

Backwards and Forwards: Regression and Progression in the Production Work of i.e. VR

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Increasingly powerful and more affordable, computers and internet technology have opened up a broad cyber-vista, a landscape that has stirred the manifest destiny impulse in the collective American psyche. In the past decade, herds of hopeful young entrepreneurs rushed to stake their claim on the new digital landscape. Unfortunately for many, after the dot-com implosion of the past two years, the nature of this landscape proved to be red in tooth and claw. The former Clinton administration's Huey Long-like pledge of "a computer in every classroom" (and, presumably, "every kid a web-master"), while not yet a reality, is accelerating towards fulfillment.

Throughout the nineties, terms like "virtual reality," "cyberspace," and "new media," became crackling icons of the great promises that computer technology seemed to hold. Advertising and marketing executives cashed in on the sexy, futuristic appeal of these words by associating them with various consumer goods, services, and entertainment media. Yet despite—or perhaps, because of—the hopes and efforts of those who marketed virtual reality and other technologies, much of the data that seeped—and eventually gushed—into the cultural consciousness via various media was contradictory. Howard Rheingold, in his book, *Virtual Reality*, notes this contradiction and, to some degree, participates in it: "One way to see VR is as a magical window into other worlds, from molecules to minds. Another way to see VR is to recognize that in the closing decades of the twentieth century, reality is disappearing behind a screen" (19). Looking at how expanded use of computer technology will affect our culture in years to come he suggests a dichotomous, utopian/dystopian image of the future that may in turn create hopes and/or fears that are deceptive and possibly even destructive. "The genie is out of the bottle," warns Rheingold (19). Such a view offers only two possibilities: either virtual reality and similar technologies will lead to a celebrated "increase in human freedom and power" (388) or it will draw us

into a nightmarish, Baudrillardian hyperreality wherein “the territory no longer precedes the map, nor survives it” (Baudrillard 1). Such rhetoric loads this technology with high-stakes adrenaline, making it all the more alluring—at once thrilling and terrifying.

The utopian image, as Fredric Jameson suggests, endures by way of a persistent faith in science and the mythical, capitalistic imperative of progressive social evolution through a process of producing heuristic technology. The dystopian side of the dichotomy is the result of threads that are woven as deeply into the cultural fabric of America as our belief in salvation through science. It is the photo-negative or the reverse side of a devout materialist faith: our fear of what will result from scientific “progress.” There seems to be a deeply ingrained suspicion of what is collectively referred to as the “scientific community,” the same community that is credited with producing the atomic bomb and super viruses. The suspicion is that the power associated with the act of scientific creation and discovery engenders a greed, a hubris, or at least a certain myopia which in turn results in the destruction of the scientist, or worse yet, of those whom he or she sought to benefit. Such suspicion constitutes a thread of cultural narrative that can be traced back to Mary Shelley’s *Frankenstein* (and surely further, to *Faust*, the Tower of Babel, etc.) and continues up through Stephen Spielberg’s *Jurassic Park*, and beyond. In both the Shelley and Spielberg stories, the fictive monsters are the creations of certain advanced technologies, yet one of the ironies in the latter film is that sophisticated computer graphics enabled the makers of this film to unleash its prehistoric monsters on a public eager to be frightened by the terrors of technology. The film warns of the dangers of technology while simultaneously celebrating the wonders it makes possible. It encompasses what I call both a collision and collusion with technology, a technology that is simultaneously an attraction and an object of revulsion.

Fictional and factual data converge to promote ambivalence towards computer media and especially virtual reality. This media hype, both hopeful and frightening, produces “a tremendous sense of anxiety about the loss of familiar structures. People are technophobic, technophilic” (Fischlin 14). The chaotic society of the film *Strange Days* seems to belie the benefits of improved pilot training that virtual reality makes possible. The bleak landscape of William Gibson’s *Neuromancer* or Neil Stephenson’s *Snow Crash* seems to sour the benefits promised by virtual reality assisted medical procedures. How is one to react when dreams of vastly improved communication, information retrieval, and entertainment access mix with the nightmare of *Wild Palms*, *The Lawnmower Man*, or even E. M. Forster’s *The Machine Stops*?

