voices of the other netizens — real or Memorex?).

The scenes were unified via title projections. The prologue, with images and sounds representing biological and digital matter, introduced the audience to John Titor via a narrator (who represented the ghost of his former lover). The show began in the year 2036 with the projection of the time travel facility (TemporalRecon) and the technicians checking and assembling the time machine and loading it into a Chevrolet truck (circa 1970s) for Titor to use on his journey. Arriving in 1975, John Titor landed in a field and met hippies, and then continued on his journey from Florida to Minnesota. His progress was depicted on a map that showed a tiny Chevy driving from state to state. In Minnesota, complete with a lake background that changed as the sun set, and a wagon stage that served as the interior of the house, John Titor met his grandfather. He visited his grandfather’s office and picked up the computer at the IBM research park, complete with projections of cubicles. He then time traveled to 2000-2001 to interact with his parents and 3-year-old self, and to post on the Internet. During this time period, the audience was presented with facades of urban dwellings that housed the “netizens,” John Titor’s web correspondents. Live performers portrayed the netizens inside their homes using their computers. These netizens emerged and vanished into their projected environments as John Titor corresponded with them. As John Titor discussed WWIII, the audience saw a glimpse of 2015 — Hell’s Kitchen. Back at his parents’ home in 2000, we got a taste of shopping servicescapes, and John Titor taking a bath. Returning to 2036 the audience witnesses John Titor landing at the exact moment he has taken off for the past. Memorable images included for me: the use of double-policemen hand puppet projections to exemplify the ever-growing police state that John Titor writes about in his postings, and the Hell’s Kitchen images that included representations from Bruegel’s *Triumph of Death*.

This essay continues on p. 113.
MULTIMEDIA PERFORMANCE STUDIO

PORTFOLIO
KOMAR & MELAMID’S NAKED REVOLUTION, AN OPERA

Charles Holley and Chris Parsons (Servants), Alex Helsabeck (General George Washington), Eric Greene (King George III).

Nick Spanos (Lenin), Peter Joshua Burroughs (Alexander Ulyanov) and Ensemble.
KOMAR & MELAMID’S NAKED REVOLUTION, AN OPERA

Peter Joshua Burroughs (Duchamp), Alex Helsabeck (General Geo. Washington), Nick Spanos (Lenin), Eric Greene (Citizen Geo.

Alex Helsabeck (General Geo. Washington), Eric Greene (Citizen Geo. Washington), Nick Spanos (Lenin).
HANS WERNER HENZE’S THE END OF A WORLD

Wilma H. Wever (Marchesa Montetristo) and Christopher Vettel (Herr Fallersleben).

Kevin Hanek (Majordomo) and Christopher Vettel (Herr Fallersleben) in foreground, Désirée Halac, Jean Marie Miller, Pedro Porro (Servants).

SEE PAGE 80 FOR FULL PRODUCTION CREDITS.
Jean Marie Miller (First Attendant), Kerry Stichweh (The Dancer, Destiny), Désirée Halac (The Queen), Pedro Porro (Second Attendant).

Désirée Halac (The Queen) and Dominic Inferrera (The Swineherd).
Dominic Inferrera (The Swineherd) and Désirée Halac (The Queen).
Amelia Winger-Bearskin (Noxi) and Mike Solo (John Titor), MPS/Cyburbia’s Time Traveler Zero Zero workshop production, 2004.

Howard Brown-Santos (Moe Tech), Mike Solo (John Titor), James Murphy (Joe Tech), MPS/Cyburbia’s Time Traveler Zero Zero workshop production, 2004.
Mike Solo (John Titor) and Joshua McCarthy (James Walters), MPS/Cyburbia’s Time Traveler Zero Zero workshop production, 2004.

CYBURBIA PRODUCTIONS’ *SILENCE & DARKNESS*, A LIVE MOVIE FOR THE CELL PHONE AGE


Chris Parsons (Alpha), Mike Solo (Beta), Grant J. Wylie (Delta), Prince Rozario (Gamma), MPS, 2004.
CYBURBIA PRODUCTIONS' SILENCE & DARKNESS, A LIVE MOVIE FOR THE CELL PHONE AGE


Taylor Coffman (Patti), Kelly Wilson (Zeta), Jen Haefeli (Page), Chris Parsons (Alpha), and Sean Lovelace, Matt McGarraghy and Matt Cain, MPS, 2004.
CYBURBIA PRODUCTIONS’ SILENCE & DARKNESS, A LIVE MOVIE FOR THE CELL PHONE AGE

Chris Parsons (Alpha), Mike Solo (Beta), Grant J. Wylie (Delta), Prince Rozario (Gamma), MPS, 2004.

Kelly Wilson (Zeta), Grant J. Wylie (Delta), Chris Parsons (Alpha), Jen Haeferli (Page), Taylor Coffman (Patti), Prince Rozario (Gamma), MPS, 2004.
CYBURBIA PRODUCTIONS’ SILENCE & DARKNESS, A LIVE MOVIE FOR THE CELL PHONE AGE

Kelly Wilson (Zeta), and Chris Parsons (Alpha), with Radiation Workers Joshua McCarthy, Mike Solo, Grant J Wylie and Prince Rozario, MPS, 2004.

Kelly Wilson (Zeta), with Grant J Wylie (Delta) and Mike Solo (Beta), MPS, 2004.
CYBURBIA PRODUCTIONS’ SILENCE & DARKNESS, A LIVE MOVIE FOR THE CELL PHONE AGE

Joshua McCarthy (animatronic Edison) and Kelly Wilson (Zeta), MPS, 2004.

In this segment, I wish to set forth what I perceive are some of the influences upon the work of MPS that have not been acknowledged or addressed at length previously by Kirby Malone. I wish to frame the multimedia work of MPS in terms of what is often termed the “alternative” theatre movement(s) that gained momentum and notoriety beginning in the 1960s.

Kirby Malone has stated that the interdisciplinary, experimental, educational approach of MPS is modeled upon the Bauhaus and Black Mountain College. He also has cited a range of influences, historic and contemporary, upon the multimedia performance work of MPS. In particular, he cites the theatre of Meyerhold, Vakhtangov, Piscator, the Federal Theater Project’s Living Newspaper, and others that utilized a stylized aesthetic to create performance pieces that contained social messages. From my perspective, the creative approach, the performance aesthetic, and the subject matter undertaken by MPS also bear a relationship to other work that has been placed under the rubric of “alternative theatre” (Shank 1982) or “communitarian radical theatre” (Auslander 1992).

Shank (1982) wrote that the alternative theatre movement of the 1960s and 1970s expressed themes aligned with the social movements of the 1960s, and provided an alternative to using traditional aesthetic conventions, working methods, and techniques. Alternative theatre performances were more perceptual than verbal, and were autonomous (and often collective) works of art. In the tradition of alternative theatre, on the first point, MPS productions combine oral/aural (words, songs/music), and visual content (animation, graphics, live performers on stage). In alternative theatre, the visual focus was a reaction against society’s reliance upon words which were believed to distance humans from experience (Shank 1982). While I am not certain that Malone or White intend to privilege one sensory system over the others (although Malone has stated that he does not trust language and turns more and more to images), from the perspective of an audience member, I found the visual element to be particularly strong in the performances. The visual elements (the mingling of live performers
with projected images), were to me, the most experimental and innovative parts of the productions. Speaking as an audience member and critic, I believe that the power of the MPS pieces lies in the perceptual (particularly visual) aspect.

On the second point, Shank (1982) wrote that alternative theatre did not rely upon a linear cause and effect plot. While MPS’s staging of *Naked Revolution* was not completely autonomous given that the script was conceived by Komar and Melamid and staged two times prior to 2001, it was an original piece. The MPS productions of *Silence & Darkness* and *Time Traveler Zero Zero* were novel, collaborative creations that brought together a unique blend of artists and technicians from inception through performance. Malone scripted the productions and served as director. White supervised the team of digital artists and the creation of the digital media. While the shows were in development, the artists sometimes worked independently, sometimes as teams, but also came together as a full ensemble to share and to inspire each other.

Other characteristics of alternative theatre of the 1960s and 1970s according to Shank (1982) included: creating art that improved the quality of life of the artists and audiences, and using styles of performance that kept the audience conscious of the performance aesthetics, rather than which tried to seduce them into a fictional illusion. According to Shank (1982), the autonomous method of creation of alternative theatre groups arose as a reaction against that fragmentation artists experienced in a technocratic society that assumed that human needs could be satisfied through the specialization of labor. MPS productions have been interdisciplinary in nature, bringing together faculty, students, alumni community members, and guest artists from around the world. The works have contained social messages that were designed to encourage the audience to take action. In this sense, perhaps another influence upon MPS is the Living Theatre. The Living Theatre is an often cited historical referent for many alternative theatre companies of the 1970s and onwards. Their work extended the theatrical approach of Meyerhold, Piscator, Artaud, and Brecht (all of which are also cited by Malone as artistic references). The Living Theatre attempted to shock the audience into action. While the MPS shows did not allow for audience interaction (i.e., performer to audience member) in the same way as the Living Theatre performances did, the goal of promoting social action, although perhaps at an individual, rather than at a collective level, was resonant in the MPS productions.

The performances by MPS relied on the audience being psychologically present. Nevertheless, the performance aesthetic promoted a state of consciousness that made the audience receptive to the social message. The entire multimedia experience did not allow the audience to escape, to be lured into a fictional world, and to forget that they were experiencing a performance piece. As Malone has stated, the performances were designed for younger adult audiences who have been socialized on rapid-changing images on television, movies, and video games. The live movie experience speaks to
young adults. *Naked Revolution* and *Silence & Darkness* did not rely upon plots that created dramatic suspense. Although *Time Traveler Zero Zero* did have a strong story, the staging did not foster the dramatic tension that is normally experienced by an audience asked to suspend disbelief. Just as environmental performance pieces created by Richard Schechner’s Performance Group in the 1970s offered audiences several points of focus, allowing individuals to shift their attention from one part to another, so the often layered multimedia projections, dialogue spoken or sung by live or recorded performers, set pieces, and live action that comprised MPS multimedia productions allowed for the same manner of customized experience. Similarly, the work by Richard Foreman and The Ontological-Hysteric Theatre in the mid-1970s, which consisted of a series of rapid changing images designed to heighten audience awareness, may be a distant influence on the MPS productions.

The work of “new formalist” Robert Wilson, who in the 1970s, created collage-style works that included repetition, slow motion, and visual stage pictures, and who has more recently experimented with more advanced multimedia techniques, may also be thought to be a relative of the live movie. In contrast to Wilson’s performance aesthetic that relied upon the audience entering into a reduced state of consciousness (Shank 1982), as discussed previously, MPS audiences experienced these techniques in a heightened state of awareness.

**Live Movies and Postmodernism**

The work of Foreman and Wilson has often been labeled “postmodern” (Auslander 1992) in the sense that it deconstructed its own representational means by means of representation. While some performance theorists considered the 1980s new formalist performance pieces to have been apolitical, others believed it was political but in a different sense of the term. Artists during this period sought to work within a media-saturated culture by creating performance that played with surface (images), and that sought to break the distinction between live and mediated performance. In this sense, the performances “mimed” hegemonic structures from within, seeking to open a critical space for resistance. In a similar vein, the work of MPS has used live and technologically generated representations of ideas, persons, and environments on stage and yet has taken a critical, skeptical view of technology. Working with technology and within a somewhat traditional, commercialized theatrical structure (using a theatre space, selling tickets, etc.) while commenting on the excess of technology and on commercialization and consumerism, has simultaneously exposed the system and also allowed MPS to profit from it. In this sense, the approach to production by MPS has illustrated the undecidability of postmodern performance, its contradictory nature.

One thinker associated with postmodern thought whose ideas have been incorporated directly in the work of MPS is Jean Baudrillard. Baudrillard wrote that the world is now constructed through simulacra and simulations — a hyper-reality
or a world of self-referential signs. In *Symbolic Exchange and Death* (1993 /1976), Baudrillard historicized the evolutionary concept of hyper-reality, discussing three orders of simulacra — the counterfeit, the production, and the simulation. In the third order of simulacra, reproduction has replaced production in its entirety. Under infinite reproduction, the myth of origin disappears as do all referential values; internal contradictions no longer exist because the real or referential which opposes the contradictions no longer exist; and the myth of the end of reproduction or revolution also disappears (Baudrillard 1995). Unintentional parody, tactile simulation, and aesthetic enjoyment become attached to the indefinable play of reproduction (Jameson 1983). MPS productions play with the third order of simulacra, both in terms of the performance elements and the content of the shows.

The MPS live movie format has relied on the reproduction of performance elements. Images, sounds, music, verbal content are recycled over and over. Also, rather than portraying characters in a realistic manner, actors/singers mimic or parody characters. It is through reproduction and parody that the show takes on a structure that the audience can follow. Without the use of world leaders and well-known artistic figures in *Naked Revolution* who function as symbolic representations for ideas, the audience would have had no reference point or anchor, and the show perhaps would have been alienating for them. Without the images of Cyburbia and reoccurring characters in *Silence & Darkness*, the fragmentary nature of the performance may have confused audiences. Audience members, such as myself, enjoyed anticipating the repetition of images in *Time Traveler Zero Zero*, such as the Chevy truck as it time traveled from 2036 to 1975 to 2000 to 2036, and its road trip to/from Florida and Minnesota in both 1975 and 2000. The audience could look forward to reoccurring images, characters, sounds/music within an aesthetic that allowed them to choose the performance elements upon which to focus throughout the piece.

Writers such as Rheingold (1991), have commented on the opportunities for audience members to discover (and rediscover) experiences in postmodern, multimedia performance. Quoting from Walser (1990) “Elements of a Cyberspace Playhouse,” Rheingold states:

> Whereas film is used to show a reality to an audience, cyberspace is used to give a virtual body, and a role, to everyone in the audience. Print and radio tell; stage and film show; cyberspace embodies...Whereas the playwright and the filmmaker both try to communicate the idea of an experience, the spacemaker sets up a world for an audience to act directly within, and not just so the audience can imagine they are experiencing an interesting reality, but so they can experience it directly...Thus the spacemaker can never hope to communicate a particular reality, but only to set up opportunities for certain kinds of realities to emerge. The filmmaker says, “Look, I’ll show you.” The spacemaker says, “Here, I’ll help you discover” (p. 286).
In addition to a performance structure predicated on repetition, the multimedia MPS productions have, as subject matter, attended to topics concurrent with the age of simulation. Technological devices — computers, Internet, cell phones, virtual reality headsets, etc., became the focus of both *Silence & Darkness* and *Time Traveler Zero Zero*. These devices are presented as tools of a consumer culture controlled by large corporations and the government.

In MPS productions, cyberculture was presented as a site of oppositions. On the one hand, individuals, such as Alpha and Zeta, the couple in *Silence & Darkness*, were shown having individual (albeit mediated) experiences with each other through technology, but the authenticity and meaningfulness of their interactions were ultimately illusory. In *Time Traveler Zero Zero* a conversation between John Titor and his father on branded clothing highlighted the dichotomy between consumer choice and marketing control. John Titor asked his father if a company was paying him for advertising the logo on his shirt. Audience members, like John Titor’s father may have felt in control of their clothing choices, and did not realize that they were being left with fewer and fewer unbranded clothing options. As noted in Venkatesh et al. (1997) the present heralds a consumer space that may allow for contributions from consumers under the guise of freedom, but that ultimate power rests in the hands of the marketers (and the government).

In the current age, consumers’ identities are increasingly becoming public information that can be co-opted by marketers (Venkatesh et al. 1997), another theme of the MPS shows. Simulation is the social reality of consumer culture, and it is evident in the marketing and the recycling of images, and signs in advertising and in the consumptionscapes that constitute our lives. We also live in an age of technology that can physically change our relationships to our bodies. As Turkle (1995) argues, our bodies are no longer confined to one physical space, but can be said to be fragmented, dispersed throughout the web of cyberspace. Katherine Hayles (1999) and Donna Haraway (1991) write on the junction of the mind and machine (cyborg). Featherstone and Burrows (1995) write on technological embodiment. Each of these writers suggest that we are reconceptualizing humanness when, on the one hand, machines can think logically and become linguistic, and on the other hand, humans insert into our bodies or replace biological tissue with machine parts. These developments and discussions raise questions for society such as what is the nature of the body? What is the purpose of the body? These are questions that MPS have raised in both *Silence & Darkness* and *Time Traveler Zero Zero*. Whether it is Alpha and Zeta having cybersex or John Titor warning of polluting our bodies by consuming animals who have fed on their own species, the shows allowed the audience members to reflect on their bodies and their future interactions with humans and machines. As an important symbol or metaphor, the body acts as the interface between corporeality, and individual, social, and cultural...
meaning in an age marked by experimentation with previously held notions of physical and social determinism (Meamber and Venkatesh 1999; Venkatesh and Meamber forthcoming). MPS shows have commented on the relationship between people and machines by using both live and simulated performers interacting with technology. The performances juxtaposed the immaterial with the material. The live movie format allowed the audience to question the relationship between the following categories: body/mind, human/machine, live performer/simulated performer.

In postmodern terms, fragmentation refers to the breaking up or detachment from what was conceptualized as whole under the beliefs and conditions of modernity. Juxtaposition of opposites refers to the refashioning of these fragments into a new configuration (although not a whole in the modern sense). Decentering of the subject signifies the lack of centrality of the individual. Performance artists in the 1980s and 1990s such as Laurie Anderson and Spalding Gray played with narrative and character, breaking up and reconfiguring stories, events and the notion of an autonomous character (Auslander 1992). The live movies presented by MPS have played with fragmentation and the decentering of the subject. In particular, *Silence & Darkness*, as described previously, was composed of fragments — texts, music, ideas, images, sounds that operated independently and in tandem. The effect was disorienting and destabilizing for the audience, because although there were elements that repeated and provided a foundation for the performance experience, the lack of a plot structure made the experience feel less than “whole” in the modernist sense. The audience was not drawn into a story, but instead was called to focus on the messages contained in the fragments or quotes. The fragments were combined into a pastiche so that the performance retained the outward conventions of traditional performance pieces, but also played with modern theatrical conventions. In all three pieces, characters were not fully developed nor played by the performers as such. Instead the performers “mimicked” the figures rather than embodying them on stage.

Because the performers in the MPS live movies retained some level of distance from the characters they played, the audience was confronted with the ways in which they, as individuals, have become imitative assemblages of others. Gergen (1991) posits that the process of social saturation (i.e., the multitude of information, persons, lifestyles, etc., we encounter on an everyday basis) is producing a profound change in the way the self is understood and conceptualized. The self is no longer conceived of as a product of real and identifiable characteristics, such as rationality, emotion, inspiration, will, etc., because we are becoming aware of our construction, and the role that language and culture have played in our construction. As social saturation proceeds we become pastiches of what we encounter. In a postmodern
world, there is no essence to which one remains true or committed. Identity is continuously emergent, re-formed and re-directed through our relationships and interaction with the social world. While the individual may be free to choose from cultural narratives and identities to become somebody in the moment (of consumption) (Firat and Venkatesh 1995; Turkle 1995), the notion of free will has come into question. Maffesoli (1996) contends that mass culture is splintering into fragmented tribal groupings, organized around language, brand names and bits of consumer culture, changing our view of social collectivities and established models of social life and politics. These are temporary identifications and identity is subject to play, especially in the realm of cyberspace (Turkle 1995). However, identity play in cyberspace does not neutralize oppression, as the implications of power are always present.

In *Silence & Darkness*, the character of Alpha visited a physician to heal his fractured identity. The doctor prescribed a course of treatment that alternated between passivity, allowing for the absorption of media messages, to that of a schizophrenic-like state resulting from too much stimulation. In this scene, Alpha succumbed to the power of the corporation and government-controlled messages and became a true citizen of Cyburbia, a man whose identity became a combination of all of the influences and people that he encountered in his life. In *Time Traveler Zero Zero*, John Titor spoke of community in 2036, but this sense of community was based on familial relationships, and with small groups of others, who relied upon each other for production of food and other survival needs, as contrasted with Maffesoli’s (1996) “tribal-like” brand or consumption or Internet communities that exist today.

**Live Movies and Social Action**

The live movies presented by MPS shed light on a multitude of social issues. As Turkle (1995) discusses, technology has created new social spaces, which are changing the way we, as humans, think, the nature of our sexuality, the form of our communities, and our identities. We are exploring and eroding previously held boundaries of real and virtual, animate and inanimate, and the unitary and multiple self. These changes have profound implications for our experience of everyday life. Live movies comment upon and critique the role of technology in consumer culture.

More importantly, if we understand theatre as but one determined form of a more generalized human performance, then ritual, speech acts, everyday life, and performance art, in short the entire spectrum of performance studies, all become creative and critical avenues for addressing the human experience of computers.

*(McKenzie 1994: 90).*
Implicit in the work of MPS thus far is the assumption that performance has tremendous capacity to impel response by audiences as a community of individuals. Following from Artaud (1958), live movies as theatre pieces shake people out of their slumber or so-called rational and routinized lives. For Artaud, theatre (of cruelty) does have an important place in society, a role that cannot be assumed by other forms of entertainment (especially those made possible by film and other forms of mechanical reproduction). According to Artaud the role of theatre is to respond to the “needs” of individuals — “choosing subjects and themes corresponding to the agitation and unrest characteristic of our epoch... by resisting the economic, utilitarian, and technical streamlining of the world, it will again bring into fashion the great preoccupations and great essential passions which the modern theatre has hidden under the patina of the pseudocivilized man” (p. 123).

In Artaud’s (1958) concept of theatre, individuals come face to face with “cruelty” in witnessing a multi-dimensional spectacle taking place all around them, feeling the depth of an (or many) emotional responses taking place within themselves and realizing consciously that at their core they are base and animalistic in nature. In contrast, the live movies that have been presented by MPS allowed audiences to experience a multi-dimensional spectacle, to feel and think about social issues, and to imagine a critical position of their own. Through engaging in performance activities, audience members were made aware of their place in this world and from a position of knowledge, could subvert and challenge hegemonic relationships as individuals.

Conclusion

In this essay I have written on the live movie experience. The work of MPS to date has explored the use of new media in the performing arts while commenting upon the growth of new communication technologies upon the lives of audience members. In utilizing multiple forms of technology to cast light on the extent and influence of technology in society, live movies constitute a new form of performance that can be said to be truly postmodern. “The postmodern cannot be identified with particular figures or forms precisely because the ‘postmodern’ occurs as a displacement and subversion of the very terms of which it would seem to consist” (Kaye 1994: 17).
Bibliography


Knowledge of the technical makes creativity possible

— Josef Svoboda
What Is New Media Theater?

New media theater is an invented space that relies on human invention. New media scenographers work with one foot in virtual space and the other in the built environment. Their art is a hybrid practice and a collaborative synthesis, combining the ideas and actions of playwrights, directors and actors with the inventions of set, lighting and costume designers.

Since its inception, theater investigates the language of the outer world and relates it to the inner world. It explores, portrays, dissects, and reflects the human condition. Theater examines social codes, their origins, their current manifestations and their possible outcomes.

Twenty-first century urbanites and suburbanites are plugged-in, on-camera, and data-transferred. Digital technologies are part of their daily lives, and, by extension, their art. New media scenographers create hyper reality, since projected images are inherently real and unreal. They are allusions to another place, space, event, memory, feeling. New media theater can genuinely enrich the audience’s overall experience or cause emotional detachment. New media can be powerful and persuasive and therefore should be used thoughtfully and responsibly.
Live theater is a meta-medium where new media scenographic designers work in tandem with directors, actors, lighting, set, costume and sound designers to develop a meaningful *mise en scène*. Directors and new media scenographers should use projections for expressive, communicative and evocative purposes. New media scenographic artists should create original artwork whenever possible, just as set, lighting and costume designers create new work for each production. New media projections should support actors and scripts, not dominate them.

