Audible and Inaudible Choreography

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Introduction

A main focus of DAP-Lab's research presently engages the interconnections between sound (audibility, aural environments) and wearable technologies in interactive live performance and dance. Our understanding of wearables is adopting new insights into the paradigm of interactivity, as we have become more cautious about the meaning and effect of computational interactivity and recently felt we needed to resist the prisms of programmable environment design.

Therefore, we are approaching the idea of the wearable from a more basic point of view, namely how we wear an outfit or costume that is similar to an instrument, and how its design, shape and functions affect movement behavior and thus help to build character (role).

We are exploring propositions regarding the sound of the costumes worn in performance (and in extension, regarding the function of fashion, textiles and wearables produced for popular culture sectors and markets), and investigate wearable textures and the manner in which they enable or constrain movement, touch body, extend body and physical shape into sounding instruments. In this context, we realize that sometimes the costume or costume-instrument can also have the function or symbolic role of a prosthesis, but we have not yet pursued all the implications of prosthetic design that touch upon medical or social differentiations of ability to move and express movement (or replace movement sensation, as it might be the case in robotics engineering). We consider this an open avenue that we could pursue in the METABODY project, defending the body against expropriation or reductive control systems.

Some of the sounding garments and accoutrements that Michèle Danjoux has built for our lab ensemble are delicate and fragile, others are sturdy and resistant. Many of our designs also entail functional and dysfunctional aspects which have a role to play in the movement narratives or interactions between performers and environment. The sounding wearables amplify movement and performance environment through audible or inaudible dimensions that are generated and processed. In the following, we will briefly introduce some of the ideas that make us think of performance design, in particular, as a form of composition (in a musical or sonic sense) working through sound and silence in a kind of *Raumpartitur* (spatial score). The emergent "score" is thus both scenographic and choreographic at the same time.

The performer wears the wearables on a "sound stage," so to speak, for example with embedded sensitive microphones or speakers worn on the body, and she articulates – or seeks to disarticulate – instrumentalized notions of choreography that are also inferred from the so-called "choreographic unconscious", the more or less automatic operations carried out through a given knowledge of dance and of sound. The automatic operations of movement are hindered by our design, and this is deliberate.

1. Expanded Instrument-Body

Our wearable "design-in-motion" prototyping begins with instrument design (costumes and embedded analogue/digital technologies) that is gradually extended into the production of suspended choreographic feedback systems. These systems, which we test in our public performances and installations, have historical dimensions insofar as the work addresses particular ideological constellations of the introduction of sound to movement (and sound to image, in the cinematic-theatrical contexts) or movement to sound. Thus, the use of surrounding or backing film projections allows us to draw attention to gesture in silent film on different levels of scale. In physically immersive installations, where performers and audience intermingle, attention is drawn to small gestures and their local sound from very close proximity. In some cases, the performers become their own loud-speakers.

As a first proposition, we ask you to imagine the sound of the costume you wear in performance, listen to its texture and note how it enables or constrains your movement on stage, how you touch it and how it touches your body. Your costume also extends your body, limbs, arms, hands, fingers, your physical shape or imagined Gestalt, and the movement figures and qualities you seek to pour out, into the present performance environment. The space is now mediated by the sound you make as it travels from your body becoming amplified, processed, and distended. You act on a "sound stage," embedded sensitive microphone pick up your motion, echoes reverberate and stop. You begin again.

If we go back a century to the beginnings of modern dance, we discover how important it was for choreographers and dancers in Europe to claim a professional and methodological approach to movement composition and a new *kinesthetic*. Mary Wigman founded her school for dancers (in Dresden) in which she instructed the dancer to become her own "instrument" through physical individuation on the foundation of a comprehension of experienced (inner) self-perception and (outer, artificial) performance.

