DANCING FOR THE ELECTRONIC AGE: MERCE CUNNINGHAM AND CONTEMPORARY TECHNOLOGY

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Ten years ago, as he approached the ripe, young age of seventy, Merce Cunningham began experimenting with a computer animation program called Life Forms which represents the human body as a series of concentric circles. Seated at the computer, Cunningham can dictate –and simultaneously record– a wide variety of choreographic variables (everything from the flexing of a joint to the height and/or length of a jump, the location of each dancer on stage, the transition from one phrase to the next, etc.) And by the early 1990's, Cunningham had became the first choreographer of international renown to routintely utilize the computer as a choreographic tool. (So much for the widespread assumption that the digital revolution is a young person's game.) The earliest dance Cunningham choreographed with the assistance of Life Forms was «Trackers» in 1991. And significantly, when Cunningham appeared on stage in this work, he did so with the assistance of a portable barre which also seemed to function as a «walker». Is there a connection between these seemingly unrelated facts? Perhaps...

The upright posture had always been central to Cunningham's choreographic identity. But by 1991, severe arthritis had made it increasingly difficult for him to stand –let alone walk or dance– in an upright position for any extended period of time. As a result, the emotional tone of «Trackers» was both melancholy and heroic. It presented Merce Cunningham as a dancer/choreographer determined to remain vertical despite the challenges of age.

But «Trackers» also made it clear that Cunningham would not be able to continue indefinitely choreographing and teaching from the standing position that had constituted his starting point –his center of gravity– for the past fifty years. Thus it's tempting to conclude that the Life Forms software became available at the very moment Cunningham most needed it (i.e. Life Forms made it possible for Cunningham to

choreograph from a seated, rather than a standing, position). True enough. Still, it would be a mistake –a bit one, I believe– to assume that Cunningham's increasing reliance on Life Forms as a choreographic tool was dictated primarily by bodily necessity. It's my contention that Cunningham would have been attracted to the idea of choreographing at the computer in any event –independent of considerations prompted by advanced age and advancing arthritis. Cunningham's own words bear this out: In 1994, he wrote a short essay entitled, «Four Events That Have Led To Large Discoveries». The four events, listed chronologically, are (a) the decision «to separate the music and the dance» (b) the decision «to use chance operations in the choreography» (c) «the work we have done with video and film» and (d) «the use of a dance computer, Life Forms»[1].

It's my belief that the journey from event (a) to event (d) was all but inevitable, that each discovery laid the groundwork for it successor. In other words, «the four events that led to large discoveries» have also led –like a chain of dominos– from one to the other. The initial dissociation of sound and image in the late 1940's (the decision «to separate the music and the dance») finds its anatomical equivalent in chance-generated compositional processes. As early as 1953, in «Untitled Solo», Cunningham's movement choices for the arms, legs, head, and torso were all conceived separately and ultimately linked together by chance operations. This collage-like conception of the body (as an inorganic «assemblage» of parts) anticipates the way a film or videotape editor arranges and re-arranges individual shots and splices. (Cunningham's extensive work with video and film began in the 1970's). But as early as 1968, in his book Changes , Cunningham also foresaw the connection between chance-dictated processes and the computer: listen to what he wrote back then: «...the use of chance methods demanded some form of visual notation... A crude computer in hieroglyphics»[2]. And John Cage conceived of the computer as little more than a high(er) tech version of the *«I Chin»g*, the Chinese Book of Changes, which he and Cunningham had utilized since the 1950's as a principal tool for chance-generated decision-making. In fact, the computer program Cage eventually designed for generating random variations of pitch, timbre, amplitude, and duration was called ic.

Furthermore, Cunningham's «de-centered» organization of stage space (e.g. whereby: a dancer located downstage center assumes no automatic pride of place over dancers positioned upstage left or right) –that conception of space has long

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[1] Merce Cunningham, in David Vaughan, *Merce Cunningham: Fifty Years* (1997, New York: Aperture Press), 276.

