

Johannes Birringer

Kimospheres, or Shamans in the Blind Country



Fig 1. *Metakimosphere no. 1*, with performers inside white fabrics and audience inside black fabric sphere. DAP-Lab, Artaud Performance Center, 2015. © DAP-Lab

Blur

Not too long ago, reading a book called *The Choreographic*, and reflecting back on two decades of having participated in a strange avant-garde we thought of as “dance and technology”—a network of artists and practices combining movement with software, computational creativity and technical processes—I wondered why it had not occurred to me earlier. Just as Rosalind Krauss once proposed to think of new practices happening in the 1960s and 1970s through the lens of “expanded sculpture” or “sculpture in the expanded field,” I realised of course that stage dance or concert dance was an antique form, if we were to adopt today’s advanced thinking in agile design. Although I grew up in love with the aura of the theatre and its *mise en scène*, regardless of whether it featured words, music or dance, in the mid 1990s I had not only begun to work with computers and develop interactive performances, but already through the 1980s I realised that photographic/filmic projection in live art or site-specific performance manifestations, or

the assemblage of different objects, scales, landscapes, sound materials with movement and time, required a different understanding of the animated settings for the work.

The choreographic had expanded infinitely, its articulations reaching far into discourses on built space, architecture and design, but also into the cognitive sciences, psychology, and anthropology and beyond—slowly we heard of *social choreography* and inevitably, with the rise of the internet, of virtual choreography. In 2001 I had joined a group of artists located in different places of the world (Europe, Latin America, USA, Japan) interested in networked performance, and our strategic ensemble (ADaPT = Association of Dance and Performance Telematics) rehearsed performing together through a distributed network, touching intangible skin and yet sensing the touch. This widening of the *mise en scène*, at the same, time helped me to see digital movement, and projected (virtual, 3D or screen based) movement, in a new light, as I had begun, around 2004–05, to work with a fashion designer who paid much attention to sensual intimacy and sensorial affect, the luscious viscera of materials and textures that slowly entered into our choreographies with intelligent garments. The costumes were not always intelligent, at times they were just beautiful or extravagant; they seemed to grow into instruments that could be played or constraining encumbrances that needed to be negotiated, learnt to move in, and grasped as “characters” that in-formed the movement and became movement. Costumes thus also compose, as they embed or envelop us and animate corporeal movement.

In this essay I shall look forward to current work, the *metakimospheres* as we call our installations, not without placing what already in 2005 we began to think of as “sensual technologies” into a context of art/technology, dance/technology and new media art—the cross-over performance and science assemblages that are of interest here if we consider the technological arts as an important medium for contemporary knowledge production and also political intervention.

Metakimospheres 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 (as you note them being cocooned inside the gauze and draperies in 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, and what I imagine to be the *expanded choreographic*, 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, a flutter, 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 2. *Metakimosphere no. 1*, intra-active graphic projections tracking motion from performers inside white fabric architecture, DAP-Lab, Artaud Performance Center, 2015. © DAP-La

In the expanded choreographic there is no real stillness as the breath not only moves, inhaling/exhaling, expanding/contracting, but also is audible, and in this kimosphere the biophysical, etheric sound is amplified. The elemental thereness of the environmental atmosphere includes the audience as experiencers who are “inside” the atmosphere, and the atmosphere is in them. *Meta*: through them. Both, so to speak, reciprocally make up the materialities of the interaction merger. There is black porous gauze on the perimeter, and soft white veil net inside, and these insides-outsides—or “interskins” as Hae-in Song, one of our dancers, called them—are housed inside a darkened gallery-studio space (circa 10 by 12 metres 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 near future meant to grow into an architectural pavilion, a dynamic spherical environment.¹ 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, unfolded, pulled over.

This 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. Choreographing atmospheric conditions is not something I had pondered before, although physical arrangements and sitings of skins (if they are also considered as costumes to be worn) are design challenges that thrive on the various

contingencies implied by different materials, or situations where human and nonhuman agencies might be involved, as Bruno Latour explains in an interesting reference to the elastic connectors or filaments spanning across a large space to produce the shape of networks and spheres in Tomás Saraceno's *Galaxies Forming along Filaments, Like Droplets along the Strands of a Spider's Web* (2009 Venice Biennale)—an amazing nodal work that also implies vibrancy, reverberations along the links and points of the network paths if a visitor shook the elastic tensors. That was strictly forbidden by the guards, Latour remarks (2011: 2), even as it is hard to imagine how the envelope (the institution), in this case, could prevent visitors from touching or bumping against the lines if they climbed through the threaded environment.

