(Re)Traces / Is You Me?
Reflections on real-time performance and prototyping

Johannes Birringer

In the context of contemporary performance, installation and digital art, the notion of "live traces," as this online magazine has named its focus of engagement, assumes a beautifully complicated depth of meaning. Concerns about re-enactment and documentation accompany every live art practice connected with physical manifestations, energies related to the performing body and the movement that expresses them. For many years I have composed dance-theatre works and observed dance and live art practices, yet already since the late 1980s I became absorbed in the gradual embedding of media and digital computation into performance. Or, vice versa, performance became embedded in an expanding range of media arts and intermedial composition processes which challenge assumptions about assemblages of forms and relations. As a new paradigm, the processual or intermedial poses questions about compositional modalities and transmissions (and thus about what constitutes *traces* of digital composition) to just about everyone – practitioners, audiences, curators, teachers and students of contemporary interdisciplinary art.

The generation of form, we have learnt from architecture, is dependent on material processes, and on transformations of in-formation. The in-forming techniques – for example drawings, figures, mappings or other design strategies – are like the organizing principles that William Forsythe proposed for his understanding of choreography. How is space created, how is movement created if not through the continuous extension, variation and re-orientation of moving bodies in dynamic dialogue with the environment. And what are "traces of dance "– if you remember the title of a remarkable book on drawings and notations of choreographers, edited by Laurence Louppe in 1994 – if not certain "phantom movements" bearing on the limits of the imaginary? "Dance can have no recourse to the sign," writes Louppe, "for its essence is to forgo the *detour* that leads there. The access to dance, whether it is perceptual or interpretive, is a direct access that surges up from the heart of the

matter…Dance is lived and traversed as a living present" (Louppe 1994: 2).
Something quite similar had been claimed for "performance" in general and in
principle, namely that it is nonreproductive and that its presence is predicated on its
disappearance. And yet, we are of course interested in the phantom limbs, the gray
areas between notations, notes, conceptual graphics and tracings of the sensorial
fabrics, the intensities, weight, energy, or qualities of movement experienced, seen
and imperceptible, remembered or anticipated. Traces as shadows of the virtual, of
dissolution and orientation, every moment becoming again, mobility its image of
passing.

Helenna Ren in *Ukiyo*, modified performance prototype © P V Smith/DAP-Lab 2008

A present or past performance has perhaps been *documented*, and surely that is quite
common, as a matter of fact. We record the stage, the sounds and the images of
performance; we can look at them/listen to them. We record rehearsals too, and
sometimes make close-up films of the gestures, objects or interface tools we try out.
Other technologies have become available to store traces that are in fact usable in
other ways (not as archive), to generate different knowledge or creative options for
further practice. The actual performance and the virtual performance (the possibilities
inherent on all live events) were/are synchronous, and they have been
captured/recorded. Today we'd say the captured is data. Dated data and data that don't
care about a date and are infinitely re-usable. Much documentation is useless since the
data of a particular performance are already out of date after the changes we make.

More and more dance companies or live artists show and release "versions" of their performances.

The Forsythe Company, *Nowhere and Everywhere at the Same Time* © Courtesy of Tate Modern 2009

Nowhere and Everywhere at the Same Time. That is a title of one of Forsythe's recent performances, created jointly with his ensemble, and when I spoke to Liz Waterhouse, one of the dancers, after the showing at Tate Modern in 2009, she referred to the "work" as part of a living, malleable repertory, predicated on transmutability. What do we *trace* in choreography of improvisation which always further reinstates the repertory as mobile presencing?

On a slightly different level, the world of dance screen media recently saw the emergence of "Choreographic Captures" in Germany, a project inviting submission to an international competition of short non-commercial "clips" (60 seconds) to be screened in public places, cinemas, and online. The entry conditions are simple: A "Choreographic Capture" deals with choreography in a filmic way. Choreography is

to be understood here as an arrangement of movement in space and time. These movements needn't be limited to motions of the human body, but can also involve any other object (www.choreographiccaptures.org). In my lab, we often refer to performance experiments or installations as "digital objects," as the capturing is always already part of the creation, the *post-choreography* (Birringer 2008).