Although new media artists may spend many hours faithfully staring at illuminated screens, they do not worship blindly at the altar of technology. New media artists question and embrace the ever-unfolding drama of technoscience and the relations between humans and their machines.

**Idea + Technology + Context = New Media Art**

New media artists jump the gap between bits and atoms. They create digital projections that can mimic or defy reality, stand still or travel through time and space. Their paint brushes are hardware, software and projectors; their
canvas can be anything or anyone on the stage or in the house. Projections travel through space, and to be seen, they must be caught on a light-reflecting surface. This surface can be front or rear projection materials, props, objects, set pieces, soft goods, costumes, skin, floors, walls, and virtually any surface that reflects rather than absorbs light.

The ideas contained in authors’ and directors’ heads will never get to the stage without the efforts of others. The live actor is the measure of theatrical space. The stage can be a street corner, the scenography a streetlamp, but it is the live actor, breathing the same air as the audience that creates theater. New media artists commit to the actor, the director, and the script as they collaborate with set, lighting, costume, and sound designers in the building of thoughtful and thought-provoking stage environments.

New media scenographers should rarely order from the “illustrate reality” menu. Simulated reality may be what is called for in a certain scene, yet in most cases, it should not be the only fare offered. Illusion, metaphor, allegory, trope and visual poetic license are all staples in the multimedia diet. There is much to be learned from the Magical Realists, Surrealists, Futurists, Expressionists, Cubists, Dadaists, Situationists, and literally all modes of the creative and performing arts.

New media designers/artists must recognize/understand that all images carry multiple meanings. These meanings have cultural and individual variations. Moving and still images tell stories. They may speak to the audience directly or indirectly, but the new media designer must understand the language of images and shape it into a collaborative discourse with the playwright, director, actors and designers.

New media has unique characteristics and possibilities such as: the ability to instantly journey from place to place and through time, to defy gravity, to shift scale and location, interact with live performers, relive or reinvent the past, predict the future, and connect remote performers to the audience. These characteristics should be well understood and used thoughtfully.

Text, words, sounds, smells and images all evoke memories and conjure images. The new media designer should think about the collective experiences of the audience. Tap into this rich resource. Do not exploit this connection. Avoid clichés. Remember humans think pictorially as well as linguistically.

Many of today’s actors, audiences and playwrights have grown up watching film and television. A cinematographic language is understood, and jump-cuts, extreme close-ups, freeze-frame, fast-forward, rewind, slo-motion, flashback, split screen are all part of the vocabulary. New media artists understand the language of montage and how to use it wisely.
What Is Not New Media Theater?

New media theater is not simply video pasted onto theater. Nor should it be an exercise in technology for technology’s sake. New media art is not stock, canned or clip art but rather a meaningful montage that is borne out of ideas, technology and effort. If directors desire puffy clouds, ocean waves and beautiful sunsets, then they do not need to hire a new media scenographer. If, on the other hand, a director has a genuine interest in using digital art and technologies to create visual metaphors that add layered meanings to live performance, then it is time to work with a new media scenographer.

New media art does not fit neatly into one category. New media scenography is used in alternative and mainstream theater, opera, dance, and performance art. While corporations, governments, educational and religious organizations use new media technologies to inform and influence their constituents, their practices are not new media art. Creating multimedia scenographic art is a far cry away from typing a few words into a search engine and selecting the first image that pops up.

Directors, actors and designers should experience the added value of collaborating with new media artists in the theater. If a director, actor or designer sees the new media scenography as something to endure, then the new media scenographer has failed.

What Does A New Media Scenographer Do?

Much of new media work is done before rehearsals begin. The new media scenographer starts with the script and then begins the processes of research, idea generation and concept development. After initial meetings with the show’s director and designers, the new media artist will develop sequence charts and storyboards for the director’s input and approval. The new media scenographer brings art making and technology to the service of scenic design. They work with others to create live environments that function as dynamic and interactive components of the performance.

The new media scenographer has the overall responsibility for design, production, testing and delivery of digital scenography. In cases where the budget is minimal or new media is only required in a few scenes, the new media scenographer may do all of the work. In cases where the new media needs are complex, the new media scenographer will often work with other new media artists and technicians.

The new media scenographer searches for the perfect balance between new media art, the built theatrical environment, and the live performance. To find this balance new media designers must be innovative, flexible and good
listeners. New media scenographers should keep directors, designers, actors and stage managers visually informed. Concept drawings, storyboards, sample media, production charts, and online access to the work in progress are essential tools for clear communication.

New media designers are project managers. They should determine standards and templates for all projections and masks, production work flow (including quality assurance testing), intermediate and final deadlines, and software and hardware needs.

New media scenographers and new media artists not only create art, but are responsible for the technical delivery of it in the theater. Just as lighting, set, costume and sound designers’ creative work must be delivered to the stage for tech rehearsals and performances, so must the work of the new media scenographer. This means not only having all new media art complete prior to load-in but also having it all loaded into a reliable, flexible show control system.

This field is relatively new, constantly changing, and frequently misunderstood. Scenographic artists are shaping new media theater, not just by bringing new media art and technology into the theater, but also by being responsive, dependable, creative, affable humans. New media scenographic designers should be calm, focused, problem-solvers. A new media scenographer’s character traits should never upstage a production meeting or tech rehearsal.

The New Media Designer/Artist’s Manifesto

New media scenographic artists create original artwork whenever possible, using archival footage when needed and stock footage only rarely. Set and lighting designers create new and unique environments that reflect the ideas
and desires of playwrights, and so should new media scenographic designers and artists. When making new media art, focus on how actors fit into projected spaces. It is helpful to have scaled images of actors in each scene file as reference objects.

Find the balance. What is the proper balance of light between the actors and new media? What is the correct balance in scale between actor and new media? As Ron Chase, a pioneer in projection design for opera, said at the 2005 Broadway Projection Master Class, “The actor should be exquisitely matched to the projection.”

Remember that night defines day and dark shapes light. Projected scenery is not always the best idea. The new media designer must make an honest call. Avoid the tendency to overload the audience by stacking media on top of media.

Develop a cohesive visual language between new media scenography and all other components of the designed and built theatrical environment.

Think of how you frame new media within the live performance. It is not just the media, but the context that it is presented in, that creates meaning.

Pay attention to transitions. How media start and end is important.

Develop all images to their highest artistic and technical levels. Images should be free of compression artifacts, clipped color, noise, and poor craftsmanship.

Moving images attract the eye. They can be used to distract the audience on purpose but they should not distract from the actors’ performance. Less can really be more.

Unless genuinely called for, new media scenographers should avoid flashy, intruding and distracting effects, “eye candy,” and cascading images. Don’t get carried away with tools. “Just because you can doesn’t mean you should.” warns Wendall Harrington, leading NY projection designer.

The global script archive is a multicultural, multilingual, time-traveling repository of authors’ visions and thoughts. Although scripts can be read, studied and written about, it is the interpretation and performance of scripts that give them theatrical life. Read the script and keep it handy while creating new media art and animations.

Collaborate, collaborate, collaborate. New media designers must listen to and learn from playwrights, directors, actors, designers, stage managers and fellow new media artists and technicians.
Lighting designers are visual artists who paint with light and shadow. New media artists paint with moving and still images. The lighting designer and the new media designer can speak with one voice or appear to be talking in alien tongues. An overly bright projection can destroy an ethereal scene. Lights aimed at or bounced onto projections can wash them out. Color palettes and light levels must be in sync, and in-sync requires collaboration, communication and mutual respect.

New media designers must also establish extra-productive working relationships with the set and costume designers. Projections are light traveling through space. The surfaces projections strike define their form. Without set pieces and costumes explicitly designed to catch new media projections, the projections will seem like add-ons or afterthoughts.

New media designers must encourage, support and respect the new media artists and programmers who work on the production. The new media scenographer should think of the new media artistic team as the director thinks of the cast. They are a rich repository of experience, imagination and skill. They have much to contribute to the work.

For the new media production artists: the rich experience of teamwork requires a level playing ground. Avoid hierarchy. Share the jewels and the drudgery.

Remember new media scenography cannot come to life on a computer screen. New media artwork exists only during the live performance. In order to understand the live performance better, attend the first actors’ read-through and several key rehearsals. Observe the actors and blocking carefully and take notes. Visualize the projections in each scene.

New media designers should avoid conventional “screens” whenever possible and instead work with the director, set designer, and costume designer to discover inventive surfaces to hold projections.

New media scenographers should use the most appropriate means of media production and media delivery. Do not simply rely on video. Video is low resolution and noisy, yet it can work well if its strengths and weaknesses are understood. Higher resolution formats are already available including High Definition (HD). 35mm slides create rich, dense beautiful still images and the projectors can be stacked and connected to a switcher and dissolve unit for show control and animated transitions.
If sound is to be synched with projections, determine at the first designers’ meeting how sound will be handled. In most cases the new media designer will give the video/animation soundtrack (with an embedded clock track) to the sound designer/engineer.

Be prepared. Technology accidents are like most all other types of accidents, in that they can be prevented. When a stage manager sees a trip hazard, they also see to it that the trip hazard is fixed. The new media scenographer should always be on the lookout for technology trip hazards. All media systems (including backup systems) must be in top working order. Remember that the digital gods and goddesses are unforgiving and they will punish you (public humiliation is at the top of their list) if you either commit hubris or don’t do your homework.

The new media artist must work closely with stage management. Paper techs save time and help to make actors and run crew more confident working with new media projections.

Organize, organize, organize.

Test drive new media artwork from storyboard, animation, rendering, compressing and encoding, to projection as early in the production process as possible.

Learn everything possible about projection materials, projectors and show control systems. Depending on the production budget, the new media designer will need to work with a wide range of materials, equipment and software.

The show control and media delivery system must be tested, reliable, flexible, and have built-in redundancy.

The digital gods and goddesses are not always smiling, or if they are it is that quirky little half-smile they get when they’ve devised an extreme challenge. There are always technical problems to be solved in new media scenography. Face them head on and remember each problem solved extends one’s reach.

Theater is not Real Life but rather it illuminates, questions, and teaches us about the human condition. On closing night, the director, actors, designers, new media artists and technicians should feel that through the collaborative process of combining different ideas, influences, actions and objects they have created an evocative and meaningful audience experience.
Coming to Terms

**New Media Theater:** The integrated use, in live performance, of animation, film, video, photography, digital/electronic art, sound and text with the practices of set, lighting, costume and sound design.

**New Media Designer/Artist:** The person(s) responsible for the design, development, production and delivery of new media scenography within the context of live performances.

**New Media Scenography:** A hybrid art form encompassing the design, production, control and integration of new media with live performers and the built theatrical environment.
Who’s Nuts?

Anyone who writes, produces, designs, or directs new opera is nuts. The potential of an emotionally and musically overwhelming work entering any repertoire is tiny. Nearly all new work (the English word for opera) is doomed to derision by opera lovers (please don’t misunderstand, I like crazy bands of eccentrics!) — a teeny fraction of music fans devoted to museum pieces who don’t need or want anything different. The mutually exclusive audience for novel ideas in music, another band of honorable eccentrics, generally won’t sit still for opera’s length or affectations. If *Tosca* (or the *Magic Flute* or *Lulu*) were created today, note-for-note identical to the original, she would have as little chance of repeat performances as would Jimi Hendrix, if he appeared today, of receiving a major record deal.

Beyond active disregard / automatic animosity from fans, there are inherent frustrations that have bedeviled opera creation since 1603, when the Camerata of Florence assumed the legacy of Athenian theater, both Apollonian or Dionysian, by using all of the devices that singing, playing, acting, storytelling, and stagecraft had to offer. More manifestos by Wagner and Harry Partch, and the Beijing Opera tradition, demand the same access to all the arts to produce an overwhelming experience.

These factors cause a set of immediate production problems: How can one use singing actors and not be embarrassing? How can lyrics be understood when screamed over an orchestra? Where are those capable singers, how can we teach them the music, and how can we afford them? How can you ever afford an orchestra with all the instruments you need, even if for only a single full rehearsal (usually the case)? How do you
incorporate the story and musical style with the set and production people and, often more daunting, a house staff that is often unhelpful and even resentful? Then how do you develop a pretty large audience to justify all that effort?

There are occasional strategies that attack these problems successfully even in the Grand Ol’ Opera manner. Here are a couple of examples I witnessed in New York City. The Metropolitan Opera produced John Corigliano’s *Ghosts at Versailles* (1991), in which he figured out how to admit with his discomfort with the tradition — Corigliano once told me that he didn’t like opera — by satirizing arias and creating a Marx Brothers plot device so that singing in full operatic voice would not be an affectation. It was funny, particularly Marilyn Horne’s belly dancer role, moving, beautifully orchestrated, and not much of a critical success, as predicted from the *Tosca* hypothesis. It moreover required specialty voices and expansive stagecraft, and probably will not become a repertoire piece. The New York City Opera produced Tobias Picker’s opera *Emmeline* (1996) woven from *bel canto* tradition, even using the only tried and true operatic plot device, i.e., by the end, leave a heroine either unjustly dead or in such bad shape that she might be better off so.

Such new works, with a story and large orchestra and singers who can project over that orchestra to the back rows of a large theater, are rare and sure to become rarer still. There is no opera labeled as such at, say, the Brooklyn Academy of Music or anywhere else that begins to pay back its costs. A decade ago, the cost of a New York City Opera production was reported to be four million dollars, while the genuine cost for any event at Lincoln Center would require a ticket price of $500. The price of orchestras, singers, and hordes of production and theater staff, are not coming down and will rise further as the “classical” music world starves. There are only a very few composers, directors, and producers who have determined how to negotiate this, combining a means to cajole support from benefactors in the classical style and the several countries who place tax funds into such projects in the contemporary style. If you can name the exceptions, it proverbially proves the rule.

Yet as surely as the same basic human satisfied by village elders reciting legends of Heracles is now filled by TV scriptwriters with stories of heroes in weekly situation comedies, the desire for major league emotional catharsis with music survives. We’ve been a resilient species when it comes to filling our psychic wants, and I’m way confident opera creation will survive human cupidity better than will low-lying coastal cities or the majority of uncultivated large animal and plant species.
Says Who?

The most exciting new opera doesn’t solve those inherent quandaries but ends run them. Here are examples, none of which can enter any repertoire, but act to stir, excite, move, trouble, knock over, decimate — whatever it is that great musical theater does. They happen to each have found their way via the subject of our book, “new media” — recall the “all devices” manifesto and that this is an ancient approach — to let a thousand flowers bloom.

**Film opera.** Michel Legrand’s *Umbrellas of Cherbourg* (1964), a magnificent tearjerker entirely in song with a singable motif from start to finish worthy of a post WWII *Carmen*. A fine example to demonstrate that the most universal work is the most particular — not only would you have to replace Catherine Deneuve, but you couldn’t recreate the fatalism of the setting and characters who understand the effects of the Algerian war in provincial France.

Or post-facto found film, with Richard Einhorn’s *Voices of Light* (1995), using live Early Music singers and orchestra to provide music for Carl Dreyer’s silent 1928 film *The Passion of Joan of Arc*.

**Animated opera.** With frame-by-frame drawing, you can do anything: look at the extensive animation credits to Benoit Charest’s *Les Triplettes of Belleville* (2003), another heartrending Francophonic. As for all Anglophone opera after Purcell except *Porgy and Bess* and Partch’s work, hardly a word can be understood, but *Triples* doesn’t even make the claim to be parsable.

Or it can be far less labor in animation, c.f. Mark Stamen’s *Southpark: Bigger, Longer & Uncut* (1999), with the ultimate Disney “I want” song, Satan’s homoerotic longing aria climbing higher and higher and then higher by half-steps. (I’m proud to have pioneered this device in my survey-determined composition, *The People’s Choice: The Most Wanted Song and The Most Unwanted Song*, a conceptual collaboration with Komar & Melamid.)

**You didn’t suspect this was going to be an opera.** The most exciting new direction of all: and, behold, an avenue by which mere humans, rather than organizations or the very wealthy, might be able to produce their own work.

In Bob Telson’s *The Gospel at Colonus* (1983), the show begins as a gospel concert, and bit by bit, one is in the midst of the story of Oedipus Rex, a favorite of Henry Purcell and Harry Partch. Every word sung in this piece can be comprehended.

In John Cameron Mitchell and Stephen Trask’s *Hedwig and the Angry Inch* (1998), the audience enters a rock club, orders a beer, and listens to Hedwig and her rock band perform, then retell a fable from Plato’s *Symposia* (a
favorite of Erik Satie) and plunges us into a glam tragedy where the heroine is either unjustly dead or in such bad shape that she might be better off so.

By the way, what is it about Athens throughout four hundred years of opera?

**More opera than you suspect.** Not one of the examples above uses a classic opera voice or a musical vocabulary that draws directly from the operatic tradition. But Ira Schiff’s late ensemble *La Gran Scena* routinely used a host of drag queen sopranos who sang the repertoire precisely and made vicious fun of every aria and great singer. Shows were accurate excerpts of the most emotional moments from Grand Opera. The internal logic decreed that parsability of the lyrics here would be as much of a mistake as under-acting.

John Moran’s operas with the Ridge Theater, for example, *Matthew in the School of Life* (1995), were composed entirely on computer. There were usually no conventional instruments, but rather music made of assembled samples. More startling, there was no singing, but spoken vocals played over a PA system with actors mouthing the words in pantomime as human puppets. Every word is clearly understood, and the excitement of beautiful singing was replaced by the surprise of comparing one’s expectations to what would next occur. Laurie Olinder’s sets used a combination of simple motifs and projections that, together with the wide-ranging sounds, elicited disorientation rare in the performing arts.

**What Are They Saying?**

There are singers with voices that sail over the orchestra and are still understood. But even with the examples of *The Ghosts at Versailles* and *Emmeline*, the audience can barely if at all understand the lyrics; in the latter case, a listener in my row asked what language the opera was in.

Let’s return to those old Greeks and how they sang their stories. The vocal style of Homeric myths survived unbroken until recently in the islands, and you can hear them on recordings made by Alan Lomax for the Smithsonian. The music is neither an open throated uninflected “early music” sound nor an unmetered Gregorian Chant but a funky repeated riff with a voice that sounds like Howlin’ Wolf or James Brown. I don’t speak Attic but even I can understand some of the words. No wonder the repertoire lasted more than 4000 years.

The loss of intelligibility is often credited to the composer, and there are obviously composers who place accents in ways that make sung English awkward and would never have lasted a minute with Ira Gershwin.
But more often after the composer can sing the part in a poor yet perfectly comprehensible voice, the song is repeated by a professional singer in round vowels and perfectly clipped consonants that barely resemble any spoken tongue. This manner of singing has become part and parcel of contemporary conservatory training for big voices. Even many of the best enunciators are required to handle a part musically in a language made in part of sounds they cannot produce.

Conservatory voice is not required to produce a big sound: gospel singers possess the other song tradition in the USA where a non-amplified voice can be easily heard and parsed over a big group of instruments. Gospel singers do not typically read music, and a composer working with an orchestra needs to figure out the means to make the combination work: I succeeded in one oratorio for gospel singers and orchestra, *Mark Twain’s War Prayer*, in which the parts were easily memorized and in the gospel tradition, but faced a gospel group’s revolt in my opera *Naked Revolution*, where I tried to get them to sing outside of the tradition. This problem can in principal be solved by plenty of rehearsal and coaching, but organizing this is nearly impossible for amateurs and out of the question with professionals.

Our new media may come to the rescue in several ways. First, over the past decade, nearly all composers have learned to write or copy out their scores on the computer (I hear a lot of short repeated phrases in recent composed music, fundamentally because it is hard to map out longer ideas on a computer screen), much as nearly all letters are presently written as e-mails. The advantage for us is that it has become trivial to record accurate parts for the singers to memorize. Thus, a gospel singer or any vocalist can learn the music: it should be understood that even many opera singers are poor readers and learn mostly from recordings. It does not, however, address the problem that non-classical singers do not know how to follow a conductor and require experience and explanation to understand how entrances are cued and tempos followed.

Second, and sometimes sadly, there is the microphone. Amplification allowed Bing Crosby and Louis Armstrong and nearly all subsequent pop singers to have a career, and is responsible for the opera voice seeming affected, one that children make fun of in the playground. In truth, the opera voice is no more affected than crooning, but was developed to sail over loud instruments and hit the back of the hall. The invention of the microphone nevertheless allows even non-singers to mumble or hum their voices in new opera.

Whenever possible, I prefer the sound of the unamplified voice to one coming out of speakers. My oratorio, *The Apotheosis of John Brown*, used un-mic’d voices in front of a baroque orchestra, and we performed it at theaters that never otherwise used unamplified music. As I hoped, the
audience had to be quiet and thus became quite absorbed in the story. The same approach did not work with the 10-piece chamber group for my opera Naked Revolution, when it became clear that the audience could not follow vocal melodies over a piano, winds, and percussion. Some otherwise outstanding singers cannot be heard with 19th century instruments without amplification, and to exclude them is to limit the range of vocal expression. The blame lies not only with the musicians, but also with audiences that have grown up with music blasted at them through speaker systems during all of their formative musical experiences. They say they can’t otherwise “hear” it.

An opera critic for the New York Times, Anthony Tomassini, has been a strong critic of vocal amplification in his columns. I heard him lecture on the subject one evening at the Harvard Club, using a microphone to be heard in a room that in previous decades didn’t require one.

There is another beneficent side to microphones inevitably to come. Prerecorded voices are already used in opera, and as mentioned, in most of John Moran’s work there is no live singing, but a musical arrangement of spoken voice recording, often soundlessly mouthed by live actors. This will lead to more ways to express the voice musically, either prerecorded, or more interestingly, live. It’s now possible to so closely trail the genuine rhythms and microtones of the voice that an instantaneous musical accompaniment could follow it precisely. We can do immediately — purely from a technical level — what it took Harry Partch a lifetime to develop.

Who’s In The Pit?

Part of the spectacle of opera is the knowledge that the pack of living musicians just outside the staged action is busy cooking up the sound, and it’s the part of the experience that I treasure most. But the conventional orchestra is doing its best to commit suicide. The orchestra once had the expansive quality that the opera manifestos wished for, incorporating new instruments as they developed. The Johann Strauss orchestra, playing Viennese dance music, used most of the same sorts of instruments as the Vienna Philharmonic. Yet now, not a single instrument common in American popular music is included in the conventional orchestra. If a composer writes for these instruments, the costs to the orchestra in extra performers, in part due to union regulations that charge extra salary for players of “non-conventional” instruments, effectively disallows their use. As a consequence, the orchestra seems affected to most music lovers, a suitable background for the kid in the playground singing “Figaro, Figaro” with a big opera voice.

Finances also dictate a near impossibility of more than a single rehearsal before performance. In order for this to run smoothly, the
orchestra cannot be given anything that requires deviation from normal practice. For instance, asking an orchestra to play a simple contemporary American pop rhythm invites not only a rhythmic disaster, but ensures that the majority of rehearsal time will be wasted on that section.

I love the orchestra nonetheless, and wish to use it. These opportunities are extremely rare, and will clearly become rarer. Even Philip Glass, who is certainly the most established opera composer alive, is often writing his pieces for a small amplified ensemble. Some operas, like the filmed examples, organize their players once, while the John Moran pieces, may not use any live musicians even during recording.

This is already old news. A review of one of Moran’s pieces in the New York Times, didn’t mention the fact that this was an opera with neither live singing or a musical instrument other than the computer.

I’d like to claim that instrumental possibilities for the orchestra will expand, and that we will have access to gamelan orchestras or Harry Partch’s instruments, but it seems that the number of instruments will dwindle further, and Glass’s ensemble of about six instruments plus prerecorded parts, or Hedwig’s group of four rock ‘n’ roll musicians with some prerecorded parts, will be the only available option.