While the film industry has literally and figuratively cashed-in on the computer age, on the wonders of its technology and the anxiety that accompanies it, contemporary theatre and drama have largely steered clear of both the tools of the computer age as a means of creation, and the issues surrounding the impact of an increasingly cyberized world on the individual and culture as a matter of thematic concern. The practice of theatre has, in large part, nervously avoided

utilizing the tools of this cultural and technological revolution, a fact examined by Twyla Mitchell in her essay, "Terror at the Terminal: How Some Artists View Computers." This is not to say that theatre makers do not use computers at all, but rather that the use of computers in production remains largely "behind the scenes," as it were, and deliberately outside the circle of attention of the audience. Such avoidance reinforces the unfortunate belief that theatre is, by definition, old-fashioned and conservative.

Yet throughout the 1990s, a small but growing number of theatre academics and artists began to utilize new media technologies not merely as devices for communication, visualization, and classroom presentation, but as visible and integrated elements within the performance event. In the work of these practitioners, computers are no longer "behind the scenes." They are the scenes. That is, interaction with computer technology becomes a vital part of the spectator's experience of the aesthetic event. While there has been little consensus regarding how to refer to these types of computer-aided productions, they are sometimes organized under broad terms like "cybertheatre" or "digital performance."

Far from being limited to a single kind of endeavor or any single theory of theatre, performance, or presence, computer-aided production has become, and is continuing to evolve as, a delightfully eclectic field of performance. Two recent books, Stephen Schrum's anthology, *Theatre in Cyberspace: Issues of Teaching, Acting, and Directing* and Michael Rush's *New Media in Late 20th-Century Art* (both published in 1999), give ample evidence of the breadth and variety of the tools, approaches, and styles currently being utilized in this hybrid form. Unsurprisingly, performance art (largely the focus of Rush's book) as a field has assimilated new media technology into its practices relatively quickly, while those organizations that focus on integrating computer media with the models and methodologies of traditional theatre (the focus of Schrum's book) remain comparatively few. Among the most notable of the latter are the George Coates Performance Works, a prolific organization centered in San Francisco (Starbuck); the Gertrude Stein Repertory Theatre, an ambitious company currently at work staging Stein's 1911 novel, *The Making of Americans* (Reeves); David Saltz's Interactive Performance Laboratory, whose recent productions include *Hair*, *Kaspar*, and *The Tempest* (Saltz 2001); and The Institute for the Exploration of Virtual Realities.

It is not my purpose to give a survey of the work of these organizations, but rather, to focus on the most recent evolution of one of these groups with which I have been intimately involved. In recent years, the evolution of this group has been simultaneously regressive and progressive. That is, over the past few years, The Institute for the Exploration of Virtual Realities (commonly known as "i.e. VR"), an organization that exists under the umbrella of the Department of Theatre and Film at the University of Kansas, has found it necessary to move backwards along the arc of its processual and technological trajectory in order that it might move forward again.

The origins of i.e. VR date back to 1994, when Professors Mark Reaney, Ron Willis, and I began work on a production of Elmer Rice's expressionistic play, *The Adding Machine*. In this production, actual physical sets were replaced by virtual scenography. The live actors performed before large rear-projection screens that displayed the swirling images of stereoscopically projected computer generated virtual worlds. These virtual worlds were constructed using Virtus WalkThrough Pro, a virtual reality software application that can be used to create three-dimensional architectural environments that the user can "move" through from a first-person point-of-view. This form of virtual reality operates in a manner not unlike the familiar flight simulators or the many varieties of "first-person-shoot-em-up" computer games like Quake or Unreal Tournament.

From *The Adding Machine* project, Reaney, Willis, and I formed i.e. VR, an organization dedicated to experimenting with the application of virtual reality and other computer technology to live theatre. Other productions soon followed the success of *The Adding Machine*. In 1996, we produced Samuel Beckett's *Play* and, a few months later, Arthur Kopit's *Wings*. Unlike *The Adding Machine*, in which the audience wore special polarized glasses to interface with 3D projections, in *Play* and *Wings* the audience wore head-mounted displays, or virtual reality goggles. Not only did these head-sets allow spectators to view the virtual environments and video (which were stereoscopically displayed on the two tiny television screens inside the head-sets), it also allowed them to look through these images to witness the live actors on stage before them.

