Metakimospheres

Johannes Birringer

Dispositions, setting the stage

Metakimospheres – as we currently define and explore them in installations and performances designed by the DAP-Lab – are kinetic atmospheres or environments staged for visitors that pass through them, listen to them and feel them, unconsciously, attentively, distractedly, blindly. Performers are also present and embedded in the kimospheres (cocooned inside the gauze and draperies, see Fig.1), exploring the tactile and sonic interface, as well as the visual moisture, that animates the growth, slowness, scale and direction, the breath of their movement, their gauzeous entanglement. They may be invisible but their incubating presence is felt. Perhaps they do not invite looking, as their role is not necessarily one to be looked at. Yet their bodily presence is affecting the body of the architecture in-between or beyond the thereness (*meta* referring to such 'between' and 'beyond' notions of presence/atmospheric space) – in the duration and circulation of space-time. The architecture's thereness can also be a wave, touching bodies. Their motion or stillness, in reverse, animates the elastic veil-like gauze draperies that are suspended from the ceiling and slouch down on the floor. They breathe and their breath (as it animates their bodies) animates the architecture.

Fig. 1 *Metakimosphere no. 1,* created by DAP-Lab, Artaud Performance Center, Brunel University London, 2015. © DAP-Lab

The elemental thereness of the atmosphere includes the audience as experiencers who are 'inside' the atmosphere, and the atmosphere in them. *Meta*: through them. Both, so to speak, reciprocally make up the materiality of the interaction merger. There is black porous gauze on the perimeter, and soft white veil net inside, and these insides-outsides are housed inside a darkened gallery-studio space (ca. 10 by 12 meters wide). This was the first envelope, for a test performance in London in March 2015. Later that summer, the second envelope was a huge auditorium in the Medialab Prado, Madrid. The envelope is to be developed further, envisioned as an architectural skin with its own properties and behaviors. The current studio-envelopes are test sites, in the future meant to grow into a pavilion – a dynamic spherical environment. The current kimosphere we have created has tighter, narrower skins; these skins are also a kind of costume that stretches close and far between, an entangling fabric that can be touched, grasped,

stretched, squeezed, pressed, pulled over.

This metakimosphere as hyperarchitecture will be discussed below. My essay generally tries to cross over between performance matters, choreographic and design processes, sensorial and experiential perceptions, and new forms of spatial and kinaesthetic composition. The question whether such metakimospheres can also be enacted outside of an inside will also be addressed further below, and I hope to contribute to current thinking on the choreographic, wearable space and participation, here also understood as entanglement or encumbrance. The latter, of course, has socio-political and not only aesthetic implications. I see our practical work as part of a larger investigation of 'virtuosity and precarity' within the political realm of art: performative and critical empowerment after democracy (the theme of a research/workshop series I curated at Brunel University in 2015-16).[1]

The visitors entering the gallery are not entangled, at least initially – free to choose their positions or passage, depending on how they feel the changing contours and sensory affects. They can sit, lie, walk around, change places between outside-inside-outside. They can let themselves drift, meandering, hesitating, wondering, falling into reverie. Atmospheres, strictly speaking of course, have no outside. They are all over; they tend to operate on a non-conscious level. I will come back to that. The design process for metakimospheres definitely is entangled, metaphorically speaking, as it is part of wide-ranging research on wearable space, pro-active architecture and performance technologies that highlight embodied differences in expression and communication, conducted for METABODY, a five-year project linking 11 partner organizations from across Europe, and associate partners further afar in North and Latin America.[2] Here is how architectural collaborator Nimish Biloria describes the larger 'HyperLoop' structure he plans to develop:

> The HyperLoop is an attempt to develop the world's first large-scale real-time intra-active pavilion structure, which pro-actively augments its physical state via real-time information exchange with its environmental, social and technical context. The structure geometrically takes the form of a loop, which can fully re-configure its skeleton in real-time. The entire loop is a fully dynamic structure, which harnesses generative movement, sound and light as an active mode of interaction with its visitors. The HyperLoop is the very first iteration of the proposed large-scale pavilion structure and in its current format is a scaled version, outlining basic tactile properties of the proposed structure. (Biloria
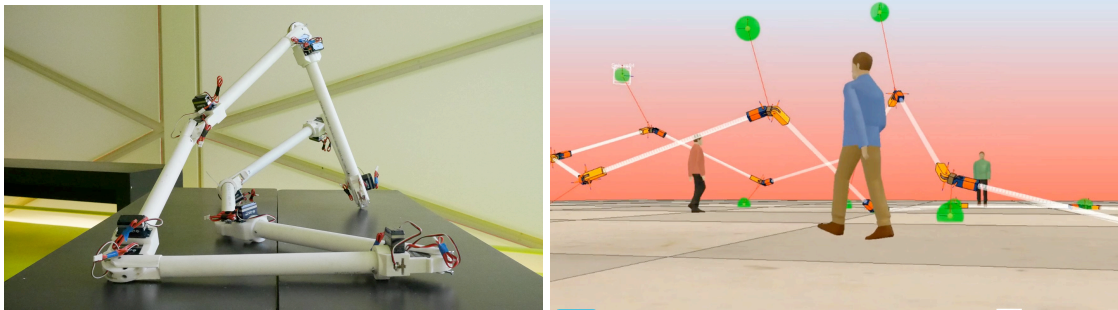
2015)

Figs 2-3. *Hyperloop,* small scale protopype (left), shown at Medialab Prado, July 2015. Prototype animation (right) of the Loop skeleton without the skins (https://vimeo.com/117388146) presented at the Metabody exhibition, Le Cube, Paris, October 2015. © Nimish Biloria

The Loop structure embodies material agency and performative dynamics that will reveal behavioral tendencies and exchanges with the flow of the physical and technical (analog/digital) feedback context, the *RSVP cycle* as Lawrence Halprin once called it, the environment that surrounds body or 'enters' body as much as bodies enter into the space and move through it. I am thinking of the visitor/experiencer as the embodied subject, but the architecture is here also understood as a hyperobject having physical states that are looming, precipitating, changing, reacting.

