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Motion Lab

Convened by Scott deLahunta (nl)

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"Motion Lab" is a framework for a public discussion of ideas related to performance, movements and media. The Lab features specially invited guests and contributors who present their papers and projects. Motion Lab is facilitated by Scott deLahunta and runs thematically alongside and in association with the "Synchronous Objects, reproduced" installation by Norah Zuniga Shaw.

Scott deLahunta (nl)

Program Manager and Research Coordinator Motion Bank
Director R-Research Wayne McGregor|Random Dance
Research Fellow, ARTI Group, Amsterdam School for the Arts
sdela@ahk.nl

Publishing Choreographic Ideas

Abstract:

A growing collection of self-determined reflections on dance practice are being published by choreographers in a variety of formats. Often working in collaboration with researchers, editors and designers, these heterogeneous publication projects make use of text, moving image and more open-ended digital tools and platforms. Many of these projects are either newly available or are in the process of development. In addition to offering practice led contributions to the discourse on dance, they point towards the artist's role in developing alternative forms of documenting, analyzing, notating and archiving contemporary dance.

Part One:

There are several definitions of choreography in Jonathan Burrows' recently published *A Choreographer's Handbook* (Routledge 2010). I cite the first here: "Choreography is a negotiation with the patterns your body is thinking" (p 27). This brief description guides us toward a couple of interesting concepts. If the body is capable of thought, then choreographic thinking may be what happens when one is making dances. Or one could speculate on how choreography emerges from the interaction between an abstract idea and what has been learnt by the body – its patterns. In any case, the conditions of this interaction vary depending on the methods and tools used by the particular choreographer.

How does this all come together in a work of art, the finished dance? Burrows' book, based on his many years of performing, choreographing and teaching, provides wonderful and useful insights into the process of dance making. Thusly, *A Choreographer's Handbook* makes an important contribution to the growing collection of resources dance artists have begun to offer the field. Some are publishing their ideas about choreographic practice, like Burrows, in book format. Some are making film documentaries. Others are combining aspects of text and moving image with more open-ended digital publishing tools and platforms. Whatever the media, there appears to be a

desire on the part of dance artists to inspect their own practice, then share and communicate these ideas to others.

Once published or produced, these resources have the potential to be of use to teachers and students in dance and related arts, as well as educate audiences in new ways. They also bring choreographic ideas into contact with other fields of knowledge and research. For example, *Improvisation Technologies: a tool for the analytical eye*, an multi-media CD-Rom published in 1999 by William Forsythe, generated a great deal of interest in the field of architecture. Its use of graphic annotation on video (see Fig. 1) has also helped cognitive psychologists, anthropologists and other non-arts specialists understand an aspect of choreographic thinking. In 2009, Forsythe followed up *Improvisation Technologies* with the creation of the award winning on-line digital dance score *Synchronous Objects for One Flat Thing, reproduced*.

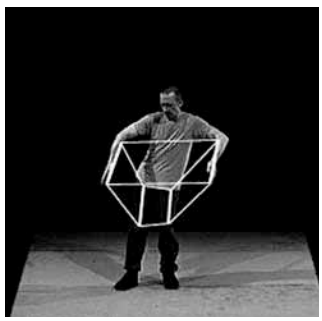

Fig. 1: Still of Forsythe demonstrating Parallel Shear on the *Improvisation Technologies* CD-Rom

In the meantime, other choreographers, some inspired by *Improvisation Technologies*, began to explore the use of digital tools to bring choreographic ideas and processes into newly productive exchanges with audiences, education and other specialist areas. These include Wayne McGregor and Siobhan Davies, both London-based, and Emio GrecoIPC in Amsterdam. In 2008, these choreographers and the researchers and designers working on their initiatives came together during a series of workshops entitled "Choreographic Objects: traces and artefacts of physical intelligence". These workshops drew attention to an emergent international 'community of practice' involved in the complex work of publishing choreographic ideas. From this emerging community a variety of important contributions to research areas are in development, including new creation and notation tools, and fresh perspectives on archiving dance [1].

Part Two:

This last decade of activity provides a context for a new collaborative initiative of William Forsythe and The Forsythe Company. The following summarizes the project goals and partners:

Motion Bank is a new four year (2010-2013) project of The Forsythe Company providing a broad context for research into choreographic practice. The

main focus is on the creation of new on-line digital scores in collaboration with selected guest choreographers to be made publicly available via the Motion Bank website. Both these unique score productions and development of related teaching curriculum will be undertaken with and rely on the expertise and experience of key collaborative partners. Public educational activities and events reflecting the diverse issues related to score creation will be offered at The Frankfurt Lab, and will include performances and presentations of the guest choreographers as well as lectures. Workshops and residencies organized with senior scientists and scholars aim to stimulate interdisciplinary research based on questions coming from dance practice. Exchange of information with and support for related projects is facilitated through working groups and associate networks.

