The Genealogy of Digital Performance

Those who forget the past are doomed to reboot it. . . . To know where we're going, we need only look in the rear-view mirror.
—MARK DERY

Introduction

Throughout our research, we have attempted to question and discern what is genuinely new in the ontology of new media technologies and their application within the performance arts. As we argue later, the computer does give rise to unique artistic modes of expression and new generic forms of networked and interactive performance, and we dispute the contentions of writers such as Matthew Causey, who declares, "There is nothing in cyberspace and the screened technologies of the virtual that has not been already performed on the stage." But equally, it is acknowledged that in digital performance the computer is commonly employed as an agent for the remediation of old and established artistic forms and strategies rather than as a means of originating authentically new performance processes and phenomena.

New media commentators have frequently taken polar positions, pronouncing computer technologies either as revolutionary and heralding radical new paradigms or as the emperor's new clothes dressing the same old techniques and models. This critical divide is dependent upon differing attitudes and perspectives that are both culturally and ideologically formulated. The sense of the "newness" of computer technologies is clearest when they are considered and contextualized as media of significant social, cultural, and artistic change. In this sense they can be seen to generate a genuine reevaluation of models and a rethinking of artistic and communicational techniques and paradigms. But when computer technologies are considered more dispassionately in relation to older communications media and artistic forms, it is relatively easy to draw close parallels and thereby argue the contrary.
Both critical positions are thus equally logical and sustainable, a point that Sandy Stone has touched upon in her discussions on cyberspace where she poses two possible answers to the question, "What's new about networking?" The first is "Nothing," since the tools differ little from technologies such as the telephone, but the second is "Everything," since networking has transformed ideas of cultural and performative space. "Computers are arenas for social experience and dramatic interaction, a type of media more like public theater, and their output is used for qualitative interaction, dialogue and conversation. Inside the little box are other people." In examining the complex history of multimedia performance and its antecedents, it is not our intention to adopt a dispassionate or cynical "it's all been done before" position. Susan Greenfield warns of an inflexible and conservative "crystalline intelligence" that can only relate new technologies to old ones, and Theodore W. Adorno reminds us "nothing is more damaging to theoretical knowledge of modern art than its reduction to what it has in common with older periods." But looking back, particularly at the early-twentieth-century avant-garde, brings into sharp focus an historical landscape littered with a surprising amount of complementary work, albeit within different contexts, and using pre-digital technologies.

Echoes of Bauhaus

This fact was highlighted during a highly charged and, for the artists, uncomfortable discussion following a performance demonstration by brothers Noah and Seth Riskin during the Performative Sites conference at Penn State University in 2000. The brothers had discussed their work at great length before the performance, and suggested that it broke new ground. Seth Riskin's solo performance demonstration used geometrically shaped light projections, which beamed out from a number of lamp sources attached to his futuristic bodysuit. A kinetic "light sculpture" was created by manipulating the lighting shapes and sources; by altering their visual scales with Riskin's movements towards and away from an upstage screen; and by projecting the light beams out onto the walls and ceiling of the auditorium. In the post-demonstration discussion, the artists were critically attacked both for their earlier intimations that they could communicate telepathically and for their claims that their work constituted innovative use of technology to create a unique and spiritualized experience. One delegate, a leading performance studies academic, stopped not far short of accusing them of charlatanism, suggesting that their claim to technological originality was disingenuous since the performance derived directly from the work of German Bauhaus artist and choreographer Oskar Schlemmer.

Schlemmer's work, including his 1923 "light plays" (with Ludwig Hirschfeld-Mack and Kurt Schwerdtfeger), which the Riskin brothers' performance echoed, presents an important precursor to many current explorations in digital performance. Experimenting with Adolph Appia’s ideas on light, Gordon Craig’s notion of the Übermarinette, and his own conceptions of space, line, and plane, Schlemmer took narrative, spatial, and choreographic abstraction to new heights during the 1920s. He designed robotic costumes for the Futurist dance The Triadic Ballet (1922); utilized mechanical devices to move flat, metallic figures rapidly around the stage on wires; and enclosed a female performer's head and hands in science-fiction-style silver spheres for Mental Dance (1929), staged within a corrugated tin-plate set. Schlemmer also prefigured ideas of avatars and artificially intelligent robots in his plans to create an artificial figure (Kunstfigur) without wires. This would be remote controlled, or even self-propelled: "almost free of human intervention" and permitting "any kind of movement and any kind of position for as long a time as desired."