[2] Merce Cunningham, *Changes: Notes on Choreography* (1968, New York: Something Else Press), no page numbers.

provided a model for the sort of «liquid architecture» one now finds in the world of «hyper-text» and the CD ROM– where multiple «windows» of information can be opened simultaneously in an overlapping collage of interactive choices. And the process by which the «user» actively selects these choices parallels the process by which the Cunningham spectator chooses to focus his or her attention.

The fact that Cunningham has now become heavily reliant on the Life Forms computer program –which enables him to manipulate the component parts of the human body on screen– thus seems less of a quantum leap and more like a logical next step. Indeed, one could argue that the «cut and paste» command on the computer has institutionalized the mix-and-match collage aesthetic and made it a central fact of contemporary life –which is to say, a central fact in all of our lives, not just Merce Cunningham's. Interviewed by The New York Times in 1987, Merce Cunningham drew an analogy between «the way we (the company) work(s)» and the way that society exists now...Being able to take fragments, long and short, and put them together in different ways--we have to, in a sense, do that in our lives all the time, although we don't think about it[3]. That again was 1987. My first experience of the Cunningham company came twenty years earlier in 1968 during an extended engagement at The Brooklyn Academy of Music in New York City. As coincidence will have it, I'd been reading a wonderful book published earlier that year by Wylie Sypher called Literature and Technology . Discussing a number of contemporary aesthetic movements, Sypher had written,

> The heavy investment in method suggests that the artist was subject to the same imperatives as the scientist and that the fissure between art and science was not so wide as is alleged, or the kind of fissure one might think, since both were highly specialized executions or procedures[4].

The author went on to draw analogies between artistic method and

> ...a mentality expressing itself in its sparest and most impersonal form in engineering, the choice of methods that most economically yield the designed results. A law of parsimony worked in aestheticism as it did in science. Such privative or puritan discipline is associated with the notion of distance, the detachment that makes the artist or scientist a neutral spectator, isolating him from the realm of Nature...[5].

Even though Cunningham and Cage aren't even mentioned in Sypher's book, its generalizations about rigor of method, impersonality, and detached observation turned

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[3] Merce Cunningham, quoted by Donald Hutera, New York Times, *Arts and Leisure,* March 1, '87, p. 8.

[4] Wylie Sypher, *Literature and Technology* (1968, New York: Random House), xvi.

[5] *Ibid,* xvi-xvii.

out to be immensely helpful in my early attempts to understand the company's work. Above all, it was Cunningham's and Cage's commitment to the impersonal methods of scientific inquiry‹regardless of whether the resulting dances employed some easily recognizable form of «technology» that established the connections between their work and the artists that Wylie Sypher was writing about. Here's an example of what I mean. The strangest, most intriguing (and for a while at least, inexplicable) element of the Cunningham performances I first experienced in the late 1960's was the utter autonomy of the design elements, their essential obliviousness to one another all of which derives from that initial decision to «separate the music and the dance». This was probably most apparent in the lighting designs for works like «Winterbranch» and «Canfield». In both pieces, the play of light throughout the stage space was essentially indeterminate. Put bluntly: light didn't serve the customary end of illuminating the dancers. If lighting instruments happened to fade up as the dancers darted past them –well and good. But the dimmer board had its own chance-generated agenda, independent of the audience's (perfectly understandable) desire to see the dancing.

For «Canfield» Robert Morris designed a vertical column adorned with blazingly bright white lights focused on the back wall of the stage. Moving on a trolley that glided from side to side, it began by establishing a predictable back and forth rhythm. But then –as if breaking down internally or simply becoming «indeterminate»– it would unexpectedly reverse direction (just like a Cunningham dancer!). By displaying a «will of its own», –and no special propensity for focusing on «the human element», let alone the dance element– it erased many seemingly important distinctions between the animate and the inanimate. It displayed all the brutal impersonality of a bank surveillance camera, recording blankly, without «human interest», oblivious to anything –no matter how conventionally significant– that might lay just beyond the perimeters of the viewfinder. (Yet another variation on the fixed, unblinking stare of the camera in Andy Warhol's films from the early 60's).