Motion Bank Partners:

For the digital score development: the Advanced Computing Center for Art and Design at The Ohio University, the Fraunhofer Institute for Computer Graphics Research IGD, the Hochschule Darmstadt-University of Applied Sciences (h_da) and the Hochschule für Gestaltung (HfG) Offenbach.

For education and workshops: the Frankfurt University of Music and Performing Arts and the Palucca Schule Dresden – Hochschule für Tanz.

For interdisciplinary research: The Berlin School of Mind and Brain – Humboldt University Berlin and the Max Planck Institute for Brain Research Frankfurt.

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Staff:

Scott deLahunta (Programme and Research Coordinator), Christopher Roman (Productions and Educational Coordinator), Marion Rossi (Production and Administration)

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Inside Movement Knowledge. URL: insidemovementknowledge.net (accessed 29 June 2010)

Motion Bank. URL: motionbank.org (accessed 29 June 2010)

Siobhan Davies Replay. URL: www.siobhandaviesreplay.com (accessed 29 June 2010)

Synchronous Objects for One Flat Thing, reproduced. URL: synchronousobjects.osu.edu (accessed 29 June 2010)

[1] Other established choreographers publishing works include Meg Stuart, Steve Paxton, Rui Horta and Deborah Hay.

The World-Producing Body

Sarah Drury (us)
Temple University
Associate Professor
sdrury@temple.edu

This presentation explores various frameworks of embodiment at work in performance projects that use sensed movement to control live media. Engaging a cause-and-effect relationship between the physical and the virtual, such performance works propose alternatives to a centralized, unitary notion of embodiment. At the same time, there is a range of different ideas about embodiment across projects and practices, and within each work. My presentation provides the opportunity to sort through these different ideas, and to look at the implications for how these works use interactive technologies to trouble or relieve the vocabularies of embodiment that underlie everyday life.

The frameworks of embodiment discussed include:

• *The body as image, as memory*

In Bergson's framework, the body is a perceptive interface that is also continuous with matter – produced by and producing the world. Reality is comprised of images: perceptual objects. The body, when perceived from the outside, is this kind of image, "continuous with the images of matter". But one's own body is a "privileged center", an image that regulates all other images. Knowledge of matter from the inside moves into the terrain of memory. In interior experience, matter is replaced by memory. [1]
Sensor-based performance projects using a Bergsonian framework of embodiment treat the body-sensor-image as a controller of a database of stored memories. The body's movements access a Proustian narrative: multilinear, multilayered, multichronological.

• *The body as mediation*

Wegenstein's idea of the body as mediation [2] proposes the body itself as the locus of a constant negotiation of images, both internalized and socially projected, in which the body is the edge between inside and outside, self and other, cultural role and individual agency. Wegenstein relates the body as mediating surface to performance/media works that operate critically

within the simulacrum of image culture. Performances that draw on the idea of "the body as mediation" engage the body as a critical surface of image production and negotiation, both wearing and disinvesting itself of culturally circulated images, referencing and commenting on the culture of images that circulate through media and language.

• *The phenomenological body*

In the phenomenological concept of embodiment, the body is outside knowledge [3], but exists as access to experience itself. Inside and outside are not a binary pair, but are understood as a fluid continuum. The phenomenological body privileges presence over memory, with immediate experience as the only possible access to reality. [3]

Projects based on a phenomenological framework of embodiment focus on the relationship between gesture and media as an expression of the continuum between interior and exterior experience, and question the representational image as a wedge between the self and immediate experience, using images as non-critical extensions of the body.

• *The Body Without Organs*

Deleuze and Guattari's Body Without Organs (BwO) invokes a conception of the body that is disinvested of fantasies, images, projections, representations. But the BwO proposes a very different notion of embodiment, in which the body's lack of a centralized organizational structure serves a critical function. It is a set of processes, and as such, invokes chaos and fluidity in place of the hierarchical notions of identity that inscribe the subject socially and politically. The fluidities and processes of movement and transformation that describe the BwO imply a continual disintegration and reintegration of embodied coherence [4].

Projects drawing on this notion of embodiment are suggesting that body and image exist in a machinic interrelationship, as fragmentary parts of a never-completed body that fluidly incorporates the other. The image is not a perceptual extension of the body, but is an alienated part that is nonetheless included.