In his Stäbentanz (The Pole Dance, 1927), Manda von Kreibig danced holding two poles around two meters long, with another eight poles attached to the costume, emphasizing a geometric choreography where the human body was "literally reduced to being the carrier of the line." Schlemmer's radical reorientation of the topography of the body in space, and its reduction to two-dimensional planes equates with the reconfiguration of the dancing body within digital environments and cyberspace. M. P. L. Palumbo's study of New Words: Electronic Bodies and Architectural Disorders (2000) relates Schlemmer's work to current virtual body paradigms, describing Schlemmer as a performer whose body is "extended through space" using technologies that merge and unite scenic elements into single spatial and geometric forms, while Sue-Ellen Case links what she calls his "cyborgic" pole extensions to the quasi-prosophy of the computer mouse.

Johannes Birringer suggests that Schlemmer's Kunstfigur ballets effected a deformation of familiar movement and physiology and a fissured "double abstraction... between inner and outer realities." He also links Schlemmer's theoretical sketches for his Tänzerinmensch to the cyborgic body designs on Stelarc's website that accompany his statement "The Hollow Body would be a better host for technological components." For Pelle Ehn, the optimistic vision of social and artistic progress promoted by the Bauhaus movement offers a model for a contemporary equivalent of the unification of art and modern technology, which he articulates in his "Manifesto for a Digital Bauhaus" (1998).

The Historical Lineage of Digital Performance

Theater, dance, and performance art have always been interdisciplinary, or "multimedia," forms. For centuries, dance has been an intimate marriage with music and has included the visual elements of sets, props, costume, and lighting to enhance the body in space. Theater, from its ritual roots through classical manifestations to contemporary experimental forms, has similarly incorporated all of the above, while additionally foregrounding the human voice and spoken text. Throughout the centuries, theater has been quick to recognize and utilize the dramatic and aesthetic potentials of new technologies:
Theatre has always used the cutting edge technology of the time to enhance the "spectacle" of productions. From the early Deus ex machina, to the guild-produced Medieval pageant wagons, to the innovation of perspective painting and mechanical devices on Italian 16th Century stage sets, to the introduction of gas, and later electric, lighting effects, to the modern use of computer to control lighting, sound and set changes, technology has been used in ways that have created incredible visual and auditory effects.12

The roots of digital performance practices can therefore be traced back through decades, even centuries of performance history. The same is true of computer arts, as Oliver Grau demonstrates persuasively in Virtual Art (2003), undertaking a near-archaeological analysis of the lineage of Virtual Reality and immersive environments through two millennia, from the friezes of ancient Pompeii in ca. 60 BCE to late-twentieth-century panoramic wallpaper vistas. Along the way, Grau visits fourteenth-century French frescoes, sixteenth-century Italian ceiling painting, post-Renaissance trompe l'oeil, and the panoramas of great artists, ancient and modern. Immersive and sensorial cinematic experiments and innovations are also traced, from the Cimarrona of the 1900 World Exhibition in Paris through Futurama at the 1939 World's Fair in New York and Cinemascope and 3-D films in the 1950s to the IMAX (Image Maximization) cinemas of the 1990s. Art and performance's relationship to technological change in distant history has also been mapped by Norman Klein, whose From Vatican to Special Effects compares the treatment of space in Baroque times to our understandings of cyberspace.13 A number of valuable anthologies and readers were published just after the turn of the millennium, which bring together historically important texts that foresaw or influenced new media theory and practice. These include Randall Packer and Ken Jordan's Multimedia: From Wagner in Virtual Reality (2001); Dan Harries's New Media Book (2002); Darren Tofts, Annemarie Jonson, and Alessio Cavallaro's Prefiguring Cybertecture: An Intellectual History (2002); and Noah Wardrip-Fruin and Nick Montfort's excellent (and epic) edited collection The New Media Reader (2003). The latter juxtaposes seminal texts by computer pioneers and media theorists against artists' writings, tracing historical parallels between their thoughts and works since World War II.

