

Puntos de Fuga (Vanishing Points):
Performance Writing for the Digital Theater

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Examining the contemporary challenges of “writing” or composing for the digital stage and new forms of real-time programmable or augmented multimedia theater, the authors delve into some theoretical concerns that are characteristic of such compositional practices—discussing notions of interactivity, wearable space, participatory design, postdramatic textuality and choreography, bilinguality and translation, and political content—before using their new play, *Puntos de Fuga* (Vanishing Points), as a case study. The essay contextualizes the production aesthetic used for *Puntos de Fuga*, referring amongst others to the Wooster Group’s “dancing with technology,” and proceeds to delineate the performer techniques and rehearsal methods used in composing an integrated digital performance and multimediated mise en scène closely and passionately dedicated to the poetic testimony of harsh political/economic realities at the US-Mexican border.

Bare Bones: Writing for the Digital Stage

Flesh and bones, words scurrying back and forth, languages modified by the force of translation and political pressures, growing silent into surreal images of human organs and their forced extraction, violent acts against young female maquiladora workers, a sinister fictional landscape of gang warlords and FBI investigators, interrogation officers and ancestral women with magical powers—these materials form some of the narrative texture of our multimedia play *Puntos de Fuga*, written in 2007 and now prepared for its first production tour in 2009. Not yet performed except during a stage reading at Talento Bilingüe (Houston, December 2007), we had originally intended to offer several scenes to be published here, for

Gramma's special issue on "postdramatic" playwriting or composition ("The Text Strikes Back: The Dynamics of Performativity").

Such an offer may be paradoxical (and it was declined), if much of our artistic work is identified with belonging to dance, performance art, and the screen media. There are few play texts that will have survived our performance manifestations, installations and video versions to be archived or published (to be "read"). When the play was read aloud, we included all camera script directions (projected as inter-titles onto a screen) to clarify to our audience that the cinematic dimension of the work would alter the action imagined through the words. The Spanish-only sections of the interrogations were also accompanied by surtitles in English, and audio parts were represented by "audio-files" projected onto the screen. If we are now writing about writing for the digital performance theater, we follow the editors' suggestions to paraphrase our compositional process and reflect on the implications of multimedia writing for the stage—or for the kind of *mise en scène* still associated with theater rather than a visual media context or the more fluid and highly contingent digital network spaces, game worlds and related virtual environments where contemporary "performativities" might happen.

We invite the reader to remember that one of us is an actress/performance artist and writer trained in the theater; her writing for her own performance solos or multimedia plays always had a textual base and a particular poetics, even if inflected over the years by a growing involvement with film/video, script writing/storyboarding, and collaborative projects with practitioners from other disciplines. The other has worked for some time in dance-theater and choreography with movement images (digital dance), and now experiments mostly with interactive systems and computational environments where the role of text or spoken language is marginal. Text, in other words, is superseded by programming languages and the cross-patching of interaction design. At a recent drama conference in Germany, Birringer posited a twenty-first century "theater in its post-medium condition" where dramatic performance and representation are increasingly supplanted by hybrid repertoires of materialities and contingent behaviors (including gestic, visual, musical, kinetic and tactile elements of performance and manipulable projective environments) which suggest new situational forms and an interactive art of design (83-101).¹ At this conference, he introduced some of his wearable designs (performed, for example, with his London-

1. See also: Johannes Birringer, "Interacting: Performance and Transmediality," *Monologues: Theatre, Performance, Subjectivity*, ed. Clare Wallace (Prague: Litteraria

based company in *Suna no Onna*, 2007-08) and concepts for “wearable space.” Such design ideas, taken from fashion and smart materials technologies, have unexpected implications for contemporary theater, shifting attention to affective and sensorial experiences in a virtually created shared environment.

Both of us have been involved in experimental production for quite some time, involving workshops, compositional training, conceptual strategies, mise en scène making (installations), writing, programming and post-production techniques. New modes of performance writing emerge that are not necessarily beyond theater or fashionably aligned with digital interactivity and the participatory impetus of the so-called “relational aesthetics”² but challenge performance and the theater of acting in particular ways (Bourriaud). In the following, we offer some of our thinking through performance as field notes for “digital production,” taking up *Puntos de Fuga* (Vanishing Points) as a kind of software and as a case study for a future production, reflecting especially on the role of writing/stage directions for multi-media plays, performer techniques in multi-mediated, responsive environments, and composition strategies relevant to the kind of digital scenographies that intertwine the (real-time) performance present with a writing or scoring of representational or—as we prefer to call it—virtual referentiality.³

Pragensia, 2006) 297-325; Johannes Birringer, “Interacting,” *Contemporary Theatre Review* 16:4 (2006): 389-405, and Johannes Birringer, “Body/Art and Technological Transformations: Rhythms of Real Time,” *The Flesh Made Text Made Flesh: Cultural and Theoretical Returns to the Body*, ed. Zoe Detsi-Diamanti, Katerina Kitsi-Mitakou, and Effie Yiannopoulou (New York: Peter Lang, 2007) 13-25.

2. See also: Claire Doherty, ed., *Contemporary Art: From Studio to Situation* (London: Black Dog Publishing, 2004); Martha Buskirk, *The Contingent Object of Contemporary Art* (Cambridge, MA: MIT Press, 2006); Anna Munster, *Materializing New Media: Embodiment in Information Aesthetics* (New Hampshire: Dartmouth College Press/University of New England, 2006).
3. For a provocative critique of the discipline of performance studies and its anti-dramatic prejudice, including Lehmann’s influential writings on the “postdramatic,” see W.B. Worthen, “Antigone’s Bones,” *TDR* 52:3 (2008):10-33. See also: Hans Thies Lehmann, *Postdramatisches Theater* (Frankfurt: Verlag der Autoren, 1999). There have been few books on new performance writing and the hybrid technological genres, but see Steve Dixon, *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation* (Cambridge, MA: MIT Press, 2007); Sue Broadhurst and Josephine Machon, eds., *Performance and Technology: Practices of Virtual Embodiment and Interactivity* (Basingstoke: Palgrave, 2006); and Freda Chapple and Chiel Kattenbelt, eds., *Intermediality in Theatre and Performance* (Amsterdam: Rodopi, 2006).