Ceci n'est pas une pipe, Frame grab from Choreographic Captures 2008 © J Birringer/dans sans joux

No resistance to a disciplining apparatus of capture (in the negative sense of bodily subjugation or delimitation) is necessary here. The CC project intends to create an international platform for choreography and cinematographic art, keeping in touch with the Web 2.0 "do-it-yourself" culture of distributed digital work that, increasingly, is also re-mixable, re-distributable, open, social and interactive. Live traces, but different. Christina McPhee, publishing *Sodalake Unbound* on the Internet (http://www.vimeo.com/5681577), refers to her on-going work as "variable

installation performances," the current version a remix of earlier versions of *Sodalake Unbind* *(naxsmash scrim tent build performance).* When she came to give a workshop at my lab in London, she invited our dancers to mash the online video and reconfigure it in new ways (under the creative commons licence).

In the following, I want to follow this thread and look at traces and captures, re-tracings and transmutations of "work" that is, in the digital age, inherently unstable and unfinished. In terms of the processual logic, it would be unfinishable? My proposition: A growing number of contemporary digital or intermedia performances utilize onstage recording, real-time processing technologies and capturing media to develop narrative or movement content that might be relatively tightly embedded in a system and yet widely open to operational indeterminacies implicitly built into the nature of a self-organizing (and partly autonomous) system. The embedding system itself, therefore, is not stable or closed.

Briefly referring to several examples of live performance and installation art, I will then suggest that re-enactment and documentation are negligible side effects in the larger context of always mediated, interactional or distributed/networked art, where "prototyping" of real-time interface architectures implies continuous iteration and difference, programming, redesigning/versioning, and platform switching. The data are traces and pro-actively usable, re-usable. As a consequence, there never will have been stable or final works in need of documentation or re-performance.

1. *Is You Me*

Is You Me is created by Louise Lecavalier, Benoît Lachambre, Laurent Goldring and Hahn Rowe. I saw the performance at the Dansens Hus during the 2009 Coda Dance Festival in Oslo. Ostensibly a duet between Benoît Lachambre and Louise Lecavalier, this dance reflects some of the fascinating aspects of a "cracked medium" – in the sense in which Caleb Kelly has examined 20th century musical and artistic production by looking at experimental usage of playback and sound-producing technologies whereby tools of media playback are expanded beyond their original function as a simple playback device for prerecorded sound or image. The generative and glitch

aesthetics of cracked media point to processes of alteration and malformation, usually enacted on the material surface of a medium (Kelly 2009).
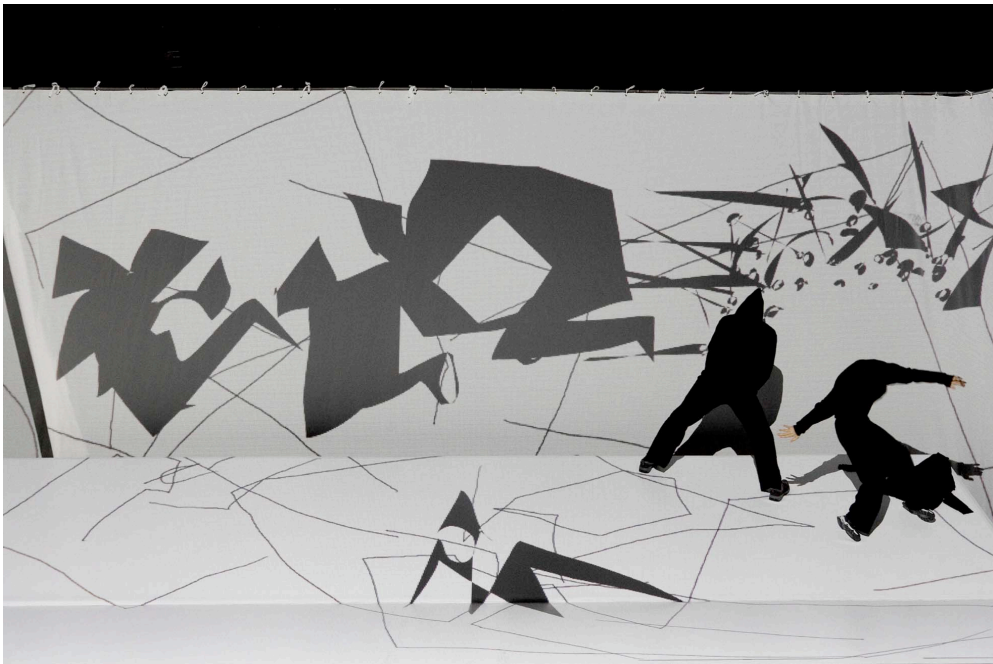