The physical states of skins may be subject to mechanical motor enactment of legs and joints, the embodied artificial intelligence of robotics. Or they respond to surrounding temperature and touch (thermochromic fabrics), and manifest color changing abilities, say, based on levels of carbon dioxide in the environment and transformative light or sound transmission patterns. They may also be inflected by human, physical animation. The small scale prototype of the Loop had motors on the knee-links, and some of the other modules of the future pavilion skin also are operational through motors that actuate the motion of the skin through small pulley systems, for example in the origami wall with folded polypropylene sheeting which we worked with during the second *metakimosphere* installation in Madrid. Thus, engineering and a physical force dimension enter environmental conditions, while dancers present in the space wear costumes that may be connected into the spatial structures, exoskeletons and materials, thereby also affecting the thereness of the material architecture. The architecture, in this sense, can be likened to a choreographic object[3] or sculpture.

Choreographic Objects

The particular reasons for inventing and recalibrating our terms – such as *metakimosphere* – for such choreographic objects in the larger context of intra-active performative structures, architectures and social works at stake here, will be parsed in the following pages. The kinetic atmospheres in question do not just happen; they are produced and therefore my writing here means to test a poetics, or methodology, for presenting experiences of being in space, possibilities that move us to ask how we perceive and relate to environments, the organisms of our *Umwelt* (a pertinent term here adopted for our discussion from biologist Jakob von Uexküll). If *Umwelt* exceeds consciousness (and thus the choreographic), then what kind of movement unfolds here?

Movement is still the basis of the work I have created with the DAP-Lab over the past ten years, but movement is no longer the medium-specific concept I once associated with dance and the moving body. In regard to the design of *performance-wearables* our lab has developed since fashion designer Michèle Danjoux and I founded it (in 2004), movement-design acts in a much closer relationship to the visual arts, fashion design, sculpture, expanded cinema, architecture, and sound ecologies, rather than to theatre or the proscenium stage. The expansion of movement-design at the same time reflects back on the biological extension into space as *Umwelt*. Movement thus gains new meanings, contingent on the morphing material conditions of expression and the different but determining historical conditions we recognize in the current forces of technological representation, modeling, and measuring. The quality or ability of movement may depend on infrastructural encumbrances and prosthetic experiences. Again, the interest in wearables and wearability has affected everything. Ten years ago, the term *wearables* was hardly known (in its current connotations, at least), and reckoning with disability perspectives was less acknowledged. The notion of prosthetics as aesthetics was controversial,[4] and fashion had not been thought of – as 'critical costume' – in the way it sometimes is today. You wore clothes, but now you wear a smart device, and this device might be connected into networks, biomedical monitoring and geographical positioning systems. You wear sensors and wireless transmitters, and you can be tracked.

My dance-theatre work has been less recognizable as dance since it focused on sculptural

costumes, fabrics, sensortized and slightly perverse accoutrements. Danjoux's garments are fashion-technology prototypes built specifically for performance and with particular 'characters' in mind. The material and conceptual quality of the accoutrements, however, tends to offer encumbrances to the dancers. Movement has become polymorphous, constantly shifting the shape (Gestalt) of its forms of appearance and affect, its milieus and extensions, but some of the 'equipments' (as Trisha Brown had called bodily extensions) require hard work – to learn new ways of material engagement and behavior. The dancers in our company are not only dancing but adapting to new hindrances all the time.

What matters is that movement reverberates. In our work it often moves through mediations, graphic/filmic projections, floating pixels becoming sound, then bouncing back, dripping through cloth and screens, leaking out, spilling over into other areas, corridors, floors, wings, spheres of intimate, as well as public, spaces. Kinetic movement, in this sense, intertwines the physical, conceived as living organism, with other manipulable, excitable objects. Reverberation links bodies, spaces, buildings, and all that resounds (air and sound), all that is uneven, unpredictable, tremulant, like gusts of wind or flashes of flood, temperatures rising and falling, like light fluctuating and thinning out, gray dust exhaling twilight, just before night falls.

The 'equipments' attain a special significance and also carry an infrastructural aesthetics: they are not simply accessories but in a crucial manner support and prop up the 'character' of the movement. They are essential, and reciprocal, to the formation of the choreography and the multisensory fashion of the interaction – the atmospheric dramaturgy – with environment. They enable the polyphonic grasp and the sensing of the ambience connected to, or generated through, the equipment (e.g. the wireless sensors that activate sound; the amplified dress that generates resonances in the space, the tactile and physical textures of the space embedding performer or recipient, the lights that clothe the space in a warm ambience or a more eerie green timbre, the cables that hang from the ceiling and connect to membranes). The garments, sculptural objects and equipment, in other words, become essential components of the performer's embodied experience. They also are instrumental in facilitating the experience of the visitors entering into the spatial resonances, the material/temporal processes happening in the architectural environment. Microphones, speakers, cords, vital things – they form presence and carry relational energies and qualities.