Digital performance is an extension of a continuing history of the adoption and adaptation of technologies to increase performance and visual art's aesthetic effect and sense of spectacle, its emotional and sensorial impact, its play of meanings and symbolic associations, and its intellectual power. Dance, ostensibly that most nakedly corporeal of all performance forms, has similarly been conceptualized as a continually evolving technological praxis, as the title of an article by Arnd Wesemann makes clear: "Mirror Images with New Media: The Story of Dance has Always Been the Story of Technology" (1997).

The dancer Loïe Fuller provides an interesting example, undertaking some extraordinary experiments from 1889 with the then "new technology" of electricity. Fuller, a contemporary of Isadora Duncan, performed wearing huge, diaphanous, semitransparent gauze robes and held long batons to extend the length of her arms (prefiguring Schlemmer's 1927 *The Pole Dance* and Stelarc's 2000 Extended Arms, which updates the image for the robotics age). As she danced, the billowing robes became a kind of "screen" on which were projected multidirectional, multicolored lights, including those emanating from a glass panel in the floor that lit her from below. The complex plays of light on the vast folds of material that extended far into space beyond the strict limits of her body transformed (or, in computer parlance, "morphed") the dancer's body shape and visual form as Fuller danced and span in circles. The then "high" technology of electric light combined with the "low" technology of hidden wooden extension poles to transform the flow of energy of the human body into an image of pure energy and light, which conjured metaphors of clouds, butterflies, and dancing fire.

Like today's digital dance artists, Fuller diminished the fleshliness of the body in order to transform its materiality (or to make it immaterial) and render it like a metamorphosing, liminal trace. The first modern dance choreographer to use new technologies in her work, she continued her experiments until 1923 (she died in 1928), incorporating film projections and shadow effects as a means of transforming her body shape in live performance, and even created a piece where she tried to get her costumes to glow like radium. Fuller's work can be seen as a kind of harbinger of the way Wayne McGregor uses stage lights in his solo Cyberg (1995) where lighting gobos fragment his dancing body, making it appear to morph from one shape to another, throwing sections of his body into shadow and illuminating others. Here McGregor, one of the leading lights of British digital dance, uses old technology to generate the effects of new ones, and to conjure visual echoes of one of dance technology's earliest pioneers.

**Wagner and the Total Artwork**

*Artistic Man can only fully content himself by uniting every branch of Art into the common Artwork.*

—RICHARD WAGNER, 1849

While writers such as Grau have traced precedents to digital arts stretching back through antiquity, we will begin our own analysis of the ancestry of digital performance in the nineteenth century, with Richard Wagner and his notion of the Gesamtkunstwerk (Total Artwork). Wagner's vision, expressed in writings such as *The Artwork of the Future* (1849), was the creative unification of multiple artforms: theater, music, singing, dance, dramatic poetry, design, lighting, and visual art. Wagner's conception is central to the lineage of digital performance both in its advocacy for grand theatrical spectacle and in the paradigm of "convergence" that unites the Gesamtkunstwerk with contemporary understandings of the modern computer as a "meta-medium" that unifies all media (text, image, sound, video, and so on) within a single interface.15 Wagner's own version of the Gesamtkunstwerk, as expressed in his epic "music-dramas" (he disdained those who described his work as "opera") sought not only a synthesis of
artforms but also the Holy Grail of many multimedia endeavors: user immersion. Wagner attempted to engineer a wholly immersive audience experience through a variety of technical and artistic strategies, from hiding the orchestra out of view to negate any "alienation effect" to his use of hypnotically repetitive musical leitmotifs and sonorous, elongated chords. Wagner's immersive ambitions extended to the construction of his own theater, the Bayreuth Festspielhaus (opened in 1876), which was designed with a fan-shaped auditorium to ensure perfect sightlines from every seat, and which eliminated the visual distractions of traditional nineteenth-century theaters (pillars, balconies, boxes, gilding, and so on) to focus all attention on the stage action. The acoustically sophisticated theatre also utilized the latest innovations in stage machinery to intensify the illusion of Wagner's mythic images, such as mermaids swimming in the Rhine and the destruction of Valhalla. The hidden orchestra pit was (and still is) terraced in steep steps underneath the stage to separate the different instruments, and a huge curved cowl funnels the sound directly onto stage. Unlike in conventional theater orchestra pits, the music is directed first onto the stage itself in order to merge with the singers' voices, before the composite sound resonates back out into the auditorium. Wagner was thus the first theater producer to design and construct a sophisticated (and today still unique and powerful) audio "mixing" system.