Is You Me, co-created by Benoît Lachambre, Louise Lecavalier, Hahn Rowe and Laurent Goldring. A ParBLeux production © 2009 André Cornelier. Courtesy of Latitudes Prod.

The first "malformation" once notices in *Is You Me* is the occlusion of the individual subject/performer. On a raked white platform, which backs up into a slightly curved white screen, we can barely make out anything initially, except for a black pullover with sleeves and hood, lying there as an abstraction of a torso. A puppet-like shadow appears, seems to become animated, with tiny legs, but it is "only" a projection, lines drawn and then redrawn, with swift marks of a pencil. Then first one, then another figure gradually appears in black hooded costumes; for a long time we don't recognize the dancers or their gender, no body no subject, we only perceive stunningly quick brush strokes, animated lines that circle and dance around the hooded pantomime of silhouettes, creating scene after scene in a constantly moving universe. Perplexing scenes of phantom realities. In terms of animation (e.g. Miyazaki), one can see the scenes as *doga*, moving pictures or animated drawings,

The figures on the platform, flat and nearly two-dimensional, move in strangely wobbling and flapping ways, they are manga characters perhaps, appearing to engage in a surreal cosplay to the haunting electronic violin and innumerable crackling sound

effects generated by Hahn Rowe, seated downstage left, while on the opposite side of the stage, seated at his laptop, light and projection designer Laurent Goldring creates his live kinetic sceno-graphies and drawings. This is stage design enacted in real-time, under constant erasure. The movement of the performers remains two-dimensional for some time, limbs popping, contorted twisting and trembling extremities, stretched cloth and Kafkaesque forms emerging and combining with the line tracings, marks, blotches, smears and extraordinary zigzagging calligraphies created by Goldring's hands on the computer tablet. Now there is a full landscape, then it is wiped away, and on a blank canvas the tracings of motion start again, while eventually, now in yellow and green hoods, the dancers reveal a face, a hand, a bare back, almost as if animal or human-like bodily contours form associations with an imaginary story (metamorphosis, à la Kafka) that resembles an uncanny nightmare, a dream with (at one point) a black and white film scene of a car driving through heavy rain, we look at the night through the windshield, one performer stands sprawled in front of the projection as if he/she were an insect caught on the glass, smashed up. I can barely believe what I am seeing. Near the end, the live animation draws a horse shape, a huge Picasso-like cubist monster with a wide open mouth, red color bleeding from its belly as if this troubled image wanted to be more than cartoon, shapeshifting into a densely emotional virtual landscape.

Is You Me, co-created by Benoît Lachambre, Louise Lecavalier, Hahn Rowe and Laurent Goldring. A ParBLeux production © 2009 André Cornelier. Courtesy of Latitudes Prod.

What can we call such a dynamic real time kinetic sceno-graphy, with its seamless integration of drawing and movement, which at the same time appears corrosive, not centered on fusion but on the physical cracks and breaks in the surface, on decomposition of identities, on concealable (bodies) errors and layerings that slip away and cannot surge into the heart of the matter… ?