Writing a multi-media play for the stage indicates the potential of composing or scripting in a hybrid, combinatory style that fully acknowledges the availability of audio-visual technologies, projections and live camera or movement tracking/sensor feeds. The technologies allow the integration of dramatic text, collage or poetic writing—spoken and performed language—as well as recorded and musicalized voices into a digital system which reverberates with other potentialities that are usually associated with film/digital video or electronic music. Computational systems provide a (cybernetic) structure of feedback loops and transductions, converting data in real-time which is generated in the system and used in the programming of input-output relations, the latter usually implying audio and video projections, spatialized sound and distributed image-objects. The data can also be used to control lighting and other electro-mechanical objects. The distribution can create a complexity that challenges or disrupts the perspectival mechanisms known to the proscenium theater, and it is therefore not uncommon to see contemporary performances taking place neither in theaters nor in the conventional sender-receiver structure.

The interactive dimension of digital art has created a different structure in which a single, unified perspective and “passive” consumption are replaced, to varying degrees, with active audience participation and an anticipation of contingency and process which necessarily subjects the notion of the theatrical work, the performance production or the production of a play, to the same pressures described by Martha Buskirk in her examination of post-conceptual art and its ephemeral “objects” or materialities, usability, and complex layering of pastiche, copying and appropriation as well as deliberate confusion of the role of the “original” and the document as both primary and secondary object. While Buskirk addresses performance art and video art, she does not mention theater or dance, even though conceptual dance in particular, over the past decade, has raised the very same questions about authority/intentionality of movement and the apparatus of representation.

The “object of performance” is notoriously difficult to define in terms of materialities as well as textualities, especially if one sees literary dramatic texts no longer as the main or only primary source for performance embodiment. The theatrical apparatus, it could be argued, has always welcomed the pressures of performance, the critique of illusionism, and new performance techniques that gradually evolved. In the “postdramatic” era, the production of plays, just like the choreography of dance, continues unabated even as the writing, directing and acting may very well be adapting

some of the challenges that reside in the dialectics between the representational and the (self-reflective) performative *mise en scène* making. New productions of literary texts (or adaptations of film and novel) are not our concern here, although *Suna no Onna* was such a transformation of a film (the 1964 film noir by Hiroshi Teshigahara)⁴ (see fig.1).

Nor is it possible as yet to claim that *interactive theater* involving the audience as co-producers is likely to be implanted anywhere soon: the interface design for unsuspecting and untrained audiences asked to step inside and make use of new interactive performance techniques has not been cre-



Fig. 1. Scene from *Suna no Onna*, Laban Centre Theatre, 8 December, 2007. © DAP-Lab/Dans Sans Joux. Photo: Hans Staartjes.

4. *Suna no Onna*, a dance environment created by Dans Sans Joux, premiered at Laban Centre, 8 December, 2007, directed by Johannes Birringer, performed by Katsura Isobe, Helenna Ren and Olu Taiwo, fashion design by Michèle Danjoux, music by Oded Ben-Tal, sensor programming by Paul Verity Smith, digital animations by Doros Polydorou and Maria Wiener, motion graphics by Jonathan Hamilton, scenography by Hsueh-Pei Wang. It toured Watermans Art Center, London, and other venues in the spring of 2008. For video excerpts, go to <http://people.brunel.ac.uk/dap/dap6.html>.

ated yet—the model of gaming and the use of game engines in media art works notwithstanding.⁵ The convention of the spectator-interactor needs patient development. However, it would be true to argue that cultural expectations of new “uses” of performance are undoubtedly influenced by the computational world in which we live. Many of our communications devices are interactive, our global realities are interconnected and interdependent, as political and economic events teach us, and thus the writing we shall discuss here involves spectators responsible for the ways in which they negotiate the ideologies of language/translation, visual and aural projection, action, acting and behavior in presentational staging that intermediates referential and virtual realities.

It could also be argued that “text” or writing never disappeared in post-dramatic productions but used performance experimentation differently, i.e. the practitioners used innovative techniques to explore different spatial configurations, bodily configurations and perceptual strategies to create performance in the presence of audiences who were conjoined in the work of interpretation of such configurations, as we have seen in numerous cases. As an example, the Wooster Group has consistently experimented with “translations” of primary writing material into multi-media performance choreographies undermining the linear textual and acting paradigms of mimetic dramatic theater. They established a reputation for their deconstructive dramaturgies, the mixing and sampling of heterogeneous texts, personal narratives, popular cultural materials, and innovative use of film/video and audio processes within live performance, from early works of the 80s (*Route 1 & 9*, *L.S.D.*) to more recent touring productions of *To You, The Birdie!* (2001), *Poor Theater* (2004), and *Hamlet* (2006). Their live performances have a particular technological style which we are tempted to call “live post-production,” as they have developed a performative set of video and microphone/audio strategies clearly characterized by video and sound editing techniques that a producer would use in a television

5. See, for example, SWAN QUAKE, an interactive artwork comprising 3-D computer graphic environments and motion-capture driven characters, created by the English group igloo (<http://www.swanquake.com/>). Scott deLahunta edited *SWAN QUAKE: the user manual* (Plymouth: Liquid Press/I-DAT, 2007) an unusual book about the artwork which functions as a kind of user manual for the game. Interestingly, a new handbook by theater director Kate Mitchell, *The Director's Craft: A Handbook for the Theatre* (London: Routledge, 2009) literally contains two pages (90-92) on the use of video in theater, claiming, astonishingly, that the use of video in mainstream theater is still in its infancy.

studio. Their Performing Garage in SoHo (New York City) functions like a sound stage; the use of scaffolding often makes it appear like an installation. Due to their presence on the scene for so many years, their technical and artistic method has also had a considerable impact on younger companies in the US such as Builders Association, Elevator Repair Service, Cannon Company, Big Art Group, Radiohole, Les Freres Corbusier, etc., while similar production strategies can also be found amongst alternative companies in Latin America, Japan, Europe, and the UK (known for its “devised theater” e.g. Forced Entertainment, Gob Squad, Theatre Complicite, Station House Opera, etc).

