Expanding Choreographic Resources: Generative Techniques in Contemporary Life Performance and New Media Art

1. Introduction

As human beings in general and artists in particular our lives are shaped by meaningful encounters with other human beings. Early on in my professional career as a young dancer I met New York based “videographer” Cathy Weiss in the Netherlands and had the privilege to work a few months with her on a new creation called D.U.B. Cathy choreographed astounding images on stage and edited movement material, she storyboarded the performance in a way that seamlessly integrated tightly rehearsed parts and loosely structured improvisation, and she used TV sets and VCR players as performers moving on structures built for the occasion. In other words, she challenged every possible notion of technique, improvisation, composition, or choreography in dance, which I had been taught during my training at North Carolina School of the Arts in the U.S.

During the following fifteen years I have constantly been investigating how to expand choreographic resources through working with dancers, actors, designers, animators and multimedia artists, without ever loosing my passion for movement and the physical work; on the contrary, it seems that all this interdisciplinary dialogue naturally feeds back into the dance.

As a young choreographer I have grown into the field of Dance & Technology, which simultaneously is in constant flux and establishing more solid foundations in terms of its techniques, methodologies and theorization.

In this article I will trace some of our lines of artistic inquiry in an attempt to refer back to the rich heritage of interdisciplinary dialogue between dance and technology during the past six decades. The focus of this paper will be on generative techniques and the way they are designed and employed in life performance situations as well as in New Media Art. Subsequently we will discuss the transfer of concepts and working methods between both areas looking at the work of eminent artists in the field, as well as reflecting upon our own artistic practice.

2. Retrospective view:

During the second half of the 20th century choreographic resources and consequently compositional “tool kits” have expanded considerably through interdisciplinary dialogue. An example often referred to is the transfer of principles and compositional elements from Minimalism/Fine Arts to Choreography that Yvonne Rainer (1968) suggests. The introduction of “found” (or pedestrian) movement, repetition, neutral performance of task (like) activities, simplicity and equality in movement and compositional structures, were expanding the choreographic materials and methods, particularly characterizing the movement research of the Judson Church Theatre group members.

It has been particularly influential for generations of choreographers, how Merce Cunningham developed his compositional techniques by recurrently combining, testing and adapting them in new technological and conceptual contexts.
Cunningham (1994) writes about “Four Events That Have Led to Large Discoveries” in his work: the first large discovery was the separation of music and dance, which allowed for an independent creation process in dance. On the other hand, music and dance are interdependent in the performances of his works, based on agreed temporal structures. The second event is the introduction of chance operations in movement research, composition, and the use of certain parameters in performance. The work with and for film and video is mentioned as the third main discovery, which led Cunningham to develop specific concepts of space, time and choreographic composition that would in turn expand possibilities for stage works. More recently the work with the computer, specifically the (character animation) software *Life Forms*, allowed Cunningham to discover humanly impossible movement and its adaptation for and by his dancers.

Roger Copeland (2004) discusses in detail how generative and compositional techniques, which Cunningham transposed from other art forms, or developed in interdisciplinary collaborations, extended and changed his movement research, and expanded his choreographic methods, which were re-combined and refined throughout the past six decades.

While Cunningham created a technique of his own to prepare the dancer’s body to develop and perform his highly complex movement vocabulary, American choreographer Kenneth King (1983) envisioned a different approach. Distinguishing between “choreographer” and “dancemaker”, he compares his approach with the work of a programmer:

> As a dancemaker I program structural and organizational options rather than just set, specifically repeatable phrases, so the generation of (im)pulses, and the tracking of “circuits” in space, activate the firing and fielding of signs and signals that synchronistically become part of the formal performance process.

King’s dancers therefore train in diverse styles, techniques and systems to eventually arrive at working within a dance as an algorithmic generative system, based on the idea of **“processing choreography”**, which is close to what today is termed “real-time choreography”.

King consequently proposes the term “synergetic training” to describe the complex demands on dancers, who are asked to make complex compositional decisions as they are performing. Part of their preparation is to bring information from other fields and art forms “to the dance, in order to discover a larger organic understanding of the moving body.”

Friederike Lampert (2007) arrives to the conclusion that the meaning of the term choreography has changed since the 1950s, as dance improvisation has evolved from just being a tool in the choreographic process to frequently being an integral part of life performance. She discusses several models of improvisation and their respective methodologies in their historical context.
In many cases choreography can be seen as “slowed-down improvisation”, allowing more time for the use of compositional techniques and structuring of a work. On the other hand the improvising dancer, who uses the same craft as the choreographer, creates “instant compositions”. In this sense improvising dancers can be seen as several choreographers on stage.