But what we can do was not imagined even by Wagner, Nancarrow, or Partch. And we doggone well better figure out why the Lord wished us to be born in this era by learning how to work these new instruments. Our model ought to be Bill Monroe incorporating all the old instruments into a new version of music, Harry Partch inventing new instruments for a completely new music, and Mozart adding clarinets just because they became available. It warn’t easy for any of them either…sixty years of one night stands for Bill and poverty at times for all three…who said this was for wimps?

Where Do You Get This Stuff From?

The most exciting opera opening I’ve seen was Hedwig, when after being carded and admitted to a typical skuzzy rock club with a pretty typical silly glam rock opening, the world shifts under your feet into an involved, heart-rending story, albeit of a heroine either unjustly dead or in such bad shape that she might be better off so.

The use of venues that participate in the story makes sense now not only because of the new resources one can use, like rock singers or PA systems, but economically. Hedwig ran for years, presumably made its costs back if not a profit, and had a large audience and developed rabid fans in part because renting the bar at the Riverview Hotel was a lot cheaper than the Brooklyn Academy of Music.
A parallel tack is to insert the performers into the projections, as Laurie Olinder does for the John Moran pieces, or as Kirby Malone and Gail Scott White have done for *Naked Revolution*. A few small props work wonders for this: in *Naked Revolution*, the onstage props included the original Komar & Melamid socialist realist paintings that were the genesis of the work! The creative approach to projected sets by Gail and Kirby was one reason that our budget was 0.5% of the cost of an opera of similar length and vocal forces at New York City Opera.

It’s only a matter of some time and work before the audience is incorporated into this stage, a virtual reality or total immersion opera. When this is solved, a typical theater will not be required, and perhaps only some projectors and PA systems and a few select props will be required to perform pieces anywhere. We will then use theaters only by choice...

**Does This Mean Something?**

It means that there ain’t no standard path and everyone needs to figure it out for themselves. We are in the middle of a revolution in sound and design and ideas as great as any time in history, and we can’t see it all. Only fifty years ago, Stockhausen, Cage, and Boulez could gain notoriety in modern music circles by being the first to use the *I Ching* or arbitrary timbre or rhythmic phrase differences or modifying some notation. Now, one can come up with comparable small discoveries almost effortlessly. True, the changes are mostly due to new technology, but that’s been true throughout civilization. But the discoveries also come from exploring the past from a different point of view. That’s how this operatic stuff all started, and how Wagner and Partch got their notions.

For the last example of new media opera directions these days, please go to the web <http://www.mulatta.org/Elephonic.html> where I have placed a two minute opera sung by two elephants, Luk Kang and Pratidah, with a live elephant orchestra performing in the Thai jungle. It’s very classical except that the performance can’t tour — the two divas are booked up.
Computers are becoming more and more a part of everyday life. Many people cannot imagine going for an entire day without internet access, e-mail, or at the very least their PDA and iPod. It is only natural that a generation who grew up along with the computer would want to incorporate its capabilities into their art as well. Ever increasing computing power and advances in projection equipment have brought the opportunity for digital designers to become a huge part of what once was strictly a lumber and muslin world.

Just about everyone has done some form of multimedia production. Remember the overhead projector you helped run in high school? The teacher spoke, the transparencies changed, and sometimes there was even interaction between “performer” and media. Overhead projectors still have their place. Shadowplay of one form or another on a rear-projection screen is still used by many companies, large and small. However, many companies have also moved ahead as technology has advanced. Perhaps more important has been the corresponding drop in price of advanced computing and projection equipment, placing what was once only possible for high-budget Broadway productions within the grasp of smaller companies eager to explore the possibilities the technology has to offer.

Incorporating video projection into a theatrical production opens up the designer to a huge array of possibilities. But along with those possibilities comes a new set of parameters that are unlike many of the traditional sequences encountered in mounting a production. Much depends on how extensively the video is to be incorporated into the performance. Is it a straight video that runs on a screen next to the performer? Is it a series of clips that are rear projected at different points during the show? Or does the projection take a more active role, illuminating, animating, or even becoming the scenery itself? It is in this final scenario that the role of the production manager and production team begins to change more dramatically.
Certain things about light cannot be changed. It travels in a straight line (at least in theatrical distances) unless it reflects off of something. And it always reflects off of what it hits, sometimes more, sometimes less. The struggle in working with projection in a theatrical setting is the delicate balance between illuminating the actors and allowing for maximum clarity of the projection. Much of this is accomplished in the selection of lighting instruments. The less controllable units, fresnels, scoops, R40 strip lights, all have a place in designing around projections. They must be used very judiciously, and in locations that don’t allow for direct or initial reflection spill on projection surfaces. Ellipsoidal instruments allow for much more control, and make avoiding the projection surfaces easier. Remember, though, that light ALWAYS reflects, and even if that front light is bouncing off a flat black floor, it will bounce up onto the screen if the angle allows. Even the actors play a role in ensuring the integrity of projected images. Just as it bounces off the stage, light also reflects off costumes. Careful blocking helps, but a slight turn of a torso can make a huge difference in the amount of light that reaches the screen.

The video aspect of a production has many variables. The truth is that it cannot have too many variables. Especially in the case of a touring production, the more flexibility the video technicians have, the easier their jobs will be. A zoom lens may well serve the purposes in a given venue, but having as many lenses (short-throw, long-throw, etc.) on hand as possible allows the video technician to make a decision rather than be forced into one. It may mean the difference between having to severely keystone an image and being able
to project it straight on. The projectors themselves can make a difference as well. Apart from the basic variables of brightness and contrast ratio, features such as horizontal and vertical keystone correction and lens shift make fine tuning an image easier. Especially in the case of front projection, this can be essential. Remembering that light travels in a straight line, any cone of light that accompanies front projection also limits the acting area when trying to avoid having the actors walk through the projection. This prompts a higher angle of projection and a greater need for keystone correction.

New software plays a part in the adjustability as well. Programs are being developed that allow for increased manipulation of images, and new video codecs offer significantly higher resolution and relatively low file sizes.

Back for a moment to the basic variables mentioned before, brightness and contrast ratio. Most current projectors fall into two groups; Liquid Crystal Display (LCD) and Digital Light Processing (DLP). In general, the LCD projectors achieve a higher lumen output, while the DLP projectors are capable of much higher contrast ratios. The higher contrast ratio tends to make up for a lower output as far as overall image quality and clarity, so a 2000 lumen DLP projector may serve just as well as an LCD projector generating 3000 lumens. If possible, contact a local rental house or professional video supply dealer to arrange for tests in your space of the projectors you are considering. Numbers only take you part way to the decision. Actually viewing the projections side by side is the only true way to decide which projector (or combination of projectors) will work best for your production.

Once the projectors have been selected, there are still a few more steps before the images actually make it to the set. Decide where the projectors are going to be placed, even if the set pieces are not available yet. Consult with the director on blocking and traffic patterns, remembering that whatever is holding the projector becomes an obstacle to flying or rolling scenery if it is placed onstage. The cone of light must be considered as well before placing your projectors. Will the actors play within it, or must the director avoid those areas when that projector is in use? Once a position is determined, measure, measure, and measure again. Often the size of an image is based on the throw distance with very little room for error. A projector with a zoom lens or image adjustment capabilities can make up for some minor changes, but working with the correct distance from the start will help to maintain the image integrity. With distances and positioning set, project an image created using the same software and hardware that will be used through the projector you will be using with the playback equipment you’ll be using. This is the only way to get an accurate determination of the image that will make it through to the projection surface. Some decks cut out a small portion of the image.
Some software will render an image that produces non-square pixels when transferred to DVD or other media. A projection grid is very helpful in these circumstances. It will help to determine the usable image size in pixels. There are also considerations for masking out certain parts of the image for special effects, but we’ll leave that to a more in-depth discussion on image creation.

So you’ve determined the equipment you’ll be using, and you’ve created your source material. The next step is to get it into the theatre. As an alternative, get a VERY accurate set of drawings or measurements of the space you’ll be working in. One of the nice things about video is that as long as there is clear space, it can be done almost anywhere. The trick comes when you begin introducing angles, either from the side or above. Then the intricacies of the theatre come into play; wing space, front of house positions, accessibility. If you’re setting up in the theatre you’ll be performing in, allow plenty of time for the initial set-up. Then double it. And be sure to take measurements whenever possible. This will help not only with placement for the current show, but for reference material if the show goes on tour or if a similar show is proposed.

Video not only creates a whole new column in the production calendar, it affects the other aspects of production as well. Lighting in particular must be dealt with differently in the cases where video is being used extensively. In the planning stage, instruments with controllable beams, such as ellipsoidal reflector spots, are preferable to instruments that are more suited to washing the stage, such as PAR cans, fresnels or strip lights. More lights may be necessary than in a standard plot, since illuminating an actor in a certain position may require that an additional light be hung rather than just opening up a shutter. For this reason, as well as to allow for more specific shuttering and level setting, the focusing and cueing of lighting should be allowed more than their usual amount of time in any given space. It is also important to consider that a lighting designer may be working for the first time with video. In cases where video projections are not confined to screens, but rather are part of the ambient light on the stage, it may take more time than expected to mix and balance the projected light and the stage lighting.

Sound may or may not require additional time as well. Depending on the level of experience the venue or sound operator has working with video, it may take some time for the proper connections to be made and speaker placement to be worked out. Different playback decks have different outputs and sound quality, and varying cables or outputs may provide an improved sound quality. Video often demands that the sound image originate from the area of the screen itself. This is not always possible with a venue’s standard speaker arrangement.
Above all, organization is the key to making a production that incorporates video run smoothly. Not that this would not be true of any show, but the precision that can be required of actors and stage crew in video-intense circumstances demands a higher level of attention to detail. Perhaps the first really important hire on such a project is the stage manager. The additional layer of video cues makes having a calm, collected stage manager imperative. The precision demands of certain video production elements often mean that sequences need to be rehearsed repeatedly. This can quickly become a strain on crew and actors. The stage manager will be called upon to see that the rehearsals run smoothly and that the cues are called and executed as consistently as possible to avoid any wasted time. The job description will also include cheerleader when the rehearsals do run longer than the cast and crew expect.

Much of what has been detailed here would cause one to ask; “Why should I even try to use video if it’s this much trouble?” Well, the answer is in the experience. It’s the actual moment when everything comes together, when the actors hit a precise mark within a masked video and appear as one with the projection. It’s the moment when the scenery and video blend seamlessly, when an environment appears onstage that would have been unachievable and inconceivable without the contributions of video projection; when it’s no longer video media, but video magic.

Video first.
If possible, incorporate software/hardware that allows for shifting of images.
Side light, reducing bounce onto screen surfaces, is extremely useful.
Projected light will not adequately illuminate through a scrim.
Lighting elements behind a scrim should be done from as extreme a side angle as possible, unless multiple sources at low levels are a possibility.
Multiple sources at lower levels are preferable as long as they can be contained.
Allow lights more time than for a conventional show.
Hire a REALLY cool-under-pressure SM.
Don’t forget to incorporate the projection into the lighting scheme.
And vice versa.
No glossy surfaces.
Three-thread scrim makes a good projection surface.
Try different cables. Some may work better than others depending on the source deck or computer.
Remember that set positions need to be ACCURATE.
Light blocking from backstage sources is important.
Spike and rehearse, rehearse, rehearse.
Introduction

The development of specialized technology in performing arts production has allowed theater artists and designers to realize concepts and designs that previously could only be referred to in the abstract through the traditional areas of scenic, lighting, sound and costume design execution. Theatrical productions in the twenty-first century are able to communicate almost Hollywood-style special effects onstage, with the advent of computerized traveling set pieces and flying rigs, pyrotechnics, intelligent lighting, high-tech audio sampling and playback, and mechanical components in costumes and wigs. All of these design choices, however, seem to be additions to the theatrical “bag of tricks” in that they are simply additions to a production’s central design, rather than the entirety of the complete design itself. This concept of “complete design” is currently being explored by the Multimedia Performance Studio (for whom I have been in charge of stage management since 2001), housed at George Mason University in Fairfax, Virginia, through the highly sophisticated technology of multimedia computer animation projection as a theatrical design element. This format includes multimedia projection as an additional layer to the traditional design areas, serving not only as a backdrop, but also as illusions of scene changes, flying effects, and projected costumes.

As with any new technology in theatrical practice, the understanding and organization of how this new multimedia technology is to be integrated into the traditional model of theatrical production in all of its phases, from pre-rehearsal to performance, is critical. The role of the stage manager as the single company member who is expected to know everything about a production and all of its elements is becoming increasingly more challenging — previously, a
prompt book may have included cues in the areas of lights, sound, follow spots, fly rail, set changes, and cue lights. With multimedia projection, numerous projection playback console operators must be cued, not only to hit the classic “GO” button, but also for various additional actions, such as “wiping out” or “looping” a continuous image. Just as any professional stage manager must know the basics of lighting and audio technology in order to troubleshoot or assure that proper vocabulary is being used in order to communicate needs to technicians, a basic knowledge of the multimedia equipment being used and its functions is vital. Generally speaking, most operators of multimedia projectors and playback units are specialists themselves, so it is in the best interest of the stage manager to take advantage of the operator’s knowledge by requesting a demonstration of how the equipment functions, from playback unit to projector. It is also important to learn the terms, phrases and descriptions of the operator’s actions, in order to correctly call cues, and to discuss what the protocol will be should a projection not appear, or work incorrectly; in the example of calling a lighting cue, the traditional calling of “go back,” or “stop cue,” when a cue is called too early or there is a technical problem, may not be the correct response, due to the meticulous timing necessary in a multimedia production. Additionally, a familiarity with every projected image — what it looks like, how it moves, its projected location and target — is as equally important to the stage manager as the familiarity with the script or score.

**The Pre-rehearsal Period**

Since the creation of multimedia projection images is incredibly time-intensive, it is critical that a majority of the design concepts are already realized well in advance of the rehearsal process. Storyboards and true color graphic prints of the eventual images are integral to have at the first official theatrical production team meeting, in order for costume, lighting, and scenic designers to understand the color palettes, scope of size, and projection surface placements for the entire production’s design concept.

At this time, multimedia designers should also be able to discuss with the sound designers which sound designs will be pre-recorded independently from any sounds which plan to be embedded within the projections. All of this information will be important to stage management, as these early meetings will reveal cue-calling patterns regarding what percentage of set changes, audio cues, and major projection scenes will be called rather than built into the multimedia itself. The most valuable tool at this point in the production process for the stage manager is the early version of the Projection Scene Breakdown (based on a multimedia sequence chart); although for cast and
rehearsal call use, a traditional French Scene breakdown is important, the Projection Scene Breakdown will focus the technical goals and challenges of each rehearsal, particularly during the Tech Period. Additionally, this document will have rough timings and titles for each projection, with a description of any actor-placement requirements, which will also assist in the structure and focus of the Rehearsal Period. The multimedia designer should be aware of strict deadlines regarding the production of this document in time for the first pre-rehearsal production team meeting.

Multimedia Performance Studio / Cybrbia Productions
**Time Traveler Zero Zero**
Multimedia Shots and Sequence Chart
Date Modifi 1.16.04
Version 2.5

<table>
<thead>
<tr>
<th>ScnNo</th>
<th>SeqName</th>
<th>Desc</th>
<th>Med</th>
<th>Artists</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0-0</td>
<td>Amelia Drifts Down</td>
<td>Amelia falls slowly to the ground and lands in a crouching position.</td>
<td>Video</td>
<td></td>
<td>Against a plain dark background. After landing in crouching position, stands up.</td>
</tr>
<tr>
<td>0-0-1</td>
<td>Prologue</td>
<td>Art and background during prologue</td>
<td>Video</td>
<td></td>
<td>Amelia delivers prologue</td>
</tr>
<tr>
<td>0-3-0</td>
<td>Amelia Walks Away</td>
<td>As Amelia walks away to screen right, camera zooms in on her feet.</td>
<td>Video</td>
<td></td>
<td>Dial will be synched to prologue when key events in time are referenced</td>
</tr>
<tr>
<td>0-0-2</td>
<td>Radio Dials</td>
<td>Representing timeline, similar to a radio dial</td>
<td>2D</td>
<td>Ricardo, Prince</td>
<td>reference works of William S. Burroughs' Naked Lunch. Picabia's paintings. requires a black mask for JT to be seen</td>
</tr>
<tr>
<td>0-1-0</td>
<td>Gearworks/ Softmachine</td>
<td>Cyberpunk establishing shots of gears and</td>
<td>2D, 3D</td>
<td>Ricardo, Noah</td>
<td></td>
</tr>
</tbody>
</table>

Also at this pre-rehearsal meeting, a Master Production Calendar should be provided with dates reporting when individual multimedia projections should be completed and ready for viewing by actors and designers; committing to these due dates is very important throughout the process, since traditional scenery pieces or solid mock-ups may not be present in the production design for the actors to visualize during the rehearsal period. Although the virtue of flexibility is always key to stage management’s success in any theatrical production, it is critical that any delay, or anticipation of a delay in the completion of multimedia designs, is carefully examined, paying close attention to the domino effects into other production design areas and timelines.
The Rehearsal Period

Additional duties are necessary for the rehearsal stage manager working on a multimedia production, the most important of which is the careful recording of timings for any scenes that directly correspond to a multimedia sequence. The rehearsal process should be mapped out in order to rehearse the scenes that are most intertwined with projected scenery and the interactions of any moving projections with the performers. The consistent timing of the length of dialogues and actions happening in a scene must be reported to the multimedia designers once the scenes have a consistent pattern and timing, so that the projected images are then edited to work within the dramatic action.

The taping out of the rehearsal room must be as specific as possible, so that actors are aware of anticipated “danger zones” where projectors may be placed behind a projection surface, as in the case of rear projections. Actual areas where actors will not be able to cross in order to avoid visible shadows in the projection will be discovered during the Tech Period, but for this phase of rehearsal, it is important to get the actors used to the concept of their shadows not being “onstage” even when backstage. Another challenge for stage management includes the increased use and specificity of spike marks. If an actor is to interact with or be incorporated into a projected image, many times the image
has been specifically designed around that action; actor placement is critical in order for the desired effect to be successful. Reiterating the importance for actors to “hit their marks” during the rehearsal process will allow for a much smoother Tech Period. Communicate with the actors, and be sure the spike marks are clear and easy for them to locate and understand. Accurate spike placement is equally important in the case of using temporary set pieces or hand props as alternative projection surfaces.

In addition to scheduling costume fittings for actors, there may also be the need for multimedia designers to photograph or film actors in order to incorporate their images into the projected media. For this reason, certain costume items may require an early due date in order to be included into the timeline that allows for the completion of certain multimedia sequences that use actors in character. Ideally, these needs would be articulated as early in the process as possible — very soon after casting — in order to craft a rehearsal schedule that makes optimum use of the time allotted with each actor in the rehearsal room, costume shop, video studio, or on location.

Daily rehearsal reports will also include a section for the multimedia designers; since many times the first viewing of a multimedia sequence is during the Tech Period, having a forum in which to ask questions and relay information is very important in order to have a clear and unanimous vision of what each scene hopes to accomplish visually.

If at all possible, multimedia designers should find a way to bring their work, even in an unfinished state, to rehearsals via a laptop or color stills in order to inform the actors and production team. Posting a storyboard or set model in the rehearsal room is always an excellent reference tool.

The Tech Period

As with any new technology, the amount of time necessary to incorporate it into a traditional model must be respected. The standard “tech week” of theatrical production should be carefully examined and extra time should be allowed for the load-in and setup of projectors and playback equipment. Time must also be allowed for the focusing and precise placement of front and rear projectors — it is during this time that stage management must assess and mark out areas backstage where actors may not cross in order to avoid unwanted shadows on the projection surface — this will also determine the space available backstage for scenery and prop storage.

A block of time should also be allotted to introducing the actors to the performance space and the projections before the first technical rehearsal takes place, not just to set actor spike marks for scenes in which moving images may
incorporate actor movement, but also in order to allow the cast to see the images so that they understand the impetus of their actions, and to avoid distraction during the working technical rehearsal. During this run-through of projections, it is also valuable to rehearse any scene changes and actor-driven set changes now that the true running time of the images is available, and to take careful notes for the rehearsal report regarding any multimedia sequences which may need timing adjustments based on the time needed to complete the scene changes. It is incredibly beneficial to “sketch in” these set changes ahead of time, even if it takes a full rehearsal day, so that stage management can focus on running the technical rehearsals without stopping to choreograph each set change during rehearsal time.

Since the introduction of multimedia into the performing arts is still a relatively new concept, many times the operators of the playback equipment may have little or no theatrical experience. A brief meeting with the operators before immersion into the technical rehearsal, in order to familiarize them with stage terminology, such as upstage, downstage, stage right and stage left, in addition to the cueing language of stage management, is critical; be sure all operators understand the terms “warning” and “stand by,” and that “GO” is the only word upon which to act. Other subjects that are taken for granted in the theater industry, such as headset etiquette and the importance of call times, should be introduced to these technicians new to the theater production world.

Above all, patience and realistic expectations are the most important concepts to maintain when stage managing a production with multimedia projections. It is ideal to have two assistant stage managers backstage, especially if there are rear projectors present; the assistants should be trained to perform basic troubleshooting on the equipment in case of a problem.

The pace of technical rehearsals may be slower than usual, due to the re-cuing of projection sequences when it is necessary to re-rehearse a certain scene or sequence. Additional time may also be required to assure that the focus of stage lighting instruments remains off projection surfaces during each multimedia sequence. It is important to build in additional time into the Tech Period in order to allow for the challenges presented when initially using multimedia projections. For this reason, careful judgment regarding what is to be accomplished each day is imperative, in order to avoid wasting the time of actors called. A production meeting should be held at the end of each rehearsal day in order to assess the needs brought about by the day’s work, and an actor hotline should be in place in order to alert actors to their call times, which may be grossly different from originally anticipated. If a projection sequence needs to be changed, the next day’s plans must be carefully evaluated, in order to confirm that the missing piece will not impede the next day’s progress.
Performance

Before every performance, in addition to a dimmer check and sound check, stage management must confirm with multimedia equipment operators that a systems check has been completed on each projector and playback unit, and that each projector has been re-focused on all projection surfaces. For this reason, it is good practice to set multimedia equipment operator show calls earlier than lighting and sound board operators, in order to allow for any troubleshooting in case of technical problems.

In performance, a system of backup plans should be prepared in the event of a playback error; planning ahead with multimedia equipment operators will reduce the chances of panic and will allow for full concentration when establishing the rhythm of calling cues. It is in these emergency situations that a grasp of the technical vocabulary related to multimedia design and playback will assist in clear communication and speedy problem-solving during live performance mode.

It is ideal for the production stage manager to call the performance cues from the back of the house, not only to view the best and largest possible stage picture, but also to monitor projector focus and possible shadows from the backstage area, as in the case of rear projections. For this reason, a reliable communications system to backstage is critical, so that assistant stage managers positioned backstage may be alerted and respond to any shadow issues or poorly focused onstage projectors.

Conclusion

Multimedia projection as a theatrical design element, although challenging for first-time users, is one of the most exciting and innovative components of twenty-first century performing arts. Successful stage management of a multimedia theatrical production requires patience, a willingness to learn new vocabulary and technical equipment, and skill in time management. However, the stage manager’s most valuable talent, when working on a production that involves multimedia, is the ability to adapt the traditional theatrical process as we know it, from pre-rehearsal to performance, to incorporate the technology and techniques necessary in order to allow for the full potential of this exciting new component of theatrical design.
Introduction

A consistent visual elements in all Multimedia Performance Studio (MPS) shows to date has been the use of projections as an integral part of each show’s aesthetic. These projections have been implemented using a number of different methods throughout the life of MPS. With each show we have attempted to improve upon our methodology, giving us more control and ultimately allowing us to integrate the projected material into the show more effectively. By doing this, we had the opportunity to create a visual experience during our live performances that is very much unlike what people have grown to expect out of the theatre. During the production of *Silence & Darkness* in the autumn of 2004, we used Dataton’s Watchout software to control the animations being sent to each of the three projectors we used. It was my responsibility to learn this software, create the “show” (a process which I will go over in greater length later on), and to control it during the performances. By using a media server to feed images to our projectors, rather than using a direct video feed as we had before, we gained a level of flexibility and manageability that was previously unobtainable. In this essay I’d like to expound on how the media server application works, what it is capable of, and how MPS, specifically, utilized it to meet our self-imposed challenges and, as usual, some we didn’t expect.