Wearables are instruments and prostheses worn on the body, garments and accoutrements that enable different kinds of manipulations (of sonic and visual effects in the scenographic environment) while also becoming specific matter – encumbrances and proprioceptive entitlements expanding or constraining kinesthetic expression potentials. The constraints interest us overridingly. Over the past few years, our dance works have changed considerably, since the building of the wearables meant thinking through the *choreographic* in many different ways, not least being the question of composition, in French often aligned with *écriture* – 'wording' and 'putting together' (Louppe, 2010: 150) – and also the question of defocusing perception. Defocusing means becoming comfortable with peripheral perception which, as architect Juhani Pallasmaa argues, is 'the perceptival mode through which we grasp atmospheres' and the diffused ambience of aural, tactile, and olfactory qualities, very near or distant, like the weather (2014: 38). Our dancers have to sense space and events through their backs, shoulders, fingers, legs, feet. The audiences would not know where to look. This is what we mean by relational qualities, sonorities, tremulations, temperatures. The constraining dimensions can surely be felt everywhere, synaesthetically. Our metakimospheres behave as if they are active living architectural organisms with an auditory, visual, and tactile sensory quality, with subtly changing states and affordances. They are graspable. They can be worn and breathed, listened to, touched, felt and imagined, transported, put on and taken off. They vibrate in the light of distant voices; they percolate, tremble, and change their temporal contours. They are like twilight, they are there and not there.

Metalevels

After this brief evocation, I will first explain the context of this work, then proceed to dig deeper under the skin of the strange wearables, define their heritage and futurian role in a larger organism to be built over the coming years, and then anticipate some questions, within the context of interactive digital art, that can be posed about the understanding and perception of the work as a participatory-immersive phenomenon.[5]

When I read the communiqués of the coordinator of the METABODY project, I cannot help but smile at the ever-widening perimeter of his naming of prototypes we are to develop: metakinespheres for Metatopia, metafaces, metadresses, metagoals and metatents, anti-objects

and modular metainstruments, more or less wearable architectures, metanarratives and amorphogenetic occurrences, 'in the indeterminate space of potentials that we mobilize through movements and ecosystems of diffuse affordances, and intra-active environments. It's a diffuse guerrilla movement of perception. It's a Metaplayground' (del Val 2015). Jaime del Val himself has been very active in the development of some of the prototypes, having built a wearable 'metadress' constructed out of a number of modular components that he refers to as 'readymades.'[6]

When DAP-Lab joined, we knew that the development of the project depended on the various interests and strands of expertise brought together, the convergences between partner organizations. Amongst the artists-scientists involved in METABODY there was an abundance of creative talent from dance, music/sonic art and architecture, almost as if the project was lighting out into the 'expanded field' of performance architectures (cf. Dwyre and Perry, 2015: 2-7). In the 1960s and 1970s, Lawrence Halprin's 'Experiments in Environments' workshops in California (often conducted together with dancer Anna Halprin) aimed to foster such expansive creativity amongst performers and architects. The Halprins explored outdoor happenings (staging 'kinetic environments' in San Francisco) that were meant to develop awareness of distinct senses, of sounds, smells, textures, tactilty, etc (Nelson, 2015). Bernard Tschumi and other architects, around the same time, developed a keen sense for the qualities of temporal dynamics, movement and corporeal qualities, and more recently a growing number of design and architecture firms, such as Archigram, Diller + Scofidio, Lateral Office or NOX looked to dance and multimedia performance as inspiration for challenging the discourse of modernist architectural form, materials and built environment. Flow and movement, in fact, are the primary poetic and phenomenological key to architectural philosopher Wolfgang Meisenheimer's *Choreography of the Architectural Space* (2007), especially in his chapters on 'Gestures of Places' and the threshold phenomena of the gestures of 'Passageways.' What impressed me particularly about this book were the evocative black and white photographs of butoh dance and gestural choreography that intersperse incisive reflections on ambiguous thresholds enabling movement 'from the outside to the inside, from the inside to the outside' – what he thinks of as the disappearance of space in time.

For METABODY, the philosophical and aesthetic aspects of such writing, and of architectural

and theatrical theory, receded somewhat compared to the political challenges the collaborators sought to generate. del Val steered the project narrative towards a critical social and political approach. The 2015 Metatopia forum expressed it most clearly: METABODY as a research venture aims to push the boundaries of commonly accepted conventions of performance and architecture – it wants to displace the predominant western epistemologies and side-step the *alignments* perpetrated on our perceptual concordances (with the rationalist western presumptions about the logic of phenomena and the power/gender axis of normative knowledge).

METABODY takes as its premise that bodily motion and non-verbal communication, understood as *changing repertoires of emotional expression and cognition*, constitute a foundation of sustainable cultural diversity, a changing matrix of embodied knowledge in permanent formation. The idea of ongoing formation induces del Val to call his actions 'metaformance,' rather than performance. The in-forming diversity, however, is being undermined by the impact of information technologies which are inducing an unprecedented standardization of non-verbal, bodily and kinaesthetic communication processes through the increasing reduction of movement and the non-verbal spectrum to patterns of imitation and functionality. The METABODY project therefore claims that 'diversity is also undermined by the ways in which people across Europe and the world reproduce more and more the standardized gestures, ways of speaking and moving induced by mass media, publicity, interfaces, ubiquitous moving images, hand-held devices, commercial music or video games; while at the same time in domains such as Robotics, Biometrics, Virtual Reality, Human Computer Interaction, Ergonomics and Artificial Intelligence there is an increasing and problematic attempt to simulate and repeat reduced repertoires of human emotions. This homogenization operates not only with regard to traditional cultural patterns but to the singular variations of each body' (http://metabody.eu)