This attitude of technological detachment was equally evident in Pauline Oliveros' sound score for «Canfield» –which assigned the musicians the task of scientifically testing the acoustical properties of the performance space. As the lights dimmed out at BAM in 1969, one could hear the musicians Cage, David Tudor, and Gordon Mumma communicating with one another over walkie-talkies. With a cool and scrupulous objectivity, they discussed the acoustical possibilities of the opera house. Indifferent to the «dance performance» occurring in their midst, they proceeded with an overt series of experiments, a disinterested «sizing up» of the space, an icily objective examination of its acoustical dimensions. There was something a little scary about the single –minded way these sound– crazed fanatics went about their mission. You sensed that even if someone were to yell «Fire» in this crowded theater, they'd continue to go about their business in a business –like way. I distinctly recall Gordon Mumma blowing

short blasts on a bugle while scrupulously turning a full 360 degrees. The sound ping – ponged off a variety of surfaces (including the bodies of the dancers). That some of these «surfaces» were human appeared to be of no special concern to him. In works like «Canfield», Cunningham seemed to be contemplating that most frightening of all possibilities: a post-human world. Like Andy Warhol and Jasper Johns –both of whom designed decor and costumes for Cunningham in the late 60's– he evoked, without a trace of apocalyptic melodrama or self-pity, an «inhuman» landscape that refuses to lend human beings or human consciousness any special pride of place.

Let's segue for a moment into the world of the visual arts. Consider the way Jasper Johns in «Target With Four Faces» from 1965 blurs the distinction between the animate and the inanimate. Here the face –which us usually view close up and the target which we usually view from a distance– are brought into an eerie equivalency with one another. And was it a coincidence, I wondered, that «Target With Four Faces» was the inspiration for the famous poster that Johns designed for Merce Cunningham in 1968? Similarly, Andy Warhol replicated silkscreen images in the same impersonal and mechanistic way regardless of whether the subject matter was Campbell's Soup Cans, the widowed Jackie Kennedy, or Coca Cola Bottles. (It was of course Warhol who designed the décor for Cunningham's «Rainforest» in '68: helium-filled, silver-mylar pillows that wafted langorously in and around the dancers).

Now, granted, it may sound perverse to praise a choreographer for de-emphasizing the differences between his highly trained dancers and the inanimate objects with which they shared the stage. But for me, this was the practice that lent Cunningham's dances their special flavor, their mentholated cool. Cunningham was a Pygmalion in reverse, choreographing dances in which performers seemed to acquire the emotional reticence and palpable physicality of objects. (One thinks, quintessentially, of Cunningham dancing with a chair strapped to his back in «Antic Meet.»). It was only a matter of time, it seemed, before Cunningham would choreograph a dance called «Objects». (Indeed, a work with that title premiered in 1970).

Another distinctive aspect of Cunningham's movement vocabulary is the fact that his choreography had little or nothing to do with the most «natural». Unlike most of the great pioneers of modern dance, Cunningham never embarked on a quest for «the natural» way of moving. In fact, his style often seemed willfully inorganic. Given the chance-dictated nature of movement sequences in his work, it's not surprising that the ordering of phrases rarely seemed guided by a «natural» sense of flow (or even by anatomical logic). By contrast, the body, especially the naked body, functioned in much of the art of the late 1960's as the very symbol of «naturalness». This, after all, was the decade in which the dress rehearsal was less common than the undress rehearsal. The «naked truth» was no mere metaphor in the 1960's. In retrospect, you don't have to be a semiotician to realize that a body minus clothing is still a product of its cultural

conditioning. (Even naked, we continue to move in ways that are dictated by the clothes we've discarded). But in Cunningham's work, there was no pretense of naturalness.