• *Interactional Couplings*

In Francisco Varela's cognitivist approach, the embodied subject comes into being in a dynamic process of "interactional couplings" with the environment, a "situated" event in which both environment and subject emerge through immediate response to the concrete realities presented by this contact. Like the BwO, the individual subject is an emergent phenomenon, a collection of fragments and processes that "may be brought together, even in a haphazard way, to give rise to what appears to an observer as a purposeful and integrated whole, without the need for central supervision." [5] However, rather than positing this form of embodiment as a resistance to the centralized subject, Varela draws this model from research in artificial intelligence,

and puts it forward as a pragmatic understanding of cognition itself. Cognition arises by chance as the cognitive agent interacts with its environment. The performer or “cognitive agent” and virtual environment are formed together, in a mutually defining and transforming process. This interaction suggests the mutual creation of self and environment, with the sensed gesture “writing” the graphic environment while the body itself is reframed by this displaced amplification of its actions.

I will use these and other frameworks to explore various performance works and their implications for a contemporary view of embodiment that embraces difference in subjective and social contexts.

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Susan Kozel (us)
Mesh Performance Practices
Director
susankozel@gmail.com

Mia Keinanen (fi/ru)
Dancer/Cheographer, Developmental Psychologist

Leena Rouhiainen (fi)
Theatre Academy of Helsinki
Dance Artist, Phenomenologist

IntuiTweet

Corporeal Excavations of Social Networking

The *IntuiTweet* project elaborates a dance perspective on Twitter emphasizing corporeal, expressive and aesthetic depth. The act of basing tweets on an intuitive corporeal moment, sending them to a social network, and then re-integrating them into our bodies only to re-tweet the new movement is an example of relational performative engagement through social media. It is also a form of dance improvisation.

Twitter has been both celebrated as a medium to convey our social zeitgeist and dismissed as a fundamentally superficial and disembodied epiphenomenon of social networking. This project began as an impulse to challenge the latter sentiment and to extract depth, physicality and poetry from a pervasive mode of cultural expression. Poets know the power of using a few carefully selected words, visual artists know the power of an image, or even fragment of an image, and dancers need very little to generate haunting improvisations: a word, sound, or colour is sufficient. The *IntuiTweet* project began as an attempt to access and share intuitive moments between three dancer-researchers (Keinanen, Kozel and Rouhiainen) and it has expanded both artistically and philosophically. This presentation will provide a glimpse into the current stage of artistic research, briefly describing three modalities of performance and some emerging philosophical thoughts.

Three Modalities of Performance

The first modality of performance is the Immanent *Performance of Everyday Life* by which micro and somatic moments are enhanced and shared through Twitter. These can best be described as periods of structured improvisations. At the time of writing this text four improvisations have taken place over the course of a year. Only once were the dancers co-located in a single city. The

third and fourth improvisations integrated TwitPic and YouTube for visual material, affirming that a fragment of movement intuition could be captured not just through words but through images.

Most of the improvisation occurred in public places (streets, public transit, workplaces) or in private homes as we went about our daily lives in our separate cities and countries. Some access to dance studios was available but the performance component was very much that of everyday life. The tweets generated are like performative scripts useful both for future improvisations and acting as archives or traces of past movement. Future and past dimensions coincide.

The second and third modalities relate to performances that are still being developed out of the improvisations just described. The second modality is called a *Participatory Performance with Dancers*. This is an open composition in a theatre space combining the improvisations of participants and dancers. Material from the prior improvisations will be integrated, both visual and textual, along with material generated by dancers and audience/participants at the time of performance. The intent is to make the space of the theatre porous by means of the social media.

The third performance modality is a *Participatory Performance across Multiple Social Networking Platforms*. This performance model integrates various forms of social media over a period of weeks or months in order to build a community of performers. The space of social networking will be punctuated by several site specific moments where the mediated corporeal exchanges will be anchored, almost unveiled, by the grounding in a shared physical space. There will be no dancers separate from the participants.

Philosophical strands

IntuiTweet exemplifies and extends some principles of Relational Aesthetics, drawing this approach to contemporary art from the 1990s into dialogue with current participatory performance and media practices. Asserting that art is a state of encounter, and that intersubjectivity is not just the context but is the work itself, the relational approach to aesthetics is strongly relevant to artistic practices using mobile social media (Bourriaud 2002). Yet there is more depth and poetry to this work than relationality.

