

A Little Technology is a Dangerous Thing...

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Technology is with us — it's a part of our daily life and culture, and while some fear and decry the technocrats, we also consciously or otherwise revel in their works and indulge their perceived control over us. Computers have made life simpler and better for all of us, whether we are performing artists, academics, theorists or historians. Artists have used technology for centuries, for millennia, even. Artists, in fact, have often been creators of new technologies, refusing to be satisfied by currently available tools. There is a received wisdom amongst the dance community, however, that technology is a dangerous thing — that to use technology as an integral element in a work is to detract from the body, from the choreography and design, from the core of what is dance. It is a thing to be feared. We don't discuss the dangers of using increasingly high-tech lighting systems; we don't question that computers can at some level be used to help choreographers make work; we don't doubt that computers can help us refine and develop notation systems and that video cameras are at least partially successful in their ability to capture work for later retrieval and analysis (that the video camera has become, in fact, an invisible yet essential day-to-day tool for many choreographers).

But what I want to talk about is the use of technology as a creative partner — the use of interactive technologies as an integral part of performance. In the context of my own work to use interactive technology is to use tools for making performance environments in which the motion of the performer can directly influence the sonic or visual environment in the moment. I use the work environment here because, well, there really is no more appropriate word. These environments live only when a body is moving within them — without movement they are silent and dark and lifeless. Similarly, the performance itself cannot happen without the environment. The environment *is* the stage, as well as the instrument upon which the performer is playing. So in an attempt to define our terms, perhaps we can say that *interactive technology* or *performance technology* is that which exists only in an integral (symbiotic?) relationship with the performer, and with all the other elements that go into making a performance.

I'm a composer, trained as a classical musician, with about as much bodily sense as the keyboard I'm using to write this essay. I've used technology in my artmaking for twenty

years. I don't question its validity, I don't doubt its efficacy; I do constantly question its appropriateness and value with every piece I make. I've worked with dancers and choreographers for many years, and with interactive technologies for most of this decade – but more importantly I've now worked with the same primary collaborator for five years, which builds an entirely different relationship than the kind that happens in the context of making a single piece. My use of technology, and the art I make, is entirely influenced and affected by the input I receive from my choreographer/writer/collaborator, Jools Gilson-Ellis. I'm not very good anymore at creating work without a computer. I can't really sit down in front of a piece of manuscript paper and "write" a piece a music. The muses just don't speak to me in those terms anymore. Is this a loss? Of course. My long relationship with fickle and ever-changing tools, however, has been rewarding, albeit not without pain. So, given that I cannot question the place of technology within performance making, I will attempt to talk about what I see to be the positive and negative aspects of using these technologies, and how our relationship to them might change as they, and we, mature.

There are still only a handful of artists in the world successfully using dance technologies (see my definition above: I will henceforth use this term generically to mean the use of interactive motion-sensing technologies to control sound, video projections, lights, and all manner of other things). This is true largely for

two reasons: the amount of time involved in getting to know the tools, and the amount of time necessary to develop work with all participants present.

These are possibly the two most significant barriers in a time of economic restraint in which fiscal support of the arts is often seen as a low priority (or, in the United States, possibly not a priority at all). These kinds of pieces are by definition expensive to make, not because of the technology cost, but because of the time required. By example, look at the work of the Frankfurt Ballet, with choreographer William Forsythe. It is not atypical for the company spent almost a full year in developing a new work, during which time they do not perform. There is likely to be a full-time dramaturg and a full-time composer, and a host of other support staff to help the company develop improvisatory structures, experiment with a variety of technologies, and develop the content of the work in harness with the technology it utilized. There are a minuscule number of companies who can afford to work in this way. As a result, how often do we see work with new technologies that is remarkably superficial or unsuccessful? How often do we see work in which the technology is dominant, in which the choreography and the performer has been completely subsumed by the technology? Is it any wonder that dance technology is viewed skeptically by practitioners and audiences alike? What's remarkable to me is that audiences have not reached the stage where they *expect* this work

to fail, but instead our ever-optimistic view of the technological world keeps audiences coming back for more, however disappointing their previous experiences.

Another barrier to creating work using these kinds of technologies is the fundamental shift in process their use demands. Composer and choreographer must give up a huge amount of control; the performer or performers must be given much more control; work must often be devised with at least some degree of collaboration with the performers, with all the technology in place; time must be spent simply learning a new performance environment — usually at the same time that environment is being created; all involved must be willing to experiment, and be willing to cooperate in the making of a performance environment that is also the performance (and be willing to accept that quintessential paradox). So, if you're working with techno-virgins, on their first trip into Interactive Land, you are in one fell swoop asking performers to be: choreographers, improvisers, actors (in our work, anyway), composers, and listeners. This is often too much, and the amount of time required to acquire so many skills within so many challenging performance modalities takes an inordinate amount of time, even when working with the most accomplished and experienced professionals.