In the context of technologically expanded life performance, “instant composition” for example within an interactive computer vision system, requires even more intense multitasking, because as the performer is navigating the matrixes of movement possibilities he has simultaneously to take on the role of a visual artist.

Interestingly, there is a long tradition of employing techniques from the visual arts in the choreographic process: the note- or sketchbook, designs of floor patterns or figures of the dancing body, descriptive definitions of certain poses and steps, left alone visualizations of ideas for scenic design, the use of objects, lighting or interactive technology. A choreographer’s sketchbook tends to primarily be used as a generative tool in a specific creative process, though it may contain ideas and information that can be explored and developed within several projects on other occasions (deLahunta 2007).

In contrast to the sketchbook, comprehensive dance notation systems such as Labanotation or Benesh rely upon formal conventions in order to produce dance scores, which primarily aim at preserving and re-staging choreographies. However, as these systems require long periods of study due to their complexity, they are generally not used in the process of choreographic creation, or for real-time generation of choreography in performance (deLahunta 2006).

It is intriguing how Halprin, Cunningham and Dunn, and subsequently the Judson Dance Theatre started to use scores as generative tools for movement research and dance composition, and later for structured improvisations performed to an audience. In context with other groundbreaking innovations (the use of “found” movement and actions of all kinds; the introduction of chance and indeterminate structures; the utilization of the collage principle as the dominant structuring device) the generative score became a living archive, simultaneously documenting the conceptual work of its author and generating physical vocabularies, interaction between performers, and their organization in space and time.

Today sophisticated digital hardware and software is affordable and accessible for choreographers and other artists involved in the creation of a new performance work. Digital technology can support all phases of the creative process, production, presentation and marketing of the work, and recently has become an important factor in the conception and development of new choreographic resources.

Chris Ziegler, interactive media artist and designer, has been working since 1993 developing choreographic and dance information interfaces. Over the course of several years Ziegler collaborated with choreographer William Forsyth and his company at the time, Ballett Frankfurt, on innovative ways to build up and access a digital video archive
of rehearsal and performance videos (Ziegler, 2007). A combined archiving and teaching tool was developed for the choreographies Loss of Small Detail (1991) and Self Meant to Govern (1994), and led to the design of a cross-linked archive of theory and practice (interactive lectures, rehearsal and performance videos). In 1999 a CD-Rom entitled William Forsyth: Improvisation Technologies, A Tool for the Analytical Dance Eye was released, introducing the larger public to a more general description of Forsythe’s movement principles and a set of tools to generate new structures through the re-organization of existing movement material.

Through a decade of work with Improvisation Technologies, amongst other digital choreographic tools, I came to highly value opportunities to explore its potential through very diverse groups of users (dancers, actors, designers, animators and multimedia artists). Their particular approach based on their training, vocabulary, unique artistic perspectives and the present working conditions bring a wealth of information back to choreography.

In our perspective the concept of a “living archive” thus indicates another important dimension: a particular user’s interaction with the archive represents a unique possibility, which is latent in the archive, and manifested through the user’s individual exploration and application, or adaptation of the proposed movement and compositional principles.

On the other hand the dancer can be viewed as a “living archive” himself, who brings a wealth of latent information to the investigation: his training, often in several systems, experience with different choreographers and collaborating artists, personal live experience, particular cultural and historical background among other factors (Odenthal 2005). This latent information, can be activated, and transformed in the process of improvisation, or real-time choreography, in this case through the exploration of and interaction with the digital archive.

The conception of the living archive employs a holistic perspective of the choreographic creative process and the live performance, as it combines visible and lasting aspects of the work with the invisible and ephemeral dimensions, both of which come into being in the moment of interaction.

In some cases the generative score can be seen as the structuring device of such a living archive. In Forsythe’s choreography Self Meant to Govern (1994) for example the dancers are provided with information usually stored in a score: a time-code allows for sequencing the sections of the piece; letters that correspond to a movement vocabulary of 135 sequences are shown in random order on monitors on stage, spatial references for the movement material can be deduced from the graphical presentation of the letters, and lists of possible transformative actions are displayed at the dancers entrance points of the stage.