In the recent première of *Dawn* (2010) composed by Franck Krawczyk for Christian Boltanski's installation *No Man's Land* (Park Avenue Armory, New York City) audience members were invited to record the concert using their hand held devices and upload the files so that these could later be merged into a collective composition. The care and delight with which people used their devices during the 90 minute piece were striking. The individual perceptual moments were not lost in the collective of relationality, they made up the fabric of the larger, shifting whole. Phenomenology makes up an important basis for IntuiTweet: how fragile and fleeting moments of embodied living in the world can be captured, shared and woven into an artistic experience that in turn expands as other voices and other bodies filter, interpret and forget those earlier moments.

Marc Augé writes, forgetting is essential to remembering, it is through oblivion that we can hold onto anything at all and find a place in the world (Augé 2004). This is as true of personal narratives as it is of bodily memories, our social media does not dilute or transform this dynamic: with our shared media, we preserve and forget, excavate intuition and free it to evaporate or be distilled in another's body.

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Martin Kusch (qc/ca)
Marie-Claude Poulin (qc/ca)
kondition pluriel
Artists
info@k-pluriel.org

passage

- a Hybrid of Interactive Installation and Performance

Context

As an interdisciplinary production group we are exploring modes of representation that incorporate choreography and media arts, and lie at the border between installation and spectacle. We are interested in the artistic process as much as the artistic product. One of our objectives is to develop strategies and methodologies for artistic expression using new technologies in the live arts and to foster the integration of expressive systems as tools for creation in the performing arts disciplines. The work with new media and our multiple experiences creating interactive dance performances inspired us to produce an installation integrating live performance, in which the spectator is invited to actually "use" the body of the performer as the interface to the media environment.

passage

is a performance-installation project with one performer, a visual artist and a sound artist. It is a practical research into the possibilities created by blurring the boundaries between active performers and passive spectators. It explores varying states of intimacy and proximity, with the goal to create an artwork that oscillates between interactive installation and performance. The project incorporates dance performance, choreography, improvisation and a dynamic and responsive media environment. The media environment is transformed by continuous live input from multiple users – the spectators – via a series of wireless sensors attached and distributed both on the costume of a performer and throughout the installation environment. The work is accessible to visitors for approx. three hours per day. With passage we propose a situation where the spectator's participation plays a role in the shaping of events. By manipulating the sensors on the body of the performer and/or on the objects in the space, the visitors are invited to manipulate the sound, image and lights in real-time. The distributed sensors register movement, proximity, touch and pressure. The technical set-up consists of two wireless sensor systems, three computers, a wireless microphone, a multichannel sound system, three video-projectors, a motorized mirror, lighting and the max/msp software.

During the performance, the performer solicits the participation of the public with the help of specific actions marked by an attitude of availability, invitation and at times retraction. The spectators have the choice of participating and collaborating, or of positioning themselves more as observers.

In the absence of intervention, the environment transforms only in relation to the performer's movements. However, in response to interventions, the transformations of the environment are clearly manifested and the visitor's actions provoke a shift in the installation environment. These fluctuations in ambiance lead the performer to move to another state, which she does by drawing from a bank of movements and pre-determined performative modes.

The elements of passage are constructed around ten separate but interrelating scenes and motifs. Each of these scenes are articulated around a specific state of the performer, in combination with a distinct image and sound environment. They each deal in a particular way with the themes of social interaction, intimacy and observation. The relations between media space, performer and public are developed and executed in an improvisational manner. To be able to modify the audio-visual thread live we developed a compositional grid, a score, for the distribution of the interactive parameters and the management of the data.

By working with the contrasts between solicitation and retraction, passage deals with playfulness and mutuality and explores the notions of exchange and collaboration, the boundaries between beings and their environments. We create a situation that questions the visitor on his relationship to his own body, and by offering the body of a dancer as the ground for exploration we play with the limit of discomfort. Actively implicated and possibly confronted by our artistic proposition, the spectator finds himself at once subject and object.

The fact that this project takes the form of a hybrid between performance and installation brings us to reflect on the notion of temporality. How can it be organized in an installation, in which multiple users can engage and where, at the same time, a performance takes place?

We have attempted to answer this question by exploring and structuring the temporal organization of the separate scenes in a non-linear way. At some moments the order is pre-determined at other moments the visitor's actions determine what follows what, all taking place in an environment where the performer, the visual artist and the sound artist make use of various improvisation strategies.

One of the issues is how to lead the visitor to enter into a relationship with the dancer and his environment. A determining factor for the outcome of each performance is the visitor's capacity to listen and to observe, together with the capacity to communicate and to collaborate. The relationships developed between the visitors, the performer and the environment are one of the central elements. The nature of these relationships shifts between: dialogue, confrontation, collaboration, domination and game.

passage is a work about freedom of choice, intimacy and privacy, participation and connectivity; it provides a reflection about the perception of our bodies and our mediated presence inside networked societies.