When we saw *To You, The Birdie!* in 2002, we were struck by the extent to which the Wooster Group had perfected the integration of theater and video techniques. Unlike interactive art that treats the interface environment as an open communicative process (real-time) with uncertain outcome, the Wooster actors work the stage as a pre-programmed environment, with all actions and video images tightly cued and conceptually fixed. Yet the “live editing” or illusion of real-time live processing is maintained, certainly in the audio production, if not always in the video editing, turning this performance into a cunning theatrical pun on interactivity as well as shifting the Wooster Group’s experimental theater aesthetic closer to dance. *To You, The Birdie!* reveals a complex template, and it helps our discussion here to quote a commentary from the company’s program notes. Director Elizabeth LeCompte refers to the notion of “dancing with technology,” which hardly surprises, as the group’s audio-visual (re)production strategies have evolved to a point where multi-media choreography approaches the complex fluidity so characteristic, for example, of William Forsythe’s dance works or the hybrid performances of digital choreographers (Yacov Sharir, Klaus Obermeier, Paul Kaiser, Dawn Stoppiello, Pablo Ventura, and others):

TO YOU, THE BIRDIE! allows us to further our explorations of the possibilities of “dancing with technology” in three specific ways. We work with live feeds from on-stage cameras, which force the performer to simultaneously consider both the framed, mediated space of the monitor and the actual stage space simultaneously. We are also creating sequences that rely on the performer dancing a *pas de deux* with their own prerecorded image, yielding movement that is psychologically evocative as well as physically captivating. A third approach involves the use of existing video-

tapes—including Marx Brothers films and dance pieces—on monitors visible only to the performers, who then translate physical actions and camera moves through their bodies onto the stage.⁶

In this case, the performance is ostensibly an adaptation of Racine's seventeenth-century tragedy, *Phèdre*, centering on the obsessive sexual infatuation of Theseus's wife with her stepson Hippolytus (with rewritten text by Paul Schmidt). The title of the performance, however, refers to the game of badminton, and the "players" of this elegant and athletic game open the show with a live video-produced duet which prepares the audience for much of the splitting and doubling of actors/video-actors devised in this staging. The set design is a mobile, grid-like landscape with gliding screen panels, hidden video cameras, and television monitors that make intimate meetings between the actors/characters easily visible. The badminton court takes up the whole width of the upstage area, presided over by Venus, a goddess as referee, and a monitor high above her recapturing her facial expressions and judgements. Across from Venus's monitor, behind the audience, hangs another monitor that can only be seen by the actors. On this offstage monitor, films are played which cue the performers to imitate particular dance steps or movements. Perhaps these are training films for the athletes...

As this brief description betrays, the integration of the mixed realities of technological performance, especially the framing operations afforded by on-stage/off-stage uses of camera, microphone feeds and control monitors, provides for a continuous shifting of perceptual levels. The live cameras feeds capture the actors' actions and transmit the input to the monitors on stage. The actors thus perform both to the camera and to the stage audience, doubling what Walter Benjamin called "optical tests" (for the film actor performing to a camera without any audience present), since in such staging dramaturgies the actors must remain continuously aware both of the framing created by the video camera and the larger stage frame (217-51). The live optical tests are a double framing implying a mediation between different acting techniques required for each medium. To bring the face or the hand to a close-up on the video screens means that an actor must be aware of how to place the body in relation to the camera eye. The theater audience can view both the real size actor's face or hand and the amplified images on the screens.

6. Quoted from the program. For an extended interpretation of the mediational scenography, see Johannes Birringer, *Performance, Technology, and Science* (New York: PAJ Publications, 2008) 121-29.

The writing of these scenes implies an awareness of how the audience in fact is invited to perceive the mediation of shifting perspectives as such, observing the alternation of the framing devices. A continuous tension exists between the televisual imagery of the actor/character and the performance production techniques for the live mediated representation. Arguably, the Wooster Group here use a Brechtian *Verfremdungseffekt* to play with the space of seeing and the contradictory projections of (technological) embodiment, self-display, enhancement, entrapment, displacement, and deformation—thus also various permutations of the fleshly anatomy as they are implied by Phèdre’s corseted and medically encumbered persona.

Furthermore, the *pas de deux* between actor and pre-recorded video image implies a peculiar coupling, affording a psychological self/image which splits and combines live/technological representation (as it is also used in Beckett’s writing for spooling *Krapp’s Last Tape* or Pina Bausch’s choreography in *Bluebeard*, where the play back of Bartok’s music is stopped and started by the dancers) into a kind of psychedelic tango with past time, real-time and simultaneity. This ambiguity of time levels and language levels lies at the heart of *Puntos de Fuga* (Vanishing Points), as we tried to examine the interactive distinctions between possible performances, interpretations of the words and gestures, and levels of real and magical reality. Our aesthetic also has a more cinematic direction, avoiding the flatness of the small closed-box video monitors to evoke a more outwardly expanding sense of projected worlds, flowing over at the edges, in keeping with the flight metaphor (pilots, aircrafts) in the script.

Flight, fleeing, and crossing borders constitute a thematic motif which of course plays on the audience’s political and geographic imagination, and the projection of “worlds” (outside the stage) and internal states (inside different actors’/characters’ POV) thus calls for a writing that can itself project the visual, kinetic, acoustic and physical dimensions, the interplay of different textures and processes, including the presence of cameras and “surveillance” mechanisms (hinted at in LeCompte’s reference to off-stage monitors and cameras) that might function as fantastical devices and folding strategies, worlds within worlds folding and unfolding, like baroque contrivances of artifice and optical anamorphosis.

