The Ecology of Creativity and Evolution of Choreographic Strategies.

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Abstract. This paper explores applications of intelligent systems and how they can be imbedded into choreographic structures to create new approaches to the choreography. It includes examples of the methods in Riikka Theresa Innanen’s work that are based on somatic dance techniques such as Body-Mind Centering® together with various strategies to created embedded structures for intelligent systems to emerge. In Anima, BMC© was combined with philosophical studies by Jaana Parviainen in embodied experiences such as Negative Knowledge, Gregory Baetson’s System Theory, biosciences and the current sociopolitical debate how to tackle the rising ecological crisis. In the work NUMBER, Innanen collaborated with mathematician Alexis Clancy using algorithmic structures and a deep study in Numbers with a process of simultaneously counting and moving to create a method in which the choreography is allowed a totally new autonomy and renegotiates on a profound level the aesthetic and dramaturgical borders of dance, creativity and control of emerging state of a group. Using the metaphor of creativity as an ecology and development of choreographic methods as evolution, a question is posed how to create (self) sustainable ecosystems of art similar to a rainforest or a computer programs and promote an organic paradigm shift in choreography in order to allow new aesthetics and new processes of thinking to emerge.

Introduction

I view dance as ecology of creativity, constituted by a body-mind in motion, interacting with the world though a visceral, aesthetic and kinesthetic interface. My aim as an artist is ask to question, be in connection with the world I live in and collaborate with the odd and excellent other and to choreograp conditions for creative action to happen – in time, in space – allowing us to see the world and ourselves anew.

The foundations of the theoretical framework for my paper are in the relatively recent critical dance philosophical theories, mainly by Jaana Parviainen (PhD, directs research centre for philosophy of sport, body and movement (Talfit) in Tampere University) and Michael Klien (PhD, Former Artistic Director of Daghdha Dance Company).

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In my daily practice as a dancer and a choreographer, I strive use perception training and somatic dance training to deepen my own embodied experience of the world, my self and what an intimate relation to movement could mean. With groups – either as an art teacher, choreographer or collaborator, I also apply such methods as group coaching method Social Dreaming created by Gordon Lawrence. As a choreographer, I find the current technological developments, such as social network, algorithmic structures or increased interactivity, a great source of inspiration for developing new methods and models for embedded strategies for intelligent systems of choreography to happen. As this New Environment we act in has changed how we think and interact it also requires a new approach from dance. This means having to invent new methods out of scratch i.e. to reinvent the entire approach to what is choreographed and how to achieve it. One aspect of this is the increased usage of swarm and game theories as well as algorithmic programs to generate movement material. From this lineage I have developed further my own approach to dance and technology.

Currently my main question is how creativity can emerge, sustained and even make to flourish. This seems to require a shift in the attitudes towards control and authorship in a classically very hierarchical structure in dance, meaning allowing also the dancer and the audiences to part take in the creation by contributing with their own creativity, intelligence, learning skills, opinions and choice making abilities to the process. In other words, changing the attitudes of the dancer doing a dance into being the dance, and the action of watching into a process of being moved – from representation to an unfolding of the Self.

When choreography is expanded from a beautiful dancer on a beautiful set to include a wider realm of a “dance” of the world - weather we mean by it the traffic infrastructure in city, personal relations in a family or swarms of people moving through space- a loop like relation with society and art not only possible but also able to grow - in type, sophistication and complexity. This renegotiates dances role to grow beyond mere entertainment or propaganda into a tool for revitalized thinking, social dialogue and personal processing.

“Could 21st-century dance art really become a kinesthetic art, and how could this happen? How would the nature of dance art then change? Does choreography have the potential to break through the audio-visual-linguistic reception, which is at the core of Western art?” [1]

Since the turn of the millennia, a new paradigm of dance as a kinesthetic art form rather than a visual has become more and more urgent mainly for two reasons: the artists themselves have an increased need to allow their engagement with philosophy and science to seep into their work and because the needs and desires of the audience, much like the general conditions of consumers, have changed.