Accordingly, the Cunningham company also avoided any trace of hippie-dippie, touchie-feelie, ersatz ritual: no mystical rites of initiation, no facile invocations of oneness with the audience. A far cry from those exotic (but sanitized) theatricalizations of «primitive» ritual that were so much a part of the dance boom at its peak. (Remember those hideous Gerald Arpino ballets with titles like «The Sacred Grove on Mt. Tamalpais?). And of course, 1968 and '69 were the years in which The Living Theater toured the U.S. with its most utopian work, Paradise Now, featuring «the rite of universal intercourse» in which the audience was invited to join the performers in an extended group grope. By contrast, Cunningham –with his insistence on preserving the autonomy of every element– countered that tendency of the counter-culture that was all about fusion, audience-interaction, going with the flow, etc. (In 1970, in «Tread», he would assemble a row of industrial-size fans right on the curtain line between the audience and the dancers. Only half of them were turned on –whirling throughout the performance– but all of them seemed to be saying «Keep your distance... Do not under any circumstances mistake what you see on stage for a participatory rite»). Yet the culture at large in the late '60's seemed intent on fusion, not separation. The dominant sentiment of the period was probably best summed up by the opening lines of The Beatles' song, «I Am The Walrus»: «I am he as you are he as you are me and we are all together» (culture as a psychedelicatessen where all the ingredients flowed together in a sort of paisley update of Art Nouveau). The most common artistic and technological embodiment of this craving for oneness was mixed-media of the sort that one found at «psychedelic discotheques», the multi-screen projection systems that wowed the crowds at Expo '67, or a good deal of inter-media art. Nam June Paik, a key proponent of such mixes, discerned a sexual metaphor beneath much of this multi-media mania:

> Male human body has nine holes. Female body has ten. When all holes are filled, you have satisfaction. Purpose of inter-media art is to plug all holes as fast and efficiently as you can[6].

Without a doubt, the best-known mixed-media dance work that sought to plug the holes in the late '60's was Robert Joffrey's ballet «Astarte». Certainly when it came to publicizing the many connections between dance and the counter-culture, it left no

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[6] Nam June Paik, quoted by Marshall McLuhan and Harley Parker, *Through The Vanishing Point* (1968, New York: Harper and Row), 131.

hole unplugged. In fact, on March 15, 1968 –exactly two months before the beginning of Cunningham's seminal season at BAM– a psychedelicized photo of Trinette Singleton as «Astarte» graced the cover of Time magazine. Clearly, «Astarte» had succeeded in fingering the Zeitgeist. Here was a work dedicated to the blurring of boundaries: film/live action, audience/performers, inside of the theater/the outside of the street. While Singleton gyrated in her paisley leotard, Max Zomoso –dressed in jacket and tie and cunningly planted in the front row of the auditorium (as a symbolic surrogate for the audience)– gradually rose from his seat, enraptured by this ancient Moon Goddess. Slowly, as if hypnotized, he stripped down to his underwear, and surrendered to her primitive power. All the while, gigantic filmed images of Singleton were projected onto an undulating scrim curtain. «Astarte» ended with Zomoso drifting somnambulistically out the back door of the theater, while film footage purported to show him exiting, into an alley, totally tranced-out. This was it: the bridging of the gaps, the plugging of the holes between art and life, live action and filmed overlay, the space of the performance and the «real» world of the street.

Now...I know this feels like a digression; but I take the time to mention «Astarte» for purposes of contrast and comparison. The opposing work I have in mind is Cunningham's «Variations⁵» from 1965 –with film projection by Stan Van Der Beek– which seemed utterly unlike the garden variety (the «got-to get- ourselves- back- to- the- Garden» variety) multi-media of the period. This was not Fillmore East or the Electric Circus. The images didn't meld seamlessly into one another. There was no attempt to clobber the audience into blissed- out submission. If «Astarte» epitomized the «mixed media» of the period, «Variations V» was an example of un-mixed-media. (Those whose idea of a good time was to drop acid and then crash the last ten, solarized minutes of Stanley Kubrick's «2001» –sitting as close to the screen as possible– would not find comfort here).

If there was any sort of connectedness to be found in this work, it was not the tactile, sensory massage variety. In «Variations V», the dancers moved through a series of electromagnetic fields, triggering bleeps and blurts of electronic sound as they darted in and around antenna-like poles. When Cunningham's dancers reached out to touch someone, it was more likely to remind you of the old Ma Bell commercial rather than the sort of touch-therapy then being practiced at the Esalen Institute. This was the electronic inter-connectedness of long distance. Similarly, in «Walkaround Time», when Carolyn Brown performed slow developpes on demi-pointe, she «swept» her working leg like an electronic antenna picking up otherwise invisible signals. (And in '69, when Cunningham choreographed a work called «Signals», the title felt entirely appropriate –maybe even inevitable). In fact, in «Signals», the dancers would often stand in one place with feet firmly planted, while their torsos tilted and twisted like radar scanners. Furthermore, in that same work,

one dancer wields a stick in a way that both delineates and re-enforces the physical distance between the performers.