Puntos de Fuga: The World of the Play

Puntos de Fuga (Vanishing Points) explores the contact between two language systems—the governmental procedure of interrogation enabling an officer to determine whether to grant protection, and the subjective, psy-

chologically disturbed plea of a woman who insists on her truth of experience. The narrative features Amalia Velásquez Mena, a young female maquiladora worker from Ciudad Juárez who finds herself in custody with US Homeland Security after being rescued by the fictional character of Amelia Earhart. The mythic pilot encourages Amalia to undertake a rescue mission of her own, seeking to find the numerous missing bodies of young women on the Texas/Mexico border. Amalia is interrogated by officer Ernst Lauder who employs the services of a Spanish speaking interpreter, Marina Rossell Berg (herself an Argentine immigrant), whose complex role as a mediator—structured after the historical model of La Malinche—intensifies the political and ethical dilemma in the relations between US authority and the undocumented, disenfranchised workers on the southern border.

The play thus dramatizes, on the one hand, the role of interpretation as well as the function of “major” and “minor” languages in today’s political reality. On the other hand, the young woman’s hidden power of *brujería* (the stage direction notes that she is a “witch from Catemaco”) challenges the technological surveillance apparatus of the US authorities while she recaptures—through a series of visions in the dramatic ritual climax of the performance—the events leading up to her rescue, namely her horrific journey to the dark side, the mythic and totemic underworld of the Juárez border, in search of her kidnapped sister.

The *mise en scène* of the play’s worlds is heterogeneous, combining realistic and scientific (forensic) elements with ritualistic sensations and phantasmagoric or dirty textures (low resolution imaging), digital manipulation and noise, thus using the digital cinematic techniques to emphasize the constructedness of evidence or belief, the various kinds of artifice linking power of exclusion with disenfranchisement. Forensic paraphernalia point to documentary evidence, yet files, photographs, audio recordings, polygraphs and microscopes also add to an informatic surface hiding the extracted histories or complicating the perspectival illusions of truth with video projections (virtual characters and scenes) and audiovisual technologies in close interaction with the three stage characters. The total cast is seven: three real characters and four virtual characters (on film). The production uses the theme of “translation” throughout by presenting all dialogue in English and Spanish; during the climactic scenes, Totonacan language from Veracruz (Amalia’s hometown) is used as well.

The space is envisioned as a hyper-secured government building with corridors, transparent/opaque mirrors which also function as projection surfaces for film, monitors and other high-tech equipment, and an interrogation



Fig. 2. *Cuerpos Ambulantes*, featuring Angeles Romero, Festival Iberoamericano de Teatro, 7th Encuentro de mujeres de iberoamérica en las artes escénicas, Cadiz, Spain 2004.

chamber, adjacent to the women's bathroom, a semi-private space used by the young detainee and the Argentine interpreter. *Puntos de Fuga* takes place in the beginning of the twenty-first century and a time of globalization characterized by increased political, cultural and ethno-religious tensions that were feebly described, in the 1990s, as the "clash of civilizations" but recently gained a more sinister aura of terror after 9/11 and the US military invasions of Afghanistan and Iraq. The widespread economic imbalance between the North and the South, which also gave rise to the maquiladoras along the US-Mexico border and the continuous flow of legal and illegal immigration to the wealthier capitalist countries of the North, occupies a much less explored side of the fallout from economic inequality and the new constructs of Empire with its rhetoric of "enemies" (terrorists) and its practices of violence. State-ordained practices of violence shadow the older, continuing dilemmas that have plagued modern biopolitics and shaped the experiences of people living in poorer or conflicted (border) regions where cheap labor, prostitution, drugs, and migration develop a particular dynamic of violence.⁷

7. On a philosophical level, the notion of biopolitics implied in the introduction to this essay is inspired by our reading of Giorgio Agamben's *Homo Sacer: Sovereign Power and Bare Life* (1998), which interrogates the power that decides over life and death of (the sovereign's) subjects, as well as the figure of the detainee (homo sacer), the "sacred human," who can be killed and not sacrificed; but who can be killed with impunity. On

On a first level, therefore, the “fortress” world of the play appears to protect citizenship from such violence, but it is also founded upon violence and the policies that are executed both by the State and by the criminal organizations operating in its shadow. The fortress itself is porous, and the performance hints at this throughout by undermining the soundproof character of the interrogation room and by its numerous references to airplanes and an aerial or fantastic space not framed by delimitations. The performative dimension of *Puntos de Fuga* is marked by the porous quality of border crossing and the “cosplay” of languages; much research for the writing was conducted on the Texas-Mexico border and also influenced by Romero’s first hand experience as an interpreter in Houston where she encountered numerous cases of the plight of undocumented workers suffering from harassment, work-related accidents, health insurance or worker compensation problems and family complications arising from separations and domestic violence.

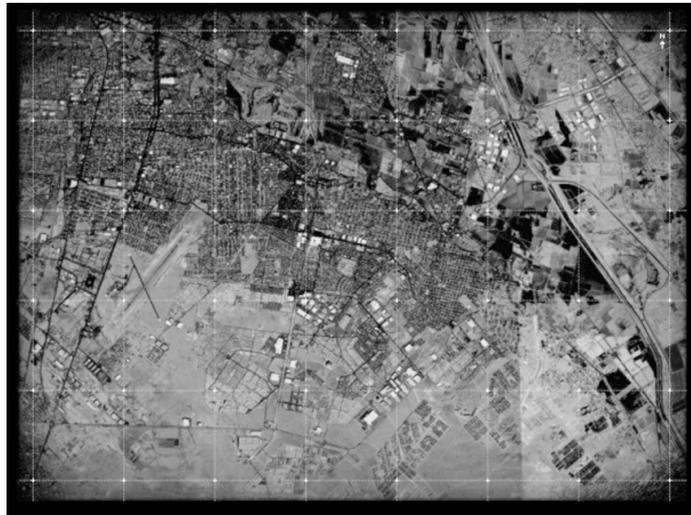


Fig. 3. *La cité des mortes*, map from interactive Webdocumentary.
Videostill © <http://www.lacitedesmortes.net/>

At the factual core of the play lies the horrific history of femicide in the border region of the cities of Ciudad Juárez and El Paso which over the past decade became the killing fields for young women, the site of over 400 un-

a performance level, Romero explored forensic interrogation and mapping of body parts in her 2004 solo performance *Cuerpos Ambulantes* (fig. 2).

solved (often ritualized) murders. Relief organizations have accumulated evidence (through interviews with family members and fellow workers, investigation, and study of crime reports) allowing a mapping of these incidents of vanished female workers found dead in certain locations.⁸ Our production uses such mapping in a subtle manner, introducing visual projections and aerial views that hint at factual realities.