2. (Re)Traces

My second example is a concert at London's Place Theatre where Tanja Råman + Dbini Industries were featured on the Dance3 program in April 2010. *(Re)Traces* is a shorter version or re-adaptation of *Traces*, and is performed as a live collaboration between Tanja Råman (dance), Jon Ruddick (electronic music) and John Collingswood (live video manipulation and projection), each performing together in their own languages, combining movement with live sound and working with the digital image projection (words, calligraphies, light traces) in real time – thus producing a performance in constant mutation, centered on the theme of memory. I did not see this performance live, but its video versions tell me it is an interactive dance performance constructed through a combination of audio and video live mixes controlled by software and camera vision. In the system of interdependencies of such a "machining architecture" (Spuybroek 2004), the performer also enacts certain parameterized controls of the coding process, traces of choreography in action, as we have seen in some of the outstanding prototypes of contemporary performance that utilize real-time composition (Trisha Brown's *how long does the subject linger on the edge of the volume...*, created with Marc Downie, Shelley Eshkar, Paul Kaiser, Curtis Bahn and others; Chunky Move's *Glow,* designed by Gideon Obarzanek, Frieder Weiss, Luke Smiles and performed by Sara Black or Kristy Ayre; the Ventura Dance Company's *2047*, with installation, video, audio and stage design by Pablo Ventura; or *Movement A*, designed by Ulf Langheinrich and danced by Toshiko Oiwa).

A question that arises is whether a particular dancer is needed for the system to perform and how a dancer is positioned inside the sensing system. Råman, wearing LEDs on her arms and one leg, moves with lights (reflectors) that are "recorded" and

then generatively looped into the graphic visual projections on a scrim in front of her. The projections dance. Letters, shapes of words, appear as well, layered upon each other, homonyms, letters of the alphabet that disconnect from the body. The projected light also seeps through the scrim and falls, slightly blurred, onto a back screen. Remembering Loïe Fuller, especially her legendary "Fire Dance," the performer is to some extent apparitional, embedded inside the projection environment and the looped light and sound traces generated by the graphic and audio interface.
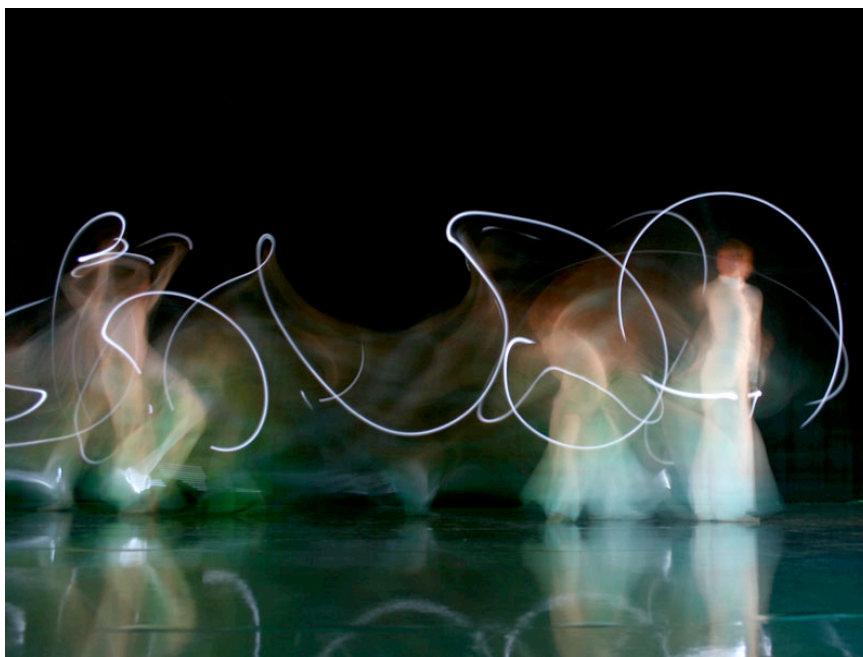

(Re)Traces, co-created by Tanja Råman, John Collingswood and Jon Ruddick © 2010 Courtesy of John Collingswood

These light traces create a virtual double, a dimmer version of Råman's figure and movement, "white lines and shadows that basically originated from her, but after a while seemed to gain their own life " (Tonucci 2010). Since the looping effect creates delays of perception – and thus also of our memory of the perceived light-in-motion – the solo becomes a duet with virtual emanations, as we also recall it from Merce Cunningham's *BIPED* or Bill T. Jones's *Ghostcatching*: the dancer spawns virtual shapes that appear to grow from the movement gestures.