Although we weren't quite ready to describe it as such at the time, this was dancing for the electronic age. Indeed, even the most cursory glance at the orchestra pit in the 1960's made it immediately apparent that we had entered a brave new world: the electronic paraphernalia one found there included wave function generators, pitch sensors, signal modifiers, frequency shifters, VU meters, and oscilloscopes. But what made this strange universe seem less forbidding to the layperson was the aura of happy chaos that permeated the pit: One tended to see a bunch of overgrown kids playing with their expensive toys. In fact, between Cage and his cohorts, it looked as if the Hardy Boys had commandeered their way into mission control at the Kennedy Space center –lots of dials and switches, crisscrossing wires, a maze of electronic circuitry.

In April of '69, prior to the company's season at The Brooklyn Academy of Music, a controversy broke out that illustrates Cunningham's ambiguous relationship to the very idea of «music» for dance. Two different unions, Local 802 of The American Federation of Musicians and Local 4 of The International Alliance of Stage Employees (the electricians) fought one another for jurisdiction over the activities in the orchestra pit. (The electricians claimed that the strange sound-producing equipment was too dependent on electronics to qualify as musical instrumentation.) Needless to say, the sounds that emanated from this high-tech pit were rarely acoustical. They were usually generated electronically in ways that eliminated the role that the organic body of the musician had traditionally played in the creation of sound on more traditional acoustic instruments . Sound from which the body has been excluded. (Even Pierre Schaeffer, whom we think of as the founder of «musique concrete,» was opposed to the use of electronic oscillators as sound sources. He feared that the result would sound «inhuman»).

So what happens when an all-too-human dancer's body moves through that kind of auditory environment? What sort of movement is stylistically consistent with such sounds? Inorganic movement...choreography that never pretends or presumes to have discovered the most «natural» way of moving. And despite the clarity and concreteness of the physical images, both sound and decor often worked to impose a layer of mediation between the dancers and the audience. Here's a slide of a moment from «Walkaround Time» in 1968 where the mediating imagery is adapted by Jasper Johns from Marcel Duchamp's «Large Glass». Cunningham seemed to acknowledge that the privileged place of physical presence in our lives had been challenged –perhaps irreversibly– by electronics. His dancers often seemed to inhabit the landscape of the sci-fi, techno-body that Thomas Pynchon described so evocatively in The Crying of Lot 49, published in 1966. In fact, Pynchon could have been talking about dances like «Signals» or «Variations V» when he said of his central character:

> She walked in on soft, elegant chaos, an impression of emanations, mutually interfering, from the stub antennas of everybody's exposed nerve endings[7].

And needless to say , Cunningham's movement vocabulary has evolved over the years in ways that show the unmistakable influence of these technologies: In fact, Cunningham has spoken explicitly about the way in which video has influenced the tempos of his work:

> the speed with which one catches an image on the television made me introduce into our class work different elements concerned with tempos which added a new dimension to our general class work behavior[8].

(Here he seems to illustrate the truth of a prediction Alvin Langdon Coburn made in 1918: that the camera would help bring about the advent of «fast seeing»).

And Cunningham's stage choreography in the 1990's has changed in ways that I believe, reflect his work with Life Forms computer animation. «Enter» ('92) is named after one of the most prominent control keys on the computer. The title of «CRWDSPCR» ('93) is one of Cunningham's most insightful references to the affect of the micro chip on our conceptions of space and time. The title can be read as a condensation of the words «crowd spacer» or «crowds pacer», a twin reference to the way in which technology has both crowded space and quickened pace. What computer science knows as Moore's Law, formulated in the mid 1960's by Gordon Moore, former chair of Intel, argues that the size of each transistor on an integrated circuit will be reduced by 50 per cent with each passing year. Computational power thus expands exponentially. Well... in its speed and density of movement, «CRWDSPCR» offers us the choreographic equivalent of Moore's Law.