On the other hand, *Puntos de Fuga* is not a docudrama or verbatim play based on interviews but a fictional treatment—a film-noir like fantasia that conjures the play’s horrific reality through the spoken word, the characters’ remembering (projections), a direct interrogation showdown, but also through silent images and grainy graphics projected onto the “corridors” and false mirrors of the government castle. The play thus locates its central conflict in an interrogation room of US authorities recently preoccupied not only with increasing efforts to secure the border and stem undocumented immigration but also sending undercover agents to the other side of the border. One of these agents, John Arenas, has disappeared, and the writing thus combines and juxtaposes the disappearance of Amalia’s younger sister and of Agent Arenas, heightening personal and political tragedies through a poetic narrative space that strives to allegorize the recurring nightmare of a conquest (the invasion and rape of Mexico) deeply stored within the Mexican imagination (cf. Octavio Paz).

At the same time, *Puntos the Fuga* throws a sharp light on the self-understanding or self-consciousness of the US psyche enmeshed with the border—here understood as an unacknowledged or emotionally repressed relationship to its own dark side—and thus on current resonances of this repression in an era of the government-sponsored War on Terror, which has produced its own paradoxes, the spread of controversial tactics (Guantánamo Bay, Abu Ghraib) of physical, sexual humiliation and intimidation seemingly incomprehensible within the civil and ethical imperatives the Empire had reserved for itself traditionally.

The dramatic core of the play is interrogation: a relentless search for truths that surface in the relationship between the stage characters and their understanding of the “bare life” (the fragile sense of sovereignty and physical protectedness) which might easily become ex-cepted from citizenship or family.⁹ Amalia survives but discovers that her sister was killed/sacri-

8. One map is published online at: <http://www.lacitedesmortes.net/>.

9. Agamben’s critique of violence, in his writing on “bare life” and the example of the detention camp as the most concrete materialization of the “state of exception,” is

ficed. The play's interrogation scenes culminate in her testimony and re-enactment of her own (and her sister's) violation. The virtual scenes, shot digitally and edited for live projection in the performance environment, are woven with a real-time dimension of intermediality, simultaneous presences of the characters created through live video feeds. The media use is intended to lift the audience's perspectives beyond the government "fortress" to the lands beyond the border—opened up in dialog, narration, and the metaphorical "flights" of the airplane which are also visualized and sonified in different ways.

Digital Scenography and Acting: The Theater of Interactivity

The script with its embedded camera script for this type of multimedia play can be understood as the creation of a blueprint or score which delineates all that is "programmed" to happen live on stage, as well as that which is "virtually present" (in digitally mediated form), and very much real to the world of the play—other characters, memories, fantasies or psychological spaces produced via video, still images, animations, projected graphics/titles and audio. Even more importantly, a digital scenography implies thinking of the stage as a system of operations for various ways in which these media coalesce and interact with other media in specific scenes. The virtually present scenes are shot on digital film and edited for live projection in the performance environment. A software operator (or shall we say "actor"?) can mix and manipulate stored or live generated data in real-time. A programmable system of interactivity enables the actors themselves to input data into the system of simultaneous presences of characters—created through live video feeds (cameras) — and live software-generated drawings, soundings, animes (animations), noise, interferences, etc. *Puntos de Fuga* is a hybrid storyboard that can bring about a unique theatrical experience contin-

particularly apposite here, as it challenges us to rethink our common notions of family as well as asylum or sanctuary in regard to the legal representation, or access to legal protection, afforded to those who seek security and equal right under the rule of law. In an article on detention and human rights, Fiona Jenkins observes that protectiveness is immediately fragile once we see the universal inclusiveness of merely "human" rights as already constituting an exception to the norm (of citizenship) supposedly ruling the terms of belonging. Appealing to the language of human rights to address the status and suffering of "unlawful immigrants" or refugees, she argues, is inadequate to the extent that it fails to interrogate the terms on which "belonging" and "displacement" are politicized in the nation state. (<http://www.austlii.edu.au/au/journals/AJHR/2004/18.html>)

gent on careful integration of all mediating possibilities (live, prerecorded, mixed).

Even though the dramaturgical complexity is obvious, we plan to avoid stepping into digital pitfalls, for example using video projections that merely illustrate or unnecessarily complicate and overburden the stage action.¹⁰ The most challenging problem for the digital theater lies in the manner in which actors create a charged stage presence and transmit energies to their audience, in the very proximity of the digital medium which could easily deplete their effect on the collective audience empathy, the unique choral stimulation for which theatricality is still largely responsible in today's over-mediated culture. Acting craft, and especially the kind of magnetism, strength and focus of intentionality developed in the Suzuki training method or Anne Bogart's Viewpoints technique, is essential for providing the performers in a multimediated environment with an expressive, physical power and commitment to each moment of stage attention shared with projected images that themselves have no "technique" of presence but a flickering, glimmering appearance.