After *Wings*, we were left contemplating the dilemma: "What do we do next?" The software that we had used for all previous i.e. VR productions (Virtus WalkThrough Pro) while fast and relatively easy to use, produced rather geometric, clunky, and unsatisfying graphics. We wanted to explore new software applications as a means of improving the graphic quality of our virtual scenography. Though "realism" was never a word we used to describe our productions, we wanted software that could render objects that looked more realistic, less cartoonish, than what Virtus would allow. As we discussed our future direction, the words "slick-looking" came up again and again.

Our difficulty with the software that we had been using up to that point was painfully pointed out by a glib quip from a spectator who wrote his opinion on an audience-response card. The card read simply, "Disney has better graphics." This, of course, is completely accurate, though not really a fair comparison. Setting aside the fact that Disney has hundreds of millions of dollars to work with, while we had the budget of an average state university theatre department, the graphics that Disney displays in films like *Toy Story* or *Dinosaurs* can easily be superior because they are not in real-time. Ours are. The difficulty with creating worlds for real-time virtual reality is that the more realistically detailed a world becomes, the longer it takes the computer to process each image. Make a world too detailed and real-time movement through that world will be so slow and jerky as to make any performance application impractical.

We decided that, in order to make our graphics more “slick-looking” and more compelling, we would, for the time being, have to sacrifice the real-time aspect of our virtual scenography. As it happened, our next project, *Tesla Electric*, a play by Canadian playwright David Fraser, sacrificed not only the real-time aspect, but also scenographic motility entirely. This proved to be a critical change in the direction of our work, for, as with Edward Gordon Craig’s theories of theatre, scenographic movement in i.e. VR’s brand of cyber-theatre had become a central issue in the creation of the *mise-en-scène*. In each of our previous productions, the designer and director had to confront and utilize the virtual scenography’s motive capabilities as an element that creates meaning through time. This resulted in a curious reconceptualization of scenographic function: while the actors in traditional theatre operate within a *performance* space, the actors in i.e. VR’s productions function within a *performing* space, that is, a space that *performs*.

For *Tesla Electric*, produced in 1998, we returned to the practice of using the rear projection screens and polarized glasses that we had used in *The Adding Machine*. The scenic elements were computer-generated slides, stereoscopically projected on three screens that were erected behind a stage in our black box theatre. Though they were static, the graphic quality of these images was far su-



Jeff Bachura as Nikola Tesla (left) and Becca Booth as Anne Morgan in i.e. VR’s *Tesla Electric*. University of Kansas. Photo: Mark Reaney.

perior to anything we had ever achieved. Instead of *Virtus*, we used a 3D-modeling software called *Design Studio* to model the scenic environments.

Joining our team for this project was Martin Moeck, a professor in the Department of Architectural Engineering at KU. Because the design team for this production was so large and the design process so complex and collaborative, we found it necessary to create a new means for the entire team to communicate on a regular basis. Because of busy schedules, daily face-to-face meetings were impractical. Instead, we set up, what was effectively, our own list-serve, allowing the entire production team, including the playwright in Canada, to be in constant communication. It became, in effect, an ongoing and non-stop production meeting.

In *Tesla Electric*, the design process typically worked this way: Reaney would announce on the list that he had started to design a certain scene and discuss his vision of the environment. I, as director, would reply with my thoughts on the scene, the environment, the characters, and the directions the scene was taking in rehearsals. Martin Moeck and the playwright would also contribute thoughts of their own. Reaney would then finish a rough 3D model of the scene and post it on our private web site. This allowed each of us to view the model and post comments, ask questions, or make suggestions. Each model usually went through a number of revisions before it was completed. Reaney would then upload the final version to the web site. At this point, the objects in the model had no textures and the lighting was only roughed-in. Though the models looked rather crude at this stage, they were still a great improvement over the models we had created in *Virtus*.

Martin Moeck would then download these finished files onto his computer and import them into *Radiance*. *Radiance* is a software application capable of producing impressive, photo-realistic graphic images. Using *Radiance*, Moeck would add textures to Reaney's model and insert the lighting effects. When finished, he would post the image on the web site, at which point another round of questions, comments, and suggestions would ensue. After revisions were made, the final image would be printed as a slide.