METABODY builds upon the many fields of cognitive sciences affirming that cognition and affects are embodied, relational processes, which take changing forms in different environments and are irreducible to standardized patterns of imitation, information and fixed meaning. Our project aims at exploring the hitherto underestimated end of the communicative spectrum: the expressiveness of gesture and movement that exceeds categorisation and fixation into meaning structures as foundational for sustainable cultural diversity. This aim, I argue, shifts the artistic methods of the collaboration also closer to social art practices and institutional critique of the kind

that Shannon Jackson describes in her book *Social Works* (2011). In her foreword she evokes the example (drawn from Kuppers's *Disability and Performance*) of a movement practice from the 19th century – the 'turtle walk' of the *flâneurs* taking their turtles for a walk in the arcades, as Walter Benjamin noted with astonishment in his study of the *Passagen*. She comments on how being walked by a small slow animal requires a change of internal perception (of time) that also provokes changes of perception of wider social scales. Kuppers imagines this as *a new dialogue of being in space* (quoted in Jackson, 2011: 5). Such a dialogue would require an understanding of interdependency, and of what Jackson refers to as 'dependent forms' in circumstances when, say, the ability of a dancer (or animal, plant, object, apparatus) to move or to propagate depends on support that is received (245-46), on an inclining rather than a declining environment.

This idea of inviting/inclining atmospheres seems elemental; it also evokes nurture, attachment, dependent care. And yet in social choreographies and socially engaged art dependence needs to be examined in terms of the materialities and the performative labor involved, as well as the kind of communications systems that are applied, if for example architectural installations are deemed active forms that affect human behavior and are 'intra-active,' as Karen Barad's theory of performativity implies (Barad 2003), or if plants or objects relate to us and the world through a combination of auditory, kinaesthetic, and visual perception systems. What frequencies determine which forms of sociality? What threshold shifts can be imagined between the human, the animal, the vegetal, the mineral, the machinic?

Metakimospheres: Human and non-human materialities

Early in 2015, DAP-Lab began to collaborate with one of the Hyperbody teams (TU Delft) on the development of a performative interaction during the Madrid METABODY forum. The architect-team worked on the installation of their *{/S}caring-ami* prototype, which they had built and tested in the Netherlands, envisioning it as a 'creature' (manufactured out of polypropylene origami sheeting) interacting with its surroundings via vision-sensing response to the proximity and movement patterns of people, in terms of an underlying narrative of loving embrace or defensive retreat. Its responsive behavior allows alternating light patterns (red, blue, white) and motion behavior; the origami skin also has many protruding elongated tentacles. The structure embodies integrated sensing and actuation abilities; suspended from a grid, small stepper motors and pulley systems enable the wired structure to have X, Y and Z direction control. The main

physical behavior, termed 'global interaction' by the architects, was conceived as either a forward embrace (inclining) or a backward defense (declining, become tall and rigid), a representation of the potential fear of the unknown and the misunderstood.[7] These concepts were conveyed, and origami samples dispatched to us (Danjoux had created pleated costumes before and we were familiar with 3D laser printing techniques). Before traveling to Madrid, Danjoux drew up further sketches of an origami-like object (accordion) that could generate sound.

After DAP-Lab's arrival in Madrid, the joint rehearsals began. The performative interaction involved three of our dancers, several new costumes and audiophonic object-instruments designed by Danjoux and developed with the performers as well as with some of the other METABODY partners (Marije Baalman, Nicoló Merendino, Marcello Lussana helped on the sound electronics). Along with our sound and graphic interface artists – Jonathan Reus, Chris Bishop – the ensemble rehearsed a choreographic response to the *{/S}caring-ami* architecture prototype. Interactions described below were part of a larger parcours, involving many METABODY partners and spreading out over a very large space

Fig. 4 Vanessa Michielon performing with "OrigamiDress" by Michèle Danjoux, in front of origami architectural structure by Hyperbody. Azzie McCutcheon moves inside foreground gauze. © DAP-Lab 2015

Evoking a parcours implies that the audience was not seated, as in a theatre or concert hall, but moved around and engaged. If we want to theorize the new materialism of kinetic atmospheres and develop a better grasp of participation, or how audiences become material of a different kind, we must observe and ask how they engage choreographic design. How do they become immersed and entangled, or sense being captured in an atmosphere? How do they embrace or support, avoid or leave that which is constructed (the atmosphere of the installation) and toward which their behavior is guided?

Ideas of participation/immersion stretch back to well known traditions of live art, e.g. to happenings, site-specific performances, situationist and environmental art, processual theatre, interactive media art, invisible theatre (Boal), social works, etc. In *Audience Participation in the Theatre*, Gareth White in fact evokes an early 1960s performance, *Cut Piece,* during which Yoko Ono, quietly kneeling on a gallery floor, invited audience members to cut up her clothing, which they did (2013: 8). White correctly suggests that the spectators' involvement in the action, or rather their *becoming the subject of the action as performers*, constitutes the process of the act of symbolic and real violence (initiated by Ono towards herself). If we now think of Barad's notion of intra-action and the relationality between human and non-human materialities, we need to ask what forms of participation are envisioned by moving architectures and spatialized costumes? Ono's invitation to *cut off* her costume is indeed a powerful provocation that we have rarely seen repeated in the history of live art. The cutting, of course, is very 1960s/70s – now a part of our punk legacy.