3. Open Systems and Prototypes

How do we propose to interpret such loops between apparently real and virtual figures that evoke a certain interchangeability? Or are the digital and the analog not interchangeable? Råman's dance, as we also observe in the photographs from the performance, documents itself, if one were to think of trace lines in this way, it partitions and splices the physical motion-gestures with the graphic trace lines of light projected onto her, and thus she can indeed be said to perform with the "memory" produced by means of the interactive Isadora or Max/Msp/Jitter patch (the computational environment) which processes the input data and translates them into output. The difference to Laurent Goldring's live drawings onto the stage of Louise Lecavalier's and Benoît Lachambre's performance is that Råman is her own scenographer, so to speak. A virtual scenographer, disturbing perception, generating response patterns from the graphic interface system activated by software algorithms. You take the masquerade for the real, while the digital computer remembers nothing; the software instantly analyzes the incoming data (numbers) and translates them into projected light patterns. What the audience might remember are the visible (and invisible) partitions in the small delays between gestures and the projected graphic traces of gestures, which in her concert enter into a beautiful, resonating kinaesthetic

(Re)Traces, co-created by Tanja Råman, John Collingswood and Jon Ruddick © 2010 Courtesy of John Collingswood

fusion with the projected words you will remember ("renew," "remember," "retrace," "recall," "revisit," etc), their typographies as well as semantic meanings, the abstract light notations of mathematical thinking, grammar of cognition here evoked as a kind of writing in movement or inscription (*choreo-graphy*).

I am arguing, however, that all of this is post-choreography, since changeable and inherently unstable or indeterminate within the intelligent system. Such an assemblage, performed interactively by the dancer in close unison with the software, was clearly marked in Chunky Move's *Glow*. Here the graphic projection onto the floor – where the performer first moved in the dark and then began to glow – seemed to act as a continuous contouring medium but also revealed its own behavior, its cross-haired lines scanning the stage, polygonal nets folding in faint colors around the effervescent human body, being *attracted* to it. The graphics also glowed in the dark attractively, reminding me of numerous installations which invite audiences as players into the responsive system (1) Such exhibitions create a sense of intimacy providing seductive playful trial. It is entirely possible to watch the event paying attention to the system behavior, puzzling over causes and effects or inter-relationships, wondering what gets omitted by the mapping or from the visible prosody of the body moving. The moving graphics speak a different, if synchronous language.

Now, in most theatrical works using preprogrammed light/video projections, the positions and movement sequences of the performer need to be cued precisely to the space/position and temporal structure of the video playback. The role of the dancer then would be reduced to the difficult task of making each performance an exact copy of an original. In *Glow* the machine vision of the software – wonderfully named "Kalypso" by computer artist Frieder Weiss – observes and analyses the performer and reacts (anticipates) to her movement. It thus releases the dancer from restrictiveness and monotony. The Greek name, translated, means "the camouflager, the hider."(2)

If the reference to restriction were to be taken literally here, it should not cause offense either. When you perform with sensor interfaces or camera interfaces, there are always restrictions which enable different techniques of improvisation or performance, creating body and environment (flux agents and systems) in mutual

modulations. The intricate real-time interrelations provoke a shift in emphasis to the momentum of new conjunctions, for example the ground, which is a screen, might move, the silhouettes breathe, light contracts and expands. In the case of *Glow* and other contemporary interactive installation, the active presence of the player/performer is needed, but again we don't think of choreography here. There is no re-enactment. Each time new conjunctions can occur and a lover's discourse emerges.

