No. 26

'Dance (in the presence and absence of) Technology'

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In August 2006, I received an invitation from Barbara Raubert, dance critic for the newspaper Avui in Barcelona, who was preparing a publication for the Mercat de les Flors, the institutional theatre in Barcelona. She asked me for a short paper "talking about the role of new technologies in dance, which they are and why. Also, we would like to know when is the mixture of dance and technologies considered dance and when is it considered cinema; when is it creation and when is it technology."[1] The deadline was very tight, only a few weeks. My response was that I was in a new phase of thinking and was not sure I was prepared to write on this particular topic and offered an older paper. Her response was that "maybe it would be easier to take an old text", but "all these thoughts about what is new or can be, etc that may be even more interesting, and hopefully this can help you clarify something."[2] I accepted her proposal and wrote this as a new text.

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[1] Email to the author, 18 Aug 2006.
[2] Email to the author, 23 Aug 2006.

Dance (in the presence and absence of) Technology

(This is the pre-translation English version as submitted for publication in September 2006.)

By the time I moved to Amsterdam in September 1994 to teach at the School for New Dance Development, Netherlands was already an important environment for the growth of new media culture. This probably was one of the reasons that Technology/ Media became the main theme of a symposium on choreography we organised in June 1996. Re-titled *Connecting Bodies*, "an international symposium on the connections between the discourses and practices of dance and technology focussing specifically on the impact of new media technologies on dance making/ choreography", the symposium was the first of its kind in the Netherlands.[1]

An impressive gathering of presenters included artist and computer scientist Thecla Schiphorst showing LifeForms, the 3-D human figure animation software she had been developing with Merce Cunningham as a tool for choreographic creation; Heidi Gilpin, dance dramaturge with William Forsythe demonstrated early versions of what would be published in 1998 as the *Improvisation Technologies* CD-ROM; and Oslo based Amanda Steggell (choreographer) and Per Platou (musician) showed documentation and discussed their performance work *M@ggie*s Love Bytes*, one of the first to use the Internet for connecting remote spaces as a part of the performance. There was a project shown by Peter Mulder from the NOB (Dutch Broadcasting Company) connecting a performer in a complex 3-D motion capture system to graphic imagery during a live orchestral concert. There was also a short "interactive" dance performance made especially for the symposium that used Big Eye, a motion tracking software being developed at the Studio for Electro-Instrumental Music (STEIM) in Amsterdam.

The breadth of work shown at the symposium covered the basic "catalogue" of technologies often connected with choreography and dance, from digital creative tools to real-time interactive performance instruments. But the symposium was not simply a pedestal for technology. Every presenter was in the process of thinking hard about the impact of technologies on dance and vice versa. The collective discussion was rich and incisive, and our chairperson, Diana Theodores, summarized the two days with an "inventory of issues" and questions that remain relevant today such as: does technology produce a different idea of the body and could this be liberating; can dance provide a resistance to the notion of technological disembodiment; what makes a good "technographic" (dance and technology) performance; and can we maintain a culture of movement memory via technology?[2]

Inspired by this wide range of new artists, materials and ideas, I embedded myself further into this community of practice called "dance and technology" as a writer, researcher, advocate, speaker and organiser.[3] Mark Coniglio, co-director of Troika Ranch, and I worked together to revive discussions on an email list which had been launched earlier under the title "dance-tech", and we launched the resource website *Dance and Technology Zone* in early 1997.[4] This ushered in a period when the growth of information becoming available to me on a daily basis seemed to mirror an actual increase in artistic activity. The feeling at the time was not only of growth, but of a kind of rapid expansion and maturation. Two years later, in February 1999, the organisers of the *International Dance and Technology Conference* (IDAT) at Arizona State University confirmed this feeling by writing: "We can now begin looking historically and critically at how the convergence between these fields has developed, how this effects us, and how dance and technology can continue to give breadth to one another in the coming century."[5]

However, the artwork that was being made had its critics. Outside of the dance and technology community of practice, the general perception was often a variation on

"too much technology too little dance". I felt different perspectives were necessary and sought to open up thinking about the range of relationships inherent in this type of work; particularly in its making. For example, one of the intrinsic strengths of the dance and technology community could be seen in the conjunction of two creative domains or disciplines working with radically different materials. Convinced that the production of strong artworks could, in part, be achieved by making the conditions for interdisciplinary creation much better, I became involved with others in the organisation of a number of "research labs".[6] Short and intensive, these projects brought together new collaborative teams and supported existing ones; maximized access to a range of technologies; were process- orientated and emphasised constructive peer-to-peer feedback. There was always an effort to make documentation of the research outcome available, sometimes not as successfully as we wished.[7]