Experimenting with constructivist design, technologies, and software programming adds complexity to the artifice that Wigman admits even in the expressionist nature of the dance and her improvisational or compositional methods. Our wearable "design-in-motion" is not an emotional out-pouring into a new unity/harmony but dwells on what Wigman calls *Spaltungs-erlebnis* – the *experience of discordance* and affordance with the interface/feedback systems that distracts or at least make you conscious of an abstracting process.

For example, how do you move with a costume equipped with sensors, microphones, and small speakers? How does the dancer-actor control their sensortized wearable outfit in order to generate sound or manipulate visual/graphic projections in the stage or installation environment? And how does the actor participate – affecting the audience's own intimate perceptional relation to the immersive environment – in a stage world created in real-time through generative processes, through this ecology of becoming? What can she hear as she makes sound and what form of composing is this

if it does not follow any system of inscription (score) but pretends to be scoring in real-time?

Our questions are meant to refer to the difficulties we have with the paradigm of interactivity as well as the algorithmic/mathematical way of thinking movement without a body. From the point of view of composition, the dance-theatre works we create are neither based on scripts (text) nor scores (music). They are choreographies-in-the-making, installations developed through a longer process of laboratory research where each performer learns how to expand or contract gestures that can be heard or not. We are looking for small poetic moments of articulation, but also for the awkward separations and connections, the images of movement we perceive as we move and pause, listening to the resonances of the expanded body.

We attend to the emotional, vibrational sensations and inter/intra-psychological dimensions of wearing, i.e. to the impact the wearables have beyond the visual on our bodies serving as extension of the senses, as we assimilate them to our body by pouring ourselves into them. This means that in our design process we move from the initial morphogenetic possibilities – explored through our digital photography of the choreography – to the listening body in the interface, incorporating all bouncing, reverberating sounds into the "pouring," conjoining material and virtual oscillations into immersive experience of imaginary space. The crackle of leaves, the dropping of salt onto the floor, the exhale of the bandoneon, the clicking of magnets against speakers, the sweeping of a vinyl groove with a finger next to a microphone, the glitches of claves seemingly beaten, the hands on the skin of the drum, the rustle of paillette sleeves. (These are some sounds from *UKIYO*.)

Physical preparations for working with sensortized garments includes the "Artaud Method," learnt in workshops in Japan with Hironobu Oikawa whose butoh training encompasses Chinese natural philosophy of the five elements (wood, fire, earth, metal, water) and their audible and inaudible motions. The Qigong system we apply uses a mixture of training methods, combining dynamic, static, meditative and interactional patterns. *UKIYO*'s attention to sound generation arose from this cross-cultural process with a philosophical, not merely technological, interest in developing a practice capable of integrating movement composition (both physical movement

and image animations) with methods for creating particularized audiophonic and sensortized garments.

Composing “audible choreographies” might now be the best way to describe our design work. We are interested in teasing out various strands of inspiration (usually we depart from a motif that drives the research; the motif could originate from an image or a historical incident or a technical proposition as much as it might be derived from an object, poem, sound phenomenon or fashion concept). In the DAP-Lab, we no longer subscribe to notions of digital innovation. We tend in fact to look backwards, historically minded and aware of earlier analog visions for a “new theatre of the scientific age” (Brecht), remembering Antonin Artaud, Gertrude Stein, Oscar Schlemmer, Khlebnikov and the Russian Constructivists, Meredith Monk and others, looking at transcultural concatenations of movement and “landscape plays,” old investigations of body weather, geopoetics and physical engagement of the environment.

After creating our first expanded environment (*Suna no Onna*) in 2007, adapting Teshigahara's mysterious 1960s movie, *Woman in the Dunes*, into a dance installation that merges virtual and real images of a life of existential entrapment in an inhospitable habitat, the DAP ensemble worked with Japanese network artists and butoh dancers for three years (2008-2010). The meeting with butoh masters in Tokyo led to a dance installation titled *UKIYO [Moveable Worlds]*.