Processing, in computational and aesthetic terms, is the artistic material for such prototypes of loving relationscapes. Enacting such relationships (and would there be videogames if it were not so?) implies a readiness to become immersed in the experiential dimensions of animation (anthropologists might call it spirit-possession) where movement-action is as imminent as the visual or sonic abstractions generated and propelled by algorithms, neither of which knows exactly how the virtualities, the phantom limbs, will have been sensed or thought. At the end of the game, you begin again, and you can't die.
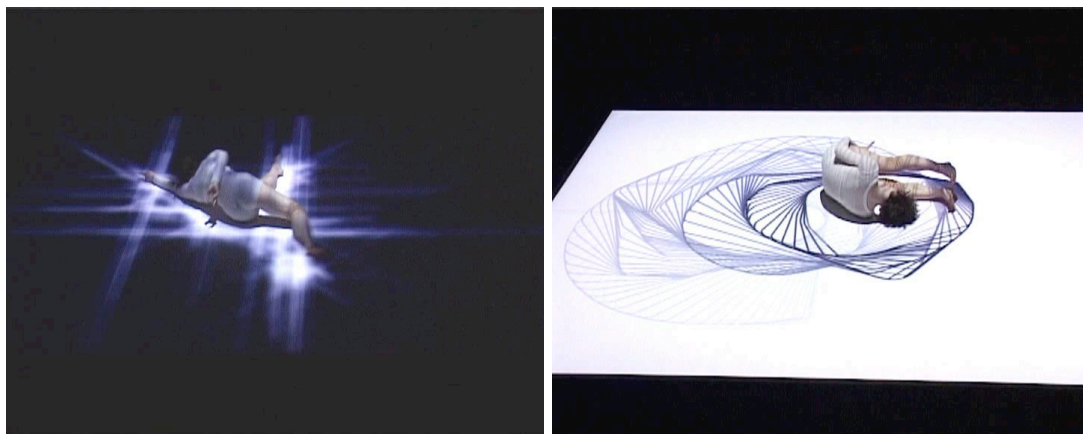
Glow, c-created by Chunky Move and Frieder Weiss © 2006 Videostill courtesy of Frieder Weiss

Kalypso, the hider, is a calculating system. As audience, watching the player, we cannot see everything. Perhaps it can be argued that such real-time processing systems invite us to sense and deduce certain things from what we are able to glimpse and hear, from amongst the shadows and the contours, the splinters and splatters, blotches and lines and dots. Let's imagine the afro-caribbean roots of the software, which also recalls rhythms – the kind of rhythms seen in Kara Walker's extraordinary animated cut-paper silhouettes (e.g. the Whitney Museum show of Walker's "My

Complement, My Enemy, My Oppressor, My Love"). When Sara Black plays in the *Glow* system, dressed in white and wearing kneepads, she slides onto the dark floor, light and video images flow onto the dancer, onto skin and clothes as she is tilting and twisting, tumbling and stretching, rolling over and under, contorting legs and arms into ever new figurations of abstract movement, unknown to us or unknowable, as we do not see her intentions, we can only sense her being in love, her desire and rhythmic pounding of the invisible lover.

Each movement and each tilting of the body appears to generate an animated calligraphic trace, an echo, a whispered word from the shadowy lover. Half-way through, Black becomes quite audible in her ecstasy, she slides and slides, spinning around, stuttering words of love in unknown dialects of the possessed dervish - suddenly all is white, and each gentle motion of her arm and elbow draws purple outlines of her coffin below her, she literally draws her envelope, her lover's embrace, the Draculan sucker who will climb into the coffin with her when the sun rises, now it is night again, we are in the dark, only thin stripes flicker across, lines like knives stab and cut, and the dancer continues, happily enslaved to the pulsating underground. Near the end, the dancer jumps up, and lets herself fall, again and again, creating powerful dark blotches on the white floor. Her body leaves the silent black blob of a silhouette on the surface, and as she leaves and retreats to the side, anxiously, she separates from the beloved silhouette, but then the dark blob slowly begin to move, follow her across the space to finally catch up with her. She is reunited with the impression of her body; embraced by digital projection, silhouette and person become one again. Distance and unity are processed and recalibrated.

In Forsythe's installation of his research project *Synchronous Objects* one observes how such a dance can be captured and processed through data visualization tools that help us to analyze the interlocking systems of organization in post-choreography (http://synchronousobjects.osu.edu). Images of Forsythe's *One Flat Thing, Reproduced* (2000) may show a light sculpture composed of traces-over-time, pathways of movement without the movers, now clouds of data as if performance were quantified through various collection techniques (which may derive from visualization strategies in neuroscience, statistics, and bio-informatics) and transformed into a series of "objects" or sculptures that can reveal patterns, but also