Each scene required the use of six different slides—two for each screen, to make stereoscopic projection possible—and each image had to be rendered separately. The complexity of each image was so great that, once the computer was set to render, it would take hours for the computer to finish the job.

Our production of *Tesla Electric* was well received by audiences. Though the virtual scenography was static, we found a few ways for the actors to interact with the projections and with other technological elements in the production. The scenery was indeed striking and “slick-looking;” the 3D effects superior to anything we had achieved thus far. We were pleased with the production yet, inwardly, still frustrated. It was not quite what we wanted.

Once again, an audience member articulated our frustrations. A certain gentleman, whose daughter appeared in *Tesla*, spoke to me one evening after the show. He was quite impressed with the production as a whole and with the

beauty of the computer generated scenic images. Yet, as he so accurately, if somewhat hesitantly, pointed out, “It doesn’t do anything.”

For us, this comment went straight to the heart of our frustrations with *Tesla*. We had sacrificed two of the key aspects of our previous virtual scenic work: motility and liveness. The result of the static nature of the images was that the scenic elements often appeared physically and conceptually isolated from the stage action. A few months after *Tesla*, Reaney, Moeck and I discussed the production on-line. Reaney wrote:

I always say that we learn more from our failures than our successes, but I don’t think I truly believed it until *Tesla*. *The Adding Machine* involved much more interaction between the actors and the virtual scenery. This was easier because the scenery was dynamic and could be manipulated. Theatrically, this was more powerful even though the quality of the graphics was very low. Before *Tesla* I had no way to make the comparison.

I replied:

Tesla seemed like a necessary step back. We admittedly wanted to find ways of improving the graphic quality of the stage images. In order to experiment with ways of doing that, we sacrificed the real-time dynamism of VR.

The computer graphic images in *Tesla* created a very different kind of aesthetic. The projections recalled old perspective painted drops. Yet still, what I think disappointed us about *Tesla* is that we never really wanted this technology to serve as “only” a backdrop for the action. It should *be* the action or at least *be of* the action.

A few days later, Reaney answered back, “I came upon an old TV piece on *The Adding Machine* in which I stated in an interview, ‘if this turns out to be just another way to do a painted backdrop, I will be very disappointed.’”

The problem with *Tesla*, then, was that the scenery had ceased to be a temporal manifestation of the action. The scenery had ceased to *perform*.

i.e. VR’s next project would go some way towards redressing this problem. In April of 1999, I presented a small, laboratory production of Regina Taylor’s *Love Poem #98* with design and technology by KU graduate students, Nathan Hughes and Liana White. Like *Tesla* and *Wings*, *Love Poem* was produced using an end staging arrangement in KU’s black-box theatre. A scrim, set up between actors and audience, was used to display pre-recorded computer animations as well as live video of the actors on stage. The actors performed behind the scrim and in front of two rear-projection screens that displayed a series of computer generated animations. All of the animations that appeared on the rear screens, as well as all the sound and musical scoring for the production, were played



Abby Birrell as Mary (left) and Marc Scrivo as Emmanuel
in i.e. VR's *Love Poem #98*. University of Kansas. Photo: Mark Reaney.

from a single large video file on a work station-quality computer that was operated from behind the screens.

Most of the computer animations utilized in *Love Poem* were not designed to serve locative purposes. That is, the images displayed did not serve to locate the action in a given time or place. The animations more frequently served to actively reinforce elements of theme and action. For instance, a red rose repeatedly appeared on the rear-projection screens. Though it first appeared to be merely a static image, the rose was actually a computer animation. Gradually, it became evident that the rose was slowly deteriorating, withering, turning black, and crumpling. So subtle and slow was this movement that the audiences' awareness of it emerged only gradually throughout the course of the production. Here, the animated image of the rose created a scenic performance that manifested the play's thematic action of decay

While this production went some way towards recovering the performative elements that we felt had been lacking in *Tesla*, the scenic images of *Love Poem* were animation and not, properly speaking, virtual reality. That is, the moving images were prerecorded and not spontaneously generated and manipulated in real-time. Though the scenery performed, it did not perform like actors, but like a pre-programmed machine. The actors in *Love Poem* were thus subject to its tyranny. The animations would not pause, speed up, slow down, or in anyway al-

ter their activity in response to the immediate circumstances of the actor's performance. There was no human agency creating the moment-to-moment performance of the scenic elements, no, what I call, "temporal presence" to the images. There was only the inevitability of video.