At the same time, we pursued another line of enquiry titled *Software for Dancers*, which set out to "to develop concepts for a software rehearsal tool for choreographers and those practitioners for whom the body in motion is a primary material".[8] This research has evolved along different lines including *Choreography and Cognition* in which we shared an intensive research process with psychologists and neuroscientists.[9] This project shifted the focus of the research to the mind of the choreographer/ dancer. In doing so we made the empirical discovery that building tools to support creative process and studying various aspects of brain functioning are closely linked; nothing new in the history of cognitive science, but the *Choreography and Cognition* project showed it was possible to integrate the two fields of knowledge. The idea of the brain as an information-processing environment may not be the most appropriate conception in all circumstances; but it makes it possible to conceive of the relation between dance and technology differently.

Critical to the interdisciplinary research labs and the *Software for Dancers/*

Choreography and Cognition project is the assumption of a culturally stable concept of choreography and dance. This concept has a shared history, belief that the basic material exists in the moving body of the dancer and the primary locus of choreographic activity is the rehearsal studio and stage. These stable entities are important and useful, especially when trying to organise productive exchanges between art and science. But another way of thinking is to blur the boundaries between disciplines and practices by separating some of these concepts, and, for example, applying the concept of choreography to artistic work that uses new technologies to elicit movement from the artwork's intended audience.[10] As our social landscape is pervaded by mobile and locative technologies, this type of artwork, no longer possible to contain on any single stage (unless the idea of stage is expanded to include an entire city), might be perceived as the vanguard of dance and technology practice.[11] However, with no moving body of the dancer and no stage there is a decided absence of dance. How can this be reconciled?

A recent project has suggested a way. By their own definition, the previously mentioned projects are all bound to the idea of specialist knowledge. In a recent workshop, organised at Tanzquartier Wien and titled *Absent Interfaces* "researching new approaches to performance and media", we determined to continue exploring the same relationship the *Connecting Bodies* symposium did in 1996. But now we assumed nothing to be necessary; e.g. no certain specialist knowledge, no specific technological instruments, and to question the classic dance and technology arrangement: the relation between body as input, computer as processor and audio/video media as output.[12]

The full results of *Absent Interfaces* are still forthcoming, but they seem to contain a hint of at least three critical questions. If one response of the dance and technology community in the last decade was to take advantage of increased processing speeds, lowering costs and new software development, what response might there

be now? Are we at the threshold of certain technologies acquiring the depth and breadth of cultural meaning making it possible for dance artists to use them metaphorically and self-referentially? And if some of the newest technologies are biological, as seems clearly to be the case, what will be the artistic reaction to this? One possible response to this last question is the 2001 performance piece of Swiss choreographer Yann Marussich, *Bleu Provisoire*, in which biochemical reactions make up the performance.[13] How might works of this type that hack the body's internal machinery change our thinking about relations between "dance and technology"?

After ten years of engagement, the observation I would make now is that "dance and technology" will not converge as implied by the previously mentioned comment of the 1999 IDAT conference organisers. Rather its development has been and will continue to be periodic, fragmented and often subsumed into other genres or types of work.[14] While continuing the *Software for Dancers* research along its different strands, I have revised my original idea of the interdisciplinary research labs to reflect a different attitude to separate disciplines. I think it is less important today to emphasize distinctions between practices and more appropriate to relax the idea of specialist knowledge, to blur the boundaries between disciplines and highlight the freedom for artists to use whatever means necessary to make and disseminate their work.