Another example is Myriam Gourfink’s work This is my House (2005), which uses overhead monitors displaying interactive scores generated in real-time: while the dancer’s follow the onscreen instructions, their movement is simultaneously analyzed through a
computer vision system and influences the generation of elements the score will contain in the next moment to come.

In the field of Dance & Technology gesture analysis supported by computer vision systems like in Gourfink’s work, and artistic application of 3D Motion Capture technology, has been a strongly emerging line of investigation during the past decades, closely related to the topics of generative scores and living archives.

3D Motion capture data files consist of the information where a particular set of markers (which attached to the performer’s body) was located at a particular moment in space. This information can be applied to a virtual figure, or may be used to generate audible or visual information, or it can function to trigger off all kind of media. Information in a motion capture data file can be used entirely, or in part, and combined with information from other files.

*Openended group* artists Paul Kaiser, Shelley Eshkar and Mark Downie have pioneered a number of collaborative projects, for example with choreographers Merce Cunningham, Bill T. Jones and Trisha Brown, exploring a variety of possibilities using Motion Capture technology in installations and life performance situations.

Interestingly Motion capture archives can be said to contain less than meets the eye when a performer’s movement is captures, because the initial visualization is a set of moving dots on the screen, which is considerably less than the information we receive when looking at the live performer.

But in combination with another software application this data provides endless potential for application: mapped onto a virtual figure, the movement can be viewed from a variety of (camera) angles; the motion of fragmented body parts can be visualized and/or copied onto another body part; any movement can be edited in spatial terms and its timing, just to mention a few basic possibilities.

Again, the concept of the living archive describes the generative potential of the captured information, which can be seen as the dynamic aspect of this advanced recording technology.

**3. Background: the TeDance Project**

During 2006/2007 the Technical University of Lisbon/FMH hosted and organized the TeDance (Technologically Expanded Dance) Project in collaboration with a variety of other academic institutions, artistic research centers and theatres in Portugal. The project provided opportunities for research in the fields of Contemporary Dance, Motion Capture, Animation, Augmented Reality, Computer Vision, Engineering and Programming.

My participation as a choreographer and movement researcher in the TeDance project aimed at developing creative strategies for Motion Capture sessions and Computer Vision
set-ups, as well as developing generative techniques for the use of motion capture and motion tracking data in the process of creation and performance.

The focus of this research was on generative techniques, here seen as a set of rule-based or algorithmic choreographic procedures, which are “set into motion with some degree of autonomy” contributing both, to the creative process and the presentation of the work of art.

Artistic residencies at CENTA (Center for Experimentation and New Tendencies in the Arts) in July 2006, and the Teatro Aveirense in April 2007, provided opportunities to join visual and media artists, musicians, dancers, performers, choreographers, engineers and programmers allowing for collaborative experimentation. Research was conducted in a series of specific workshops, and outcomes were shared and discussed between participants and visiting guests. Parallel to the workshop program our own artistic work was developed and presented as work-in-progress at Teatro Aveirense and at the international TeDance Conference in Lisbon in November 2007.

The concepts of the “generative score” and the “living archive” were central to our choreographic research within the TeDance (Technologically Expanded Dance) Project. During the two years of TeDance in 2006/07 we looked into the possibilities of developing creative strategies for Motion Capture sessions and Computer Vision set-ups, as well as developing generative techniques for the use of motion capture and motion tracking data in the choreographic creative process.

Working with these technologies we felt that the holistic approach described above might allow us to best contribute to the development of transdisciplinary methodology in the field of technologically expanded life performance. Consequently we focused on the interplay of (Motion Capture and Computer Vision) technology, archive, user (groups), specific working conditions and objectives.

3.1. CENTA

During the artistic residence held in July 2006 at CENTA we experimented with motion capture files, which were imported to Poser 5. This character animation software was interesting to work with because of its intuitive interface, varying forms of visualization of the animated figure, and, interestingly, because of its limitations and “errors” (e.g. humanly impossible movement due to the interpolation of poses). Researchers and artists of the TeDance team were participating in a movement laboratory, consisting of daily workshop sessions investigating the transfer of concepts, principles and methodologies with the focus of generating new creative strategies.

In one of the workshops participants were asked to learn the (ballet) movement of an animated figure (we had imported a motion capture file into Poser). Only the arm of the
figure was made visible, and participants were challenged to complement the learned sequence of the arm’s movement using the rest of their bodies through improvisation.

After showing their movement studies to each other, the original movement data was revealed. Participants reacted surprised, because they had not recognized the learned movement as “ballet”.