Progression Towards Media Servers

Before the 2004 production of *Silence & Darkness*, MPS used a number of different methods of employing multiple projectors during a live performance. The methods we used were by no means exhaustive in terms of what could
possibly be done to approach this challenge, but by explaining the methods we used it, should illuminate the reasons why we were led to using a media server in their stead. The first method we tried was to use multiple MiniDV cameras, each feeding to its own projector, and being controlled live. The limitations of using a cassette playback feed during a live performance are myriad. Cassette playback is, by definition, completely linear and completely fixed. This means that all video is in a fixed position within the feed, and is immovable without recording over that part of the tape (though in order to get a clean video it’s wise to re-record the entire tape instead of just one section). Pausing the cassette tape in the event of some sort of delay within the show (set changes, etc.) is also not a good option, as it results in a fuzzy, ugly image while paused. It is also difficult to make changes to your show, as that involves re-recording your tape(s). We found that cassette playback allows very little in the realm of flexibility and control. It also makes any sort of actor interaction with the video very difficult, as the timing must be absolutely perfect. In light of these limitations, we moved on to DVD playback.

DVD playback is somewhat less limited and easier to work with than MiniDV playback, but it does share some of the same drawbacks. For example, a DVD can be set up with chapter markers and menus, which allows for greater control over what video plays when. This is particularly useful between scenes, as the projectors can be blacked out while the controller pulls up the desired video sequence. A paused DVD image, while providing a more attractive image than that of a paused MiniDV tape, is often-times fuzzy and jerky and not of adequate quality to be left on the projector for very long during the show. Making changes to a show using DVD playback is somewhat easier than MiniDV, as the DVD is created in a non-linear fashion if a program like DVD Studio Pro is used. This allows sequences to be rearranged or replaced fairly easily, but a new DVD still needs to be recorded each time any change is made. Actor interaction is equally as difficult with DVD playback as with MiniDV, the timing issue not being resolved. Another problem with both of these formats is that the entirety of any video coming out of the projector must be one solid image. They do not allow any sort of control in a sectional manner, nor do they allow for any sort of overlays that have not already been placed directly into the video. This was not sufficient, as we wanted to be able to cue different parts of our projection at different times in a live setting. This brought us to the use of media servers.

A Brief Explanation of Media Servers

Before I discuss how MPS, specifically, used and benefited from the use of media servers, I think it will be helpful for me to explain exactly what a media
server is, and what it can do. A media server is a method for controlling the images that are shown on one or more displays (projectors, televisions, computer monitors, etc.). This is accomplished using one server computer, and a separate client computer for each display, all of which are networked together using CAT5 cable. After each client computer is configured with its client application running, it does not need to be touched by human hands. All of the work to set up and run a show is done using the server computer. The show is set up using a non-linear timeline, very much similar to those used in video editing and compositing applications. Video is then placed on the timeline in the desired play order. Each video is also placed on a layer, which allows for overlays and transparency. This means that multiple pieces of video can be placed on top of each, and seen through if desired; allowing the show controller to create detailed layering effects without having to re-render any video. The video can also be moved around (even between different displays), change its size or transparency, as well as many other settings. The timeline also has many different ways with which it can be controlled. It can be paused cleanly at any time, it can be told to hold at a specific point, or told to loop at a specific point. The timeline can also be set up to play the video independently of where the cursor is within that particular video. This allows the controller to pause the cursor within that video while it plays and loops independently (such as for a video that plays while the
audience is being seated or for a scene with greatly varying length during each performance), then the controller can resume the cursor and move on to the next video when the next cue is called by the stage manager. Once the show is set up, the server computer sends the clients whatever video files they need over the network. This way, during the show, the only information that needs to be sent over the network is when to stop or play each file, and how. It should be noted that these observations are based on my own experience with Dataton’s Watchout, which may have greater or fewer capabilities than those in other media server applications.

**Why MPS Used Media Servers**

Firstly, to give an idea about how much we had to learn and adapt in order to employ media servers, I should say something about my own level of expertise before the 2004 production of *Silence & Darkness*. At the time, I already had extensive experience using video editing and compositing applications such as Apple’s *Final Cut Pro* and *Adobe After Effects*. I had not, however, used or even heard of a media server application before I began learning Watchout for the show. With any experience using non-linear editing timelines, however, it is not very difficult to adapt to Watchout’s interface, provided you keep a manual close by. Even without prior knowledge, Watchout is actually a fairly good introduction to the world of non-linear editing, considering that it is not nearly as featureful (thus, less intimidating) as most editing and compositing applications.

Now, the reasons why MPS decided to use media servers as opposed to the MiniDV or DVD formats should be fairly clear based on the previous sections, so I’ll just summarize them briefly for clarity’s sake. By using media servers, we were given much greater control over when and how our video sequences could be played back. We could control layering, size, timing, positioning, and a myriad of other things directly within the server application.

There are essentially two things that these levels of control allowed us to do. The first was to reduce the number of times we would need to go back and re-render our video, as this process takes a great deal of time. That time was already reduced just by using a media server because if something needed to be changed, we could re-render one specific file instead of our entire show. It was further reduced because we were able to manipulate the movement and layering of our video to achieve things that previously would have only been possible if they were rendered directly into the video. The second thing the greater level of control allowed us
to do was to incorporate a level of interactivity within the show. Using Watchout’s sophisticated cueing system, the show controller was able to activate particular pieces of video during the performance, in sync with what the actors were doing on stage.

How MPS Used Media Servers

After we decided to use Watchout for our show control during Silence & Darkness, and got acquainted with the application, we quickly found out just how useful it could be. We set it up to control three projectors for the production. We used a front projector, a rear projector, and what we called a “special” projector. The front projector was able to cover the entire stage and backdrop with its image, therefore we had to block off parts of the projection using carefully calibrated masks. The rear projector threw its image onto a screen in the center of the backdrop from behind. This allowed the actors to walk in front of the backdrop without the projections landing on their bodies. The special projector was placed in a catwalk above the house to stage right, and was angled so it could hit certain places on the stage. It was only used in a few special situations, some of which could only be accomplished with the use of a media server. An example of this is when we had the special projector display an image of an explosion directly on the chest of one of our actors as he threw open his jacket. With Watchout’s cue system we were able to send a command to the special projector precisely as he opened his jacket to start the animation, and then turn it off exactly when he closed it. The timing of this particular effect would have been nearly impossible to work out without the use of a media server.

Watchout also helped us with the production in ways that we had not anticipated. For example, during one of the stage transitions there was a set piece that was catching part of the projection from the front projector. However, once it was off stage, that part of the projection was spilling conspicuously onto the stage. Using Watchout we were able to create a simple mask for that area of the projection and cue it to appear once the set piece was off stage in order to cover up that part of the projection without interrupting the animation playing in the background. In another example, from the beginning of the show, we wanted to display words on the screen above one of our actors. When we got into rehearsal and saw that the words just popped on to the screen without a transition, we decided that was too sudden. Instead of having to go back and render out a video with a fade in it, I was able to set up cues to change the opacity of the words within a few seconds and make the change to that part of the show right there in rehearsal. We came across this type of situation many times, where changes could be made in seconds during rehearsal that would have taken many hours to make using DVD or MiniDV playback.
Conclusion

It does not take long to figure out that a media server is an incredibly useful tool when working with new media theater. It is a liberating piece of software/hardware allowing artists greater flexibility than with other technologies. The caveat is, of course, that media servers require an initial monetary investment. As with anything there are degrees of cost in terms of the different brands of media servers, but any of them will take a small to moderate bite out of a budget. This bite can often times be taken from a production’s set budget though, as the projections can be used to replace certain set pieces if one would so desire. In the end, when working with projections, especially multiple projections, the cost is well worth it. The amount of time saved by using this method is invaluable, not to mention the decrease in levels of frustration. And, most important, the media servers allow designers, artists and operators to shift a sizable portion of their focus away from the technical issues and roadblocks, and onto the art. In the end, that’s really what this is all about.
It had always been my goal to create a soundtrack to a live movie that was one continuous soundscape, and lasted the duration of the performance. Songs would be interwoven throughout the greater piece but there would be an emphasis on the continuity of sound throughout the performance. One piece that embodies all of the emotions and themes of the actor’s performance and not only complements it, but acts in tandem as a character. In working with the Multimedia Performance Studio as a composer and sound designer for both Time Traveler Zero Zero and Silence & Darkness, I worked alongside the musical directors Amelia Winger-Bearskin and Kelly Wilson, respectively, to create and orchestrate the aural elements of both productions.

I learned that the best way to prepare a group of musicians of diverse backgrounds for performing the soundtrack to a live movie was to spend a great deal of time jamming together. In all honesty, we would practice the songs we had only so much before we wanted to play something new. Improvisations that lasted an entire practice became integral to being able to perform with one another. When dealing with a group of creative people, it’s hard for our brains to sit still.

Even though I believe the use of one’s equipment to its fullest capacity is more important than what brand of equipment it is, I will provide a somewhat basic breakdown of the computer system I used to compose the music for the two MPS performances. In both cases the primary computer used was an Apple G3 Pismo laptop running Propellerhead’s Reason Software as well as various freeware recording utilities. During the production of Silence & Darkness, this laptop happened to malfunction, and the Mason Media Lab generously loaned me a G4 laptop. This laptop was a great deal more powerful than the Pismo and allowed me to utilize a large number of virtual instruments in Reason at once. Reason allows a user
to compose various forms of music using a “virtual rackspace” full of software synthesizers and samplers, as well as audio signal routers and effects units. One is able to control all these virtual instruments and units either with the program’s sequencer or external midi sequencers. As is the case with most modern midi software, one can use Reason to control other programs or allow Reason to be controlled by other programs. In both performances, we utilized the program’s internal sequencer as well as using two different midi controllers.

One of the MIDI controllers is a standard two-octave keyboard that allows one to play any of the instruments. This was helpful when writing songs especially because it gave the other composers a chance to add their musical skills to my multiple manipulations of sound in Reason. Amelia Winger-Bearskin and I wrote over half the songs for Time Traveler Zero Zero using the keyboard controller. For a couple of the songs from Silence & Darkness, Kelly Wilson sent me midi files of melodies she had written which I then programmed various synthesizers and samplers to play.

When a show called for sound effects, I would program the sound effects into one of Reason’s sampler units and then control that with an external midi drum machine controller. An entire show’s sound effects could easily be loaded into one sampler, programmed in a sequential way to provide anyone who wishes the ability to trigger sound effects live during a performance. Sometimes various musicians made sound effects with their instruments. It was a common strength between both groups of performances to be able to create lush and intricate soundscapes that only seem to come about through collaboration with others.

In addition to sound effects, the midi drum machine controller allowed me to play various other instruments in a more percussive way than on a keyboard. Similar to the keyboard, this controller is able to use any of the modern software instruments that offer midi capabilities. Additionally, these two controllers are only examples of the variety available to an eager midi musician. There are controllers filled with knobs and sliders of all sorts, as well as various length keyboards, and drum machine oriented controllers. One’s creations are no longer limited by the amount of equipment he has, but rather by the power of his personal computer. This is the case regardless of the software one chooses to explore.

It is hard not to become overwhelmed by the amount of hardware and software available to the eager scientist of sound. Where does one begin? I have already suggested that it should not matter what piece of gear one uses, provided you learn it inside and out. Once you have the abilities to create sound, you should focus on doing just that. The pursuit of the perfect sound should not be constricted by any preconceived notions of what music is or is not — this is about sounds in the raw. Sound has multiple roles in the live movies.
of MPS. It serves not only as an atmosphere to the setting, but also acts as a character and in the case of the songs, reinforces the story and thematic elements similar to a Greek chorus.

The majority of the sampled and synthesized sounds were all built from scratch. Our sample sources varied from records to DVD’s to recordings of the musicians making jokes in between rehearsals.

After a while we all became absorbed in the work and would constantly discover new aspects of the play that we could flesh out with sound. This was especially the case with *Time Traveler Zero Zero* where there was a much larger collaborating group of musicians. *Silence and Darkness* had only three musicians whereas *Time Traveler Zero Zero* had eight.

With *Silence & Darkness* I felt like I had a great deal more freedom to create an entirely new soundscape, unlike anything our ears were already familiar with. Being equipped with a sampler, many of my source sounds were things we are very familiar with. Even in *Time Traveler Zero Zero*, I wanted to manipulate the stock sound effects we used, to give the performance space a much more surreal atmosphere.

The way I decided to soundtrack the future is influenced in part by my and others’ ideas of what the future might sound like. From the sounds of theremins, synthesizers, and beyond, our culture has a pre-conceived idea about what dystopic Science-Fiction sounds like. Simply, it is an exaggeration of the sounds of our modern day settings. The artists creating works that focus on other worlds and civilizations are really speaking a great deal about their own (our?) culture.
The mobility of a laptop allowed me to take my work with me wherever I went. This was something I had experience with prior to working with MPS but it is an important advantage over using a desktop. It allows an artist to carry a high-powered digital instrument with him wherever he may go, sketching out ideas as they appear. An advantage of our technological age, I could take my work with me wherever I went and work on it as I had time to. While working on various sounds in the wild of society, I noticed a great deal of imagery and sounds influencing me. Particularly in the creating of a lot of the sounds for Silence & Darkness, the landscape of the university littered with numerous individuals on their cell phones, obliviously wishing they were somewhere else, on the other end of the phone call, where that individual also shares a similar interest in being somewhere else. We have become eager to communicate with the distant and sometime unfamiliar voice, rather than to seek out peers in our immediate physical environments. So much of the sound of both of the productions, represents a way of combating the isolation of our cellular society of individualism through collaborative efforts.

The songs were written in various ways. With Time Traveler Zero Zero, it would be common that Amelia Winger-Bearskin, the other primary composer, and I would get together to work alone on figuring out the shell melodies and arrangements for any one song. The rhythms were the crude sort of drum machines and moody tempos that we both love. The first completed track from Time Traveler Zero Zero for instance, was created and finalized in one night with Chris Andrews at The Basement Recording Studio (TBR) in Burke, Va. In a fashion typical to the generation of most songs with MPS, what we had to go on were the script by Kirby Malone, the writer/director, and the lyrics he provided for the songs. It was our task to translate words, directions, and feelings into the sound that would define the world we wanted to create on stage.

Another advantage of the studio is that it allowed us to make demos of the songs as they were in progress. Recording the demos, and then copying them to CD’s for each band member, allowed curious pairs of ears to know what the show was beginning to sound like, and it also provided the musicians a track to practice with. In some instances it also gave the animators an opportunity to sync their digital animations to the songs we would perform. This was much more common with Time Traveler Zero Zero. Another difference between the two was that in Time Traveler some things were played back sound-wise from the DVDs that contained the videos for the show allowing precise synchronization between image and sound when needed. This meant my computer was free to play other things and not have to devote its resources to those tracks, but it also meant they would remain unchanged for the sum of a performance’s run. In Silence & Darkness, we triggered all of the music, soundscapes, and sounds from the stage.
Our production manager, Dan Hobson, said *Time Traveler Zero Zero* was one of the most complicated shows for sound he had encountered in a while. Into the PA mixer we ran audio from the DVD players, audio from the stage including a mixer that my laptop and other electronics were plugged into, the wireless microphones for the actors and singers, wired microphones for the singers, microphones for the various instruments, and all of this was to be managed by a sound man during a live performance.

It was much more common for myself to perform sometimes as a human sound effects record during *Time Traveler Zero Zero* which required a great deal of generic real world sounds, such as doors, doorbells, birds, ambient television noise, and other pleasantries of our sonic conception of the world. With *Silence & Darkness* I was allowed a great deal of freedom as a sound designer to create an entire universe of sounds unlike anything we had ever heard. When we first began working on *Silence & Darkness* it was my hope to fill the soundscape with dead air static and the sounds of dying cellular phones. The sounds of malfunctioning machinery litter every aspect of *Silence & Darkness*, perhaps a metaphor for the breakdown in communication that the performance focuses around, or one interpretation of the sounds of the dystopic future.

After a certain point in the production of a live movie, I have a complete concept of how I will want the majority of the show to sound and eventually am asked to explain that idea on paper. The musicians and sound designers provided various forms of documentation including scene-by-scene timelines. Theatrical sound cues were something I had not taken into account. Using a word processor or spreadsheet program of one’s choice, one can put the lay of the land for the sound of the entire show on paper. More often than not, the hardest part is figuring out how to explain to someone exactly what something will sound like. The tedious task of knowing the lengths of time for each piece of sound in the show can be daunting as well, but in the end the process serves to make sure one hasn’t left anything important out of the overall plan. All of it can be typed out into a simple language that describes basically what happens each scene, with whom, and for how long as far as sound is concerned. For *Time Traveler Zero Zero*, we followed the design of a multi-media chart that had existed since the beginning of the project. Regardless of how it looks, one must be sure to align it with a unit of measurement that makes sense to everyone else who is reading it. As I said, a scene-by-scene break down is the best way to do it. When I reflect on the experience, there are a lot of clerical and managerial things I could have done to insure I kept better track of what was going on throughout the process, but I figured why take time away from the actual production of the music? There is a dangerous fear that is very real to me that in making my art it will become just another paper-pushing nightmare.
It should be noted that the need for sound cues has the potential to restrict the creation of a soundtrack to a live movie that becomes one long continuous experience. This of course is not the only factor that would limit the soundscape from being comprised of one long continuous movement of music. An advantage of this however would be that it has the potential to add a different feeling to the live movie each performance. And in the making of both MPS productions, there was a great deal of dialog between the director and myself as well as the other composers and musicians about the nature of improvisation.

Because of the chaotic belief that “if anything can go wrong, it will,” there is a need, especially in theatre, for knowing exactly how things will be executed, what it will look like, and in my case, how it will sound. Because in both performances, all of the musicians are on the stage the whole performance, we never get a chance to hear how the audience might perceive us. During our rehearsals at the theater, I sat out in the seats to listen, but I am still ever curious to know how the audience heard it each night. I imagine that any performer is interested in gaining his audience’s perspective, if only for one instant.

As I have already mentioned, being able to jam with one another during practices was perhaps the greatest way the musicians in the performances came together. It is important for musicians to be very familiar with those who will accompany them in performing in a live movie setting. Once any set of musicians becomes familiar with the subtleties of one another’s playing, it can take the group performance to a whole new level. When collaborating with others in making art of any kind, it is best to minimize your ego as much as possible. That seems to be a good rule of thumb for dealing with most situations in which you have to deal with anyone. We are all working towards the same goal of making the most amazing music and show ever, and I feel with both groups of musicians there was a lot of amazing music made. So often life seems to swallow the eager musician alive and it is rare that he ever has enough time in the day to make all the music he’s been thinking about all day. However in working on both of these productions, one has to devote so much time to it and to the music that it allows one to become totally enchanted with it and again, make the most amazing art one is capable of making.
One of the challenges with creating a successful multimedia performing art studio is managing all the different aspects associated with production; from direction, choreography, scenography, and projections to sound and music. Many different ways to achieve project coordination exist; some work, some don’t. The Multimedia Performance Studio (MPS) has tried many and was open to a new idea: have everyone who is participating in the performance manage themselves in an online collaboration. This idea had much promise, with new media artists spending hours online already, having them check into another web site for a few minutes to enter their daily activities related to the show, or to share concerns with others in the production, wouldn’t be too out of the way or difficult. Working with this concept the “Community of Practice” was born.

The concept of Communities of Practice has existed for many years and has been called many things. The Internet itself started out as a chat line so that universities could communicate and share scientific ideas with one another. Online conferencing, blogs, portals, listservers all attempt to group items by subject matter so that other like-minded individuals can find them and share in the exploration of their ideas. Costume designers need to be able to get measurements from actors, sound designers need to coordinate with lighting designers, set design needs to be able to coordinate with graphic artists, and the production manager needs to be able to check in with all of them. For MPS, the Community of Practice needed to provide each type of performing art subgroup a tool that they understood and could use. It needed to be web-based so that it was platform-independent (could be used on Macintosh and PCs) and needed to be updated in real-time so that time-critical information could be shared as soon as it was available. This tool would need to allow for each group to see what their group is doing and what other groups are doing. They would need to be able to share web sites that provided concept ideas, time
period information, and additional story ideas. Important news needed to be published in a manner where everyone could get it. The performance schedule would need to be available. Animators and multimedia artists needed the ability to post images and files to share with other artists. A chat forum would allow people to post messages and get answers to problems. Performers needed a sketching board where they could allow for freeform ideas to be discussed, images could be critiqued, files could be reviewed all within a single “live” document. They would need to have a listing of everyone participating, with their phone numbers and roles and abilities. Most importantly they would need to be able to browse and search all these areas by meaningful criteria and access them within a single web site. In theory, such a system would enable a group of artists, who have limited time to be all in the same place at once, to collaborate with an enhanced sense of direction and clarity.

With all of those requirements, creating an architecture for the community of practice was easy (see flow chart below).

The Home Page needed to be able to give everyone a quick overview of the newly updated sections on the site. Links would allow users to post different web site address along with some comments about that site. News would list all the important topical messages. The Calendar would have the production schedule, meetings, and due dates listed. The Gallery allowed users to post photographs, graphic images and files to share with others, and to solicit input on them. The Forum allowed people to have conversations and share ideas, a blog. Freeform gives users the ability to generate a web page with links, text and images in a WYSIWYG (what you see is what you get) web editor, allowing people who have no knowledge of web page generation the ability to create pages. The People area is where everyone who’s in the production is
listed with contact information, their skills and what tasks they’ll be working on during the production. Search would query all the previously mentioned categories. It would allow you to search for all the postings by a certain person; or find all the references to a particular scene. The Administration area would allow users to upload information into each of these categories.

With the site architecture created we still needed a mechanism from which a single community or group could be accessed and/or all the communities could be accessed if need be within each of the pages. To accomplish this another architecture was created. This one mimicked the production groups: dramaturgy, scenography, sound & music, projections, direction & choreography, production & coordination, and management. By adding this additional architecture each page could be sorted by all categories or a specific category. So if someone needed help researching a topic they could sort the People page on Dramaturgy (see screen capture above). If a costume designer needed to find out when a costume fitting was scheduled, they could sort the Calendar on Scenography.
After the architectures were planned out, we had to brainstorm how we were going to enable the web site to be dynamically updated by the new media artists in a “user friendly” way so that everyone would be able to use a web browser from any computer and input their contributions. In addition we needed to think about how a project with limited resources could maintain this web site through multiple performances, basically what would this site’s life-cycle be? To dynamically update the web site we would have to use a web programming language that could enter information from a web page into a database. With the understanding that this collaboration environment may outlast the specific performance and be employed for additional plays, a programming language that is easy to read and write would be necessary, so we chose Active Server Page (ASP) technology writing to an Access database. Both ASP and Access are Microsoft based, ASP utilizing the Visual Basic Scripting Language; the development platform would be Macromedia Dreamweaver. By using these technologies we ensured that once the system was built and used in production it could easily be handed off to another generation of users. To manage the graphic design (look and feel) of the web site, Dreamweaver Templates were used. A Dreamweaver template is similar to a template in Microsoft Word. They allow you to set font headings, style and colors; page background color and images; header and footer banners, links and graphics; along with many other items. So by utilizing web programming technologies being taught at the university, and Dreamweaver as the development platform, anyone knowing those tools could pick-up the system where the last person left off; herein creating the life-cycle of the site.