Immersion may imply chaos, irritation, danger, as well as holding of hands, gentle maneuvering, cajoling, and stimulating of the sensual *inner touch* we associate with affective sensations extending throughout the body (cf. Heller-Roazen, 2009: 31). The 'leading' into the immersion, as it was practiced by our stage managers in Madrid, however, conjures up moments I considered rather curious, or contradictory, as far as invitation/instruction are concerned. I tend to think audiences always already are 'emancipated.' They can decide for themselves and do not need a recipe to follow. They do not need to be animated (cf. Rancière 2009).

We must examine such instruction to experience. Audiences, I assume, sense the mood of a space or social situation they enter, without advice. Pallasmaa suggests that we project our emotions 'onto abstract symbolic structures,' and that felt atmospheres emphasize 'a sustained being in a situation' or an internalized projection or *introjection*, an interiority that implies peripheral perception (2014: 20). Such introjections work intuitively and non-consciously, even if moods, if they are generated by design, can of course function in a manipulative manner. In that case, audiences are manipulated unconsciously, but they can follow their own sensations of the not yet known, the darkly foreboding or the relaxing and pleasant, the loud or the soft, the tangibly heavy or light, bright and dark, the cold, dry or wet, the brittle or sturdy, the reverberant or the resistant, evoked in the atmosphere. They can sit, stand, move or leave, or come back. They can try to touch or shy away. They can do less, or more, whatever.

The choreographic, as I understand it, enters the atmospherics of architecture as much as the latter may rely on movement-through. It extends experience of space through bodily movement, gesture, and orientation, affective scales of the sensorial – the visual, auditory and especially tactile introjections worn into the body (incorporated), taken from the environment. For the dancers, costumes become crucial as they are worn on the skin, connecting intimately to the body and room temperature (the weather), and the wearer's balance, stability, sense of gravity, weight, and orientation (the whole proprioceptive experience). In our experiments with the OrigamiDress, worn by Vanessa Michielon, a very specific sensorial affect was explored, as the dancer wears a conductive sensor on her arm which is able to sense a transmitter placed onto a metal sheet near the perimeter of the *Scaringami* architectural structure – and the proximity sensing device generates sound effects when the dancer moves near the sheet. Suddenly, after we only perceive the subtlest tiny creaking sound of the motors from the *Scaringami* pulley system, a louder throbbing electronic sound is heard – three, four times, then it subsides as Michielon rests on the floor and seems to go asleep. On the other side of the architectural structure, a fluid gauze cloth lies on the floor (dancer Azzie McCutcheon buried underneath), attached upwards to one of the trusses. A soft breathing sound is heard coming from underneath, and slowly, very slowly, the cloth begins to stretch, McCutcheon emerging from under/inside the dress, breathing. Michielon's movement had been captured by two Kinect cameras, one that was built into the *{/S}caring-ami* architecture using the sensing data to affect the creature's (motorized) behavior,

while the other camera sent the dancer's 3D motion data to a particle physics software visualization which throws thousands of small light particles onto floor and McCutcheon's dress which stretches from floor to ceiling (we use two projectors to gain a wider spraying effect of the particles).

Fig. 5 Miri Lee with BeakHandSpeaker (left), Azzie McCutcheon (centre inside gauze) and Vanessa Michielon (right) performing *metakimosphere no. 2,* with audience seated and standing around the large METATOPE exhibition space at Medialab Prado, Madrid, July 2015. © DAP-Lab 2015

The audience, I suggest, can sense the materiality of the textures, light and color as well, and is very close to the propagations, in touching reach. They will then hear a voice approach them, from the distance. Dancer Miri Lee, wearing the BeakHandSpeaker on her right hand from which the sound of a Korean shamanic chant is emitted, emerges from the dark, behind the audience that has gathered to experience the intra-actions between architecture, dancers, and costumes. Lee, like McCutcheon and Michielon (who wears the OrigamiDress), are dressed in white 'transparent' and reflective materials. Their movements are distinct. McCutcheon inside the gauze performs a butoh-inspired movement, still and internalized, and only rises up as the voice of the shaman is directed from Lee's hand at her and the visitors seated or standing in a half circle around. Lee's beak jerks forward and backward, in fast jabbing motions: she points the

'sound' of the healing chant at the people. Yet how fragile is this voice. The sound is tiny, and also processed, about 25 seconds of the shaman's chant coming through the granular synthesis processing (in the app on a mobile phone attached to Lee's arm, providing the signal for the sound that come out to the piezoelectric film built into the laser cut BeakHand). The shaking movement of Lee's beak arm becomes like a shaman DJ scratching her record tracks.

As Lee moves in and out of the audience, McCutcheon slowly stretches the ghostly mantle. She too moves a voice, coming from a small round Acouspade speaker she points in all directions (a device emitting multidirectional amplified sound). The shamanic voice, 'illegible' to most Western ears, reverberates around the vast building, then slowly disappears beyond the horizons. As McCutcheon crawls back under the gauze, the dancer in the OrigamiDress births a small sounding object (named 'Kepler' after the 452b planet recently discovered), which Danjoux built from the same polypropylene origami material as the costume. She brings this sounding sphere to the audience, hands it over to them. They pass it around, holding it close to their ears.

The choreographic, in this sense, tends to focus on performer experience and how such experience can be articulated and attenuated for an audience inside this habitat and affected by its sensory stimuli from all angles. The audience, thus, is inside the atmosphere and, reciprocally, extends itself to the textures it hears, sees, smells, tastes and touches. It also can comprehend the proprioceptive phenomena that occur through proximity sensing. The immediate experience is experiential and also unpredictable, depending on many factors affecting self-awareness and what is today often referred to as *agency*. Spatial arrangements can be highly charged, and thus possess agency too. They are not transparent but enactive forms and materials. In analogy to some of the software patch environments I work with (called Isadora), settings, screens, perimeters or filters act as 'actors.' The patch environment is called a 'stage.' In the 1980s, we spoke of 'dilation' – the actor's physical motion expanded space-time experience. Today we see the impact of the new materialism on the thinking about the liveness of objects (and object oriented programming as in Isadora), and the agency of entities formerly considered passive objects, inanimate things, inert matter. Installations, as we understand them today, are agential, vibrant, and mobilizing – and yet one needs to look closely at what they mobilize and how they

mobilize (in a dramaturgical sense of a temporal event that invites visitors to enter, and eventually leave, a multifarious art exhibition of the kind we had in Madrid).