Virtual reality, on the other hand, is not pre-recorded. In *The Adding Machine*, *Wings*, and *Play*, movement through the virtual worlds was improvisationally manipulated for each performance by the person we dubbed the Virtual Environment Driver (VED). Reaney, Willis, and I had often reflected that the virtual scenery and the VED in our productions retained what I have called a certain "quality of agency" within the performance text itself. Though the pattern of performance, the topography of psychological, physical, and metaphorical action for the VED, as for the actors, is to some degree discovered, mapped out, and refined during the rehearsal process, their performance is, in both cases, created anew in real-time for each performance. Each one is free to respond to the other in the moment as part of the free "play" of the performance, for both occupy the same temporal location. The mind and nervous system of this VED performer, invisible to the audience, is composed of a combination of flesh and silicon. The scenic performance is manifest to the spectator through the performer's "body," which consists only of light and color moving in a fan dance that reveals and conceals its constituent parts, generating through time and in collaboration with the other "living" agents, an emergent meaning, an emergent world.

With our production of Sophie Treadwell's *Machinal*, directed by Ron Willis in the fall of 1999, i.e. VR returned to the practice of utilizing virtual reality as the primary scenic medium. Reaney set about designing the virtual worlds for *Machinal* with some powerful new tools at his disposal. Using a 3D modeling software called 3D Studio Max, the same software used to design *Love Poem*, Reaney created three-dimensional models that would serve as the environment for each scene. He would then import these models into WorldUp, our new virtual reality software from Sense 8. This software not only allowed for greater sophistication of detail, texture, and lighting within the virtual worlds, it also made it possible to create moving objects (like pendulums, gears, and machines) within these worlds.

The stage for *Machinal* was arranged in a manner similar to *Tesla*. The actors worked on a raised stage in front of three rear-projection screens. The center screen displayed the stereoscopic images of the virtual worlds. The two side screens displayed various prerecorded computer animations as well as real-time video of actors performing off stage. With this show, we added an interesting new dimension to our usual practice of utilizing real-time video of remote actors. The actors appearing on screen would work backstage in front of a live video camera and their movements would simultaneously appear on one of the two side screens. What was different in *Machinal* was that the living bodies of the actors whose histrionics appeared on the screens were directly visible to the audience. The side screens were raised some seven feet above the floor of the



Kristen Bush as Helen (seated center) in i.e. VR's *Machinal*. The faces of Damon Klassen as the Judge (center) and Jeremy Spencer as the Defense Lawyer (left) appear as live video images behind her. Just below the projection of his face, Jeremy himself performs before the camera. University of Kansas. Photo: Mark Reaney.

stage, revealing the backstage area where the actors performed before the cameras. The juxtaposition of the magnified and electronically mediated actors on the screen with the authenticity of their bodied performance in the wings created a curious duality of technology and body, silicon and carbon. Strangely, in the trial scene, when the disembodied heads projected on the side screens spoke to Helen, the protagonist, the manifest presence of the remote actors creating the performance served to further impersonalise the interaction on stage. Helen seemed thus more isolated, more subjugated, the whole scene more sinister and ominous than it would have had the back stage actors not been visible.

In *Machinal*, we once again found ways for the scenery to perform in tandem with the live actors in such a way as to create meaningful action. In the opening scene in Helen's office, the point of view within the virtual world approaches and moves through a cityscape to a platform with office equipment and furniture scattered about: filing cabinets, adding machines, telephone equipment, etc. This platform is suspended in the center of a gigantic purple gear. The gear spins slowly, suspended in a dark, nightmarish, BladeRunner-like cityscape. As the actors perform the scene and move about energetically and mechanically, the point of view moves slowly but tirelessly about the office space. Viewing the scene, one has the impression of flying through the guts of a vast, industrial office machine. Each time the character of the Boss enters, the actors freeze and

turn their heads to look at him. At the same time, the motion on all the screens ceases. The machine waits breathlessly while the Boss speaks. When he leaves the stage, the machine, as embodied by the actors and the scenery, starts up again.