After those decisions were made the construction of the community of practice began, starting with the graphic design that would be inserted into the primary web site template. Knowing that the template could be easily changed or modified, and working on a tight deadline, the design work was quickly created using a theme of “Cyberpunk” (as seen on the facing page). This design would be carried out on every page within the web site. With a standard header banner, navigational links (these links are reflective of the site’s architecture, i.e. Links, News, Calendar, etc.), cookie crumbs (underneath the site navigation) that help users identify what page they are on, page title, the page body where all the dynamic information will be populated, a “User Login” link where artists will go to upload information to the site, “Report Bugs” and “Help?” links, and a footer with some additional links and graphics.

Now it was time to take a look at programming each page so they do what we want them to do. By thinking this process through before you start coding, it enables you to identify similarities within the pages where code can be reused, saving time. Here you find similarities in the page title, the Records area, View by Category area, and within the way the records (Calendar, Forum and People information) are displayed within the body. This process is also
helpful to identify pages that will require heavy programming, like the Home Page, the Calendar and the Gallery. During this stage of the process you also begin to sift out the information needed within the page, like who posted the information, when, what the information is called and the information itself. Will a thumbnail be needed to display an image, and will the calendar page allow you to scroll to previous and future months? The best approach to collect this information is to have continued interaction with the users to solicit their feedback. It’s also a good idea to consider how users will input their data into the site. For the communities of practice we determined that splitting it in half was the best approach, creating a view-only and an administration side. The view-only side would allow anyone who came to the site the ability to read all the posted information about the performance. The administration side would allow the users to add items to each of the pages via web page forms. After submitting their information to the site they could return to the administration menu to edit and delete their entries. By creating these two environments, it gave information control and administration to the individuals that owned the information, getting rid of the need for a webmaster or database administrator.

The web form input fields (the areas where you would enter things like name and address into a web page) are directly related to the database schema. For every input field that exists in the web form a database field exists. In general the process would be: input “name” via a web page form, a “name” is submitted into the name field in the database, a “name” is extracted from the database name field and populated in a web page; all of which is being completed via the ASP. So once the administration area was built we could begin to populate the database via the web forms. After which we could
extract the information from the database to populate the view-only pages. We’ll repeat this process many times for every page to work out the bugs, refine the interface and to ensure they meet the users’ needs.

The Home Page of the site needed to be unique in function from all the other pages. Instead of submitting information via a web form to populate the Home Page, the Home Page collects information from the database and displays it by date, showing you the most recent updates to the site. By creating the Home Page to function in this manner it required no one to manage it, keeping our web site management strategy consistent.

Once the site was built and published in a live web environment it was time for the users to engage it to aid with their project collaboration. Users would initially have to create an account that would require them to enter items like name, email address, phone number and password. In addition it would ask for information about their skills and what group they would primarily work in (as depicted in the following screen capture).

![Skills (check all that apply)](image)

<table>
<thead>
<tr>
<th>Skills (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dramaturgy</td>
</tr>
<tr>
<td>- history</td>
</tr>
<tr>
<td>- research</td>
</tr>
<tr>
<td>- supporting materials</td>
</tr>
<tr>
<td>- cross-references</td>
</tr>
<tr>
<td>- related work</td>
</tr>
<tr>
<td>Scenography</td>
</tr>
<tr>
<td>- set / sculpture</td>
</tr>
<tr>
<td>- lighting</td>
</tr>
<tr>
<td>- costumes</td>
</tr>
<tr>
<td>- props</td>
</tr>
<tr>
<td>- puppets</td>
</tr>
<tr>
<td>- electronics</td>
</tr>
<tr>
<td>- robotics</td>
</tr>
<tr>
<td>- animatronics</td>
</tr>
<tr>
<td>Sound / Music</td>
</tr>
<tr>
<td>- sound design</td>
</tr>
<tr>
<td>- sources</td>
</tr>
<tr>
<td>- playback</td>
</tr>
<tr>
<td>- microphones</td>
</tr>
<tr>
<td>- amplification</td>
</tr>
<tr>
<td>- vocals</td>
</tr>
<tr>
<td>- instrumentation</td>
</tr>
<tr>
<td>- conception</td>
</tr>
<tr>
<td>- integration</td>
</tr>
<tr>
<td>Projections</td>
</tr>
<tr>
<td>- artwork</td>
</tr>
<tr>
<td>- still</td>
</tr>
<tr>
<td>- animated</td>
</tr>
<tr>
<td>- 2D</td>
</tr>
<tr>
<td>- 3D</td>
</tr>
<tr>
<td>- screens</td>
</tr>
<tr>
<td>- front and rear projection</td>
</tr>
<tr>
<td>- scrim</td>
</tr>
<tr>
<td>- machines</td>
</tr>
<tr>
<td>- video</td>
</tr>
<tr>
<td>- slides</td>
</tr>
<tr>
<td>Direction / Choreography</td>
</tr>
<tr>
<td>- bodies as:</td>
</tr>
<tr>
<td>- motion</td>
</tr>
<tr>
<td>- talking</td>
</tr>
<tr>
<td>- behavior</td>
</tr>
<tr>
<td>- pictures</td>
</tr>
<tr>
<td>- sculpture</td>
</tr>
<tr>
<td>- music</td>
</tr>
<tr>
<td>- movies</td>
</tr>
<tr>
<td>- machines</td>
</tr>
<tr>
<td>Production / Coordination</td>
</tr>
<tr>
<td>- production notebooks</td>
</tr>
<tr>
<td>- storyboards</td>
</tr>
<tr>
<td>- sound and light plots</td>
</tr>
<tr>
<td>- set design</td>
</tr>
<tr>
<td>- costume sketches</td>
</tr>
<tr>
<td>- multimedia sequence charts</td>
</tr>
<tr>
<td>- cue sheets</td>
</tr>
<tr>
<td>- rehearsal reports</td>
</tr>
<tr>
<td>- contact sheets</td>
</tr>
<tr>
<td>Management</td>
</tr>
<tr>
<td>- budgets</td>
</tr>
<tr>
<td>- schedules / calendars</td>
</tr>
<tr>
<td>- publicity</td>
</tr>
<tr>
<td>- fundraising</td>
</tr>
<tr>
<td>- website</td>
</tr>
</tbody>
</table>

YOUR PRIMARY GROUP: [Direction / Choreography]
After creating an account they could begin posting information to any of the pages in the site. In addition, their account information would be re-used by the site to populate the People page. Once logged into the system your user name and the date and time would be automatically captured by the system for every submission the user made. By doing this, the user and the system could track activities. An example of the system tracking your activities would be Search. The Search function could query all entries submitted by a user, so Tom B User could search the site for everything he submitted to it. Another example would be on the view-only pages. Users who submitted items to these pages would always have their email address attached to the items in case a viewer had a question about a posting and wanted to contact the author (as seen in the following screen capture).

This enabled the site to be more robust with content while requiring the users to enter very little. By using these dynamic content generation tricks it allowed the site to have a consistent interface while being informative and require the users to enter only the information specific to the pages they wanted to populate.

With the creation of this Community of Practice for the Multimedia Performance Studio, participants were able to engage the pre-performance coordination, utilizing web technologies that enabled them to coordinate on a level that was previously unreachable. They could upload links, news, photos, graphics files and animations, and blog and query the project enabling them to have a faster response to schedule and scene changes; multiple artists could collaborate on a single graphic or animation; music could better coordinate with scenography, and management could track everyone’s progress. All while saving a snap-shot of the environment during the performance to aid in future planning and assessment. The MPS Community of Practice was an innovative approach to solving some of today’s hardest project collaboration issues.
MULTIMEDIA COMPOSITION, DESIGN AND PRODUCTION FOR "LIVE MOVIES"

• Narrative:
  • montage: the language of images (close-up, long shot, dissolve, cross-fade, super-imposition, rhythmic cutting)
  • “live or memorex?”: live performers interact with, become, transform from, pre-recorded and “live” projected characters
  • setting (illusory, sculptural, suggested, explicit, immersive, kinetic)
  • cinematic techniques (fast-forward, freeze-frame, rewind, slo-mo, flashback, split screen)
  • comic book techniques (thought and word balloons, juxtaposed tableaux of frozen action)
  • documentary techniques (super-titles, sub-titles, timelines, archival footage and imagery)
  • dream states: the stage as a portal (or “dream window”) onto a world of altered consciousness

• Media:
  • digital and conventional photography
  • film and digital video
  • archives, libraries and the world wide web
  • digital imagery: Photoshop, Painter, Illustrator, etc.
  • digital motion graphics and animation: AfterEffects, Maya, Flash, Motion, etc.
  • digital compositing and editing: Final Cut Pro, Premiere, etc.
  • digital sound: ProTools, Digital Performer, etc.

• Machines (projectors, media servers, audio, etc.):
  • media servers and show control (Dataton Watchout, High End Systems’ Catalyst DL2, DVD players, video editors)
  • video/data projectors: DLP (Digital Light Processing) vs. LCD (Liquid Crystal Display), and how they compare in regards to lumens (brightness), contrast ratio, etc.; lenses, installation, etc.
  • video production equipment: cameras and camcorders, lenses, lights, cabling, tripods, dollies, etc.
sound equipment: samplers, mixers, processors, microphones (wired and wireless), acoustic and electronic instruments, amplifiers, speakers, etc.
relationship to lighting technology and design (goboes, moving “intelligent” instruments, DMX, Ethernet, fade rates and synchronization, etc.)

**Screens and Scenography:**
- scrims
- front- and rear-projection screens
- kinetic scenic elements (turntables, tracks, traps, costumes, robotics, animatronics, environmental “wraparound” designs such as “virtual caves,” etc.)
- relationship to scenic and costume design

**Design and Production:**
- script analysis
- drawings, sketches, renderings
- storyboards
- multimedia sequence charts, shot lists and cue sheets
- scenic models: “virtual 3D” and “real world” tabletop

**NOTES FOR COLLABORATIVE PRODUCTION**

meaning, content, subject matter, value, ideas, emotions, art in time
words and language, scripts and texts

**dramaturgy**
- history
- research
- supporting materials
- cross-references
- related work

**scenography**
- projections
- set/sculpture
- lighting
- sound and music
- costumes
- props
- puppets
- electronics, robotics
- and animatronics

**sound/music**
- sound design
- sources (samplers, archives, etc.)
- playback (mini-disc, DAT, CD, laptop, etc.)
- microphones (wireless, contact, etc.)
- amplification
- music
- vocals
- instrumentation
- conception and integration
projections
  artwork
    still, animated
    2D, 3D
  screens
    front and rear projection
    scrims and other surfaces
  machines
    show control
    video/data
    slides
    other
  formats (digital files, miniDV, S-VHS, DVD, etc.)

direction/choreography
  bodies as motion
  bodies as talking
  bodies as behavior
  bodies as pictures
  bodies as sculpture
  bodies as music
  bodies as movies
  bodies as machines

production/coordination
  production notebooks
  storyboards
  sound and light plots
  set designs (2D, 3D models, 3D animation)
  costume sketches
  multimedia sequence charts
  cue sheets
  rehearsal reports
  contact sheets

management
  budgets
  schedules/calendars
  publicity
    press releases
    documentation
    press kits
  fundraising
    hustling
    grants
  venture philanthropists
  in-kind
  alliances
  commerce
  the biz
If we awaken to our actual state, in full possession of our senses, instead of remaining drugged, sleepy, cravenly passive, as we now are, we shall reshape our life to a new pattern, aided by all the resources that art and technics now place in our hands.

— Lewis Mumford (1952)
New Media Animations and Live Performance

It is a bold act to combine the inarguably complex practices of 3D modeling and animation with live performers on a stage in front of a live audience. It requires a critical awareness of the field, not just the vapid mimicry of popular 3D animations created to serve the advertising and entertainment industries. In order to shift the paradigm away from the roles of selling and escapism, 3D animations can be synthesized with live performers in the built theatrical environment, and employed as tools for illuminating and questioning real world concerns. Not for every new media artist, this practice requires a sincere and sustained commitment to acquire the fairly deep knowledge necessary to model, animate, texture, and render in simulated space. Although the work involved may be great, so are the payoffs.

Directors and new media designers, who choose to use 3D animation as an integral part of the scenographic environment, digitally open the innovation door. Imagine creating a visually rich, virtual 3D world, where almost anything a director/designer can envision is possible to build and to animate. This world can be experienced from any place that one could position a camera in the “real world” and from places where no camera can go. This ability to shift point of view and frame theatrical space is a powerful tool in the hands of directors/designers who understand cinematographic language, a language that their audience speaks, thinks, and dreams in. Context creates and changes meaning. In 3D simulated
space, directors and designers can establish new media environments that dynamically shift point of view, changing not only what an audience sees, but from where they see it.

3D modeling and animation technologies can be used to create faux theatrical spaces, that is, simulated perspective spaces within real theatrical space. Actors can be placed inside objects and objects can be projected onto actors. 3D animations can camouflage or frame actors, depict multitudes, and create impossible scale shifts. Performers can interact with animated characters, act within “immersive” environments, and travel through space and time.

3D modeling and animation software programs also can be used as visualization and simulation tools. With 3D modeling software and a set of blueprints, a relatively accurate virtual model of the entire theater can be constructed. The set can be modeled, before it is ever built in the shop, and examined from any seat in the virtual house. Digital art and animations can be “virtually projected” onto set pieces and adjusted for intensity. Even simulated actors can be placed in this digital 3D theatrical environment, providing directors, designers and actors a glimpse of opening night.

Unlike filmmakers and painters, whose work inevitably ends up as an illusion flattened out on a 2-dimensional picture plane, where “X” represents the width of the picture and “Y” the height. New media scenographers' work embraces the third dimension, or the “Z” of perspectival depth, and because it takes place over time, the fourth-dimension. In this sense, new media scenographers are architects, engineers and artists. They work with others defining and transforming theatrical space into a dynamic, living environment for the ideas and actions of playwrights, composers, directors, and performers.

**Animation: A Snippet of Past and Present Practices**

Animation is the art of using movement to bring still images or objects to life. Animations can be political, humorous, or satirical, and they can mimic or defy reality. Animation art is a wide, diverse practice stretching around the globe, crossing time, cultures and societal applications. A case could be made that early cave paintings told stories that took place over time and are therefore the predecessors of contemporary animation art. The practice of animation, like the practice of painting, belongs not to a single country or group of countries, but to anyone, anywhere, who draws (with or without the help of digital technology) moving images. Modern day animation owes much to Emile Reynaud, whose invention, the praxinoscope, held up to 500 images on a gelatin strip and was hand-cranked to create fifteen-minute shows called *Pantomimes Lumineuses*. Reynaud’s praxinoscope was developed and enlarged and rear-projected to live audiences in his *Théâtre Optique*. 

At the turn of the 19th century, experimental artists were cultivating new forms of art by merging the practices of animation and still photography. These industrious, investigational animations were as varied as the people who created them and were inextricably married to the development of still photography and cinema. These early animators employed a range of techniques from hand-drawn animations, to stop-motion sequences, to animated silhouette cutouts. Many of these artists had their roots in theater, from J. Stuart Blackton, who toured the Lyceum circuit in a vaudeville two-act before creating his real-time animated *Enchanted Drawings*, to Lotte Reiniger, who was a theater student at Max Reinhardt’s school in Berlin prior to using delicately cut paper, light, shadow, and motion to create her silhouette film masterpiece, *The Adventures of Prince Achmed*.

Animation practices dramatically grew over the previous century, and in hindsight, it is no wonder as the human eye is genetically drawn to moving images. Predator and prey (and humans are both) have to be able to detect motion for their own survival. As 20th century humans became less and less hunters and gatherers and more and more buyers and sellers, the art of animation was appropriated from independent artistic practices into the mainstream advertising and entertainment industries.

In the early thirties, Walt Disney began his lifelong effort to define, homogenize, and commercialize American-style animation. Coming out of the Depression, the cartoon entertainers, Betty Boop and Popeye, helped many temporarily forget their financial troubles. Asian, and Eastern and Western European animation artists tended to create works that were less mainstream, infusing their animations with poetics and politics. By the mid-fifties, cartoon animations had pushed their way onto American television and into the brain pans of the baby boomers. With the launch of *Tron* in the early eighties, computer-generated animation was introduced to mass audiences and began to influence cultural discourse and social practices.

Fast-forward to the turn of the 21st century and the practice of animation is undergoing a tremendous resurgence and international explosion. Animation is an international language that relies on moving images to communicate meaning and often reaches across traditional language barriers. The language of animation is spoken “with gusto” by the entertainment and advertising industries, and used for its persuasive and informative powers by educational, religious, and governmental organizations. Animation has infiltrated the arts and sciences to such an extent that architects, doctors, biologists, geologists, archeologists, mathematicians, and most other professionals use computer-generated 3D models and simulations to visualize, prototype, design, and explain their research and practice.
As new animation techniques and practices evolve, they exist in relation to culture, technology and the economy. In youth culture, highly-detailed, object-oriented, rule-based, nonlinear animations dominate the hyper-real environments of computer games. Gamers escape into their avatars and for awhile avoid the ennui of day-to-day real life (or “RL” as they prefer to call it). At the start of the 21st century, total revenue from the computer gaming industry surpassed total revenue from the film industry, which may come as a surprise to the over-35 club, but not to the under-35 club.

Add to all of this growth, the relatively new field of internet animation, where children are downloading freeware and making animated “gifs,” while adults are book-marking the popular JibJab web site and forwarding links of their favorite animations to their friends. A virtual, visual myriad of animation subcultures flourishes online, ranging from primarily abstract animations called “demos,” an artform where hackers program interactive animations to render in real time (and test hardware boundaries), to “machinima,” 3D animations that appropriate and modify the virtual environments and characters found in popular computer games.

If the first digital divide is between those who have and do not have access to the internet, then the second digital divide is between those who can create, control, and interact with online “rich media” (video, sound, animation) and those who cannot. Rich media ranges from straightforward graphic images and icons to robust, time-based, interactive simulations and animations.
What is 3D Computer-generated Animation?

Computer technology (a topless mountain of hardware, software and peripheral devices) has become indispensable to 2D animators and stop-motion animators. It has also opened up the magically real and esoteric world of 3D modeling and animation. A decade ago, high-end 3D computer-generated animation systems were unaffordable to most independent artists. Today, new media artists have a range of 3D programs to choose from, largely because of recent developments in digital technologies, both on the hardware side, with high-speed processors and real-time graphics cards, and on the software side, with sophisticated, icon-driven modeling and animation packages. Although there are some 3D animation programs that are intuitive and relatively simple to use, the more powerful programs are moderately to highly technical, and filled with terminology familiar to programmers and mathematicians, but unfamiliar to most visual and performing artists.

New media scenographers are often scared away by the technical complexity of 3D modeling, yet perhaps they shouldn’t be. Most of the digital artists coming out of today’s schools, colleges and universities have had some exposure to 3D animation, and quite a few have developed a firm understanding of the art and technology of 3D animation. New media scenographers often work with other digital artists in creating images, videos and 2D animations, so it is a logical extension that they also work with 3D animators when appropriate.

3D modeling and animation take place in the XYZ coordinate system, a simulated mathematical space where virtual objects have height, width and depth. 3D objects can be viewed with virtual cameras giving the animator the ability to digitally look at an object from any point of view. Most 3D programs start with four scene views, the top, front and side views are orthographic views. They each display information on two axes, for example, the front view displays objects flattened out onto the X and Y planes, while the top view will show the same objects on the X and Z axes. By looking at any two views, an animator can visualize what an object will look like in 3D.

The perspective view, however, is the viewport most animators consider to be their creative studio. In the perspective view, objects are displayed in full XYZ space. The animator can dolly in or out, track and tumble around objects. These objects can be examined in minute detail or from a distance. They can be displayed with their assigned surface textures. Even the effects of added lights can be viewed in real time. The 3D simulated space of the perspective view provides animators with the ability to build their models from multiple points of view, just as a sculptor will move to different vantage points in the process of creating a sculpture.

Add the timeline, which gives animators the ability to set keyframes for events, and 3D animators have a new tool for creating digital art that conveys meaning through movement. The what-if possibilities of building faux-
living characters, environments and objects seem limitless. When combining live performance with 3D computer-generated animation art, it is important for the new media scenographer to have a clear view of what is needed and the ability to put it down on paper if they hope to have 3D scenes built with efficiency and accuracy.

What Are the Components of 3D Computer-generated Animation?

3D computer-generated animation, like other art forms, begins with idea generation and continues on a desire/discovery path until the work reaches an audience. If done right, 3D animation combined with live performance can be enriching. If done wrong, it can be mind-numbing. The process of making new media 3D animation is subjective, as it calls on directors, designers, actors and artists to simultaneously work with what they know and expand their reach. This process is broadly brushed below:

1) idea generation
2) research and concept development
3) art production using materials, tools and techniques
4) critical visual analysis, applied to work in process and to finished work
5) public presentation of the work.

Although 3D animators are primarily focused on art production (#3 listed above), they are bound at the hip, heart and head to the entire process. Once concept drawings and storyboards are complete, the work of 3D animators is normally broken down into the activities that follow below. The better directors and designers understand the components of 3D animation, the better they will be able to think about what, when, where, and how to use 3D animations in new media scenography.

Modeling Characters, Objects And Environments

Modeling is the art of building geometry, that is, constructing wireframe characters, objects, and environments. Most 3D software programs ship with predefined 3D objects, and these primitive objects can then be modeled into more complex forms. This geometry can be organic or geometric. Spline-based modeling and polygonal modeling are both used to create detailed and flexible forms. The tools for modeling number in the hundreds and they can be used at a component level or on entire objects.
It is important for directors and designers to remember that every 3D object must be built. That is, every rock and tree, every doorknob and telephone, every everything must be built. The more realistic the goal, the more geometry that has to be built. 3D animators create unique objects and lush environments, yet for many 3D animators, creating animated characters is their true passion. The phrase, 3D character animation, has been co-opted by the cartoon and advertising industries. Although 3D characters in a live theatrical performance could be cartoons, that is certainly not all that they can be. The art of character animation is the art of creating distinctive and imaginative individuals, with distinct personalities. These characters are not limited to mindless Barbie and Ken clones. Rather they can be complex characters, replete with strengths and weaknesses, built to interact with live performers.

Because 3D modeling is vector-based and utilizes high-speed algorithms, the resulting geometry is exceedingly scalable. This means that an animated 3D puppet could be thirty feet high (with actors dancing in it’s belly behind a scrim) in a live performance and then just the puppet’s eyes could fill the stage and shift as they follow the actions of live performers. This extreme scale shift happens in 3D space without any pixilation or loss of detail. Once a 3D object is created, then it becomes part of the show’s scenographic archive. These 3D objects (visual metaphors) can be pulled from one scene and placed in another scene where they can be modified, duplicated, and even destroyed.

Mike Solo (John Titor), Cyburbia’s Time Traveler Zero Zero, an MPS workshop production, 2004. A time machine is lowered into the virtual bed of a 3D animated truck driven by a live actor.
Creating Surfaces

Once characters, objects and scenery are built, they are then “skinned” with a surface. The possibilities in 3D surface texturing are virtually limitless as any surface can be wrapped around any object, both inside a 3D computer animation and on the stage itself. Objects in the physical world are normally clothed in their natural textures. These objects and their surfaces carry associated meanings. For example, a brick wall looks like a brick wall and is usually thought of as a solid structure. If a wall is instead cloaked in honeycomb and flying bees, then the viewer’s response to the wall will change. The 3D animator must assign a surface to every object and define the surface attributes such as color, highlight, transparency, reflection, bump, luminance and glow. Still photographs, drawings, “tileable” textures and even videos or other animations can be digitally painted (mapped) on an object’s surface.

Creative and skillful texture mapping provides the 3D animator with ample opportunities to add layers of meanings to the surface of objects and to create portals to other worlds, real and imagined. This is particularly significant in 3D animations intended for use with live performers. Suppose the walls of a simulated room could change to reflect or reveal an actor’s interior thoughts. These animated or living walls might be covered with butterflies that gradually fly away and expose a wall pasted with old newspaper clippings.