References

www.konditionpluriel.org

Christopher Salter (qc/ca)
Concordia University
Associate Professor, Design and Computation Arts
chrissal@alcor.concordia.ca

Marije Baalman (qc/ca)
Concordia University
Post Doctoral Researcher
marije@alcor.concordia.ca

SenseStage: Low Cost Open Source Wireless Sensor Infrastructure for Live Performance and Interactive Real Time Environments

SenseStage is a research-creation project to develop small, low cost and low power wireless sensor hardware together with software infrastructure specifically for use in live theater, dance and music performance as well as for the design of interactive, real-time environments involving distributed, heterogeneous sensing modalities.
The project consists of three components:

- a series of small, battery powered wireless PCBs that can acquire and transmit input from a range of analog and digital sensors.
- an open source software environment that enables the real-time sharing of such sensor data among designers and
- plug in modules that enable the analysis of such sensor data streams in order to provide building blocks for the generation of complex dynamics for output media.

The project emerged from a desire to address a novel, emerging research field: distributed, wireless sensing networks for real-time composition using many forms of output media including sound, video, lighting, mechatronic and actuation devices and similar. The design of interactive environments using diverse output media increasingly involves the mapping of many channels of real-time sensor data to control the temporal behavior of such media. Standard mapping techniques with sensors that have been derived from the ”instrument building” paradigm, usually address only small numbers of sensors or participants and may not scale well to larger spaces. Systems involv-

ing large numbers of sensors and participants are rare, custom-designed, and expensive.

Furthermore, while wireless sensors and wireless sensor networks (WSNs) are being increasingly deployed daily in areas such as health care, defense, seismology and home security, there are scant examples of such technologies in artistic projects simply due to the lack of available hardware/software infrastructure for artists to use. Most work in sensor networks has been in areas of applied technology development without artistic aims or is restricted to lab settings. Based on these factors, SenseStage has developed a fully integrated hardware and software infrastructure that is intuitive to use by artists and designers, is scaleable to many nodes and performs data acquisition, transmission, conditioning, sharing and compositional tasks all within the same system.

Three specific factors have motivated the SenseStage project:

1) Economic and technical constraints of live performance:

While there is increasing interest in the use of sensing technologies in live performance contexts (particularly theater, dance and music-theater), the economic and cultural constraints of live performance make the integration and use of such experimental technologies difficult. Long rehearsal periods and proper technical infrastructure necessary to test and use sensing systems are prohibitively expensive for artists and cultural institutions. This is particularly evident in the extremely short technical integration periods ("tech week" or "technical rehearsals") that are customary for theater, dance and music. Thus, the use of many sensing devices and software tools needs to be conditioned by flexibility, minimal preshow setup time, quick deployment and use within a variety of stage or exhibition conditions.

2) Lack of tools for artistic use:

As previously stated, SenseStage emerged from a desire to address the emerging research field of ubiquitous computing within the artistic, real-time context of live performance and interactive environments. Although many groups are currently researching and developing WSNs, design decisions are normally motivated by engineering innovations thus leading to efficient yet, prohibitively expensive and complex systems out of the reach of artists. Furthermore, as will be detailed below, despite the high number of research initiatives currently taking place, there are disappointingly few wireless sensing platforms that are actually available for real world use or that are cost effective. In addition, there is a lack of software tools for interacting easily with the large amount of data produced by such distributed wireless systems, especially tools implemented in lingua franca programming languages and environments used by musicians, sound and media artists such as Processing, Max/MSP/Jitter, Supercollider, PureData and other environments supporting OpenSoundControl (OSC). SenseStage seeks to develop a technological framework that eases the exchange of data between many diverse programming environments used for interactive sound and media projects in order that artists and designers with diverse practices can work efficiently

on complex interactive projects in both development (i.e., rehearsal) and performance stages.

3) Real world testing scenarios:

Much of the research agenda for the project was driven by many years of artistic work and technological development of tools to facilitate the creation of interactive performances and installations with distributed sensing and which used mapping of such input data to complex parameter spaces for the control of sound and other media in real-time. A key design element of the SenseStage project is thus to deploy SenseStage technologies into real world, professionally driven testing environments to see how such tools function “in the wild” and outside of the standard lab, demo-driven mode normally given to the presentation of new technologies.