In our rehearsal practice for this theater of interactivity, we speak of "intensions," emphasizing the necessity for the actors to direct motivated attention and intensity of focus to the action on stage as well as the stimuli of the video projections which are intrinsically lifeless, like an inanimate mask or puppet that needs to be animated by the performer wearing the mask. In its appearance, and with the specific power of image-movement to attract the human eye, the mask generates its own stimulus, depending on high or low resolution, and the amount of photorealism, abstraction and technical synthesis in the visuals. But this stimulus cannot be confused with human energy. For the actors to hold their own strength in regard to media that

10. In the aforementioned handbook by Kate Mitchell, the director (who received critical acclaim for her stage adaptation of Virginia Woolf's *The Waves* at London's National Theatre in 2006) mentions using a large upstage screen on which the audience could watch sections of the production on film. As with the Berlin Volksbühne productions, directed by Frank Castorf, or the total front screen projections in The Builders Association's *Alladdeen*, such use of large projection screens is common, and often presents scale and energy transmission problems for the actors who are dwarfed and depleted by looming panoramic projection. In *The Waves* Mitchell had the cast's eight actors moving around a bare space resembling a sound studio to act out and record Woolf's group character study. Having coached them to enact, film and edit a story of the characters' entwined fates reaching from the 1890s to the 1930s, Mitchell partly overcame the scale/size issues through careful positioning and lighting, inviting audiences to observe the actors' "shoot" in a film studio and the final edit simultaneously.

magnify the eye, distract it and manipulate attentions, it is important that they shape their motivated bodies and intentional gestures with an acute awareness of their corporeal interactions with the digital mask. The bodies need to be “codified” to coexist with the digitally codified sources. In this way, we regard the actors’ performance techniques—just as the use of a sword or a prop would be in the martial arts—as vital for the incorporation of the digital into the action. The digital becomes an extension of the body, so to speak: the visual projections attain as much of a kinaesthetic material presence in the world of the action as the actor enables it, drawing the audience’s attention to the connectedness (rather than letting film take over or take on its own separate existence).

The dramaturgy follows rigorous questioning: Are the characters believable, interesting, well-crafted? How are they able to tell their stories? What physical vocabulary will be used through gesture, spatial relationships, visual and aural symbolism? Why do some characters appear digitally as opposed to in the flesh? How will the performance maintain a seamless connection between the real stage characterizations and the virtual projections? Can the actor animate the visual masks in the manner in which a good dancer can make us listen to the music as if the dancer’s body were creating it?

The “Vanishing Point”

Distance and an expanse beyond the fortress of *Puntos de Fuga* are evoked through projections but also through symbolic objects. The production will utilize “flying” kinetic objects and puppet-objects that resonate with the theme of airplanes and flying but also draw attention to a theater of conflict between actors (subjects) and objects (puppets), hinting at the underlying violence we also associate with childhood icons such as toys and puppets. On the thematic level, the violence in Juárez and its integration into the culture and life of the inhabitants point to degenerative actions as well as to healing rituals (such as the “Voladores” traditionally celebrated in Veracruz).

The production’s “vanishing point” refers to the events in the distance (relative to the Homeland Security Detention Center) and to the fantastical space evoked through Amelia Earhart’s role as “Patron Saint of the Disappeared.” On the side of crime evidence and ritual matter, the production will make subtle use of projected photographs (of Ciudad Juárez, the abduction of young women workers, organ trade, the killings and disappearance of maquiladora workers, and the patrolling of the border) and evocations of the upside-down flying Voladores, animals, and myths/miracles.



Fig. 4. *Los Voladores de Paplanta*.
© http://www.youtube.com/watch?v=j4w_D3PxKFU

“Vanishing point” also refers to the ambiguities between real and unreal characters/objects—some of whom exist in virtual reality only (film and closed circuit video are used to trigger flashbacks, and elicit responses caused by these memories; there is also use made of surveillance cameras, cellular phones, as well as audio recordings and voice traces)—and to floating/disappearing kinetic objects in the back of the stage, objects that flourish only in that midnight reality that shields them from our view. Particular use is made generally of the symbolic objects/props mentioned in the script (photographs, postcards, airplanes, *escapulario*, aviator equipment, plastic bag with remains, etc.), and of the “official” items of evidence used by Officer Lauder who appears to chloroform their facticity, pinning them down like the exterminated moths in a child’s collection.

Audio-Visual Scenography and Performer/Camera Techniques

The production uses a fully integrated interactive audio-visual design in a performance that mixes the action continuity on stage with real-time and prerecorded “virtual” scenes (video projections, monitor scenes, audio playbacks and audio amplification of voices). Significant audio-visual attention is given to the language interpreter, whose lips and mouth can be read and whose whispered and loud translations are amplified, occasionally distorted

or altered. The composer provides a structure for a soundscape and the use of particular musics in a few scenes. The interrogation scenes will not have any sound accompaniment except when audio cues are required, but some of the filmic scenes and dream scenes/memories will have a distinct sonic quality. The concluding ritual scenes are underscored as in film soundtracks. Scenographic methods are based on our previously tested multimedia stagings using the following characteristics of “media casting”:

1. **SOLO (Double)**—fractions or versions (doubles) of the same character represented simultaneously on stage and on screen to create a layered representation. There are multiple compositions to consider, here are a few:

Stage character and virtual double use same prop, however, deliver different actions with it.

Stage character and virtual double deliver same gesture, however under different contexts.

Stage character and virtual double deliver same action, however the double can be perceived by the audience from a different perspective or from a closer range.

[In ACT 1, SCENE 6 Marina notices her hand trembling. She turns around giving her back to the audience to hide what she’s about to do. ON SCREEN: Live video feed of her trembling hand. She takes out a flask from her purse and pours herself a glass of vodka. She turns to front with the glass on her hand.]

Stage character and virtual double complete each other by merging in to one body.

Stage character and virtual double synchronize to deliver a coordinated action.