Building Scenes

To build a scene, a 3D animator imports all objects and characters, and places them in a virtual environment made of modeled geometry and matte paintings, and sets digital lights and cameras to illuminate and view the scene. The assembled 3D scene must correspond exquisitely with the actors, the set and the stage lighting. The placement, scale and timing of animations must always work with, never against, the live actor. This relationship between actor and animation can take many forms. At one end of the spectrum, the 3D environment serves as a rather static background environment for a scene. At the other end of the spectrum, 3D animations can become virtual actors and literally share a scene with a live actor.

Lighting in 3D animation should correspond to the stage lighting. Colors, levels and directions should match. Illumination, shadows and different kinds of light can be simulated in 3D space. As lighting designers know, without proper light, the actors won’t be seen. Lighting is a complex, subtle and imaginative practice. Just as a lighting designer must be able to create the illusion of overhead fluorescent lighting or daylight filtered through
a Venetian blind, so must the 3D artist. 3D lighting has become a highly refined and specialized practice. Global illumination, caustics, high dynamic range imagery and ray tracing provide 3D artists with the ability to create and manipulate imaginative and realistic lights and shadows that far exceeds the capabilities of standard print and motion graphic technologies.

**Animating Geometry**

Bringing a 3D object or character to life is perhaps the most important and difficult aspect of 3D animation. Characters must have body kinesthesia, be able to anticipate motion, exaggerate motion, and convey meaning through movement. They must also relate and react to live actors and to the stage scenography. 3D animators spend much of their time setting up animation controls and character expressions. They also create motion paths and keyframe events. Timing is as critical in animation as it is in theater. An experienced animator will have (or develop) a sense of timing and be able to synthesize the art of 3D animation with the art of live performance.
High-end 3D software programs contain features such as skeletons, kinematics, deformers, expressions and dynamic curves. These features help animators create realistic and hyper-realistic motion. With dynamics, animators can create and control hair, cloth, and fur. Fluid effects can be used to create substances (smoke, fog, clouds) that change shape over time and react to environmental forces. Since any object can be defined as a “particle” and become subject to the influences of virtual gravity and wind, a 3D animator can make it rain water droplets or rain cats and dogs. Once they clearly understand the capabilities of 3D animators, directors and designers should not hesitate to ask for the wild, the unusual, or the seemingly impossible.


\section*{Animating Cameras and Lights}

Anything that can be moved in the real world can be moved in 3D space, with and without respect to the laws of physics. Cameras, with custom lenses, can pan, track, dolly, tumble, and zoom. They can have different focal lengths, depths of field, and focus (soft versus hard). Each shot, with its point of view and framing, contextualizes the 3D animation and the live actors. For example, if a director wants an adult on stage to be five years old, then the 3D animator might lower the point of view to a child’s-eye view looking up at a room full of mundane objects that appear to be monumental.

Cameras can be assigned to follow motion paths. Directors, designers, and animators should avoid flying through time and space just because they can. Moving cameras should be used sensibly. If the scene requires dashing through the woods, walking through walls, journeying down an esophagus or compressing and expanding time and space, then animating a camera may be a fitting choice.
When done right, 3D lighting gives meaning to objects and characters and creates an environmental atmosphere. The magic of lights in 3D space is that any (or all) of their attributes can be altered at any point in time. Hue, intensity, fall off, and penumbra can be changed with a few keystrokes. Lights can automatically shift location and direction, and with features such as caustics and global illumination, they can be natural, dramatic or otherworldly. 3D animators know that without lights, there is only dark. They also understand that lighter and darker areas can help compose the scene and guide the audience’s eyes towards, or deliberately away from, the live actors.

Rendering Images

To render is to draw. In 3D animation rendering is a process where once all of the modeling, texturing, lighting and animation work is done, and rendering parameters are established, the software and hardware crunch away, performing thousands upon thousands of complex calculations as they “draw” each frame for every scene.

Long before the rendering begins, the new media scenographer must determine the final rendering size for each animation. A projection grid, animation template, and in most cases a mask, will need to be made for each projector, and in some cases for each animation, prior to animating and rendering. Unlike video, which is of a fixed and relatively low resolution, 3D animations can be rendered without loss of detail in different formats. Additionally, animations can be rendered at different frame rates depending on the desired output. If an animator chooses a frame rate of twenty-four frames per second, then each minute of the animation will require rendering 1,440 frames. Rendering takes time and animators must carefully calculate their expected rendering times and plan their projects accordingly. Rendering can be spread across multiple machines to speed up the process and additional time must be allotted for quality assurance testing and media compression.

The use of alpha channels, where animated objects can be rendered against transparent backgrounds, is key to integrating animations with live actors. Animated characters and objects that are rendered with alpha channels can literally float in a layer(s) above the background environment. By using show control systems, animations with alpha channels can be scaled and placed in concert with the stage action. These animations can be timed in response to an actor’s performance. Live performers can concentrate on the timing of their own performance instead of worrying about having to synch themselves to time-based media.
Compositing, Post-processing and Final Output

After each 3D animation is rendered, shot by shot, then all of the final renders, and in many cases, sound tracks, must still be put together and gotten out to an audience. 3D animators frequently use either video editing and/or motion graphics editing programs for final compositing. These programs can handle a wide range of specialized editing and processing requests, and are relatively easy to use. There are also several extremely high-end compositing and effects programs for those who have the time and the money.

Since the advent of show control systems that support layers of media, it has become not only possible, but extremely practical, to render out the masks for each animation on a separate alpha channel. What this means is that the projected animation can be cropped in relation to the set. The masks can then be adjusted to ensure that the projection precisely hits the surface(s) that they are intended to strike and no part of the image spills onto unintended surfaces. Precise and flexible masking of animations is a basic requirement if projections are to fit seamlessly into theatrical space.

What Is The Future of Live Movies or Digital Theater?

We don't know who discovered water, but we're certain it wasn't a fish.

— John Culkin, cultural theorist

Artists are quick to put new materials, tools and technologies to creative uses. Since humans first crushed pigments and drew on cave walls, artists have made work reflecting and questioning the events of their lives. New media work requires open experimentation, complete commitment and genuine collaboration. There are no formulas to follow, as each space and each production will present unique creative and technical challenges. With the prevalence of video and motion graphics, many new media scenographers may feel that they have enough tools to use, but others will turn to the art of 3D computer animation as a way of creating extremely expressive and responsive scenography.

Above and beyond the technical aspects of creating 3D animations, lies the experimental practice of merging actors, the built theatrical environment, and 3D computer animations to create a theatrical experience that can be more powerful than any of these art forms alone. If thoughtfully done, the viewer experiences a cohesive whole, a seamless integration of live performance, stage design, 3D animation, and show control technology. These “live movies” inform, anchor, underscore, and shape live performance, as they reflect and expand on human culture.
What makes 3D computer animations such a valuable tool for new media scenographers? The answers lie in the numerous ways 3D animations can be used to simulate real and imagined objects, the ways these objects exist in perspective space, and the ways they can move dynamically in relation to live performers. Since 3D animation is done on a computer, there is often a focus on the technical, yet many animators started as either visual or performing artists prior to entering the field of computer animation. 3D animators must strike a balance between artistic concerns and technical skills. If directors and new media designers grasp the core concepts of 3D animation, then they can productively explore the creative possibilities of combining 3D animation with live performance. Digital artists know that knowledge of the technical brings both artistic freedom and responsibility. The freedom allows for new theatrical worlds to be imagined and realized. The responsibility is to create scenographic worlds that bind the audience to the live performance, and reflect, expand, and in some cases, shape world cultures.

Over the past couple of decades, digital video technology has opened up possibilities for independent artists to create movies, and now that 3D computer animation is within the reach of experimental animators, new areas of creative practices such as “live movies” and “digital theater” are popping up on the global landscape. Yet, most directors, designers, and actors who work with new media theater are not technophiles. Many are acutely aware that one side of the new technology coin can be used to save lives and enrich minds, while the other side can used to destroy lives and numb minds. Rather than using technology for technology’s sake, they turn to new media technologies as a means of persuading audiences to think about who humans are and who/what they might become.

3D animation is at the center of the hyper-real, simulated, televisual world that most Americanized humans experience on a daily basis. 3D animations are used in high-end advertising campaigns, feature films, TV shows, cartoons and computer games. They surround us and we consume them, and their covert and overt messages, without much critical awareness or thought. They seduce us with their illusion of perspectival space, rich textures, and hyper-reality, and often make us temporarily forget the past and the present. Then why bring 3D animations into the inner sanctum of live performance? Because 3D animations are part and parcel of the mile-wide, inch deep, media-crazy world most theater-going audiences live in.

In live theater, 3D technology can be used to inform and critique (not just entertain and sell). Directors and designers recognize that new art forms can provide them with new artistic freedoms, but that with these freedoms comes mindful responsibility. Instead of creating mindless entertainment, they hope, by combining elements from the popular digital technosphere, from 3D animations to robotics and sound sampling, to open doors for 21st century spectators into the historical, social and philosophical concerns with which most good theater has always been preoccupied.

For sources see “3D Animation” in Suggested Reading, page 224.
PROJECTION AND PROJECTORS: NATURE, DREAMS AND TOOLS

Would Shakespeare have used projections? They would have made his ghosts and storms and battles and moons a lot easier to stage. They can bring nature indoors, so to speak, but that’s not what they’re best at. What they are best at is poetic suggestion, ambiguous characterization, radical juxtaposition. They can make it rain, televisually, but they can also crawl inside a character’s body, or dreams.

It has only been over the past ten years that video projectors have become capable of operating artistically on the stage; until then, their images were so muddy, and their light so dim, that they were all but useless. We happen to live in the “interesting time” when advances in projection fortuitously coincide with the same in image and video creation and processing. So how do we turn this confluence into tools of art?

Because with the exception of the Multimedia Performance Studio and a few other programs across the country, there are not many places where you can study and train in the art of projection for the stage, and because there are very few (if any) books on the subject (yet), you have to teach yourself, you and your friends and collaborators. To greater and lesser extents, you’ll have to become a filmmaker, a lighting designer, a video technician and a new media artist of digital “applications” (this makes it ever clearer why and how this field is as collaborative as they come). And where will you turn to begin to teach yourself? To the World Wide Web, of course.

On the next page is a series of web links that should get you started. If you read, absorb, and follow the links in these articles and web pages, delve into some of the titles in Live Movies’ Suggested Reading bibliography, read the essays in the “Production/Practice” and “Technics” sections, and research the vendors listed at the end of this book, you will have what amounts to the beginning of a course in Projection for Live Movies 101.

When you begin to look into projectors, you will find they are made for two “markets”: “home theater” or “professional.” You will also find that projectors are grouped mostly into two types, LCD (liquid crystal display) and DLP (digital light processing). A new third format, LCOS (liquid crystal on silicon) is beginning to appear. Projectors usually are ranked by lumens (brightness), and, increasingly, contrast ratio (this latter refers to the comparison of the black and white extremes of the projected image — without high contrast ratio, there’s no such thing as anything like a true “blackout” onstage; instead you get a sort of sickly digital gray, in which actor entrances and exits, and scene changes, are excruciatingly visible).
Throughout the 2000s, Evan Powell at Projector Central has been updating a series of excellent articles which analyze and compare LCD and DLP: www.projectorcentral.com/lcd_dlp_update7.htm

You can also find out more about DLP, by going to the source, Texas Instruments (who invented and proprietarily develop the technology):
www.dlp.com/dlp_technology/dlp_technology_overview.asp

As you evaluate LCD vs. DLP, always keep contrast ratio in mind. Until recently, most LCD projectors have had paltry contrast ratios of something like 250 or 400:1, while DLP projectors typically have much higher contrast ratios (see the XD300U below). You will also find features such as resolution, aspect ratio, inputs, machine noise, zoom lens range, etc., that you will have to take into account in making your decisions. The projector manufacturer Christie has a very good set of web pages (which they call Projection 101) that will provide you with details on these features, and how to think about projectors and projection in general:
www.christiedigital.com/projection101/theProjector/introduction/introduction.asp
www.christiedigital.com/projection101/glossary/index.asp

Christie is one of the largest manufacturers of video projectors; another is Barco, whose web site also contains useful information: <http://barco.com>. Since your head will swim when you begin to decide which projector(s) to buy, while I hesitate to give a plug to any particular manufacturer, I think it would be helpful to recount MPS’s experiences with one that we’ve found very useful as a “studio” projector, the Mitsubishi XD300U. The XD300U is only ranked with 2100 lumens, but it more than makes up for this with its staggering 2000:1 contrast ratio (and its unheard of 4000 hour lamp life). While not strong enough to fill a 30-foot wide stage satisfactorily (for which you most likely will need a projector of at least 4000-5000 lumens), we have found it quite impressive for many other purposes (demonstrations, rehearsals, and as what we have come to call a “special” projector, borrowing the term from lighting, used to project onto small sections of the set, or on actors’ bodies). You can find out more about this projector at:
www.mitsubishi-presentations.com/
www.projectorcentral.com/mitsubishi_xd300.htm

If the (or a) future of theater features projections, the future of projections is the moving projector, pioneered by High End Systems with the invention of its DL1 (now DL2) fixture (which does for projection what so-called “intelligent” moving lights did for lighting). <http://www.highend.com/products> The DL2 operates with the Catalyst media server, which leads us to the subject for our next session: media servers. And the suggested reading for that session is Bob and Colleen Bonniol’s June 2004 overview at Live Design:
http://livedesignonline.com/ar/lighting_media_frenzy

The Bonniols do not cover the workhorse of current practice in projection control for theater, Dataton’s Watchout, <www.dataton.com/products/3150/#3150> (see Eric Brody’s “Show Control” in this book), and some of the servers they do cover (with their high price tags and banks of “canned” cyberdelic imagery) seem more suited to VJ’s in a dance club than to multimedia theater designers, but this article will help you begin to develop the tools of thought with which to process all the info that will be coming at you.
This log documents the research conducted by Multimedia Performance Studio (MPS) for its “New Stage Technology Project,” awarded a Resources for Change grant from the National Endowment for the Arts, in September 2001. The research detailed here was conducted between September 2001 and November 2005. The focus of the final six months was creating and assembling this field guide, Live Movies.

The activities outlined below were carried out by more than 150 artists, designers, scholars, technicians and others. These include MPS resident artists, guest artists, and faculty, staff and student artists (both graduate and undergraduate).

MPS’s work is by nature interdisciplinary, both among the arts, and between the arts and other disciplines, and is grounded in collaboration and collective creation. MPS takes as its models such groundbreaking experiments in art-making and arts education as the Bauhaus and Black Mountain College. Artistic, technical, social and historical research provide the basis for experimental workshops and productions that merge new media technologies with live performance, for theater, opera, music theater, dance theater, performance art and “live movies.”

The research conducted for the New Stage Technology Project was directed toward the creation of this book as a resource offered to a field that is still feeling its way, as we can all benefit from each others’ discoveries if we’re able to convey them, and hear each other’s, too. From this research we have assembled this multimedia expression (in book form, online and on disk) of our findings, and, more importantly, our questions. These questions inspire us to continue to focus on the creation of new stage forms for the 21st century. We welcome your feedback, and your participation.

<www.avt.gmu.edu> <www.cyburbiaproductions.com>
SUMMARIES OF PROJECT COMPONENTS

• Multimedia Opera Workshop: director Kirby Malone, multimedia designer Gail Scott White, stage manager Kira Hoffmann and production manager Dan Hobson, in collaboration with Russian-American painters Komar & Melamid, New York composer (and Columbia professor) Dave Soldier, German conductor Sybille Werner, Italian librettist Maita di Niscemi, a small chamber orchestra and an ensemble of singer-actors. Harris Theatre, Fairfax VA. (Fall 2001)

  Experimentation with digitally animated oil paintings interacting with a conductor, musicians and vocalists, and moving scenery; “show control” testing of miniDV decks for image sequencing and live mixing.

• Multimedia Dance Workshop: multimedia designer Gail Scott White in collaboration with choreographer/dancer Jane Franklin, multimedia theatrical adviser Kirby Malone, and production manager Dan Hobson, Center for the Arts Concert Hall stage, Fairfax VA, and Dance Place, Washington DC. (November 2001)

  Exploration of dancers in shadowplay filmed in digital video, projected in montage with roadside location video, interacting with live dancers.

• Research Trip to Duke University to Observe Multimedia Theatrical Adaptation of Don DeLillo’s Novel, Mao II: project directors Kirby Malone and Gail Scott White attended performance, observed technical configuration of the excellent multiple projections onto unconventional surfaces (wire mesh, crumbled plaster). Met (and continue to correspond with) the production’s adapter/producer/director, Jody McAuliffe, and the video designer, William Noland, who has traveled twice in reciprocal visits to Fairfax for further ongoing discussions, a comparing of multimedia designers’ notes, so to speak. Both McAuliffe and Noland are professors at Duke, Theater/English and Visual Arts, respectively. Duke University, Durham NC. (April 2002)

• “Bodies-as-Screens” Multimedia Workshop: multimedia designers Gail Scott White and Kirby Malone, in collaboration with actors Liana Camper-Berry, Chris Parsons and Amelia Winger-Bearskin. Multimedia Performance Studio, Fairfax, VA. (Summer/Fall 2002)

  Experimentation with digitally filming and photographing actors with video projected onto their bodies, creating prototypes for interactive “projected characters.”
• **Multimedia Performance Scenographic Research and Brainstorming Sessions**
  with artistic director Benny Sato Ambush, director Rick St. Peter, set designer Ron Keller (of Virginia Commonwealth University), and multimedia designers Gail Scott White and Kirby Malone. TheatreVirginia, Richmond VA. (Summer/Fall 2002)

• **Extensive and intensive research into the state of the art of video projectors**
  by Kirby Malone and Gail Scott White, including consultation with Sid Lissner of Audio-Visual Washington, a local media equipment supplier, and with projections designer Ruppert Bohle (who lived in N. Adams MA, but has now returned to Germany): comparisons of LCD (liquid crystal display) and DLP (digital light projector) systems, lumens (brightness), contrast ratio and other features (as they relate to the use of projectors in the performing arts, particularly companies and ensembles working with limited budgets, one of our chief concerns in all our research). AudioVisual Washington, Sterling VA; Mason Media Lab and Harris Theatre, Fairfax VA. (Ongoing 2002-present)

• **Multimedia Scenography/Lighting Design Research Sessions**
  with lighting designers Richard Winkler and Eric Chenault, director Kirby Malone and multimedia designer Gail Scott White, at Winkler’s studio in New York City. (Jan. and May 2003)

• **Discovering High End Systems’ Catalyst and DL1**: at the introduction of lighting designer Richard Winkler; project directors Kirby Malone and Gail Scott White, and lighting designers Winkler and Eric Chenault, met with Lee Magadini, NY Regional Manager for High End Systems, one of the premiere manufacturers of theatrical lighting equipment (especially so-called “intelligent” moving lights) in the world. The goal of this visit was to research and work with High End’s new Catalyst and DL1, “dream machines” for multimedia performance: the Catalyst instrument combines the kinetic flexibility of an intelligent light with video projection; with the DL1 media server, moving images can travel across a stage, rotate, scale/zoom, change color and intensity, and are stored and controlled through a “dedicated” Apple Mac G5. We also began discussions of mutual creative and technical interests, laying the foundations for possible future arrangements to work with the system in George Mason’s Harris Theatre, where MPS regularly creates and develops new work and research projects. High End Systems, New York City. (Jan. 2003)

  Experimented with image control and processing, brightness, contrast ratio, mobility, operation, projection onto a range of surfaces, media server controls, synchronization with imported applications, etc. At Lee Magadini’s request, we presented documentation of MPS productions and projects with innovative projection systems.
• **Multimedia Opera Workshop**: multimedia designers Gail Scott White and Kirby Malone in collaboration with Encompass New Opera Theatre, director Nancy Rhodes, set designer John Scheffler (Brooklyn College), and a chamber opera ensemble. Scheffler’s studio and Encompass, Brooklyn, and Connelly Theatre, Manhattan, NYC. (Winter 2003)

  Experimentation with DVD players, video switchers and LCD monitors, for image show control, with projections onto multiple set elements and the studio floor, interacting with singer-actors.

• **Opera America’s “New Media for New Opera” Forum**: Opera America’s Executive Director, Marc Scorca, invited project directors Kirby Malone and Gail Scott White to showcase and discuss some of the findings and discoveries of the research outlined here. Plaza Hotel, New York City. (Spring 2003)

  This forum was organized by Opera America in order to educate a gathering of producers of “new opera” from across the country about the scenographic and dramatic promise which “new media” hold for groundbreaking stagings of, and approaches to, innovative opera and music theater.

• **Multimedia Performance Research Session** with Whit MacLaughlin, artistic director of New Paradise Laboratories, multimedia designer Gail Scott White, director Kirby Malone, Philadelphia PA. (Spring 2003)

  Discussed prospects for development of multimedia production in the context of ensemble theater. (MacLaughlin was a founding member of the Bloomsburg Theatre Ensemble in Bloomsburg PA.)

• **Multimedia Scenographic/Montage Research Discussion** with Peter Greenaway, British director of film and opera; Peggy Parsons, Film Curator, National Gallery; Kelly Gordon, Film Curator, Hirshhorn Museum; project directors Kirby Malone and Gail Scott White. Hirshhorn, Washington DC. (Spring 2003)

  Discussed Greenaway’s mammoth film “project,” *Tulse Luper*, an ongoing development of interactive multimedia modules that connect film, history, and popular (especially visual) culture. Also discussed his earlier films, his narrative and montage structures and experiments, his collaborations with composer Michael Nyman and others, and his theories on visual culture.

• **“Avant Beyond” Multimedia Performance Series**: project directors Kirby Malone and Gail Scott White conducted research for, and annotated compilation of, a series of more than thirty companies, ensembles, solo performance artists, musicians and others engaged in multimedia performance, such as Meredith Monk, Robert Lepage’s EX MACHINA, Anne Bogart’s SITI, Ping Chong, John

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Kelly, Theodora Skipitares, DJ Spooky, PJ Harvey, New Paradise Laboratories, Michael Franti and Spearhead, Janie Geiser’s Puppets and Ridge Theater. This series is conceived for the Center for the Arts complex’s Concert Hall, Harris Theatre and Theaterspace; it is intended to increase and enrich the audience for these adventurous artists creating the future(s) of the performing arts, by presenting and producing the work in a series, “Avant Beyond,” rather than as isolated, individual events among more “mainstream” fare. (Summer/Fall 2003)

• **Multimedia Scenography Workshop** with lighting designer Dan Hobson, stage manager Kira Hoffmann, director Kirby Malone, multimedia designer Gail Scott White, assistant director Chris Parsons, and an ensemble of eight singer-actors and seven musicians, Harris Theatre, Fairfax VA. (Jan. 2004)

  Exploring the integration of moving scenic elements (wagon stages, scrims, etc.) with multiple-projector video animation and live performance. Experimentation with plotting set design coordinates for aligning projections to set units. Developed and refined projection grid prototypes, tested color contrast on a range of projection surfaces, and investigated moving images in real time, in response to performers’ movements.