Though *Tesla* and *Love Poem* may have seemed, for us, steps backward, regressive movement away from i.e. VR's desired direction, they were for many reasons both necessary and positive diversions. These steps backward were vital parts of our progress and process of experimentation with new media and performance, steps that made *Machinal* possible. By sacrificing the advantages of virtual reality, both *Tesla* and *Love Poem* allowed us to experiment with ways of improving the graphic quality of our images. Further, and perhaps most importantly, these productions illuminated those specific and special qualities of virtual reality that, for us, make it a particularly appropriate and exciting scenic medium for theatrical performance. What we learned from these three productions continues to stimulate us and urge us forward to further experimentation.

At the beginning of this essay, I spoke of the collision and collusion between art and the technology that makes it possible. Some onlookers keenly sensed the collision elements in our cybertheatre productions and sharply articulated their responses. As work began on *The Adding Machine*, i.e. VR's first production, I became aware of a number of voices, voices from inside and outside the Department of Theatre and Film at the University of Kansas, that were critical of this project. Still today, every time I speak about our work at a conference, someone challenges the appropriateness of our productions. Behind this challenge rests the often thinly veiled suggestion that what we are doing is somehow "killing theatre." The alarm expressed by these voices reveals an important and perhaps not entirely unreasonable fear. It is a fear of an increasingly cyberized culture invading what is, and perhaps must remain, an essentially primitive art form. It is a fear of the invasion of the theatre as a site of or owner of presence and truth (and the reality of these things) by a force whose very name, "virtual reality," denies it as a site of or owner of presence, truth, or reality. For me, the tension between the actual and virtual, between the organic and the cyber has been of primary concern in our work.

The productions of i.e.VR challenge and support, collide and collude with the primacy of theatrical presence. The spectacle of techno-wizardry demonstrated in our productions is not primarily what continues to fascinate me. I am principally engaged by the fact that these are not wholly computerized spectacles of absence or telepresence but sites at which the [w]hol[ly] present actor makes contact with the cyber, the [w]hol[ly] (or unholy) absent. What emerges is a performative hybrid, impure and indeterminate. If Grotowski sought a re-discovery of originary presence in the body, sought to excavate the sensual body from a pervasive realism that made the body a signifying machine producing the sign of "nature," recent postmodern technology has effectively enacted a progressive regression of this project, covering up the sensual body in an array of input devices: cell phones and pagers, lap-tops and PDAs, all the many accou-

trements of cyber-chic. The body is merely the central node to which these devices connect and make their dump. But it is not the center at all, merely an intersection in a vast array (a World Wide Web) of connections. What is the body here? Is it a body at all or merely a haunted ftp site? Perhaps the "ghost-in-the-machine" analogy is no longer relevant in this case, for the duality implied therein cannot be entirely sustained. This is the cyberized body, a receiver and source of data, an agent and object of exchange. Perhaps in the work of i.e. VR and other similar theatre groups there lies a kind of prognostication of the future of the actor, not as a dualistic entity (a human connected to technology), but as a sygyzy, a liminal creature, a cyborg. Such a teleological vision offers a kind of sequel to Erika Fischer-Lichte's theories of the evolution of the performer described in her article, "Theatre and the Civilizing Process: An Approach to the History of Acting." But if such is the evolution of the performer, it is an evolution into monsterhood, for Donna Haraway's vision conceives of the cyborg as monster. It is a monster that can view, with its many heads, both collision and collusion, both utopia and dystopia. Thus, do we return to Frankenstein.