As early as «Polarity» (1990), . Cunningham began to employ unprecedentedly complex counter-rhythms for the arms and legs. It may or may not be coincidental that «Polarity» was one of the first dances Cunningham choreographed after he began his experiments with Life Forms. Logically enough, he used the computer to devise movements for the legs, arms, and torso that were totally autonomous of one another. Indeed, one could argue that the conception of the body as an assemblage of separate parts –something that had always been implicit in Cunningham technique– is now a technological fact of life.

Of course, it's essential to realize that Cunningham (who has just turned eight

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[7] Thomas Pynchon, *The Crying of Lot 49* (1966, Philadelphia: Bantam), p. 98.

[8] Merce Cunningham, in David Vaughan , *Merce Cunningham: Fifty Years* (1997, New York: Aperture Press), p. 276.

years old!) no longer works from the starting point of his own body. Rather than standing upright (the foundation of «traditional» Cunningham technique), he now sits in front of the screen –a screen that knows little about weight or the laws of gravity. (This may also help to explain why one sees so many more «off-balance» positions in Cunningham choreography of the 1990's). And unless one struggles to keep them «pinned to the floor», the figures with which one choreographs on Life Forms tend to dart upward. One also finds Cunningham paying much more attention to the arms‹especially raised arms –than he has in the past. (The computer is incapable of either consciously or unconsciously «favoring» the legs. All body parts are inherently equal in the world of Life Forms; and the arms can be manipulated with the same ease as any other subdivision of the body). If the arms are apt to appear wildly dissociated from the torso, it's also true that overall phrasing has gotten longer, tending to counterbalance the «cut and paste» fragmentation that the computer implicitly encourages. (Perhaps it's easier –certainly it's less physically taxing– to choreograph long phrases on computer figures than on the human body).

By the time of « CRWDSPCR» in '93, we also begin to see movements on stage that look as if they've been directly influenced by the shapes and rhythms of the Life Forms wire-frame figures. (e.g. the solo in which Frederic Gafner jumps up and down while sharply twisting his torso as he moves toward the audience; its staccato rhythm suggests the transition from one «key frame» to the next). Similarly, in «Ground Level Overlay» ('95), Gafner performs a tortuous series of jumps and reversed turns in a tightly held second position. As early as «Trackers,» the unusual walking rhythms resulted from experimenting with the spacings between walking step patterns that already existed in the LIfe Forms «menu». In other words, changes in rhythm resulted from manipulating the spatial proportions between shapes.

Partnering is especially difficult to devise on Life Forms; and perhaps as a result, duets have become infrequent in Cunningham's work over the past few years. Or else, when they do appear, as in «Rondo» (1996), they seem to pose for themselves the problem: how can I partner someone while maintaining the maximum amount of distance between our two bodies? In the first duet in «Rondo», the male and female dancers' hands are clasped together, but their midsections are forced as far from one another as possible. Eventually they each rotate 180 degrees. Their hands are still touching, but they no longer face one another (As if to say: «The body is a totally objective entity», no front, no back, no sense that it's more or less «appropriate» to face or not to face one another while dancing a «duet»).

Another recent evolution in Cunningham's choreography is the unprecedented degree of deformation, a tendency to twist and gnarl the body in ways that appear not so much mechanical as «deformed». «Scenario» (1997) with costumes by the fashion designer Rei Kawakubo of «Comme des Garçons» seemed to carry this tendency to