Implicit Art (Artist Presentation)

Nathaniel Stern (us)
University of Wisconsin – Milwaukee
Assistant Professor, Department of Art and Design
nathaniel.stern@gmail.com

In his *Parables for the Virtual*, Brian Massumi calls for "movement, sensation, and qualities of experience" to be put back into our understandings of embodiment and culture (2002, 4). He says that our dominant modes of comprehension are almost exclusively visual and linguistic. Massumi wants to instead "engage with continuity," to encourage a processual, active, sensory and relational approach to the world (Ibid, 27).

As an artist, I'm similarly concerned with how categories such as 'body,' 'language,' 'vision' or 'space' are often presupposed in contemporary culture, and hope to foster greater dialogue around these complex systems and their relationships to affect and meaning-making. Most specifically I ask, 'How might the body's continuity, and its potential disruption, be attendant, provoked and contextualized in contemporary art?'

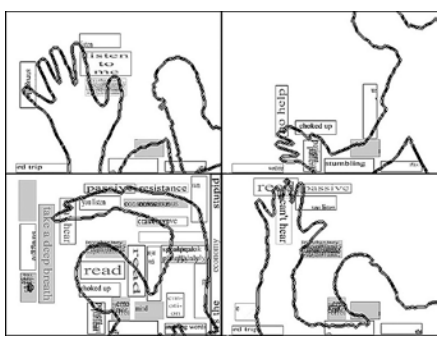

Fig. 1: ***stuttering*** **(4 screen grabs), 2003/2009, size variable**

For example, in my interactive installation, *stuttering*, viewers-turned-participants use their entire bodies to touch and trigger invisible activation points laid out in a Mondrian-styled grid. Each rectangle in the work's projected

Fig. 2: 'Compressionism' – scanning water lilies in Indiana, Jesse Egan, 2009

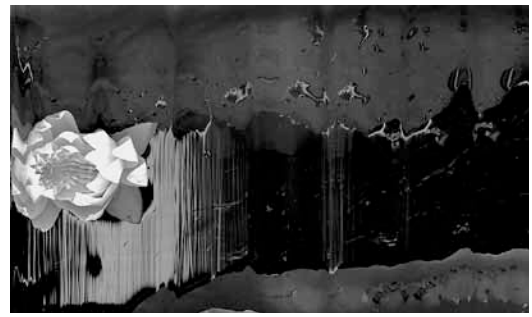

Fig. 3: Giverny of the Midwest (detail), in progress, 2 x 12 meters

image is filled with animated text and spoken word. The saturation of these 'virtual buttons' creates an inverse relationship: move quickly, and the piece will itself stutter in a barrage of audiovisual verbiage; move carefully, even cautiously – *stutter with your body* – and both meaning and bodies emerge.

In my *Compressionism* series of prints, I strap a desktop scanner, laptop and custom battery pack to my body, and perform images into existence. I might scan in straight, long lines across tables, tie the scanner around my neck and swing over flowers, do pogo-like gestures over bricks, or just follow the wind over water lilies in a pond. The dynamism of my relationship to the landscape is transformed into beautiful and quirky renderings, which are re-stretched and colored on my laptop, then produced as archival art objects using photographic or traditional processes.

Here I 'per-form' the landscape to challenge notions of a 'pre-formed' world, or sense, or meaning. By engaging with the unfinished and in-process within my work, I seek to challenge the nature of what is 'given.'

Fig. 4: performance 2 (passage) – a Sentimental Construction, 2007

And my *Sentimental Constructions* are site-specific architectural structures made of rope, built to scale and held up by live performers. These move between hard and soft, virtual and actual, public and private. Each twists

the idea of 'public place' by its double activation: first, through the volunteers who physically stretch the form outward and around them; and second, through the communal play of the onlookers-turned-participants, who give the piece an/other performative turn. Active and activated people render 'meaning' and 'use' as transductions, continuous formations in and around one another. *Sentimental Constructions* are CC-licensed, encouraging international contributors (in Croatia and South Africa so far) to re-make and re-define their own public places.

In sum, my art engages movement, sensation and qualities of experience to refigure fixed signifiers as affective and dynamic encounters.

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Sofy Yuditskaya (us)
Interactive Telecommunications Program at New York University
Grad Student
yud.sofy@gmail.com

Damian Frey (at)
Independent Scholar
damian@frey.co.nz

Valeria Maracco (nl)
Independent Scholar

Perils of Obedience

Perils of Obedience was an interactive dance piece that first took place at the “Fête de la musique 2009” in Paris, France. It is a generative audio and dance re-enactment of the Milgram Experiment.

A person dressed with the accouterments, and speaking in the languages of both experimenter and ringleader stands on the street with a mike in her hand. She entreats passers-by and on-lookers to become participants in the performance. The willing participant is given a control interface made from 1950’s British military surplus. Note that the salvaged components were originally made and used for export to Austria post-WW II, the materials used for the apparatus are a material aspect of re-appropriation of various modes of authority.