Fig. 5 and 5a. Sueño, Angeles Romero as Sor Juana. Mount Hall, Columbus, Ohio, 2003. Videostill: J. Birringer

2. **DUET**— Dialogues between characters. Stage and Virtual characters interact and affect one another. If a simple interaction, the influence is unilateral. In other words, the stage actor performs an action that appears to affect the virtual character, or vice versa. However, in a complex interaction both stage and virtual characters are affected immediately via a telematic set up. Telepresence allows beaming of distant character into site.

[ACT 1, SCENE 2 Lights on Marina. She is alone, standing on the right side of the wall mirror. As she speaks to her reflection, she gives her back to the audience. The mirror is not actually a mirror; its reflection is simulated by the projection of the camera capturing her live action on stage. Her face is bruised. With a tissue paper she gently wipes the blood coming out of her nose. She then examines a broken rope in the shape of a noose and talks to her reflection. ON SCREEN Live video feed gives the illusion of Marina's frontside mirror reflection. She insults herself. CROSS-DISSOLVE into film sequence: AMELIA EARHART tying her aviator scarf in the shape of a noose. She smiles playfully. Places scarf around her neck and lowers her aviator goggles to her eyes. The camera shot opens as it pulls back to reveal her standing on a fashion runway. She walks down the runway displaying her aviator suit as a super model would. She then slowly extends her arms out like the wings of a plane and lifts off, exiting the frame. Next shot is a CU on her face as the wind hits it. This shot will be underscored with Marina's voice.]



Fig. 6. Amelia Earhart, archival photo.

3. **CHORUS**—Stage character interacts with a collective (projected, such as the mythic wolves in Fig. 6).

[During ACT 2, Scene 11 Amalia recalls being attacked by the werewolves. ON SCREEN: Live video feed, CU of her face manipulated to create a fog effect. CROSS-DISSOLVE to video sequence: Amalia's POV of men laughing in a circle, followed by series of jump-cuts from live video to pre-recorded film sequence of her assault from her point of view.]

4. **PHYSICAL SPACES**—Stage character moves with filmic depiction of physical space (remote location, fantastic/fictional space).



Fig. 7. Puntos de Fuga, *Wolfmodel* screen image. Videostill: A. Romero

5. **PSYCHOLOGICAL SPACES**—Stage character interacts with a memory, a dream, a fantasy, a hallucination (projected cinematically or sonically).

[ACT 2, Scene 12 Amalia has apparition of appearance of Virgen del Carmen. ON SCREEN: Jump-cut to film: Amalia's POV. The SOUND of rhythmic foot stomping is heard. The men move back and away from her in fear. On stage the desk top is raised to create a 60 degree angle incline. Amalia now lies on it, upside down and on her back with her arms extended. ON SCREEN: Jump cut to live video feed: CU of her face responding to memory. She extends her arms out as if to embrace. ON SCREEN: Cross-dissolve into film sequence. CU on the Virgen's bare feet. She stands on top of a wooden surface. The backdrop is a blue sky. The Virgen's hands enter the frame and offer Amalia an 'escapulario.' Amalia's hand enters frame as she reaches to take the 'escapulario.' On stage Amalia matches the same action by reaching out with an empty hand.]

6. **SENSORIAL INSERTS**—Filmic images are projected for sensorial effect (e.g.: Stage character is looking for her kidnapped sister. Sensorial insert shows a shoe half-buried in the desert sand and as the wind blows, it is uncovered slowly).

7. **PARALLEL NARRATIVES**—Stage plot progresses along with another plot on film, intersecting indirectly/directly or the film plot can be the main narrative mediated gesturally or by the human stage voice via live dubbing.

[ACT 2, Scene 1 Amalia recounts the method used by her great grandmother to heal Amelia Earhart. Amalia demonstrates as she speaks. She places her hands over the interpreter's eyes. ON SCREEN: Film. INTERIOR. Scene from previous night in which she removes her blindfold and remains still, with her gaze fixed on a lit candle to the side. CROSS-DISSOLVE into film sequence. INT. CU of smoldering landfill outside of Juárez.]



Fig.8. *Virgen del Carmen* model. © A. Romero

8. **TELEPRESENCE**—Performer (which can be an audience member) experiences being fully present at a live real world location remote from her own physical location. If such a constellation were used, the participant would be able to behave, and receive stimuli, as though at the distant site (a possibility suggested by characters in Amalia's family or her activities at the

border or the role of the pilot Amelia Earhart, as well as Officer Lauder's description of his flights over Scotland. In this instance, the production may explore the real-time use of GPS [geographic positioning system] or Google Earth to bring the realities of Ciudad Juárez closer into the perceptual space for the audience).

9. CAMERA SOLOS / CAMERA DUETS—Performer interacts directly with tripod-mounted camera, hand-held camera, wireless spy camera or on-stage camera operator. In a dialogical scene, two performers can manipulate live-generated images directly with cameras fed to computational system. Interactive software enables camera interaction and voice activation of simultaneously patched live and prerecorded digital objects.

10. INTERMIXING—The production requires mixing live video feeds with pre-edited films. All actors will need to be on wireless mics; Amalia's mic has adaptable volume, and the interpretation of her words will be simultaneous most of the time. When speaking from English to Spanish, the interpreter whispers into a wireless mic that is connected to Amalia's ear-piece. On the other hand, all spoken English is fully voiced and using a mic. For Spanish-only scenes supertitles are projected.

The *mise en scène* of *Puntos de Fuga* creates its realistic and surreal scenes through the concentrated mixing of all of these media casting levels. The production therefore requires an extensive period of pre-production to develop some of the film scenes (and especially the lighting used for them) in close planning and dramaturgical realization of all the stage actions and the spatial directions (as well as the precise cue to cue utilization of the video inserts and sonic elements).