inspire the re-imagining of movement as something else. Such "documentation" reveals productive, synthetic and generative "objects" (visuals, text, notation, audio, spectrograms, graphs, etc), generative motion traces constructed from dancing's aftereffects. As Forsythe suggests, this is not done to create a score from which a piece could be reconstructed, but to explore how space becomes occupied with complexity (deLahunta/Shaw 2006).
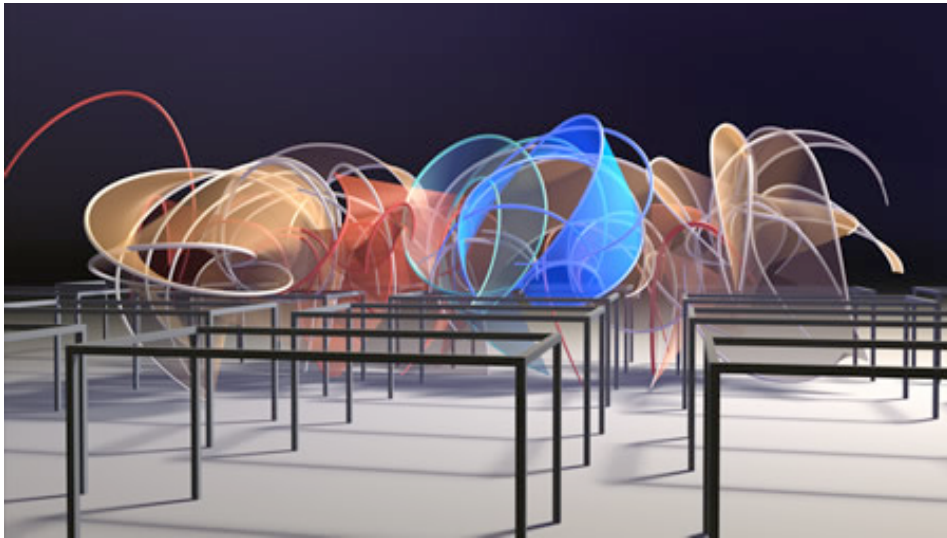
"3D Alignment Forms," Animation of dancer's traceforms in *One Flat Thing, reproduced* mapped to 3D space. © Synchronous Objects Project, The Ohio State University and The Forsythe Company
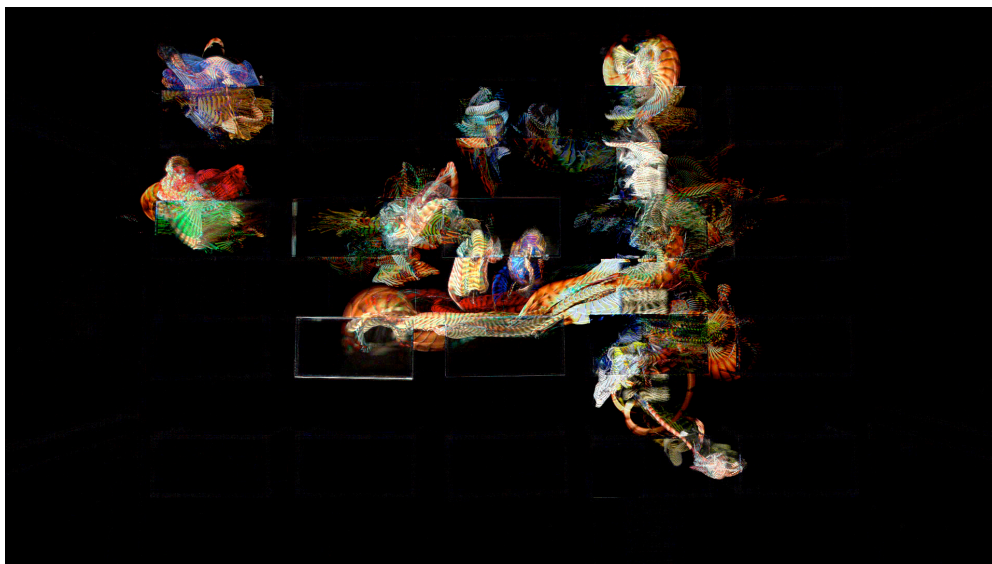
"Difference Forms": Looking at the dance from above, patterns are illuminated through video processing that reveal fleeting alignments, bursts of turns, clusters of action and horizontal and vertical flows. © Synchronous Objects Project, The Ohio State University and The Forsythe Company
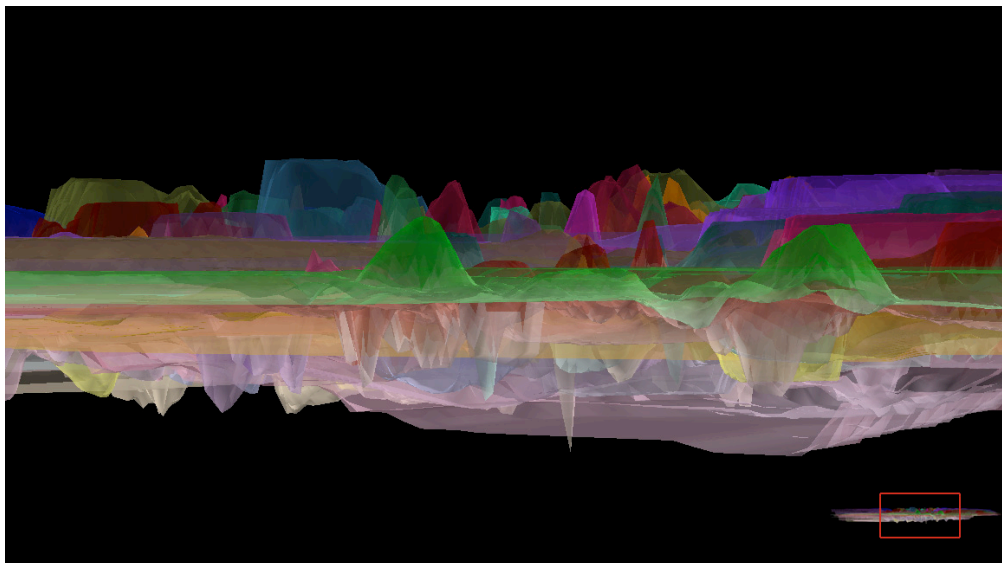
"Geographic Applications": GIS map of the dancers' motion under and above the tables over the length of the piece generated using tracking data of the dancers' positions in 3D space over time. © Synchronous Objects Project, The Ohio State University and The Forsythe Company