• **“Community of Practice” Web Site**: web designer Pat Kelly, director Kirby Malone, and multimedia designer Gail Scott White began developing a template for a web site designed to serve as an interactive tool for the collective creation and design of complex, multimedia projects. This template is adaptable to performance art, new opera and theater, multimedia dance and installations, films and videos, etc. The site will enable multiple teams of artists to communicate with each other, and exchange storyboards, schedules, shot lists, rehearsal notes, contact sheets, images, sound files, scripts, etc. This site is complemented by the ongoing development of a cyberculture web site, archiving annotated entries on theater, performance, new media and music, films and literature, as a tool for enriching cultural/visual literacy for artists, scientists, engineers, scholars and technicians creating new forms of multimedia performing arts. Mason Media Lab, Fairfax VA. (Ongoing 2003 to the present)

• **3D Animation Set Model Workshop**, directed by animator/multimedia designer Gail Scott White, in collaboration with animator Tate Siev Srey, and in consultation with director Kirby Malone and lighting designer Dan Hobson. Mason Media Lab and Harris Theatre, Fairfax VA. (Winter 2004)

  Employing the 3D application Maya (the same technology used by such Hollywood films as *Toy Story* and *Finding Nemo*), developed new approaches to, and examples of, “pre-visualizing” numerous versions of scenic designs in “cyberspace,” in concert with miniature tabletop models and storyboards, before actual construction begins.
• **Multimedia Architectural and Design Discussions** with architects Geoff Pingree, Ben Kishimoto and Steve Ziger, and designer/engineer Warren Arbogast, Fairfax VA. (Spring 2004)

• **Animatronic Research:** in order to explore the possibilities of incorporating robotic or animatronic characters and creatures into live performance, which could be programmed and triggered to perform in a lip-synched manner, director Kirby Malone met with Sean Luke, Tate Siev Srey and Chad Nelson of the Robotics Club (of George Mason University) to research the basics, logistics and challenges of “low-tech” robotics. Researched the mechanical, hydraulic, electrical, computer and other systems which typically make up the basic robot. (Spring 2004)

• **Multimedia Costume Workshop** with New York costume designer Paul K. Stolen, experimenting with costumes, wigs and special makeup as projection surfaces. Fine Arts Gallery and Harris Theatre, Fairfax VA. (Spring 2004)

• **Digital Audio Workshop** at The Basement Recording Studio (Fairfax VA) with producer Chris Andrews, producer/director Kirby Malone, composer/sound designer Sean Lovelace, composer/soprano Amelia Winger-Bearskin, and actors Mike Solo, Joshua McCarthy and Brianna Moran. (Winter/Spring 2004)

  Experimenting with compositions and sound designs incorporating sound samples, electronic instruments, acoustic instruments and vocals. Also developed new techniques for performing dialogue among live, recorded and lip-synched voices, creating and developing an aural “cinematic device” for theatrical performance.

• **Research Discussions with Rosco, Inc.:** project directors Kirby Malone and Gail Scott White met with Josh Alemany, lighting designer and Director of the Lighting Division for Rosco, Inc., a leading manufacturer and supplier of theatrical supplies (gobos, gels, scrims, other soft goods, etc.). Josh expressed his interest in our feedback as he helps chart Rosco’s ventures into the “digital age,” developing new theatrical products and services. A prominent subject of the discussions with Josh, and with lighting designer Richard Winkler, has been the development of a superior scrim for today’s (and tomorrow’s) video projections, which would retain the semi-transparent qualities of traditional scrims and gauzes, while providing a much brighter projection surface. We have theorized coating fibers with movie screen paint and possibly fabricating prototypes. Washington DC. (April 2004—discussions are ongoing.)

• **Multimedia Scenography Workshop** with lighting designers Richard Winkler and Dan Hobson, stage manager Kira Hoffmann, director Kirby Malone, multimedia designer Gail Scott White, soprano Kelly Wilson,
assistant director Chris Parsons, and an ensemble of ten singer-actors and five musicians, Harris Theatre, Fairfax VA. (May/June 2004)

Exploring the integration of scrims, gobos and other scenic/lighting effects with multiple-projector video animation and live performance.

• Multimedia Costume Workshop with Richmond designers Terral Bolton and Stephanie Lundy, and project directors Gail Scott White and Kirby Malone; further experimentation with costumes as projection surfaces. Fine Arts Gallery and Harris Theatre, Fairfax VA. (Summer/Fall 2004)

Tested projections onto an array of costume materials, from matte to reflective, and explored possible designs for costumes that can conceal and reveal projections.

• Ventriloquist Dummy/Sampled Voice Workshop: Sculptor Robin Hernandez created a life-size ventriloquist’s dummy, modeled on Alexander Graham Bell, for MPS to experiment with as a lip-synched character; with director Kirby Malone and composer/sound designer Sean Lovelace, experimented with vocal sound samples synched with the dummy’s jaw mechanism, and other movable parts. Such a “character” or “performer” holds promise as a counterpart or foil to live and projected characters. Yellow House Studio, Falls Church VA. (Summer/Fall 2004)

• “Show Control” Workshop with German projections designer and programmer Ruppert Bohle, director Kirby Malone, multimedia designer Gail Scott White, and multimedia artists Pat Kelly and Eric Brody. Mason Media Lab, Fairfax VA. (Summer 2004)

Comparative testing and exploration of the interactive media server Dataton Watchout, DVD players, and miniDV players for projection show control. Research into media development, compression, serving and live streaming.

• Digital Sound Sampling Workshop with composer Sean Lovelace, director Kirby Malone, multimedia designer Gail Scott White, and soprano Kelly Wilson. Mason Media Lab, Fairfax VA. (Summer 2004)

Exploring the integration of sampled sounds with live instruments and vocalists amplified by wireless microphones.

• 3D Animation Workshop: directed by multimedia designer Gail Scott White, collaborating with assistant multimedia designer Rebecca Kimmel, director Kirby Malone, and a team of twenty multimedia artists and animators
that included guest artists, undergraduate and graduate students, and seven student animators from Ewha Women’s University (Seoul, Korea). Mason Media Lab. (Summer 2004)

Experienced with approaches to combining 3D animation with live performers, including interaction, settings and backdrops, projected texts, shadowplay, dreamscapes, etc. Developed simulations and prototypes for working with alpha channels, particle dynamics, interactive 3D characters, and digital storyboards.

• **Multimedia Scenography/Performance Workshop** with director Kirby Malone, multimedia designer Gail Scott White, lighting designer Dan Hobson, stage managers Kira Hoffmann and Liz Welke, assistant director Chris Parsons, composers Kelly Wilson, Sean Lovelace, and Grant J. Wylie, and an ensemble of eight singer-actors and three musicians, Fine Arts Gallery and Harris Theatre, Fairfax VA. (Summer/Fall 2004)

  Exploring the integration of moving scenic elements (front and rear-projection, revolving turntables, rolling screens, scrims, globes, suitcases, costumes, etc.) with multiple-projector video animation and live performance.

• **Multimedia Venues/Network Research Discussions** with Olga Puntus, Belorussian theater artist; also a lawyer at the World Bank (Washington DC). She is meeting with MPS to explore European, Asian and other festivals, centers, theaters and other venues for future tours of MPS productions, and to begin to create a database of such venues for the project’s web site-in-the-works. Meetings in DC and Fairfax. (Fall 2004)

• **Multimedia Performance Research Sessions** with John Spitzer, Artistic Director of Fraudulent Productions (Washington DC), multimedia designer Gail Scott White and director Kirby Malone. MPS, Fairfax VA. (Fall 2004)

  Discussed historical precedents for multimedia performance, particularly Russian and German Theater of the 1920s.

• **Multimedia Scenographic and Performance Workshops**: ongoing, periodic workshops continuing the research conducted thus far, involving director Kirby Malone, multimedia designers Gail Scott White, Rebecca Kimmel, Eric Brody and Pat Kelly, lighting designer/production manager Dan Hobson, stage managers Kira Hoffmann and Liz Welke, lighting designer Richard Winkler, composers Sean Lovelace, Kelly Wilson, Grant J. Wylie, Matt McGarraghy and Viraj DeSilva, actors Mike Solo, Prince Rozario, Chris Parsons and Jen Haefeli, and other guest artists, graduate and undergraduate student artists, and alumni artists. Mason Media Lab, Fine Arts Gallery and Harris Theatre. (Jan.-August 2005)
• **Prototype Design for a Multimedia Theater**: MPS artists Kirby Malone, Dan Hobson, Gail Scott White, Kira Hoffmann and Mike Solo researched, and collectively speculated at length on, ideas for an “ideal” Multimedia Theater. [See Diorama plans.] (May 2004-September 2005)

• **Multimedia Research Sessions** with Darlanne Fluegel, actress, and professor in the School of Film and Digital Media at the University of Central Florida in Orlando, multimedia designer Gail Scott White and director Kirby Malone; focused on ways in which new media performing artists can help bring together other artists and educators in Film, Theater and Digital Media Programs, MPS, Fairfax VA. (Summer 2005)

• **Broadway Projection Master Classes (BPMC)**: projection designer Wendall Harrington invited MPS directors Kirby Malone and Gail Scott White as guest artists to the first annual session of BPMC, sponsored by *Live Design* (formerly *Entertainment Design/Lighting Dimensions*) and modeled on the Broadway Lighting Master Classes. Malone and White’s multimedia work for MPS and Cyburbia was featured in Harrington’s video, *Projection Design: An Overview*, which was screened at the conference, perhaps the first such gathering of projection and multimedia designers and new media artists, from across the country and abroad. Also at the conference, Malone and White met with Craig Burross of High End Systems, reviving past discussions exploring possibilities for MPS to experiment with High End’s Catalyst and DL1 (now DL2). Tribeca Performing Arts Center, New York City. (June 2005)
MPS artists Kirby Malone, Dan Hobson, Gail Scott White, Kira Hoffmann and Mike Solo have researched, and collectively speculated at length on, ideas for an “ideal” Multimedia Theater, as most American theaters are not well suited to the needs of multimedia production.

We have designed a utopian structure, the Diorama Theater, and compiled variations on a (100 ft. x 100 ft. floor plan) design that synthesizes the traditional, flexible “black box,” with other, more experimental conceptions: a “white box” (or “virtual cave”) with 360° projection screens, and a “green box” for use (with green-screen capabilities) as a soundstage for motion-capture, and film and video shoots.

This theater can be arranged in (at least) seven configurations, which are shown in plans on the following pages. The first image shows the second floor wrap-around catwalk/deck, which allows projectors to be positioned almost anywhere in the room. Most of the staging arrangements in the subsequent plans are familiar to theatergoers (end stage, thrust, arena, etc.), but we have named the Theater after one of its more unorthodox options, a diorama stage, with projection screens enclosing the stage on three sides.

The hypothetical designs we are at work on for this theater represent one of the most exciting and valuable components of our New Stage Technology Project, and they allow us to synthesize and coordinate much of what we are learning in our range of research and workshops. We approach this theater design as a 10,000 sq. ft. conceptual prototype for a theater that could be built anywhere, designed from scratch to accommodate the waves of new media into the hands of, and onto the stages of, innovative theatrical artists, encouraging their exploration of new directions in narrative and design.
TECH DECKS AND CATWALKS (SECOND FLOOR)
212 LIVE MOVIES
PROTOTYPE DESIGN FOR A UTOPIAN MULTIMEDIA THEATER

STADIUM
PROTOTYPE DESIGN FOR A UTOPIAN MULTIMEDIA THEATER

CAVE
CINEMA / LECTURE
It is not clear who makes and who is made in the relation between human and machine.

— Donna J. Haraway (1991)
New Media Designers

Some New Media Designers, Projection Designers and Multimedia Designers: artists whose work should be sought out, enjoyed and pondered

Julie Archer
Batwin & Robin
Ruppert Bohle
Bob and Colleen Bonniol
Zak Borovay
Ron Chase
Sage Carter
Michael Clark
John Conklin
Jason Czaja
dbox
Diller + Scofidio
William Dudley
Sarah Drury and Jen Simmons
Shelley Eshkar and Paul Kaiser
Leah Gelpe
Wendall Harrington
Jan Hartley
Beryl Korot
Elaine McCarthy
motiroti
Willam Noland
Kirby Malone and Gail Scott White
Laurie Olinder
Richard Pilbrow
Jake Pinholster
Jerome Sirlin
Rudi Stern
Dick Straker / Sven Ortel (Mesmer)
Karen TenEyck
Paul Vershbow

Artists

Some new media theater Directors, Composers, Writers, Artists, Companies, Groups, Gangs and Loose Affiliations from the present and (relatively) recent past

Reza Abdoh
Actors’ Gang
www.actorsgang.com
John Luther Adams
John Addams
JoAnne Akalaitis
Benny Sato Ambush
Laurie Anderson
www.laurieanderson.com
Steve Antosca
Robert Ashley
Blue Man Group
www.blueman.com
Pina Bausch
www.pina-bausch.de
Anne Bogart / SITI
www.siti.org
Bob Boilen
www.bobboilen.info
David Bowie
www.davidbowie.com
Glenn Branca
The Builders Association
www.thebuildersassociation.org
Carbone 14
www.usine-c.com/fr/carbone14
Ping Chong
www.pingchong.org
Martha Clarke
George Coates
www.georgecoates.org
Collapsible Giraffe
www.collapsiblegiraffe.org
Complicite
www.complicite.org
Culture Clash
www.cultureclash.com
Merce Cunningham
NEW MEDIA PERFORMING ARTISTS

Cyburbia Productions
www.cyburbiaproductions.com

Steve Dixon

DJ Spooky
www.djspooky.com
www.21Cmagazine.com

Paul Dresher

Dumb Type

DV8 Physical Theatre
www.dv8.co.uk

Rinde Eckert
www.rindeeckert.com

Atom Egoyan

Erik Ehn

Emergency Broadcast Network

Brian Eno

Jan Fabre

Laura Farabough

Karen Finley

Frederic Flamand/Le Plan K

Forced Entertainment
www.forced.co.uk

Richard Foreman/Ontological Hysteric Theatre
www.ontological.com

Forkbeard Fantasy
www.forkbeardfantasy.co.uk

Michael Franti

La Fura dels Baus
www.lafura.com

Coco Fusco

Peter Gabriel

Diamanda Galas

Frank Galati

GAle GAtes et. al.

Janie Geiser

Gertrude Stein Repertory Theatre
www.gertstein.org

Jon Gibson and Miriam Seidel
www.miriamseidel.com/violetfire

Philip Glass

Heiner Goebbels

Guerrilla Girls
www.guerrillagirls.com

Guillermo Goméz-Peña

Granular Synthesis

Peter Greenaway
www.greenaway.com
www.petergreenaway.net

Chris Hardman/Antenna
www.antenna-theater.org

Julia Heyward

Perry Hoberman

Holy Body Tattoo

Cynthia Hopkins

Naomi Iizuka

Impossible Theater

Elfriede Jelinek

John Jesurun

Bill T. Jones / Arnie Zane

Miranda July
www.mirandajuly.com

Sarah Kane

Paras Kaul

John Kelly

Knowbotics Research

Tina Landau

Laterna Magika
www.laterna.cz

Robert Lepage/Ex Machina
www.exmachina.qc.ca

Mabou Mines
www.maboumines.org

Tod Machover

Whit MacLaughlin/New Paradise Laboratories
www.newparadiselaboratories.org

Caden Manson/Big Art Group
www.bigartgroup.com

Christian Marclay

Richard Maxwell
www.nycityplayers.org

Jody McAuliffe

Charles L. Mee, Jr.
www.panix.com/~meejr
Bebe Miller  
Tim Miller  
Mind Over Matter Music Over Mind (MOM)  
www.musicovermind.org  
John Cameron Mitchell & Stephen Trask  
Ariane Mnouchkine/Theatre de Soleil  
Meredith Monk  
www.meredithmonk.org  
John Moran  
Multimedia Performance Studio  
www.avt.gmu.edu/mps  
National Black Light Theatre (Prague)  
negativland  
No Theatre  
Michael Nyman  
www.michaelnyman.com  
John Oswald  
Randall Packer  
Suzan-Lori Parks  
Pilon & Lemieux  
www.4Dart.com  
Travis Preston  
Steve Reich and Beryl Korot  
The Residents  
Ridge Theater  
www.ridgetheater.org  
José Rivera  
Mikel Rouse  
www.mikelrouse.com  
Rude Mechanicals  
www.rudemechs.com  
Todd Rundgren  
www.tr-i.com  
Rick St. Peter  
San Francisco Mime Troupe  
www.sfmt.org  
Scanner  
Carolee Schneemann  
Peter Sellars  
Jeffrey Shaw  
www.jeffrey-shaw.net  
Theodora Skipitares  
Sledgehammer  

Anna Deavere Smith  
Elizabeth Streb  
Dave Soldier  
www.mulatta.org  
Soon 3  
John Spitzer/Fraudulent Productions  
www.fraudulent.org  
Squat Theatre  
Squonk Opera  
www.squonkopera.org  
Stationhouse Opera  
www.stationhouseopera.com  
Studio Scarabee  
Survival Research Laboratories  
www.srl.org  
Julie Taymor  
Tectonic Theater Project  
Fiona Templeton  
www.fionatempleton.org  
D.A. Therrien/ Crash Art  
Theatre X  
Basil Twist  
Luis Valdez/ El Teatro Campesino  
www.elteatrocampesino.com  
Bill Viola  
i.e.VR (The Institute for the Exploration of Virtual Realities) (U. of Kansas, Lawrence)  
www.ku.edu/~ievr/  
Roger Waters  
www.roger-waters.com  
Cathy Weis  
Mac Wellman  
Darron West  
www.siti.org  
Robert Whitman  
Robert Wilson  
www.robertwilson.com  
Wire  
George C. Wolfe  
Wooster Group  
www.thewoostergroup.org  
Yubiwa Hotel  
Pamela Z.  
Mary Zimmerman
RESEARCH WEB LINKS

Projectory, “a discussion group and resource for those involved in...the creation of Projection Design, live events, dance, film, rock concerts, touring shows, sports, and architectural applications.”  
http://groups.yahoo.com/group/Projectory

ZKM Center for Art and Media (Karlsruhe, Germany)  www.zkm.de

Media Art Net (Germany)  www.medienkunstnetz.de

Rhizome (NYC)  www.rhizome.org

Ars Electronica (Austria)  www.aec.at

Boston Cyber Arts Festival  www.bostoncyberarts.org

Centre for Performance Research (Wales)  www.aber.ac.uk/~cprwww

Performa/Performa 05 (NYC)  http://performa-arts.org

Arts Archives, “an international digital moving image resource for performance practice research” (UK)  www.arts-archives.org/index.shtml

Dedale “is a platform promoting production and experimentation in the fields of innovating artwork and new media.” (France)  www.dedale.info

Digital Performance Archive (UK)  http://dpa.ntu.ac.uk

Alternative Theater  www.alternativetheater.com

Digital Performance, “the online magazine for artists embracing technology,” (NYC)  www.digitalperformance.org

Museum of the Moving Image tribute (UK)  http://easyweb.easynet.co.uk/%7Es-herbert/momiwelcome.htm

Bill Douglas Centre for the History of Film and Popular Culture (UK)  www.centres.ex.ac.uk/billdouglas

Media History Project  www.mediahistory.umn.edu

Early Visual Media  www.visual-media.be

SIGGRAPH  www.siggraph.com

CGTalk  www.CGTalk.com

Meyerhold Center (Russia)  http://meyerhold.theatre.ru/english/performances/revizor

Meyerhold Memorial Museum (Russia)  www.meyerhold.org


On Meyerhold and The Theatre Theatrical  www.theatrehistory.com/russian/meyerhold002.html

On Meyerhold and Mayakovsky
http://freespace.virgin.net/drama.land/projects/Academic/meyerhold

Yuri Lyubimov, Director (Russia)  http://www.lubimov85.ru


Piscator’s Political Theater (Germany)  www.erwin-piscator.de

Svoboda and Scenography (UK)  www.scenography.co.uk/josef_svoboda.php

Svoboda at Media Art Net (Germany)  www.medienkunstnetz.de/artist/svoboda

Laterna Magika (Prague)  www.laterna.cz

Federal Theatre Project Collection, George Mason University Libraries  www.gmu.edu/library/specialcollections/federal.html

Federal Theatre Project informational sites:
www.novaonline.nv.cc.va.us/eli/spd130et/federaltheatre.htm (VA, US)
www2.let.uu.nl.solis/ams/xroads/1theatre.htm (Utrecht, Netherlands)
SUGGESTED READING (Also see www.cyburbiaproductions.com/books)

NEW MEDIA AND FILM

The Magician and the Cinema, Erik Barnouw, Oxford University Press, 1981
The Panorama, Bernard Comment, Reaktion Books, London, 1999
Film Directing Shot by Shot: Visualizing from Concept to Screen, Steven D. Katz, Michael Wiese Productions, Studio City CA, 1991
Granophone, Film, Typewriter, Friedrich A. Kittler, Stanford Univ. Press, 1999
The New Media Reader, edited by Noah Wardrip-Fruin and Nick Montfort, MIT Press, 2003
New Screen Media: Cinema/Art/Narrative, edited by Martin Rieser and Andrea Zapp, British Film Institute, London, 2002 [with DVD]
New Media in Late 20th-Century Art, Michael Rush, Thames & Hudson, NY, 1999
Media-Art-History, edited by Hans-Peter Schwarz, Prestel/ ZKM|Center for Art and Media, Karlsruhe, Germany, 1997
Devices of Wonder: From the World in a Box to Images on a Screen, Barbara Marin Stafford and Frances Terpak, Getty Publications, LA, CA, 2001

3D ANIMATION

Maya® Character Animation, Jae-jin Choi, Sybex, Inc., Alameda CA, 2004
The Art of Maya®, T. Hawken, Alias | Wavefront, Toronto, Ontario, 2003
The Complete Animation Course, Chris Patmore, Barron’s Educational Series, Inc., Hauppauge, NY, 2003

TECHNICAL THEATER AND BOOKS BY DESIGNERS

Painting With Light, John Alton, Univ. of California Press, Berkeley, 1949 / 1995
The Speed of Light: Dialogues on Lighting Design and Technological Change, Linda Essig Heinemann Drama, Portsmouth NH, 2002
New Theatres for Old, Mordecai Gorelik, Samuel French, New York, 1940

Light on the Subject: Stage Lighting for Directors and Actors— and the Rest of Us, David Hays, introduction by Peter Brook, Limelight, NY, 1989


The Theatre of Robert Edmond Jones, edited by Ralph Pendleton, Wesleyan Univ. Press, Middletown CT, 1958

The Dramatic Imagination, Robert Edmond Jones, Theatre Arts Books, NY, 1941/1969

Towards a New Theatre: The Lectures of Robert Edmond Jones, transcribed and edited, with commentary, by Delbert Unruh, Limelight Editions, NY, 1992

The Stage Is Set, Lee Simonson, Theatre Arts Books, NY, 1932


The Scenography of Josef Svoboda, Jarka Burian, Wesleyan Univ. Press, Middletown CT, 1971

THEATER AND PERFORMANCE HISTORY

The Theatre and Its Double, Antonin Artaud, Grove Press, NY, 1958

Noise: The Political Economy of Music, Jacques Attali, Univ. of Minnesota Press, 1985

Puppets, Masks, and Performing Objects, John Bell, TDR (The Drama Review), Vol. 43, No. 3 (T163), Fall 1999, MIT Press [now available as a book from MIT]


The Empty Space, Peter Brook, Atheneum, NY, 1968/1987


On Edge: Performance at the End of the Twentieth Century, C. Carr, Wesleyan Univ. Press, 1993


Performance Art: From Futurism to the Present, RoseLee Goldberg, Thames & Hudson, NY, 2001


MEYERHOLD/EISENSTEIN/VAKHTANGOV

Russian and Soviet Theater 1905-1932, Konstantin Rudnitsky, Abrams, NY, 1988

Meyerhold the Director, Konstantin Rudnitsky, Ardis, Ann Arbor MI, 1981

Meyerhold on Theatre, translated, edited, with commentary, by Edward Braun, Eyre Methuen, London/Hill & Wang (FS&G), NY, 1969

The Theatre of Meyerhold: Revolution on the Modern Stage, Edward Braun, Drama Books Specialists (Publishers), NY, 1979