Conclusion

The performance needs to be carefully crafted to determine all interactions between the stage and the projected environment, and the use of projections is primarily intended to allow the mental (fictional) space to remain frameless, lifting the audience's perspectives beyond the "fortress" in the government building to the lands beyond the border (which are opened up in dialog, narration, and the metaphorical flights of the airplanes). In order to synchronize this interaction into an organic choreography, a camera script with a timeline accompanies the general score. This camera script visually guides what gestures, physical exchanges, glances need to be framed, and

how they need to enter and exit the frame. Likewise, the general score includes stage directions with specific cues for the stage character to follow as she/he enters or exits the virtual world. All cues for sonic elements of the performance are set, leaving room for real-time interactivity and contingency. The script is completed in a dual version (English and Spanish) intended for a careful choreography of the simultaneous interpretations as well as the use of projected inter-titles and subtitles.

This form of intermedial theater requires a double approach to the direction, giving attention to the correlation between image on screen and performer on stage, combining traditional scenography with media choreography and the timing needed in live filmmaking and editing. All the elements—spoken, enacted, projected and imagined—are to be combined in the same playing field. As the play also roams different time spheres (historical eras) through narration and fictional characters (e.g. Amelia Earhart), it can be compared to magic shows (e.g. the video characters might be manipulated like puppets or shadow play) where characters are handled with swift hands, with careful masking, and reflective mirrors. Such use of imaginative space also implies thinking of scenographic elements which differ vastly in scale, from the very small (onstage objects or small monitor images) to the very large (overhead projections simulating the desert, the sky, the stars, and the wide horizons into which Amelia's airplane takes off).

The main motifs of the play, at the same time, have a dimension of political drama, mixed with fantastical narrations and projections, which shift the directorial task from the purely experimental (in a formal sense) to the semantic layers in the script. One layer comprises the psychological weight of the characters' understanding of themselves, their professional duties, their familial bonds, and their personal dilemmas, while much of the interactive staging of projected/virtual characters widens the psychological and emotional tone to the political plot that emerges through the officer's interrogation of the detainee, and the latter's dependence on being heard through the interpreter's translations. The core theme of translation/interpretation is explored in many aspects of the *mise en scène* and the use of media technologies (audio, video, cellular phone, surveillance apparatuses, one-way mirrors, transparencies, etc). The interpretation between languages also reflects on the nationalities or different cultures embodied in the characters and enacted in the performance. Differences are further evoked by particular sounds and musics, and the various mechanisms of "recording" the voice and of playback.

Finally, performer techniques are specially developed and rehearsed for

camera-interaction, i.e. the actors need to understand the significance of performing in a telepresence environment where the camera is the interface between performance choreography and technology. It is the base line of a journey into relationships between visual/kinesthetic forms and digital outputs. It is an important starting point for digital performance to embrace the camera as a recording and motion tracking instrument, to explore its possibilities/limitations, to understand how it selects and describes, and to place it within our physical work, not outside it. It helps to remember that the camera can do what a live performer cannot, namely generate extreme close ups, remove the context, shift gravity, record and use digital effects and in-camera-editing.



Fig. 9. *Puntos de Fuga*, stage reading, *Talento Bilingüe de Houston*, 2007.
Videostill: D. Ezquenazi

The relationship between performer and camera operator, whether working towards a prerecorded or live output, is always a creative, intimate partnership, and writing/composing for the digital theater thus presupposes a common ground between spoken words, acting techniques, body knowledge, compositional technique, lighting, and phrasing or framing vocabularies of non-linear digital film coupled with material architectures of projection (output). Telepresence cannot be “written” but is designed—it is a technological form of distributed real-time mediation processes. However, the digital aesthetics suggested for the production of *Puntos de Fuga* trusts

a dramatic core that evolves from the actors' interpretation of the fable (and the linear plot's emphasis on the political and ethical crux of unequal border languages and the bare life of detainees) through specific performer techniques of interaction. Such techniques of course can question a universal or global notion of technological interactivity and "communication design" as such.

We would go so far as to argue that for a future theater of interactivity new organic acting techniques are vital—physical techniques of energetic acting that recapture the body's innate physical sensibilities (what Suzuki calls its animal energies as opposed to the non-animal energies of televisual/filmic and reproductive media) and apply their force to fundamental principles and elements of line, tone, repetition, rhythm, contrast, clarity, dislocation, etc., found also at the base of cinematic forms of figurative definition. Live visual and aural intensions can sculpt the corporeal expressions of the physical as well as of the digital mask; the informatic or synthetic dimensions of the digital machine can be folded back into an anthropological mode of *completing* gestural intensions. We believe there is something in the connection between motivated acting gesture and the interference with "sequence image" or "image batch" (data stored or fed into the computer) by the actor that can re-emerge as poetic expression. It is crucial that the images must be filmed for the gesture. Digital video or animation in our theater is not a movie clip, nor a slide show or still images but an object *designed to be interacted with*. As such it is incomplete without the intentional interaction.

The interactive image in a computational performance system would require more extensive analysis than is possible here. Our rehearsals for *Puntos de Fuga*, as well as for other work we are developing, have demonstrated to us that particular performer techniques are necessary for real-time compositional art that desires precision and intentionality rather than improvisational randomness. Likewise a grammar for interactive imagery is urgently needed to propel digital performance beyond its infant stages of literal mappings and overdetermined effects.¹¹ There are numerous possibilities to digitally affect focus, color change, layer change, morphing, detailing, sequencing, freeze frame, slow motion, scaling, resizing, etc., of the im-

11. Rehearsal techniques and conceptual directions for a "grammar for interactive imagery" (Smith) are currently developed at DAP-Lab in London (<http://www.brunel.ac.uk/dap>). We acknowledge photographer/filmmaker Paul Verity Smith's valuable contribution to this process.

ages used for interaction on stage, and many of these manipulations can be carried out or controlled by the actors themselves with various isolation techniques (known from dance practice and Forsythe's Improvisation Technologies) if their gestures or movements are trackable or sensed. The actors in such digital theater are extended instruments and virtuoso players simultaneously. Generating, controlling, and manipulating the virtual environment in real-time, however, raises many additional questions that may not be answerable in a single production of a play such as *Puntos de Fuga*. Yet the paradox of extended (dis)embodiment clearly underlies the semantic texture of the play.

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