Above all, there must always be an awareness that the technology has to be made subservient to the ideas the piece is trying to

work with, and a willingness to fail, or to confront at least partial failure. This sounds like the easy part, but in fact remains particularly difficult and challenging. How many times have you seen people looking at a video screen (television) just because it's *on* and for no other reason. Technological devices are bullies.

Dance technologies demand an experimental approach to building performance environments which creates a fundamentally different paradigm of collaboration between the makers and the performers. The finished piece, even its final form, cannot be realized until all the elements are in place, working in harmony. This makes it difficult or impossible to develop work in isolation — the conventional working paradigm in which the individual creators (choreographer, composer, lighting designer, etc.) bring their separate, pre-designed parts to the table, ready to be knitted together into the glorious whole). The making of an interactive performance environment makes significant demands on the creative process. The nineteenth century notion that the composer's scratches on paper are set in stone as though they represent some kind of prophetic gift from the deity, never to be blasphemed by alteration or mistake, never to be molded to the environment in which they are played, is still remarkably pervasive (postmodernity is as elusive as ever, it seems), as is the notion of music and everything else being subservient to the choreography. Choreographers, while

never quite so remote from their performers or quite so didactic in their approach as composers, nevertheless tend to demand ultimate control over movement choices. Of course, there have been many challenges to these paradigms, but as conservatism returned in the late 1970s and 1980s, the unassailed leadership role of the maker returned with it. In music, to use the form with which I am most familiar, the experimentalism (sometimes described as the dying gasp of the modernists) that began at the turn of the 20thC and continued through the 1960s and early 1970s, was replaced by such movements as minimalism (highly rigorous and exacting, despite its apparently meditative outer shell); the new complexity school (the post-serialist composers of England); and all kinds of “neo” movements that attempted to revive the romanticism of the 19thC and the formalist classicism of the 17th and 18th centuries. Creating music in which not only final control, but even final form are at least to some degree unknown, is fundamentally challenging to the maker/performer paradigm — an interactive technology system creates a framework that demands radical ways of thinking and creating. The end results, however, are (or should be) remarkably holistic. Challenging the maker/performer paradigm in this way can be said to be a political act — but the outcome should not be overtly political or dominated by a new politics of creation. The work, if it is successful, ought to be as seamless, as dominated by the performer(s) as any other work.

The audience should be absorbed in the *performance*, not in the technology or the tricks, or the gee-whiz effects that so much high-tech performance work relies on. If the technology is not almost entirely transparent, or at least, entirely seamless and integrated into a performance, the work has failed. If the audience is more concerned with the *how* than the *what*, then the piece has failed. If the makers are more concerned with the tools than with the content, then the piece should, and probably will fail.

But what of access? There is certainly a whiff of elitism in this discourse, a sense of I-have-you-don't-never-will superiority and smugness. The practitioners of technology within the dance performance world have been able to rest on their newness, on their novelty, for too long. If the use of technology is taken for granted, rather than being perceived as a challenge or a threat, then almost by definition there must be better work — work in which the central concern is the content, and not the tools. Many of us have witnessed the monstrous apparatus devised by scientists and technicians intended to capture movement — the body suits that look like spacesuits, and allow about as much movement; the infrared or ultrasonic systems that surround the performer with a scaffold of wires and objects, only to result in a few silly plinks and plonks of sound as the “dancer” moves within his or her scaffold prison. It's generally the artists, those who constantly

work with the tools within a performance environment, who have made successful leaps in the technology itself. Mark Coniglio and Dawn Stopiello's *MidiDancer* is one of the best examples of this. What started out as a suit that looked good on the body and allowed reasonable freedom of movement, but which tethered the dancer to the computerized nervous system by a thick loom of wires has turned into an elegant, wireless suit in which the technology is almost invisible to the viewer. Why? because Coniglio, who builds the suits and writes the software, and Stopiello, who moves and devises the movement, are a creative team who have consistently made work for their technology as it evolved, and whose work as a result has achieved a remarkable level of sophistication and understanding of the essential issues. But we can't all be engineers or programmers — nor should we have to be. The sign of a mature technology is ease of use, and a new generation of software environments are available that require little or no programming skills, and only moderate computer skills. The performance software coming out of STEIM (Amsterdam) exemplifies this level of simplicity and sophistication. STEIM, an organization that for 30 years has specialized in designing and building performance instruments, has recently begun building software-for-the-rest-of-us — interactive tools that are relatively simple to use and cheap to buy. BigEye, their motion-sensing software (available from their website at <http://www.steim.nl>) is simple and remarkably effective. I have taught workshops

in which totally inexperienced users are making interesting and engaging environments by the end of a weekend's work — environments which are often concerned less with the technology itself than with an idea that drives the piece, but is able to take advantage of the technology.

So please, let's once and for all discard the notion that advanced technologies and dance are incompatible. Let's by all means question their use, their appropriateness to a particular piece, their dominance and overbearing nature. Let's demand that the technologies be sensitive to and understanding of the body (rather than the other way round). But let us also consider these technologies as the mature tools that they are beginning to be — simply part of a technical and artistic panoply that might be used in the making of any performance.

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