Danjoux built a series of complex garments that were partly interactive (digital sensors woven into the fabric of the costumes) and partly organic. For example, she sewed accelerometers into a dress made of real Ginkgo leaves we had collected in Tokyo. The dancers move in close proximity to the audience who witness close-up the manipulations of sound generated by the costumes, and this environment becomes a sounding space, intermingling noise created by dancers and their expanded bodily instruments (microsound) and music that is spatialized through the amplification system.

Katsura Isobe dancing the 3D creation scene in Ginkgo LeavesDress in *UKIYO*, Sadler's Wells, London 2010 © DAP-Lab

2. *Khlebnikov's Birds*

In our current production, *for the time being (Victory over the Sun),* we take this concentration on the sonic morphology to the next level. Using the 1913 futurist opera *Victory over the Sun* as our template, Danjoux challenged our ensemble to push the idea of "sounding garments" even further, creating costumes that are like architectures in motion, geometric abstractions and small apparatuses. Following El Lissitzky's brilliant re-drawings of Malevich's original designs for the fantastical "futurian" characters that Kruchenykh and Khlebnikov had created in their libretto, Danjoux built costumes which stimulate the dancers to invent actions or gestures that aggregate a strange mix of noise, light projections and sonic irritations, onomatopoeia and zaum interventions beyond sense and yet sensory – an experiential Ganzfeld of synaesthetic events. Khlebnibov's non-sensical words, we found out, were inspired by the birds he listened to during his travels in the Volga Delta where his father, an ornithologist, had been studying the natural wild life.

Helenna Ren with TatlinRadiotower Headdress (incorporating motors, rotating spring, piezo [for the conversion of mechanical to electrical data], receiver and transmitter) and black box (housing amplifier, speaker & battery pack) wears productivist white suit and manipulates sensor. Design and concept by Michèle Danjoux / dans sans joux © 2012 Brigitt Angst

Our second proposition, then, relates performance to the intersections of design, fashion, science, nature and technology – design concepts of retro-futurist dimensions declined into choreographic enactment. How to wear a Tatlin RadioTower on the head, with a black box emitting radio noise held in front of the body and the dancer, with her hands, bending the sensor that activates a spiral metal piece inside the tower? The performer has to take on the role of a transmitter: bending a sensor between her fingers, she actuates the metal spiral in the tower which begins to spin, the crackling sound is picked up my microphones and sent to the speaker box. The microsounds are then picked up by onstage mics that send the input to a software that further processes amplified transmissions until the stage begins to reverberate, just as

Artaud had imagined the vibratory contagion of a poetics in space.

Helenna Ren as "Gravedigger" in sarcophagus garment made of heat resistant material stencilled with enamel spray paint, protective sunhat, glasses and gloves. Design and concept by Michèle Danjoux / dans sans joux © 2012 Brigitt Angst

Later the Tatlin dancer becomes a “Gravedigger” who captures the sun with her hands, burying the golden sphere and creating darkness on stage, her movements watched by a Kinect camera that translates motion into sound and the eclipse of light. Just as this eclipse is performed, so is the construction of the new world in Act II, Yoko Ishiguro, Aggeliki Margeti and Ross Jennings joining Helenna Ren in a choreographic polyphony. There is no prerecorded music: all of the sound is created live on stage and processed in real-time, making the environment “audible.” Amidst the hieroglyphics of the non-objective geometric abstractions on stage, the dancers in white overalls – in an early scene we developed in remembrance of the Fukushima disaster – examine the space like engineers measuring radiation in the electromagnetic spectrum.

The sounding of the space is a choreographic effect produced through the articulation of kinetic costumes and inter-action with camera-vision systems that can modulate the sun (light). In the future, we hope to give more attention to renewable energy and the light we can generate through solar panels. This also implies treating spatial architecture as a light score, drawing attention to ways in which the performing bodies "wear" space and receive environmental information (waves).

Intelligent-costume design, mobile media transmission and restrained computation thus combine to create processual architectures that enable human performers to readjust relationships between collected data. And, perhaps more importantly, to choose which data are collected or made audible.

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Film excerpt: http://youtu.be/WeAIYCnsDe4