At the same time, there are recent developments that do follow the convergence trend of "dance and technology" in which machine-based gesture tracking and movement analysis are being combined with choreography and performance in new ways; for example in the recent work of Trisha Brown made in collaboration with software artist Marc Downie entitled *How long does the subject linger at the edge of the volume...* in which Artificial Intelligence Agents generated their own graphical responses to the choreography in real-time.[15] We have explored these

developments in a recent symposium titled *Choreographic Computations: Motion Capture and Analysis for Dance* organised at IRCAM, Paris in June 2006.[16]

The questions posed by Diana Theodores in June 1996 about "dance and technology" can traced throughout these many projects over the last decade: from *Connecting Bodies* to *Absent Interfaces*; from LifeForms to *Software for Dancers*; from early Internet performances to computer-based choreographic agents; from mind- hacking (cognitive science) to bio technology art; and the emergence of the non-specialised (and uncategorized) artist. What is clear is that each specific manifestation of practice, in its specificity and contextual relations, provides answers to these questions. Artists, curators, audiences and critics today who generalise with the view that "dance and technology" means "too much technology and too little dance" are missing this wider range of possible relationships where neither may be deemed essential and yet, in either their absence or presence, continue to give rise to new creation in thinking and artwork.

Scott deLahunta

2006

Endnotes (all URLs checked on 12 September 2006)

[1] The original symposium website: http://www.sdela.dds.nl/boi/sympos.htm
[2] Symposium summary by Diana Theodores: http://www.art.net/~dtz/diana.html
[3] Origin of the term is probably most easily attributed to the *Dance and Technology Conferences* I-III hosted by the University of Wisconsin (Madison, 1992), Simon Fraser University (British Columbia 1993) and York University (Toronto, Ontario 1995). Proceedings from I and III are available here: http://www.surrey.ac.uk/NRCD/pConferences.htm.
[4] Websites for Troika Ranch: http://www.troikaranch.org/; and the Dance and Technology Zone: http://art.net/~dtz/.
[5] IDAT 99 Archives: http://www.ephemeral-efforts.com/IDAT99.html
[6] Digital Dancing Documentation: http://www.braunarts.com/digidancing/.
[7] 7. Some sample research lab websites: http://dance.asu.edu/cellbytes2000/scott/index.html; http://www.sdela.dds.nl/transdance/report/index.html; http://www.sdela.dds.nl/mcrl/index.html.
[8] 'Software for Dancers' Sanjoy Roy article (original project) http://www.sdela.dds.nl/sfd/sanjoy.html.
[9] 9. Choreography and Cognition documentation website: http://www.choreocog.net.
[10] In some ways this would not be new thinking, as the audience becoming the performer is associated with the genre of "interactive art" dating back to the Happenings of 1950. For more background and references refer to *The New Media Reader*, eds. Noah Wardrip-Fruin and Nick Montfort. Cambridge, MA: MIT Press. 2003.
[11] A quintessential work of this kind has been created by the UK based performance group Blast Theory in their locative performance/ media project "Can You See Me Now?" http://www.blasttheory.co.uk/. Additionally, an essay on the same theme titled 'Blurring Boundaries: a theory of the artwork' is available in the First Edition of the On Line Journal *COMPAS*: http://www.compasbcn.com/.

[12] Absent Interfaces was conceived and facilitated by Daniel Aschwanden (AT) and Scott deLahunta with supervision and organisation support from Martina Hochmuth from TQW; as a one-week workshop from 28 November through 3 December 2005 with invited artists Heine Avdal (NO/ BE), Myriam Gourfink (FR), Anne Juren (AT), Ralo Mayer/ Philipp Haupt (AT), and Veronika Zott and Tomate (AT).

[13] Bio-Art is an artistic response to biotechnology, which, in the example of Marussich, extends the developments of Performance, Installation and Body Art (more information on Yann Marussich can be found here: http://www.perceuseprod.ch/). There are many sources of information on Bio-Art available on-line including conferences and exhibitions, for example: http://www.a-r-c.org.uk/db/about.html.

[14] For some earlier thoughts on this I have published a chapter titled: 'Periodic Convergences: Dance and Computers'. in *Tanz und Neue Medien* (book and cd-rom/dvd). eds. Dr. Söke Dinkla and Dr. Martina Leeker. Berlin: Alexander Verlag. 2002,
pp. 66-84. A report on IDAT 99 by Dragan Klaic provides another perspective: http://cf.hum.uva.nl/%7Etheawet/technology/articles/idat99.html.

[15] . For more information on the Trisha Brown/ Marc Downie collaboration see: http://www.openendedgroup.com/artworks/howlong/howlong.htm.

[16] Choreographic Computations: Motion Capture and Analysis for Dance: http://recherche.ircam.fr/equipes/temps-reel/nime/workshops.htm. A report will be published in a forthcoming issue of the International Journal of Performance Arts and Digital Media (http://www.intellectbooks.co.uk/journals.php).