Instead, everybody used different techniques in the process of learning the sequence, integrated the movement in their particular pre-existing (trained) knowledge (Modern Dance, Ballet, Dance Theatre, Contact Improvisation, Yoga and Tai Chi), and applied different tools to generate the complementary movement: one dancer created a narrative based study (treating the arm as a character), another tried a duet using physical contact (imagining a complementary body partnered by the arm), yet another developed a solo investigating where the body weight of the arm could be in relation to the rest of the body.

Fernando Galrito, the animation specialist on the TeDance team, in turn was inspired by the idea of a floating body part in space and asked a few dancers to work with him on a short pixilation film. The dancers were filmed frame by frame in gravity-defying positions, creating the illusion of floating along the floor, the walls or the ceiling of the studio.

Watching the pixilation, we asked ourselves, what (choreographic) would help to turn the filmic illusion into something physically possible?

The following workshop consequently addressed the issue of embodying humanly impossible movement. The animation software Poser allows for the creation of a wide range of both physically possible and impossible poses, but the interpolations between the poses are somehow limited (though editable), and often produce distorted results.

We saved a series of poses from the (ballet) motion capture file from the day before and randomly connected them letting Poser create the transitions through interpolation. The result was a fascinating, physically totally impossible sequence of new movements. We enjoyed working with the distortions and physical impossible movement as stimuli for improvisation: how can a dancer “fly” or defy gravity, how can you turn your head around 360º several times, how can you pass your arm through your own or someone else’s body?

While “flying” or gravity-defying movement of the virtual figure was resolved in partner or group work and led to interesting movement ideas, distorted virtual bodies “unfolded” in three-dimensional space: a leg wound up like a screw could be interpreted as a quirky multiple turn on that leg.

The work inspired by the distorted virtual bodies expanded our view of what a satisfactory or interesting transition between to poses could be, and so dancers were asked to create “interpolations”, or unlikely transitions between any two pre-defined poses.

Again, interesting resultant movement ideas were filmed, and selected frames were imported into Poser as a background picture for rotoscoping (the Poser figure was animated to match the dancers’ poses on the photograph as closely as possible).
Finally those new poses were saved in Poser’s library, so that they are available for future animations. The possibilities that this recursive mode of working, or continuous bidirectional transfer provides, became obvious to everybody through these exercises: the saved poses from the library now would open up new possibilities for interpolation, and the virtual movement material could inspire further improvisation, which again could be filmed and rotoscoped.

Though it felt like we had just scratched the surface in our exploration of developing creative strategies using one particular motion capture data file, it had become very clear that the potential for the generation of (new) movement material was inextricably linked to the generation of working methods. It seemed we had tapped into another (living) archive: the reservoir of transdisciplinary compositional tools, which can be seen as a synergetic effect of the continued interdisciplinary dialogue.

3.2 Aveiro

In preparation for the second TeDance residency at the Teatro Aveirense in the north of Portugal we used a more sophisticated software, 3D Studio Max, which recently integrated Character Studio, a software for biped-animation. Character Studio allows, amongst many other possibilities, to mix several motion capture data files, which are mapped onto a figure and organized hierarchically. This way an arm movement of one file can be mixed with the torso of another file and the legs of yet another file. Possibilities are endless, as the speed also can be separately adjusted.

We started to experiment with the Stockmoves motion capture data file package, as it provided a variety of samples of different captured activities, such as sports, dance, and everyday activities organized by categories of movements (jump, fall, walk, slide etc.). We were particularly interested in the possibilities that mixing motion from data files of very diverse origin could provide (a boxer’s arm movement on a skater’s lower body performing a ballerinas pirouette etc.).

After experimenting extensively with a selection of twenty mocap files from different categories of movement, we came to the following conclusion: in our artistic perspective the most interesting mixtures of motion files did actually NOT result from a mixture of different forms of activity, but within the same kind of movement vocabulary. In our perspective the characteristics of a particular movement vocabulary determine to a large extend, whether the mixing of motions makes any artistic sense.

It also became clear from these experiments that larger files containing several movement phrases, should be broken down into much smaller units for the sake of more specific experimentation in the motion mixer.

Golan Levin, Jonathan Feinberg and Cassidy Curtis have presented a collaborative work, which inspired our research: Alphabet Synthesis Machine (2001), an “interactive online artwork, (...) which allows one to create and evolve the possible writing systems of one’s
own imaginary civilizations. The abstract alphabets produced with the software can be downloaded as TrueType fonts, and are entered into a comprehensive archive of user creations.”