In the control interface we see what was once secret and powerful, and used as part of the war machine, now cast aside, and made available as scrap to the general public. Though the technology used to re-appropriate the piece is not available without some dedication to learning how to use it, it has the smack of bricolage in the way that it looks. The apparatus itself has been neutralized, almost rendered nostalgic, by the passage of time.

With this appropriated interface the Participant/Viewer now generates the audio, and the movements of the dancer. The intensity of the music, and the intensity of the dancer’s movements are directly guided by the Participant/Viewer’s turns of the knobs on the control interface. All members of the performance know, because they are told by the Author, that the Dancer is following instructions of her own free will. She can stop at any point. Part of the performance is of course for her to act as if she can’t and for everyone else to consent to that.

The re-enactment transposes the roles in the original Milgram experiment, from Experimenter, Actor and Subject to Author, Dancer, and Viewer/Participant respectively. The goal of the performance being to push the limits of the authority of the spectacle.

This performance is meant to happen in the street, but under special circumstances. The “Fête de la musique” for example, transforms the ordinary

street into a special site for performance, by virtue of being a day where, by mass consensus, the street is declared to be a stage and used as such. The "Fête de la musique" is an institution unaccompanied by edifice. This gives the site a vague spectacular designation and the effect, if not the actual fact of being a temporary autonomous zone, which is very desirable for conducting experiments concerning the power of the spectacle.

The impetus for making this project came from a desire for making jest towards scientific as well as artistic authority. Stanley Milgram used actors in his original experiment, he himself acted out the role of authority figure to coerce a body of data. The Milgram Experiment is beautiful to us because it uses acting, consensus, apparatus to create scientific fact, and uses the scientific apparatus to inspire fear and belief. Likewise we are using acting, consensus and apparatus to create music, dance, performance, dialogue, and even the very space for presenting it.

Another theme of the project comes from the question "At what point does the pantomime of danger become danger itself?" In art, and theater, we are given the option of trying on different social hats without too much risk. Even when a spectator would steer the Dancer into the path of an oncoming vehicle, putting her at risk, or some other such situation, he would often simply return the controller to the Author, disengaging from the situation. When we make a similar commitment, for example to steer troops into battle, a team on a project, etc, we cannot disengage so easily, but there is also a myriad of bureaucratic contraptions in place to distance us from our subjects. Of course when a disaster happens, these contraptions often fall apart.

As with the BP Catastrophe (still raging strong at the time of the writing of this text), bureaucratic contraptions muddy the waters of outside perceptions, and distance humanity from the poetic destruction that it has wrought upon itself. The Perils Of Obedience is an art piece, that tries to embody bureaucratized violence. The theatrical way in which it is dealt with speaks back to the tradition of the Grand Guignol, rather than the spectacles of bureaucratized violence and disaster as the BP Catastrophe.

In Perils Of Obedience, we have collapsed all the actions involved in the fragmentation of building up a power structure into four essential roles, all occupied by human beings. We've slightly transposed our humanity through the performance. Abstracting our bodies from their actions. Playing out the age old tale of authority while leaving our bodies exposed to the street and each other. It requires the cooperation of everyone, the Author, the Dancer, the Audience and the Participant/Viewer, and the Apparatus/Prop, for the story to play out, and have a picture perfect ending.

We used an arduino micro-controller (see arduino.cc) to push the dancer in 6 directions in space. This would cause vibration motors to actuate when the knobs on the control board were turned. This would also send signals to our Pure Data (see puredata.info) patch, written and composed by Damien Frey to affect the audio of the piece.

Chris Ziegler (de)
ZKM Karlsruhe
Associate Artist
cz@movingimages.de

Interfacing Dance Knowledge / DS|DM Installation

DS|DM Installation

"Double Skin/Double Mind" (DS|DM) is an awareness preparation workshop for professional dancers, developed by the Amsterdam based dance company Emio Greco | PC since 1996.