its logical (or illogical) extreme. This was, to the best of my knowledge, the first occasion on which Cunningham allowed a designer to conceal the dancer's silhouette with costumes that altered the fundamental shape of the human body. Based on her notorious Spring '96 collection, which some in the fashion press dubbed the «Quasimodo» line, Kawakubo «de-formed» the dancer's body-shape with comically grotesque humps and bulges. (It was as if Alwin Nikolais had designed costumes for a dance adaptation of Richard III). It may be that Cunningham was implicitly saying in this piece, «I fear I've reached the outer limits of the human bodies' distortability; and to carry this impulse any further, I need the assistance of prosthetic appendages». Of course, another alternative means of moving beyond the limits of the human body is presented by the advent of cyberspace and the possibilities of a «cyber-body», and in recent years, Cunningham has used the computer to propel his dances into purely virtual realms. «Hand Drawn Spaces» –unveiled just last year– is a collaboration between Cunningham, multi-media computer artist Paul Kaiser and animator Shelley Eshkar. «Hand Drawn Spaces» moves beyond the work with Life Forms in a number of ways. First of all, the finished dance exists solely in virtual space. It's projected on large-scale, multiple video screens. Of course, Cunningham has made many dances since the 1970's designed expressly for video. But this project originated with the so-called «motion capture» of two live, flesh-and-blood Cunningham dancers (Jared Philips and Jeannie Steele). Here's the way it started: The dancers wear light sensitive disks called «motion capture sensors». The movement of the sensors is optically recorded as «points in space» and converted into digital 3D files. These data files reflect the position and rotation of the body-in-motion without preserving its mass or musculature. Movement is thus literally «extracted» (or captured) from the performer's body. Motion capture attempts to give us the dance minus the dancer.

When I think about the implications of this process of extracting movement from the body, I can't help but recall a now famous quote from the 1984 book that popularized the term «cyberspace», William Gibson's (then) sci-fi novel, Neuromancer. Here's how it goes: «the elite stance involved a certain relaxed contempt for the flesh. The body was meat». Neuromancer is set in a world in which the central characters lust after what William Gibson calls «the bodiless exultation of cyberspace». And those who live in «the prison of their own flesh» are referred to –derisively– as «meat puppets»[1]. Of course, Cunningham never leaves the body completely behind. Even his motion-captured skeletons remain firmly planted on the floor, executing a vocabulary that is unmistakably his. And ultimately, there is also the digital equivalent of a hand-drawn graphic line –executed by a very talented visual artist named Shelley Eshkar–

[1] William Gibson, *Neuromancer* (1984, New York: Ace Science Fiction Books), p. 6.

which helps to «flesh out» the skeletal forms of the dancers. Now... Merce Cunningham was seventy-nine years old when this work premiered last year. Thus on one level, it's difficult not to see these dancing skeletons as performing a dance macabre, an intimation of mortality. And consequently «Hand Drawn Spaces», perhaps inadvertently, also harks back to that moment in dance history when Merce Cunningham broke with Martha Graham by re-balleticizing modern dance, emphasizing uprightness, lightness, and jointedness. Here's what I mean: The ultra-articulated, balletic limbs we see in «Hand Drawn Spaces» appear to have been X-Rayed through -to -the -bone. One can almost hear the Isadora Duncans of the world uttering their mantras of disdain:

> The school of the ballet of today, vainly striving against the natural laws of gravitation or the natural will of the individual, and working in discord in its form and movement with the form and movement of nature, produces a sterile movement which gives no birth to future movements, but dies as it is made. The expression of the modern school of ballet, wherein each action is an end, and no movement, pose or rhythm is successive or can be made to evolve succeeding action, is an expression of degeneration, or living death.... A deformed skeleton is dancing before you. This deformation through incorrect dress and incorrect movement is the result of the training necessary to the ballet[10].

My guess is that Duncan would have made the very same criticisms of Cunningham. There are of course many important differences between Cunningham and his predecessors in that long tradition of pre-Cunningham modern dance which stretches from Duncan through Graham. His rapprochement with the lightness, uprightness, and speed of classical ballet is only the most obvious. But the technological dimension of Cunningham's work marks another significant divide between his dances and those of his modern dance predecessors. I find it almost impossible, for example, to imagine the aging Martha Graham working with Life Forms or motion capture. Either technique would have seemed to her blasphemous –abstract and unbodily– whereas for Cunningham, these recent experiments with the computer are merely the latest installment in an on-going series of experiments with technology that began half a century ago. Perhaps coincidentally (perhaps not) the Life Forms wire-frame bodies on which Cunningham now choreographs look remarkably like some of the more robotic designs from Oscar Schlemmer's 1922 «Triadic Ballet». But long before he began to work with film, video or the computer, the image of the machine had become central to Cunningham's dances. In fact, in that time-honored American tension between