The idea of producing an “imaginary (movement) alphabet” corresponded to the necessity we felt to break down movement phrases into smaller units, as we were looking into exploring the combinatory potential of fragments of mocap data files. We clearly were moving away from the concepts of “movement phrases” and “movement vocabulary” as we started to adopt terminology and methods commonly found in New Media Art practices.

Lev Manovich and Andreas Karatky’s work *Soft Cinema: Navigating the Database* (2005) suggests the possibility of re-inventing media based on the development of new interfaces that make use of “metadata” of media stored in a database. The database of *Soft Cinema* consists of a few hundred of video clips, which are “metadated”: keywords are assigned manually, or generated automatically through image processing software. These keywords describe content (geographical location, people in the movie, etc.) and formal aspects (dominant color, dominant line orientation, contrast, camera movement, etc.).

Among several ideas that are explored in *Soft Cinema*, the concepts of “algorithmic editing” and “database narrative” were instrumental for our choreographic research. “Algorithmic editing” here means that a program assembles the video track selecting the clips according to algorithms, which represent compositional choices, for example: “select the clip closest in color to the previous one”. “Database narrative” describes the approach to start with a large archive of media and generate a potentially unlimited number of narratives from it, as opposed to working from a script.

During the second TeDance residence we investigated correspondences of these concepts and our choreographic research. To begin with we programmed an interactive particle system in *Isadora*. Particles are objects, which are programmed to emerge in a certain point of origin on screen, follow a motion path, or remain in a position, and disappear after a certain amount of time (life span).

Particles can be images, moving images, or text. For our purposes we chose text fragments from William S. Burroughs’s *The Electronic Revolution*. Ideas for the creation of an “abstract movement alphabet” derived from this text, as well as the transference of parameters of a particle system (appear, disappear, point of origin, life span, acceleration, velocity etc.) to the movement research.

In first phase each workshop participant (a group of performing arts students and professionals) created an abstract movement alphabet.

In the next phase of the residence two exercises were introduced to experiment with the concept of “algorithmic editing”, which we interpreted as “assembling material through the use of rules”.
Employing the idea of the motion mixer, performer had to mix movement ideas to different degrees. In five defined areas of the stage the percentage of the mixes were determined in analogy to the motion mixer tool in Character Studio. The percentages were used to help the performer to divide the body into basic sections, and blend fragments of the original movement ideas in different combinations.

To our surprise this exercise was very successful. The mix of motions didn’t represent a major difficulty for the performers, because they had invented the movement themselves, and, contrary to the software’s capacity, their bodies’ intelligence helped them to organically combine the fragments in harmonious ways. Experiments with the mix of movement ideas from different performers naturally turned out to be more difficult: movement had to be appropriated from the partner, and sometimes did not fit in the alphabet that had been developed.

A second exercise was based on a concept from Burroughs’s *The Electronic Revolution*: “a word is an image – a sequence of words are moving images”. A simple key was developed which allowed for correspondences of the movement alphabet and the written word, so that any word in a text could be “translated” into movement. Again, assembling sequences of movement in this generative way was very successful, as the repetition of movement ideas in different recognizable rhythmic and spatial patterns created the sensation of a visual text.

In a discussion following the session we addressed the difference between working with movement “phrases” and assembling movement material algorithmically. It was interesting that many participants felt that as they were watching their peers perform they could make perfect sense of the assembled material.

During the final sessions of the residence we experimented exploring simple interactive particle systems programmed in *Isadora*. Text fragments and single words from *The Electronic Revolution* were generated according to the performers’ position, movement acceleration and size relatively to the camera, which served to track the movement based on the contrast of the performers’ white silhouette (white clothes) against the black background.

A few descriptions of the respective movement material and the particle systems (acceleration, direction, position/origin, size) served as “metadata” to generate aesthetically coherent combinations of performers/movement material and particle systems.

Reflecting about the second TeDance residence, we felt that sharing an understanding between similar creative processes in Contemporary Dance and New Media Art provided us with interesting concepts and ideas for practical experimentation, which often resulted in expanding existing working methods rather then introducing radically new approaches. I suggest that generative techniques in both artistic areas lend themselves to such a shared understanding of the creative process using interactive technology in live performances.
4. Generative techniques in creation and presentation of choreography

What are “generative techniques”?
Philip Galanter (2003) defines Generative Art as “any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy contributing to or resulting in a completed work of art.”