Metakimospheres as social choreographies

METATOPIA parcours demands further exploration of how kimospheres, objects in space, wearable artifacts, habitats, soundings, or physical performances afford various possibilities of visitor engagement, for an audience of abled and disabled persons. METABODY explicitly targets a diverse range of audiences, and also organizes workshops for 'metamovers' – inclusionary labs with new expressive technologies (e.g. Palindrome's Motion Composer software which transforms gestures into music) for persons with physical and mental disabilities. In my conclusion, I look back at METATOPIA, raising a few questions about participatory gestures, the inclusion and in/obstruction of the audience, the inside-outside relation, and dramaturgical methods offered to them for accepting or declining the invitation to act.

There were numerous installation-performances taking place during the last four days of the event: house open between 4:30 pm and 9 pm, and a repeated run through of three or four groups of audiences coming in each day. Gathered at the entrance, visitors underwent a first introduction to *Illegible Affects*, a project led by InfoMus Lab's gesture analysis of rhythmic, periodic movement patterns, using the on-body sensors available on smartphones. Demonstrated by del Val, it seeks to explore what can be recognized and what cannot from a wearable (in a dynamic environment where motion analysis techniques derived from cameras are not possible). Thus audiences are alerted to 'data capture' – their walking into sensorial arenas that are also recognition systems.

The lights in the main space are off. As the doors open, Dieter Vandoren hands out his sound-light artifacts, the *Lampyridae* – inviting the audience to become carriers/carers for these elegant, brittle shells.[8] The entering group now already has a task, participating in interactional space, although I cannot know how the research framework of *Illegible Affects*, developed by several partners (InfoMus team, K.Danse, Reverso, Stocos, Marcello Lussana), evoked apprehensions about big data, notions of affect, emotion and play. And how the induction, done verbally and

also through gestures, prepared them for multisensorial experiences in the space meant to be encountered non-verbally. Spoken language perhaps ought to have been omitted altogether, but would the visitors have understood the complex ideas regarding *Illegible Affects*?

The main non-verbal parcours involved two sides, two halves of the space: a large section of small tents that housed projections and installations on the right, with the metakinespheres at the bottom end of the large hall. On the left were the architectural installations by Hyperbody and DAP-Lab, including STEIM's soft speakers suspended from the ceiling, and near the entrance there was a soundproof room reserved for the silent *MetaInterview* by Palindrome Intermedia Performance Group – interviews with visitors whose eye movement was captured by a vision system responding to the eye-motion through sounds and changes of color inside the small chamber.

When these four public days were over, I asked myself what worked – did we have a working dramaturgy for the kimospheres as temporal events? How did we find a balance between durational installation, the research/interactions created in the tents, the dynamic-active architecture, and live performance? How did the different invitations work, what was excluded, what needs to be included? What is the consensus on the architectural sensing? Or the data capture theme for *Illegible Affects?* And how did that relate to our kimospheres and the soft speakers, the nonverbal 'interviews,' the inclusion of persons with disabilities and their sensory experience?

I was also concerned with the proposed LOOP structure, the next step envisioned by Hyperbody's plan for a pavilion. I observed the intra-actions, between visitors and animated objects, performers, stage managers, solicitors, paying close attention to non-verbal communication, the roles of participants and facilitators, the lighting, the sound modulations, the sequencing of the parcours. As there are too many questions, my conclusions are provisional. The stage management made me think about the autopoiesis and heteronomy of such a large constellation. Visitors will not have a preconception about the work; they may not have any understanding of what 'metabody' or 'metatopia' implies, except that they are asked to move around, enact, carry objects, crawl into tents, perform with kinespheres, touch and listen. They

are invited to watch architectural behaviors, dance, projections, avatars, other visitors performing, listening, carrying small objects that make sound and emit light. They can watch themselves perform or refrain. They are asked whether they want to be inside a metakinesphere and move it, just as de Val asked passers-by to do during outdoor performances of the object in various locations of nightly Madrid. A number of people did step inside the choreographic object and performed – young adolescents, older people, as well as a person in a wheelchair. Disability was not a hindrance at all. The 'outdoor' performances were curious, fascinating, not least because they seemed to draw no police or security attention whatsoever. The reference to the Occupy movement must have been too subliminal.

The visitors' understandings of the materials in the environment may come from their various subjective manipulation of the materials, their engagement of the space and their sense of agency in initiating a contact, a movement, and a reaction. As so often in interactive work, they look for causes and effects; when they see the particle projections on the floor in front of *{/S}caring-ami* and notice a Kinect camera, they know that the motion of the projection is caused by them. This creates a playful response, almost inevitably, especially among younger audience. But some visitors also realize that encumbrances provoke attitude; one needs to crawl into the tents, take shoes off, watch tiny projections and animations the meanings of which are unclear. One cares for the objects one is given, looks to support others or wonders how they adapt to something where no 'outcome' was predictable. The participants allow wonder, puzzlement, and adventure to guide them nowhere? They realize that sometimes they are not left alone to their own devices, but whirled around, instructed and coerced. Our stage managers sometimes worked hard to make our audience 'work out.'