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[10] Isadora Duncan, «The Dance of the Future» in *What Is Dance?*, edited by Roger Copeland and Marshall Cohen (1983, New York: Oxford University Press), p. 263.

the machine and the garden, Cunningham represents the machine and pre-Cunningham modern dance (again: the tradition that stretches from Duncan through Graham) represents the garden. Indeed, the gap between Cunningham and his predecessors in the world of modern dance can also be measured by the number of overt machine images in his work: For «Aeon» ('61), Rauschenberg designed a moving, smoke-belching contraption with an exposed battery and a light, over which hovered what looked like an antenna (actually it was the stripped metal insides of an umbrella). «Winterbranch» ('64) also featured a blinking red light (known as «the monster») which was dragged across the stage. And «Walkaround Time» ('68) alludes on several occasions to the allegory about the mechanization of sex that we find in Duchamp's «Bride Stripped Bare By Her Bachelors, Even» (which inspired Jasper Johns' decor for the dance). The partnering in «Walkaround Time» often suggests a «machine game» in which body parts emulate smoothly meshing gears, pistons, and rods. Furthermore, David Behrman's musical score incorporates the «found» sounds of engines alternately roaring into action and sputtering to a halt. Significantly, the title «Walkaround Time» was derived from computer jargon: it refers to those intervals when the computer is operating autonomously of its human programmer —who is thereby free to «walkaround» for a time... And almost twenty years ago —in 1982 to be exact— Cunningham danced in an event in his Westbeth Studio, accompanied by electronic music being played «live» in Texas (fifteen hundred miles away) by composer Jerry Hunt and transmitted over the telephone lines. Perhaps it's no coincidence that before Cunningham acquired it, the Westbeth space that serves as «home» to his company was an experimental laboratory run by Bell Telephone. Thus, as long ago as the early 1980's, Cunningham understood the world we will soon inhabit, where «home» is re-defined as anyplace on the planet that one has access to a laptop, a cellular phone, and a global positioning system.

That is not the sort of «home» that Graham and the pioneers of modern dance wanted to inhabit. While Martha Graham and so much of the world of early modern dance exuded a sentimental primitivism, a longing for lost Edens (or at least a yearning for a long lost sense of «the organic», the natural), Cunningham seemed fully reconciled to the city. Andy Warhol —whose silver-mylar pillows for Cunningham's «Rainforest» lend an urban flavor to what otherwise might pass as an evocation of the natural world— once described himself as someone who «wanted to enjoy all the great modern things that the abstract expressionists tried so hard not to notice at all»[11]. Cunningham could describe his relationship to Graham in much the same way: What might have

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[11] Andy Warhol, *The Andy Warhol Diaries*, edited by Pat Hackett (1989, New York: Warner Books), p. 605.

struck Graham as cold, impersonal, scientific, or technocratic, seemed to Cunningham an unavoidable fact of contemporary life. What might have struck Graham as urban blight became for Cunningham a potential delight, a source of complexity. In Cunningham's choreography, there are no rhapsodies to the world of lost unity or wholeness; but rather a celebration of fragmentation, simultaneity, and of life as lived by the principles of collage –an acceptance, in other words, of the world we actually inhabit.

Abstract

Merce Cunningham es uno de los primeros coreógrafos que incorporó la tecnología a sus procesos creativos. Desde 1990 utiliza habitualmente para componer sus coreografías el programa «Life Forms» ejemplo de la función que pueden llegar a tener las nuevas tecnologías en la creación coreográfica. Este artículo hace un recorrido por los fundamentos teóricos y estéticos que pueden deducirse del trabajo de Merce Cunningham con dichas tecnologías. A su vez se relacionan estos fundamentos con aquellos presentes en las propuestas de otros artistas como Robert Morris, John Cage, Andy Warhol o Jasper Johns.