Theater historians such as J. L. Styan consider Wagner to be the seminal influence on experimental theater, and the totalizing artistic vision of the Gesamtkunstwerk had a lasting and profound impression on subsequent theories and practices in twentieth-century performance. In 1919, the pioneering Dadaist montage artist Kurt Schwitters wrote, "I demand the complete mobilization of all artistic forces to create the Gesamtkunstwerk .... I demand inclusion of all materials .... I demand the revision of all the world's theatres." In 1930, Meyerhold wrote in The Reconstruction of the Theatre (Rekonstruktia Theatra) that Wagner's ideas were once regarded as "purely utopian" but that he could now see that his ideas about the fusion of artforms and "all the magic of the plastic parts .... is exactly what a production should be." Just as Wagner had custom-built his Bayreuth stage and amphitheater-shaped auditorium, Meyerhold called for a destruction of the box-stage in order to achieve a dynamic spectacle "where there is no division of the audience into separate classes." In recent digital performance practice, Wagner's spiritual music-drama Parsifal (1882) was staged by Anja Diefenbach and Christoph Rodatz as Cyberstaging Parsifal (2000) in a highly distinctive interpretation that combines split projection screens and digital effects, numerous television monitors, and live and recorded singers (Figures 2.1 and 2.2). Commentators in darkened booths, lit only by angle-poise lamps, interject, using microphones to complicate the action. Sandy Stone, a leading feminist cyberculture commentator, paid ironic homage to Wagner's Götterdämmerung (1876) in her Cyberdämmerung (1997), a performance ritual presented as part of the "Apocalypse" residency on apocalyptic narratives held at the Banff Centre for the Arts. The climactic suicidal leap of Brünnhilde into the funeral pyre of her lover, Siegfried, is parodied in Stone's rock-and-roll stage dive into the audience.

Chapter 2

The idea of the total artwork artificated by Wagner would find many different advocates and forms in the early twentieth century, from Hugo Ball's "Cabaret Voltaire" to the theories of Antonin Artaud, to the designs for immersive multimedia theaters and performances conceived by the German Bauhaus artists. The complete reorientation of the conventional proscenium arch theater space through use of light and film projections was central to the theories of László Moholy-Nagy, and to the conception of Andreas Weintinger's "Spherical Theatre," Farkas Molnár's "U-Theatre," and Walter Gropius's "Total Theatre." In his plan for his "Total Theatre," Gropius wrote:

An audience will shake off its inertia when it experiences the surprise effect of space transformed. By shifting the scene of action during the performance from one stage position to another and by
using a system of spotlights and film projectors, the whole house would be animated by three-dimensional means instead of the "flat" picture effect of the customary stage. This would also greatly reduce the cumbersome paraphernalia of properties and painted backdrops.

The playhouse itself, made to dissolve into the shifting, illusory space of the imagination, would become the scene of action itself. Such a theatre would stimulate the conception and fantasy of playwright and stage director alike; for if it is true that the mind can transform the body, it is equally true that structure can transform the mind.21

The Bauhaus artists, whose first public exhibition was entitled Art and Technology—A New Unity (1923), were influential in questioning notions of space and space/time to enhance and reconfigure artistic and dramatic forms. Oskar Schlemmer worked, as he put it, to "break the narrow confines of the stage and extend the drama to include the building itself, not only the interior but the building as an architectural whole...we might demonstrate to a hitherto unknown extent the validity of the space-stage as spectacle."22 Gropius conceived a composite amalgam of art forms to create new "entries" imbued with what he termed an "architectonic spirit." In architecture itself, there would be a perfect unification of sculpture, painting, and architectural form leading to fantastical buildings of the future, "which will rise one day toward heaven from the hands of a million workers like the symbol of a new faith."23 "Technology," a word derived from the Greek work technê, meaning craft (also translated as skill or art) demanded that these Babel-like structures could not be built by unskilled laborers; but rather Gropius's million workers would be "a new guild of craftsmen."24 Although the subsequent seventy-year history of architecture bears testimony to the relative failure of his visionary project, a new guild of craftsmen and women far more than a million strong are now creatively engaged in the architectonic "new faith" of digital multimedia.