As is the case with all the examples of real-time performance examined here, the interactive moving animations or graphs of *Synchronous Objects* offer seductive counterpoints, mixing up the analytical and the creative to provoke fresh perceptions for composition, for genesis. In this sense, *Synchronous Objects* is a prototype of notation and creation as research-in-progress, and also reflects the current surge of digital information online, not "stored" there as an archive but prone to be sampled, de-contextualized, manipulated and remixed at will for other creative purposes. *Is You Me* is a perplexing, beautifully haunting title for work that requires a deep engagement with becoming. Being uncertain about predefined concepts, subjectivity or individuation, such generative processual performance invites a joining (and is almost always collaboratively enacted), and "interactivity" or "prototyping" describe such a joining insufficiently. In design terms, creative programming and interface performance of course require trial and error, and repeated versions to test and to develop the system which turns composition into dynamic planes of evolving symbiosis as well as shifting contexts of distribution. No flat things, reproduced, but scenes prepared with loving care for synchronous unfolding to happen. This, naturally, has ethical and aesthetic implications for our understanding of art as a living organism, and of the developmental mechanisms of such organism.

Notes

(1) *Glow* was touring in 2007 and 2008, and I saw a version of it performed at the CYNETart 2007 Festival, Festspielhaus Hellerau, Dresden, Germany. Among installations that use responsive real-time system architectures are: Kirk Woolford's *Will.o.Wisp* (2002-), Gretchen Schiller and Susan Kozel's *Trajets* (various versions since 2001), SWAP's *Edge* (2006-07-), Rui Horta's and konditon pluriel's recent work, igloo's *Summerbranch* (2005-), and many others. I am also thinking of William Kentridge's *7 Fragments for Georges Méliès* in the context.

(2) Ca·lyp·so: in Greek mythology, a goddess or nymph, daughter of Atlas, who lived on the island of Ogygia where Odysseus was washed up after being shipwrecked. She kept him there for seven years and promised to make him immortal if he would be her husband, but Zeus sent Hermes to order her to release him, and she gave him materials to make his own boat.

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