Cybertheatre, though often complicit in the absenting or cyberization of the body, though complicit in its conflation of the body and electronica, is also critical, revealing the sensual nature of the body by juxtaposing it with its other. The trial scene in *Machinal*, wherein the offstage actors, cramped into a tiny space, can be seen performing in front of a camera while live video close-ups of their heads are displayed on projection screens, demonstrates this kind of critical juxtapositioning. But this critical stance is not limited to such scenes. All of the actors on stage in i.e. VR's productions are placed within an environment that refuses them. Their manifestly corporeal bodies are alienated from the computer-generated, non-kickable reality that surrounds them. From the standpoint of the spectator, the incompatibility between the two is always evident, though bracketed by willing suspension of disbelief. Cybertheatre is complicit in that the ubiquitous connections between the oppositions of the human and the virtual are reinforced and the lines between these oppositions blurred and made problematic. Yet, by juxtaposing and attempting to bring together the cyber and the sensual body, the incongruity of the two is also made starkly manifest. This articulation of the principle of collision and collusion in cybertheatre has become one of the central ideas that guide the continuing work of i.e. VR.

The critical attitude that draws an impenetrable border between the sensual body and electronica, that must always see their coincidence as collision, the attitude that fears cybertheatre's supposedly murderous intentions with regard to the theatre, relies on an essentially humanist idea of the body as wholly present. This idea has been deconstructed to great effect by, among others, Philip Auslander (1997: 28-38). Indeed, the very condition of postmodernity would seem to cast grave doubts on such glib and reified divisions. In his 1999 book, *Liveness*, Philip Auslander suggests that theatre's exclusive claim on presence and liveness (the basis for its opposition to electronic media) is a false one. To sug-

gest a critical juxtapositioning or collision between bodily presence and the absence of virtuality may, therefore, be to operate in a romantically charged duality. If such a duality is deconstructed, where does that leave us? I would argue against a Gibsonian dystopia or a Rheingoldian utopia, for both involve over-inflated value judgments of technology and the humanistic self. Though such utopian/dystopian fantasies make fertile ground for the creation of art, I would argue that cybertheatre might likewise suggest a more sygyzistic posthumanism, a practiced, dangerous, yet playful liminality.

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Works Cited

- Auslander, Philip. *From Acting to Performance: Essays in Modernism and Postmodernism*. London: Routledge, 1997.
- _____. *Liveness: Performance in a Mediatized Culture*. London: Routledge, 1999.
- Baudrillard, Jean. *Simulacra and Simulation*. Trans. Sheila Faria Glaser. Ann Arbor: U of Michigan P, 1994.
- Fischer-Lichte, Erika. "Theatre and the Civilizing Process: An Approach to the History of Acting." *Interpreting the Theatrical Past: Essays in the Historiography of Performance*. Ed. Thomas Postlewait and Bruce A. McConachie. Iowa City: U of Iowa P, 1989. 19-36.
- Fischlin, Andrew, and Andrew Taylor. "Cybertheater, Postmodernism, and Virtual Reality: An Interview with Toni Dove and Michael Mackenzie." *Science-Fiction Studies* 21. 1 (1994): 1-23.
- Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991. 149-81.
- Jameson, Fredric. "Progress Versus Utopia; or, Can We Imagine the Future?" *Art After Modernism: Rethinking Representation*. Ed. Brian Wallis. New York: New Museum of Contemporary Art, 1984. 239-52.
- Mitchell, Twyla. "Terror at the Terminal: How Some Artists View Computers." *Theatre in Cyberspace: Issues of Teaching, Acting, and Directing*. Ed. Stephen A. Schrum. New York: Peter Lang, 1999. 9-18.
- Reeves, John. "Theory and Practice: The Gertrude Stein Repertory Theatre." *Cyberstage* 1.3 (1995) 13 June 2002. HYPERLINK "<http://www.cyberstage.org/archive/cstage13/gstrt13.html>" <http://www.cyberstage.org/archive/cstage13/gstrt13.html>
- Rheingold, Howard. *Virtual Reality*. New York: Simon and Schuster, 1991.
- Rush, Michael. *New Media in Late 20th-Century Art*. London: Thames and Hudson, 1999.
- Saltz, David Z. "Live Media: Interactive Technology and Theatre." *Theatre Topics* 11. 2 (2001): 107-30.
- Schrum, Stephen A., ed. *Theatre in Cyberspace: Issues of Teaching, Acting, and Directing*. New York: Peter Lang, 1999.
- Starbuck, Jennifer Parker. Rev. of *Triangulated Nation*. "George Coates Performance Works: San Francisco." *Theatre Journal* 51. 4 (1999): 445-50.