SUGGESTED READING

Eisenstein at Work, Jay Leyda & Zina Voynow, Pantheon Books/MOMA, NY, 1982
Evgeny Vakhtangov, compiled by Lyubov Vendrovskaya and Galina Kapteneva, translated by Doris Bradbury, Progress Publishers, Moscow, 1982
The Theater of Meyerhold and Brecht, Katherine Bliss Eaton, Greenwood Press, Westport CT/London, 1985

PISCATOR/BRECHT

The Weimar Years: A Culture Cut Short, John Willett, Abbeville, NY, 1984
Brecht on Theatre: The Development of an Aesthetic, Bertolt Brecht, translated by John Willett, Hill & Wang/Farrar, Straus & Giroux, NY, 1964
The Piscator Experiment: The Political Theatre, Maria Ley-Piscator, Southern Illinois Univ. Press, Carbondale, 1967
The Theatre of Erwin Piscator: Half a Century of Politics in the Theatre, John Willett, Holmes & Meier, 1979
Erwin Piscator’s Political Theatre: The Development of Modern German Drama, C.D. Innes, Cambridge Univ. Press, 1972

FEDERAL THEATRE PROJECT AND THE LIVING NEWSPAPER


THEORY

Simulations, Jean Baudrillard, Semiotext(e), NY, 1983
Society of the Spectacle, Guy Debord, translated by Donald Nicholson-Smith, Zone Books, NY, 1995
The Shifting Realities of Philip K. Dick: Selected Literary and Philosophical Writings, edited by Lawrence Sutin, Vintage, NY, 1995
How We Became Post-Human: Virtual Bodies in Cybernetics, Literature and Informatics, N. Katherine Hayles, Univ. of Chicago Press, 1999
Highbrow Lowbrow: The Emergence of Cultural Hierarchy in America, Lawrence W. Levine, Harvard University Press, 1988
Rhythm Science, Paul D. Miller a.k.a. DJ Spooky, That Subliminal Kid, MIT, 2004
Technics and Civilization, Lewis Mumford, Harvest/HBJ, NY, 1963
Technoculture, edited by Constance Penley and Andrew Ross, University of Minnesota Press, Minneapolis, 1991

War of the Worlds: The High-Tech Assault on Reality, Mark Slouka, Basic Books, NY, 1995

Under the Sign of Saturn, Susan Sontag, FS&G, NY, 1980


The War of Desire and Technology at the Close of the Mechanical Age, Allucquère Rosanne Stone, MIT, 1996


Edison’s Eve: A Magical History of the Quest for Mechanical Life, Gaby Wood, Knopf, NY, 2002

CYBERPUNK

Terminal Identity: The Virtual Subject in Post-Modern Science Fiction, Scott Bukatman, Duke University Press, Durham, NC, 1993

The Ultimate Cyberpunk, edited by Pat Cadigan, ibooks, distributed by Simon & Schuster, NY, 2002

Transit Lounge: Wake-up Calls and Travelers’ Tales from the Future, Ashley Crawford and Ray Edgar, editors; a 21•C/Interface book, Craftsman House, North Ryde, Australia, 1997

Escape Velocity: Cyberculture at the End of the Century, Mark Dery, Grove Press, NY, 1996


Mirrorshades: The Cyberpunk Anthology, edited by Bruce Sterling, Arbor House, 1986

A Selection of MAGAZINES AND JOURNALS

that cover new media more and less, or from time to time

American Theatre, Theatre Communications Group (TCG)
520 Eighth Avenue, 24th floor, New York NY 10018-4156, (212) 609-5900   www.tcg.org   tcg@tcg.org

HOTREVIEW.org online journal of theater criticism  www.hotreview.org/index.html

Live Design (consolidates Entertainment Design, Lighting Dimensions and SRO)
11 River Bend Drive South, Stamford, CT 06907
Subscriptions (for magazine and online newsletter):  www.livedesign.com

October, 611 Broadway, #610, New York NY 10012
Subscriptions: MIT Press  www.mitpress.mit.edu/october

PAJ: A Journal of Performance and Art, PO Box 260 Village Station, New York NY 10014
Subscriptions: MIT Press  www.mitpress.mit.edu/paj

Performance Research, c/o Linden Elmhirst, Dartington College, Totnes, Devon TQ9 6EJ UK
www.performance-research.net  performance-research@dartington.ac.uk
Subscriptions: Routledge Journals, Taylor and Francis  www.tandf.co.uk/journals

TDR: The Drama Review, NYU, 721 Broadway, 6th fl, New York NY 10003
Subscriptions: MIT Press  www.mitpress.mit.edu/tdr

Theater, Yale School of Drama/Yale Repertory Theatre, PO Box 208244, New Haven CT 06520-8244
www.yale.edu/drama/publications/theater  theater.magazine@yale.edu
Subscriptions: Duke University Press  www.dukeupress.edu/journals

Theatreforum, 9500 Gilman Drive, #0344, UCSD, La Jolla CA 92039
Subscriptions:  www-theatre.ucsd.edu/TF

Video Systems, PO Box 12901, Overland Park KS 66282-2912   www.videosystems.com

Wired, 520 Third Street, Suite 305, San Francisco CA 94107-1815   www.wired.com
A short compilation of web resources for
LIVE MOVIE PRODUCTION MANAGEMENT

Rosco Laboratories, film and theater lighting media, scrims, front and rear projection screens, offices worldwide
www.rosco.com

Rose Brand, drapery and fabric supply house, offices in New York and California
www.rosebrand.com

Projector Central, online clearinghouse for information, comparisons, pricing and merchants for video projectors (sends useful updates on the rapidly changing world of projectors)
www.projectorcentral.com

Dataton, Watchout multi-display production and presentation system, and other multimedia control devices.
www.dataton.com

Texas Instruments informational web site (Digital Light Processing)
www.DLP.com

High End Systems, intelligent lighting, digital lighting, and media server manufacturers, offices in Texas
www.highend.com

Scharff-Weisberg, multimedia staging, audio/video/lighting rentals, and consultation, New York
www.swinyc.com

AVWashington, audio-visual systems (“Avitecture”), consultation, Sterling, Virginia
www.avwashington.com

Christie Digital, manufacturer of projectors, Cypress, CA
www.christiedigital.com

Barco, manufacturers of projectors and display systems, Belgium, offices worldwide
www.barco.com

Gerriets International, projection screens, stage curtains & theatrical fabrics, Allentown NJ
www.gi-info.com

Lee Filters, film and theater lighting media, offices worldwide
www.leefiltersusa.com

Barbizon Lighting Company, film and theater supply house, nationwide
www.barbizon.com

I Weiss, drapery and fabric supply house, offices in New York
www.iweiss.com

Sapsis Rigging, stage rigging supply and design, offices in Pennsylvania
www.sapsis-rigging.com

McMaster-Carr, VERY extensive general hardware supplier, shipping locations throughout the U.S.
www.mcmaster.com
CONTRIBUTORS

ERIC BRODY received a Bachelor of Fine Arts degree in Digital Arts from the Department of Art and Visual Technology at George Mason University. He is a new media artist and 3D animator. He has conducted research in show control with the Multimedia Performance Studio, for whom he worked as assistant multimedia designer, animator and video operator for Silence & Darkness. His multimedia designs have been commissioned and exhibited by 1708 East Main in Richmond VA.

SUZANNE CARBONNEAU is a dance critic and historian whose writings have appeared in The Washington Post, The New York Times, and other publications. She directs the Institute for Dance Criticism at the American Dance Festival, and has served as Critic-in-Residence at the Joyce Theater in New York. Carbonneau is a Scholar-in-Residence at Jacob’s Pillow Dance Festival and the Bates Dance Festival, and she lectures and writes about dance for the John F. Kennedy Center for the Performing Arts, and other presenters across the United States. She is a dance consultant to the National Endowment for the Arts, where she has also served as a panelist. Carbonneau holds a Ph.D. in Performance Studies from New York University and is a Professor of InterArts at George Mason University.

RICK DAVIS is Artistic Director, Theater of the First Amendment/Center for the Arts, and Associate Dean of the College of Visual and Performing Arts at George Mason University. He worked at Baltimore’s Center Stage for six seasons as Resident Dramaturg and/or Associate Artistic Director, and co-founded the American Ibsen Theater in Pittsburgh. He has directed a wide variety of world premieres, regional premieres, and classics for TFA, including Anna Theresa Cascio’s 15th of July, Cellophane Xerox by Fred Gaines, Anthony Clarvoe’s The Living, Marlowe’s Doctor Faustus, and Ibsen’s John Gabriel Borkman. He has directed for Center Stage, Players Theatre Columbus, the Kennedy Center, Lake George Opera, Opera Idaho, Capital City Opera, the IN Series, and other companies. His writing has appeared in American Theatre, Theater, and other publications, and his co-translations of Ibsen (with Brian Johnston) have been produced across the country and are published by Smith and Kraus. He was educated at Lawrence University (BA) and the Yale School of Drama (MFA, DFA).

DAN HOBSON worked as lighting and scenic designer, as well as production manager, for many of the MPS shows documented in this book. He has been working in the theatrical realm for 26 years. His efforts include work as an actor, lighting, sound and set designer, as well as stage manager and technical director. Tossed with touring experience with dance and off-broadway tours throughout the U.S. and in the Far East, he brings a very diverse perspective to the integration of new technologies into the theatrical landscape. It has been his pleasure to help steer this project and assist in making it a bit easier for other creative minds to travel down a similar path.

KIRA HOFFMANN has directed stage management for MPS since 2001, when she first worked with the company as Production Stage Manager for Naked Revolution. She received her BA in Theater with a Concentration in Arts Administration from George Mason University’s Department of Theater (1994). Additionally, she is Production Stage Manager for the Virginia Ballet Company and Production Manager for Washington DC’s City at Peace. She has stage managed for Washington Opera, Spoleto Arts Festival, Wolf Trap Opera, and Theater of the First Amendment, and also held the position of Staff Stage Manager for the Center for the Arts’ Concert Hall at GMU. She has designed lights at the Warner Theater, Lisner Auditorium, Arena Stage, and the 9:30 Club. Kira taught Stage Management as an adjunct faculty member of GMU’s Department of Theater. She has worked as Company Manager for Theater of the First Amendment, since 1998. She is currently pursuing her Masters degree in Arts Management at George Mason University.

PAT KELLY began working in the computer graphic industry in 1990, as a designer for a graphics service bureau where he became a Graphics Manager. In 1998, he started working for an architectural firm creating 3D architectural renderings and CD-ROM-based multimedia presentations. When the dot.com craze began in 2000, he shifted focus to his multimedia skills as a web-developer. Shortly thereafter a government contracting company hired him away from his dot.com career to work as a Technologist for an e-government initiative to research and implement web-based enterprise management systems for the United States Geological Survey (USGS). In 2004, he moved into the intelligence sector to design and implement similar enterprise-wide management systems. In 2001, he began a side business creating 3D architectural renderings and animations. He received an MA in Digital
Arts from George Mason University. He designed the web site for Cyburbia Productions, and is creating a new site for Multimedia Performance Studio, which will host the electronic version of Live Movies.

SEAN LOVELACE worked with MPS in 2004 as a composer, performer, and sound designer for Cyburbia’s Time Traveler Zero Zero and Silence and Darkness. This past February he participated in the first Mid-Atlantic Laptop Battle held at the DC9 in Washington, D.C. In November he traveled to Philadelphia to participate in another regional laptop battle. He is an active member of the 804noise collective in Richmond, Virginia, and has participated in a number of their events including the Minijack festival as well as the annual Noisefest in which he performed with more than twenty other bands from all over the east coast. In March of 2005 the Washington, D.C. label Nextus Records released the compilation Electronic Music For People Like You that featured numerous tracks of Sean and his laptop-derived headphone-friendly sounds. Expansive, Sean’s collaborative installation with Milad Meamarian and Sean Walker was featured at the 123 Gallery at George Mason University in November of 2005. He is currently working on an album that will be released on Nextus. Sean contributed a track to Break In the Road, the hurricane relief benefit album featuring various DJ’s and beat makers who are members of Soulstrut.com. In May of 2006 he will graduate with a B.A. in Sociology from George Mason University.

WHIT MACLAUGHLIN is an OBIE- and Barrymore Award-winning creator of performance theatre work. He serves as Artistic Director of New Paradise Laboratories. He has conceived, written, directed, and designed 9 original performance works with the company since its inception in 1996. Prior to his founding of NPL, he was a charter member, for 17 years, of the Bloomsburg Theatre Ensemble, originally under the artistic direction of famed theatre teacher Alvina Krause. He is a recipient of a Pew Charitable Trust Fellowship in Performance Art (2002), an NEA/Pennsylvania Council on the Arts Artistic Advancement Grant (1989-90), and a Pennsylvania Council on the Arts Fellowship Award (2003). He received an OBIE award in 2002 for The Fab 4 Reach the Pearly Gates and a Barrymore Award in 2000 for the World Premiere of Mary Fengan Gail’s Drink Me at the Interact Theatre. MacLaughlin’s work has been presented at the Ontological Theatre and PS 122 in NYC, at the Walker Art Center in Minneapolis, the Andy Warhol Museum in Pittsburgh, as well as at residencies in a variety of colleges and universities all over the country. He has been commissioned by the Philadelphia Live Arts Festival and the Tony Award-winning Children’s Theatre Company of Minneapolis. Coming in 2007 will be a collaboration with Actor’s Theatre of Louisville for the Humana Festival of New Plays and Chinese-American playwright Alice Tuan with a piece about bachelor/bachelorette parties called Playtime. He graduated with a BA in Buddhism from Northwestern University, and an MFA in directing from Virginia Polytechnic University. He has studied Suzuki Actor Training Method in Toga-mura, Japan.

KIRBY MALONE is a writer, director and multimedia designer, and teaches Cyberpunk and Performance Studio, as a professor of InterArts in the Department of Art and Visual Technology (AVT) at George Mason University, where he serves as Director of MPS. He is the co-founder/director, with Gail Scott White, of the performance and design company, Cyburbia Productions. His work has appeared at the Brooklyn Academy of Music’s NEXT WAVE Festival, Seattle Rep, Arena Stage, Baltimore Theatre Project, Center Stage, Peabody Chamber Opera, Theatre Cornell, Painted Bride Art Center, Banff Centre/School of Fine Arts and Minnesota Opera’s OPERA TOMORROW Festival. Directing credits include the original productions Silence & Darkness, a live movie for the cell phone age; Time Traveler Zero Zero: A Story of John Titor; Auto-Bodies; The Pleasure Raiders; and Columbus, a ghost story; Linda Hartinian’s adaptation of Philip K. Dick’s Flow My Tears, the Policeman Said; and the operas Chatter & Static by Paul Mathews, The Defendants Rosenberg by Ari Benjamin Meyer, and Komar & Melamid’s Naked Revolution, composed by Dave Soldier. He has created multimedia designs for Bertolt Brecht’s Caucasian Chalk Circle, Odón von Horváth’s Judgement Day, Mac Wellman’s Bad Infinity, Anna Deavere Smith’s House Arrest, Marlene G. Mayer’s Elta Jenks and Theatre X’s Bode-usami: Keepers of the Fire. His multimedia productions have been featured in two cover stories in American Theatre in 1987 and 1995, and his writings have appeared in Link and Boston Book Review. His profile of Rainer Werner Fassbinder was featured on NPR’s All Things Considered.
LAURIE A. MEAMBER writes on performance, aesthetics, technology, and consumer culture. Adopting a critical perspective, she has written several pieces on how the performing arts function as a means of cultural production, and on the marketing and consumption of aesthetics in daily life. Other texts have focused upon the use of technology in marketing (including web advertising and customer relationship management techniques) and the consequences for consumer culture. She has also published critiques of conventional marketing theory using postmodernist/poststructuralist thought. She is an Associate Professor of Marketing in the School of Management at George Mason University. Her work has appeared in Advances in Consumer Research, Marketing Theory, and Consumption, Markets & Culture, among other outlets. She is on the editorial review board of Consumption, Markets & Culture, and provides reviews for many journals and conferences. She has a B.A. in Sociology/Organization Studies, with a minor in Dramatic Art from the University of California, Davis; an M.B.A. from the University of California, Riverside; and, a Ph.D. in Management from the University of California, Irvine. In 1995-1996, she was a visiting scholar at Southern Denmark University, Odense, and participated in artistic events affiliated with Copenhagen 1996: Cultural Capital of Europe.


DAVE SOLDIER grew up in Carbondale, Illinois and played violin in Western swing bands and guitar in rhythm and blues groups, including Bo Diddley’s, and studied composition with Roscoe Mitchell and Otto Luening. He founded the seminal punk chamber group, the Soldier String Quartet. He formed the punk Delta blues band, the Kropotkins, the Thai Elephant Orchestra (with conservationist Richard Lair), the Andalusian band, the Spinozas, and Da Hiphop Raskalz, in which Mitchell and Otto Luening. He founded the seminal punk chamber group, the Soldier String Quartet. He formed the punk Delta blues band, the Kropotkins, the Thai Elephant Orchestra (with conservationist Richard Lair), the Andalusian band, the Spinozas, and Da Hiphop Raskalz, in which 6-8 year olds in East Harlem write and play their own compositions. Soldier’s compositions include The People’s Choice Music: the most wanted and unwanted songs in collaboration with artists Komar & Melamid; A Soldier’s Story and Ice-9 Ballads, collaborations with Kurt Vonnegut; repertoire for musically naïve children (Matarile in West Harlem, the Tangerine Awkestra in Brooklyn); repertoire performed on specially designed instruments by songbirds; and the song cycles/oratorios/operas Smut for medieval homoerotic Latin poetry, The Apotheosis of John Brown, and Naked Revolution with Komar & Melamid, many of which are available through Mulatta Records <www.mulatta.org>. Soldier has recorded/composed/arranged for television and film (Sesame Street, I Shot Andy Warhol), John Cale, Guided by Voices, David Byrne, and many others, appearing on more than fifty CDs. He received a Ph.D in neuroscience at Columbia University, where he is a professor in the Neurology, Psychiatry, and Neuroscience departments, and heads a lab studying synaptic properties and Parkinson’s Disease.

MIKE SOLO is a musician and actor, and creates graphic design and digital art as Eyes Wide Open Designs. He is a company member and the resident graphic designer of Cyburbia Productions, for whom he played the title role of John Titor in Time Traveler Zero Zero: A Story of..., and also performed in Silence & Darkness. He has been a member of the bands Lifelike, Plan B Genius, Tiger Shark and...
THOMAS STANLEY is an assistant professor of InterArts in the Department of Art and Visual Technology at George Mason University. He received his MA in Ethnomusicology at the University of Maryland, College Park, where he is completing doctoral research on emerging performance practices. He is co-author of *George Clinton and P-Funk: An Oral History* and has written and lectured extensively on radical forms of Black musical expression and their role as arenas for an underground discourse on the essentially philosophical questions that are the preoccupation of cosmologists and mind-body theorists. As an artist, Stanley has attempted to exploit the capacity of music for anchoring, framing, and energizing our subjective experience of macrotemporal texture (history). Currently, within the trio Mind Over Matter Music Over Mind, he constructs and deploys sampled and electronically generated music against a backdrop of appropriated video material. MOM² performances offer an occasion for an interior remapping of the boundaries of mental health. This most recent phase of Stanley’s sonic-craft evolved out of the performance troupe Noumenal Lingam, a multi-genre ensemble he organized in 1993 to provide a musical and dramatic space for his librettos. Noumenal Lingam’s illustrious crusade is highlighted by the production of *Powerball: When the Blind Stumble it is Not for Lack of Light — a natural history of human error*, and the electronic composition *Barking Dog, Laughing Squirrel*, used as a closing theme for a televised network crime drama featuring ample amounts of gratuitous sex and violence.

GAIL SCOTT WHITE is a multimedia designer, sculptor, and animator. As a professor of digital arts at George Mason University, she teaches 3D animation and 2D still and motion graphics, and serves as Associate Director of the Multimedia Performance Studio. She has also taught sculpture and digital arts at Cornell and Colgate Universities. She has created multimedia design for Komar & Melamid’s *Naked Revolution*, Cyburbia Productions’ *Silence & Darkness* and *Time Traveler Zero*, and Encompass New Opera Theatre’s *The End of A World* and *A Full Moon in March*. Her collaborations with choreographers include *Nude Tumbling Down a Staircase* with Byron Suber, and *In the Blink of an Eye* with Jane Franklin Dance. She has exhibited at A.I.R. Gallery and the Alternative Museum (NYC); the Everson Museum (Syracuse NY); Stone Quarry Hill Art Park (Cazenovia NY); 1708 Gallery (Richmond VA); Dance Place (Washington DC); Rhode Island School of Design; and Exposicion Binacional Arte Paraguayano-Americano, Ascuncion, Paraguay. She created a permanent outdoor architectural installation for Ithaca Commons in Ithaca, NY. Her work was featured in the exhibition *Art on the Digital Edge* at the Academy Museum (Easton, MD), and in her solo exhibition of large-scale digital prints, *Transgenic Beings*, at the Krasnow Institute for Advanced Study (Fairfax VA). She was awarded an Artist’s Fellowship from the Virginia Commission on the Arts, and a Residency at Sculpture Space (Utica NY). Her multimedia collaborations with Kirby Malone were featured in *Projection Design: An Overview*, a video by Wendall Harrington, which premiered at the Broadway Projection Master Classes at the Tribeca Performing Arts Center in New York City in June 2005.
New media theater and performance are nothing if not collaborative. And yet, most artists working in this field, especially in experimental and grassroots companies, lack the financial resources necessary for sustained new technology initiatives.

If an enlightened affiliation of venture philanthropists was to assemble a fund which they would distribute to a group of adventurous multimedia performance companies and ensembles, these philanthropic “angels” would enable new media artists to change the proverbial “face of the American theater.”

Such a program would allow new media theater companies to cover production costs and to pay a team of artists (writers, directors, singers/actors/dancers/musicians, composers, designers, animators, film and video artists, production and stage managers, dramaturgs, technicians, engineers, etc.) a “living wage” as they research, develop and perform new media works.

If you, or anyone you know, or anyone you ever heard of, would like to discuss or participate in this utopian program for opening doors to the future of new media theater and performance, please contact Multimedia Performance Studio at MSN 1C3/C200 College Hall, George Mason University, Fairfax VA 22030 or at kmalone@gmu.edu, and we would be delighted to meet with you.

A CALL FOR

VENTURE PHILANTHROPISTS

Live Movies: A Field Guide to New Media for the Performing Arts is also available online at www.avt.gmu.edu/mps

For more information:
kmalone@gmu.edu | (703) 993-8865
Kirby Malone and Gail Scott White continually challenge the boundaries of live performance, art and creativity by embracing and artistically employing a full spectrum of dynamic media. Live Movies is a vitally original and compelling guide to the synergistic blending of theater, film and new technologies that is characteristic of their work in the Multimedia Performance Studio and Cyburbia Productions. Intellectually challenging and intuitively clear. Live Movies is an essential read.

— Darlanne Fluegel, Actress, and Professor in the School of Film and Digital Media, University of Central Florida

Multimedia Performance Studio is where new kinds of theater — the edge, the synesthetic, the new that finds its way into what makes theatre great — is truly happening. This crucible for performance art is a beacon for the whole theatrical world.

— Richard Winkler, Lighting Designer

Malone and White, of MPS and Cyburbia, weave and integrate stunning multimedia imagery into the fabric of theatrical storytelling with boundless imagination and conceptual boldness. They are artistic and technical alchemists whose visual landscapes interact with live actors, music, sound, lighting and scenography to synthesize new languages of performance. What they do is new jack theater that packs a memorable wallop.

— Benny Sato Ambush, Director, Producer, Educator

Kirby Malone and Gail Scott White

LIVE MOVIES

A Field Guide to New Media For the Performing Arts

edited by

Kirby Malone and Gail Scott White

Multimedia Performance Studio

Department of Art and Visual Technology
College of Visual and Performing Arts

George Mason University

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Documenting Multimedia Performance Studio’s New Stage Technology Project