If the space or its agents are not meant to be legible but remain amorphous, what complicity with the formless is expected from audiences? What does our pavilion have to do with *Occupy 2.0* – an unexpected political reference that del Val used for the urban interventions in Madrid? Did the artistic research stretch out to an activist agenda in the city – one that is as contentious (and futile) as the Occupy movement? The night-time urban situations, when we took the kinespheres to public squares, were inconsequential except that the wearables proved sturdy enough in outdoor conditions. They fared well, and looked great in the projected light our

partners carried along (in their backpacks with batteries). del Val enjoys playing a kind of trickster figure or foreign agent, as he calls it, being naked/exposed inside the kinesphere while equipped with sensors, microphones, projectors and laptop – a walking cosmonaut. I observed a few interactions with passers-by, but also noted that the public square did not come alive. Many walked past without paying attention. There is an outside (an outdoors), but this outside did not change the notion of an atmosphere of the kind that Philippopoulos-Mihalopoulos (2015) calls a sheltered lawscape dissimulating itself as a simple bubble or conflict-free zone. There was no rupture to the continuum (of the law): the atmosphere was engineered, indoors, and the outdoor metaobjects were like the tumbleweed that blows through main streets in the old westerns. The indoor atmospherics did not create a space of confrontation (as we experience it, say, at a political rally) either. There was no occupation.

Yet some images are imprinted in my memory from the inside. One is a beautiful, intense contact improvisation that Isabel Valverde enacted with a disabled visitor whom she invited to roll on the floor with her, leaving his wheelchair behind. He had his eyes closed, just followed the moments of shared physicality, and I watched out to protect him from rolling into *{/S}caring-ami,* hurting himself. Then there was a hyperactive facilitator, Salud López, who spun around like a whirling dervish, dragging audience members around and nearly crashing into Hyperbody and DAP-Lab's architectural environment with the conductive metal plate placed on the floor. Some visitors stumbled in the dark, stepped on and disconnected cables, and made us worry about safety and health, especially as there was no lighting design that could have guided the sequences of actions in the space. Participants reacted well, most of the time, but some also felt forced, or indeed puzzled by the architecture behaviors and their intransigence.

This is what we learn from prototyping. Participants will discover themselves inspired and sensually seduced by some atmospheres/kinetic objects. They will discover a sensorial environment suggestive enough, with all the affective relations and non-verbal communications that occurred, to engage them. Or they will remain reluctant, disconnected. There is no need to be dragged or whirled. Visitors can be left to their own experience modes, their way of recognizing patterns and elaborations. At the same time, participants will inevitably also discover themselves performing actions (or watching something unknown to them) that they will feel

compromised by, as they watch themselves, or as they watch themselves not knowing what they cannot identify. A constructive proposal might be to ask visitors, and the actors, to comment afterwards on shared perceptions of the choreographic objects or the roles that were inhabited. In the case of DAP-Lab's response to *{/S}caring-ami,* we faced the unexpected challenge of the motors failing (after overheating). The animate architecture still emitted sounds (which we amplified) but was without force; its wings could no longer rise up and embrace a person approaching it. It malfunctioned.

Although the architectural vision of the LOOP pavilion may never fully materialize, the shape-shifting dance of conductivities we explored gave us much motivation to test roles and (mal)functions, or the dissolving lines between animate and inanimate. The latter allow a deeper investigation of the kind of ceremonies we hope to conjure. Miri Lee's BeakHandSpeaker is also an evocation of a shamanic voice we are not likely fully to understand or know. But one senses the pattern of incantation to a ritual in a metautopian space not fully known yet.

NOTES

[1] http://people.brunel.ac.uk/dap/ResearchSeminarSeries.html

[2] METABODY was initiated in Madrid (July 2013) by a collaborative network of arts organizations, research labs and performance companies engaged in a radical rethinking of perception and movement away from the mechanistic and rationalistic tradition, and thus also the dominant western tradition of visuality or ocularcentrism combined with formal and systemic 'built' environments and protocols that take certain embodiments for granted, towards a (digital) embodiment that puts emergent differentials of bodies and affects in the forefront of its concerns. METABODY is coordinated by Jaime del Val (Asociación Transdisciplinar Reverso) and encompasses eleven primary partners including DAP-Lab, STEIM, Palindrome, K-Danse, Fabrica de Movimentos, InfoMus Lab, Stocos, the Hyperbody Research Group, Trans-Media-Akademie Hellerau, IMM (http://www.metabody.eu).

[3] The term was first used by William Forsythe when he began to create installations proposing movement possibilities of interaction to participant audiences; he explains 'choreographic object' in the catalog for the exhibition *Suspense* (Forsythe 2008). See also Birringer 2012.

[4] Designers like Alexander McQueen, whose extravagant collections were exhibited in the posthumous *Savage Beauty* show at London's V & A (2015), perhaps were the exception. His

'Fashion-able' series with paralympic athlete and amputee Aimee Mullins for *Dazed & Confused* was photographed in 1998, after Mullins had walked on stage at the end of the *No. 13* catwalk show on a pair of prosthetic legs hand-carved in wood. The recent rise of disability studies in performance is exemplified by Kuppers 2004. The first special issue on "Critical Costume" in the journal *Scene* appeared in 2014 (see Danjoux 2014).

[5] See also Munster 2006; Dixon 2007; Salter 2010; Portanova 2013; and Kwastek 2013. For architectural theory on atmospheres and environments, see Boehme 2013.