1. How to support body-mind based creativity through a choreographic practice

If Nietzsche’s quote “Dance is a metaphor for thought” rings true, it is vital for our current civic state and our future to reinvent how we support new ways of dancing.

For me, this path of reinvention of choreographic strategies has meant collaborating with people from various backgrounds. I find “contamination” necessary
in order to expand both the theoretical thinking as well as to find practical tools for new ways of choreographing. To renegotiate what choreography is and what a choreographer does, I needed to ask what is really important to keep and support even further, and what needs to go. I desire to support creativity. For the last three years I have focused in finding out systems in which the Mind of the performance is not a stable state but a dynamic, complex and intelligent system with the ability to grow. Such concepts have a deep changing effect on both the dramaturgical structure as well as on the required skills from the dancer. To make intelligent systems to emerge additional skills are required from a dancer. They are faced with totally new scenario of how the dance can be learned and how it can be performed i.e. it is not enough to have a virtuoso body but also a keen mind with an interest to learn and a courage to share the creative processes in front of a public. Even the audience has to be reeducated, or at least assisted to make a shift from a passive consumer into an active processor of information.

As practical strategies, embedded structures, such as algorithms, work very well. We call Number a stochastic choreography by which we mean the work is not random but it is unpredictable: once the system gain critical mass it will have its own logic and “life” beyond the control of the previously omnipotent creator/choreographer. Still, the mentioned has proven to be a useful method for creating a complex system which both obeys its own logic yet tirelessly reinvents itself.

What makes this level shift in choreography radical is first of all in the way it insists creative input from both the dancer and the audience. Using techniques based on physical empathy to engage the audience in an embodied processing. Using somatic dance techniques such as Body-Mind Centering®, investigations in bio sciences and philosophical studies of the systems, minds and the role of embodied experiences in the current society can assist dance share a process of “changing the core in order to change the surface”.

“Damasio’s claim that feeling an emotion is our principle way of becoming aware of changes in our body state, as our bodies respond to changes in their situation (both internal and external). Emotions are key component of complex processes of bodily perception, assessment, internal monitoring, self-transformation, motivation, and action. They are the result of the organism’s need to continually monitor how things are going and to initiate change within itself in response to possibilities of for perceived harm and benefit to the organism. It is hard to imagine something more important than such an emotional process for our self-preservation and our ability improve our situation in life... Importantly, most of this happens “beneath the level of conscious awareness”; so by the time we actually feel an emotion, much of the essential, life sustaining bodily adjustment has already occurred.” [2]

2. Choreographic practice applying methods to create intelligent systems

In choreography ANIMA, the starting point was a question of what is ecology and ecological thinking. In the work the issue is not dealt “outside of ourselves” but rather by placing it in and processing through the dancers own body i.e. by placing the processing into our own ecology, rather taking distance –something we normally consider necessary for an analytic approach. We found out that relating to something alien and external through similar system in our selves, allowed us to understand a system or a process intimately and on an emotional level, though which an unconscious processing happened which again allowed new thinking to emerge from with in
ourselves. Once emotional, the rational information becomes yours as an intimate state of knowing, true and strong enough to resonate to the space as an atmosphere for the audience to tap into.

For the way of developing both movement and dramaturgy I applied strategies from Gregory Baetson’s System Theory and Jaana Parviainen’s writings. In Parviainen’s essay Negative knowledge, expertise and organisations [3], she talks about ways for a system to develop through not-knowing and by a loop like reassessing of information called Double Loop Learning. Applying strategies form Double Loop Learning, we managed to create conditions for the choreography to behave similarly to an organic system, which not only allows but requires creative processing from the dancer through out the process and the performance.