> The Interactive Installation is a virtual version of the workshop. The installation offers participants the possibility to take part in a virtual version of the workshop in real time, while receiving verbal, physical and peripheral information. The design consists of an aluminum frame construction with one projection screen, 3 peripheral monitors, four sound speakers and a tracking camera with Infra Red projectors- surrounding the participant. The movement – tracking program "Gesture Follower" (GF) developed by Frédéric Bevilacqua (IRCAM), compares the data of the filmed version of the workshop with the real time data of the participant's movements. As result of this comparison, different forms of feedback are given: sonification, visualization and music will accompany the participant while mentally and physically traveling through the Double Skin/Double Mind structure. ICKAmsterdam

The installation was initiated 2006 by Bertha Bemudez (EG|PC), Frederique Bevilaqua (IRCAM) and Chris Ziegler (ZKM Karlsruhe) during the notation research project "Capturing Intention". At the end of 2007 Emio Greco | PC released a book, a film documentary (made by Maite Bermudez) and the DS|DM DVD-ROM. A demonstrative version of the installation traveled through festivals in Holland in that time.

In 2008 a two-year collaborative research project Inside Movement Knowledge (IMK) went into new methods for documentation, transmission and

preservation of contemporary dance knowledge. In IMK we developed and tested the professional version of DS|DM installation inside the AHK Amsterdam dance program with dance students and teachers conducting several labs until May 2010. From 2011 onwards the installation will be included in the curriculum of the AHK's dance training program.

An environment for dance training

In DS|DM we had the means of tracking qualities of motion. The software was orginally developed to relate hand gestures of a conductor to electronic music. In DS|DM we used it to analyze dance movement to improve movement qualities with specific sound feedback and visual information. After I participated in the "real" sweat away DS|DM workshop, it was obvious that we need a dedicated space for physical training.

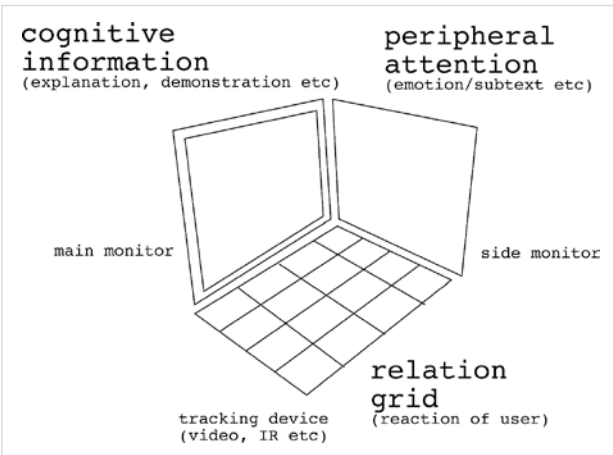

Fig. 1: DS|DM installation sketch Photo: Chris Ziegler

Architecture of attention / affiliation

With a sketch of a "Sensational Interface" I layed out an idea of expanding the CD-ROM of DS|DM for an immersive learning environment. We had to reach the body in his best sensorial interface: in a workshop situation. The body needs physical training to learn DS|DM's movement qualities.

The hybrid character of new media tools on stage creates new ways of expressing movements by sound, video and light, but on the other hand it very often restricts possible moves to "read" movement information.

Level A: Workshop

The introduction is a linear workshop in space and time, recreating the situation of a "normal" workshop, using the big screen in front of the dancer to offer a teaching situation to which he is used to. In that level Emio Greco gives a virtual dance training workshop for awareness preparation, mixing verbal commands with physical movement instructions.

Fig. 2: DS|DM installation with Bertha Bermudez (Emio Greco|PC) Photo: Thomas Lenden

Level B: Learn

In level B we split the DS|DM holistic workshop experience into one source representing the body of Emio Greco in the main screen and a "talking head" monitor in the left upper corner of the cube to give more specific verbal instructions by Emio Greco – and Pieter C. Scholten. On the sides we display close-up views on body parts to stear the attention to specific movement qualities in body parts.

The GF software analyzes the movement of a dancer and displays the body silhouette. The DS|DM software creates an internal model of the body by capturing the movement of extremities with bounding boxes and using the gravity center of the body.

Level C: Customize

Learning is a process of appropriation. Thus I designed, with Martin Bellardi – programmer of the installation interface – a way of accessing the structure of the lectures. A customization interface gives access on all levels and all chapters. The user can change settings, which are pre-set for level B. The DS|DM installation, reconstructing a dance workshop in level A, separating chapters in level B is turning DS|DM into a digital tool in level C.

Level D: Play / Create

After learning, there is rehearsal there might be creation: A dancer is requested to use DS|DM's dance qualities in his own way. Sarah Fdili Alaoui (IRCAM) created a visual and sounding moving object for a virtual pas-de-deux. The DS|DM installation constantly analyzes the dancers movement qualities and feeds a movement and sonification dialog.

Interfacing dance knowledge

From IT to DS|DM it feels like concluding a circle: From cognition to emotion, from architecture to atmosphere. Talking about qualities and intention in dance is difficult enough, trying to capture them with digital tools sounds even more challenging.