Tjark Ihmels and Julia Riedel (2004) suggest that the term “generative” should be viewed as a method of artistic work rather than an art form or a particular artistic attitude, as generative tools can be employed for the most diverse reasons. For our purposes “generative techniques” can be seen as a set of rule-based or algorithmic choreographic procedures, which are “set into motion with some degree of autonomy” contributing both, to the creative process and the presentation of the work of art.

The main objective in using generative processes can be described as the “potential to bring about change” in the creative process, or as integral part of the completed work. Friederike Lampert (2007) distinguishes between (re-) generative processes, or renewal of the known, which is predictable; and emergent processes, in which unpredictable innovations occur based on the re-combination of known elements.

Exchange, comparison and transfer of working methodologies, principles and (compositional) elements can generate new specific vocabularies and procedural inventions, as we experienced during the TeDance residencies.

We see from the table below that the correspondences between the programming of generative software and the use of generative techniques in choreography can be established during different phases of the artistic work.

<table>
<thead>
<tr>
<th>Generative software program</th>
<th>Generative techniques in choreography</th>
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<tbody>
<tr>
<td>Database</td>
<td>Set movement material in performance (generated in creation process)</td>
</tr>
<tr>
<td></td>
<td>Generate movement material in performance</td>
</tr>
<tr>
<td>Metadata</td>
<td>Descriptions of movement material are generated in creation the process to organize the material</td>
</tr>
</tbody>
</table>
**Algorithmic Editing**

(Compositional) rules are developed to process movement material; there is a set structure of rules used in performance.

(Compositional) rules are navigated and applied during performance.

**Options for interaction**

Generating movement material with the aim to create certain visual effects.

Set movement material as input to interactive system.

Navigating compositional rules to work with movement material according to visual cues.

Interestingly, from the audiences point of view there may not exist the slightest hint of generative elements within a work, when the performance is highly structured and all parameters clearly defined. However, the performer on the other hand may feel constantly “on the edge”: the “instant composition” within an interactive system requires multitasking, as the performer is navigating the matrixes of movement possibilities he has simultaneously make decisions as a visual artist.

In working with interactive particle systems we consequently found the complexity of generative possibilities increasing. The performers at the residency tended to shift between working from their movement database and a more direct exploration (which movement causes what kind of visual effect?) of a specific particle system. Some of the movement generated to create a specific visual event was not in itself satisfying or meaningful to the performer, choreographer or audience, but perfectly valid as part of an interactive system explored in live performance.

These shifts between and temporal layering of different working methodologies reminded us of Kenneth King’s term “processing choreography”, which describes the performance of dance works that make it possible for us to see “the dancer’s awareness, intelligence and spontaneity allowed to function on stage.”
Conclusion

In summary, generative techniques are often employed in fluid models of collaboration between choreographers, performers and media artists in technologically expanded life performance situations. We introduced the concepts of “instant composition”, “generative score” and “living archive” referencing the work of some eminent artists working in this field, in order to prepare movement laboratories as part of two artistic residencies within the TeDance Project.

The first laboratory aimed at testing the possibilities of Motion Capture data files perceived as living archives, and developed transdisciplinary working tools between choreography and character animation. A second movement laboratory investigated correspondences between concepts and working methods in New Media Arts and Choreography. The ideas of “abstract movement alphabets”, “database narratives” and “algorithmic editing” were tested in an interactive computer-vision environment.

We confirmed that the holistic collaborative approach toward the conception and application of (digital) technology for the creative process and life performance not only expands choreographic resources through the provision of hardware and software tools, but more importantly, challenges existing notions and methods of contemporary choreography. There is still a great potential in the correspondences between different artistic visions and working methodologies to be discovered in order to design new creative strategies.

We would like to highlight two aspects worthy of future research, which evolved from our investigation: the fluid models of collaboration in these kind of interdisciplinary teams; and the variety of possible forms of interactivity in technologically expanded life performance.

We share the view of many choreographers and media artists working in the field of technologically expanded life performance that we are still in the beginnings of exploring the full potential that transdisciplinary working methodology offers, and hope to contribute with this research on generative techniques for the creation of movement material and generative structures for life performance.
5. References


DeLahunta, Scott and Bevilacqua, Frédéric (2007) “Sharing Descriptions of Movement”. International Journal of Performance Arts and Digital Media 3 (1) 3-16