[6] The ready-mades are small foldable goalposts made out of tent-like gauze. For his *détournements*, see: https://www.youtube.com/watch?v=KKo5I9B0VWA#t=750

[7] DAP-Lab thanks all collaborators, acknowledging the inspiring mobile metakinespheres created by del Val during 2014, e.g. smaller ready-mades brought to the STEIM workshop in December 2014. They sparked a several tests in London early in 2015, then gave way to DAP's increasing interest in pro-active architectures proposed by Nimish Biloria and Jia Rey Chang (LOOP Pavilion), and the Master students who worked on the origami pattern based surface with integrated lighting, motion capture and robotic actuation: the *{/S}caring-ami* team (Anisa Nachett, Alessandro Giacomelli, Giulio Mariano, Yizhe Guo, Xiangting Meng) gave us the polypropylene materials to create new wearables (costumes and sound objects, e.g. Kepler and Accordion). Danjoux's ideas for conductive and proximity-sensing performance wearables evolved from her work with Jonathan Reus during an e-textile lab at STEIM (2014), and my scenographic sketches for 'kinetic atmospheres' evolved in March 2015 during the public presentation of *metakimosphere no.1* (with Azzie McCutcheon, Yoko Ishiguro, Helenna Ren and Martina Reynolds performing). The dancers for *metakimosphere no.2* were Vanessa Michielon, Azzie McCutcheon and Miri Lee, with graphic interface design created by Chris Bishop and Cameron McKirdy.

[8] *Lampyridae* are fragile, mysterious-looking shells emitting electronic bleeps – devices capable of both emitting and sensing light and sound signals. Participants act as trusted carers and carriers of these autonomous objects: http://dietervandoren.net/index.php?/project/lampyridae/

REFERENCES

Barad, Karen (2008) 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter,' *Signs: Journal of Women in Culture and Society*, 28(3): 801-31.

Biloria, Nimish (2015) email letter, 17 June.

Birringer, Johannes (2008) *Performance, Technology, and Science*. New York: PAJ Publications.

Birringer, Johannes (2012) 'Choreographic Objects: *Stifters Dinge*,' *Body, Space and Technology* 11(02), available online: http://people.brunel.ac.uk/bst/vol1102/.

Boehme Gernot (2013) *Atmosphäre: Essays zur neuen Ästhetik*. 7th edition, Frankfurt: Suhrkamp.

Boehme, Gernot (2011) 'Die Kunst des Bühnenbildes als Paradigma einer Ästhetik der Atmosphären,' in Ralf Bohn and Heiner Wilharm (eds), *Inszenierung und Vertrauen: Grenzgänge der Szenografie,* Bielefeld: Transcript, 109-17.

Danjoux, Michèle (2014) "Choreography and Sounding Wearables," *Scene*, 2(1&2): 197-220.

del Val, Jaime (2015) email letter, February 12.

Dixon, Steve (2007) *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*, Cambridge, MA: MIT Press.

Dwyre, Cathry and Perry, Chris (2015) "Expanded Fields: Architecture/Landscape/Performance," *PAJ: A Journal of Performance and Art* 109, 2-7.

Forsythe, William (2008) *Suspense*, ed. Markus Weisbeck. Zürich: Ursula Blickle Foundation.

Halprin, Lawrence (1969), *The RSVP Cycles: Creative Processes in the Human Environment*. New York: George Braziller.

Heller-Roazen, Daniel (2009) *The Inner Touch: Archaeology of a Sensation*. New York: Zone Books.

Jackson, Shannon (2011) S*ocial Work: performing art, supporting publics*. New York: Routledge.

Kuppers, Petra (2004) *Disability and Contemporary Performance: Bodies on Edge*. New York: Routledge.

Kwastek, Katja (2013) *Aesthetics of Interaction in Digital Art*. Cambridge: MIT Press.

Latour, Bruno (2005) *Reassembling the Social. An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.

Louppe, Laurence (2010) *Poetics of Contemporary Dance*. Alton, Hampshire: Dance Books.

Meisenheimer, Wolfgang (2007) *Choreography of the Architectural Space,* trans. Rebecca L. van Dyck and Kim Jeong-Geun. Munbal-li: Dongnyok.

Munster, Anna (2006) *Materializing New Media: Embodiment in Information Aesthetics*. Hanover: Dartmouth College Press/ University of New England.

Nelson, Solveig (2015) 'Space Age: The Halprin Workshops,' *Artforum* 53(5), January 2015:

99-100.

Pallasmaa, Juhani (2014) 'Space, Place and Atmosphere: Peripheral Perception in Existential Experience,' in Christian Borch, ed., *Architectural Atmospheres: On the Experience and Politics of Architecture*. Basel: Birkhäuser, 18-41.

Philippopoulos-Mihalopoulos, Andreas (2015) *Spatial Justice: Body, Lawscape, Atmosphere*. London: Routledge.

Portanova, Stamatia (2013) *Moving Without A Body Digital Philosophy and Choreographic Thoughts,* Cambridge: MIT Press, 2013.

Rancière, Jacques (2009) *The Emancipated Spectator*, trans. Gregory Elliott. London: Verso.

Salter**,** Chris (2010) *Entangled: Technology and the Transformation of Performance*. MIT Press, Cambridge, MA.

von Uexküll, Jakob (2010) *A Foray into the Worlds of Animals and Humans: with a Theory of Meaning,* trans. J. O'Neil. Minneapolis, MN: University of Minnesota.

White, Gareth (2013) *Audience Participation in the Theatre: Aesthetics of the Invitation*. Basingstoke: Palgrave Macmillan.