“"In negative choreography the work becomes a blind spot and at the same time its material aspect disappears. The work is a certain kind of magnifying glass or microscope, but is in no way a mere instrument. The task of negative choreography is to turn the spectator's attention away from itself onto what it generates and gives birth to. The focus is not on the choreography as an object.” [1]

![Figure 1. Drawing of the dramaturgy in choreography ANIMA based on Double Loop Learning strategy.](image)

Interestingly enough, audience’s response was mimicking this: with an experience grounded in their own bodies they felt an ability to understand the questions from a new point of view, a desire deal with issues of ecological crisis through contemplation and post performance discussions i.e. engage with abstract dance even if not a dance connoisseurs. This aspect of dance working as an “invisible vehicle” for critical assessment of the current state of a community, giving it a role with in the social dialogue, links the work to the realm of Social Choreography.

NUMBER on the other hand is an on-going choreographic experiment for a group created in collaboration with the Irish mathematician Alexis Clancy where the nature of Numbers and the process of applying linear algorithmic structures on a human, non-linear surface create a complex yet hypnotically effective fractal landscape.

"Before a number is a number, a number is a (quantum) wave. [Assertion mine.]

By putting an Úna sequence into the mind of a moving dancer, the wave can be re-instantiated in mind and body - the dancer becomes a “wave mimic.”

With a number of dancers, the dance floor can become an observable quantum field.
In a sense, it is a new type of fractal, where an Úna sequence (which is non linear governor in a fictional sense) is reiterated in a non-linear field (that is the coupled minds and bodies of the dancers).

[The novelty of this fractal lies in the fact that not only is the governor non-linear - so to is the field upon which the fractal is generated.] - NUMBER dramaturge Alexis Clancy

The choreography of Number persists in emergence. In the process, rather than finding consensus or correlations between the two simultaneous actions (counting and the moving) required from the dancer, the “creative spark” is born from this relation of the rational mind and the irrational mind being placed in a state of tension, with a goal orientated release (on the part of the mover) in the end. Once the goal is achieved (in terms of completion of the count), the true choreography is permitted to reveal itself. In a way one could say in Number the performance actually begins after the active executing of the choreography is finished: like a winding toy the dance conditions the state of mind and then releases it to explore on its own, in the residual state of being and not being.

Reflection of a dancer in Number, hypnotherapist Risto Santavuori:

“When the moving created by numbers challenges in a strange way the normal way of moving,
All the sudden your identity as a mover isn’t valid
How the movement is created
What kind of meanings it expresses

Hypnosis is needed to free the new way of moving caused by the numbers, which may be both liberating and frightening at the same time

But why is it so important to be able to change the way of perceiving or why does this practice in Number cause this change?

The answer lies in the idea of hypnosis as a state of learning and adjusting oneself to the environmental demands and possibilities, to other people to achieve this state of creative meaning experience we need to alter the everyday rationality

This creative perceptive consciousness I call “infinite awareness” which means a state of body mind -system where every existence is a picture of the whole universe and is able to sense it somehow to let that picture come through your whole body mind system you need to alter your state of mind

but it isn’t anything dramatic
you just let it happen
while counting you let the numbers resonate with yourself
flow through your head and body
and you stop thinking any reasons explanations, solutions.”

This Choreographic investigation I have hoped to open up via this paper is followed by two main streams of questions, which feedback on each other in a loop like manner and hopefully help each other to grow beyond our current ability to imagine:
1. What can dance, body-based art forms and the embodied experiencing, which differs in perception from our “normal state of awareness” and ways of engaging with the world, contribute to the quest of increasing our understanding of the world and our general wellbeing?

2. How can we find strategies to choreograph *ecosystems of art*? How can we expand the ways of devising dance and choreography through new technological discoveries and strategies, which bypasses the more common choreographic methods of sculpting bodies and probes down to choreograph on a visceral level i.e. to choreograph “beneath the level of conscious awareness” (*Aiming for the core to change the surface*) [4] in order to create dances, which grow organically from inside out? And in return, how can these strategies tested in dance be applied back and be used to benefit the larger society?

References