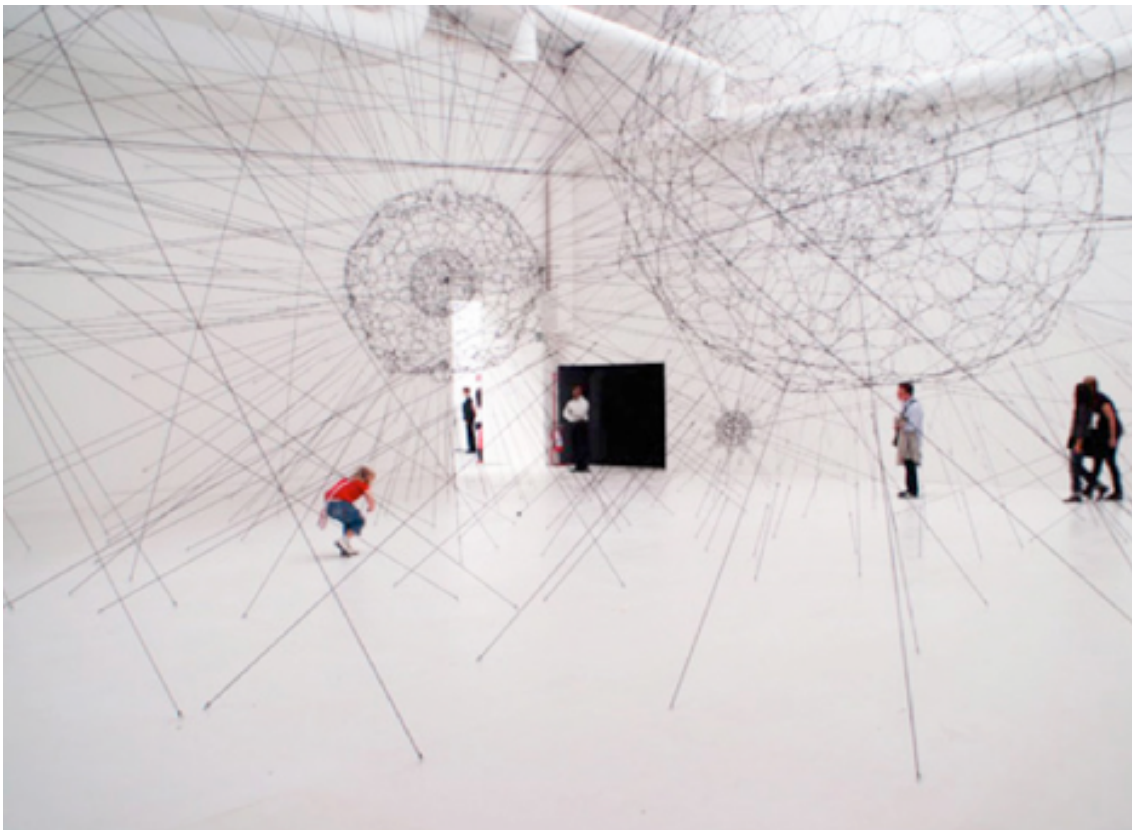


Fig 3. Tomás Saraceno, *Galaxies Forming along Filaments, Like Droplets along the Strands of a Spider's Web*, Venice Biennale, 2009.

The untouchability (or encapsulation) of such an environment is, of course, a paradox and we can see through it in Saraceno's spider web. But the question of the continuum is critical, and whether metakimospheres can also be enacted outside an inside I shall again address further below, while I hope to contribute to current thinking on performance scenography, wearable space, and participation while being careful to avoid getting caught in the spider's web.

The visitors entering our gallery are less entangled, at least initially, and are 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, and they tend to operate on a non-conscious level of blur.

The design process for the metakimospheres *is* entangled, metaphorically speaking. It is part of a 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 that has brought together eleven partner organisations from across Europe and other associate partners further afar in North and Latin America.³ Here is how our collaborator Nimish Bioria describes the larger “HyperLoop” structure he is developing with his teams for the Metabody project:

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.⁴

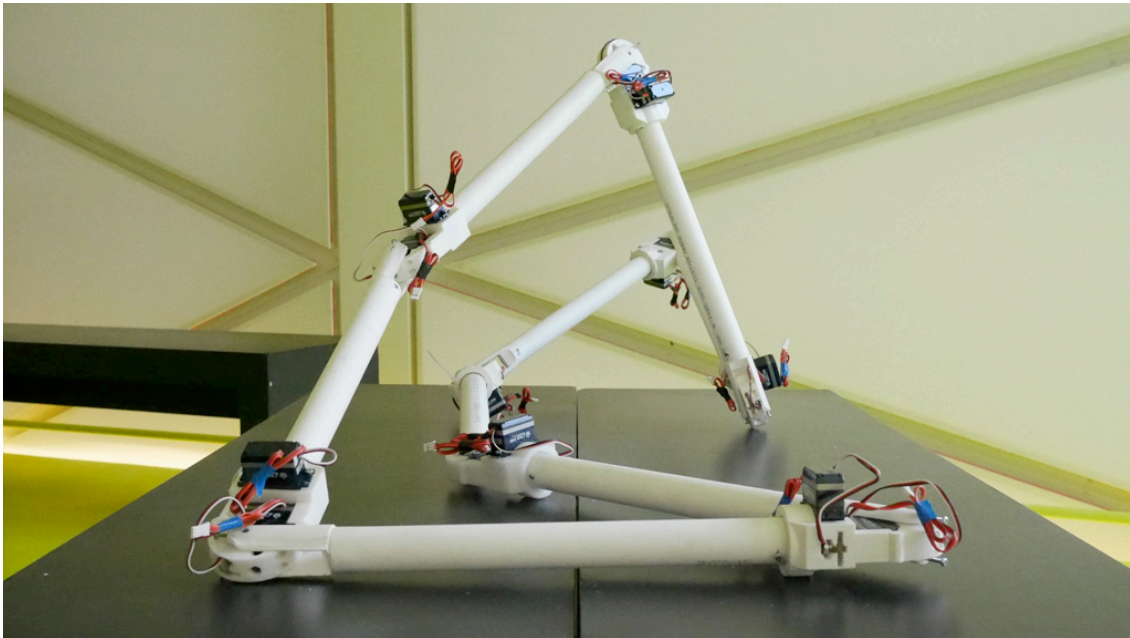


Fig 4. *HyperLoop*, small scale prototype (left), shown at Medialab Prado, July 2015.

The Loop structure embodies material agency and performative dynamics that will reveal behavioral tendencies and exchanges with the flux and flow, as I understand it, of the physical and technical (analog/digital) feedback context—the *RSVP cycle* as Lawrence Halprin once called it—namely the environment that surrounds body or “enters” body as

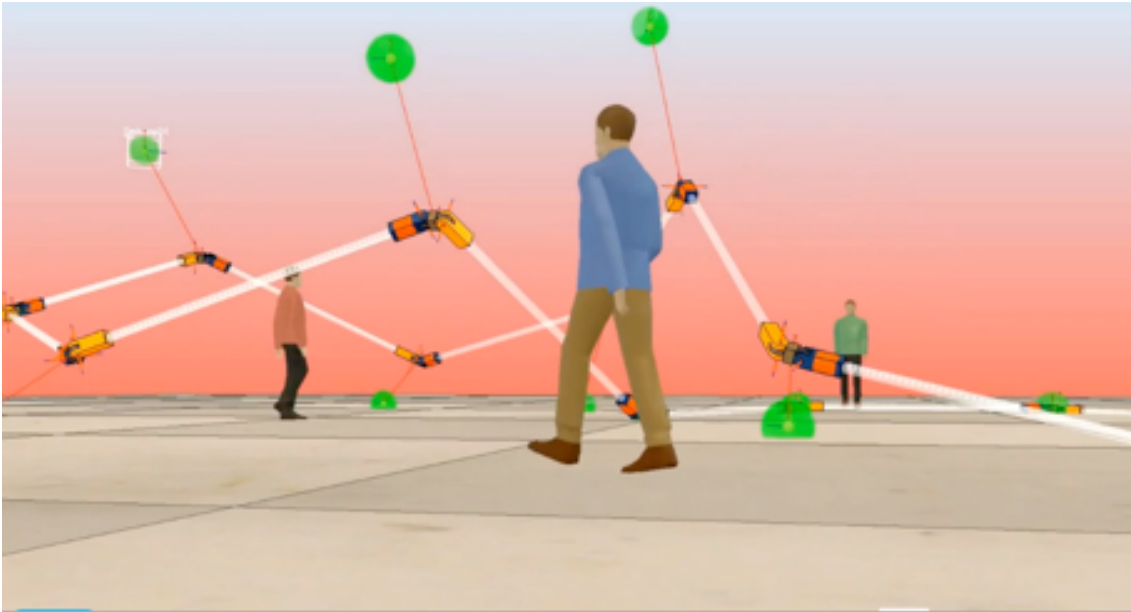


Fig 5. Prototype animation of the Loop skeleton without the skins
 (<https://vimeo.com/117388146>) presented at the Metabody forum, Le Cube, Paris, October 2015. © Nimish Bilorla

much as bodies enter into 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 Loop scale model (Fig. 4) only shows the bones and joints of the skeleton, as there is no agreement yet about the skin textures. The physical states of the skins may be subject to mechanical motor enactment of the legs and joints, the embodied artificial intelligence of robotics. Or they may respond to surrounding temperature and touch, and manifest color changing abilities, say, based on levels of carbon dioxide in the environment and transformative light or sound transmission patterns (for example those made of thermochromic textiles). 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 the environmental conditions, while the dancers who are 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 or sculpture.

Choreographic Objects

There is a need for new terms—such as *metakimosphere*—for a number of the hyperobjects and choreographic objects⁵ in the larger context of intra-active performative structures, architectures and social works at stake here. The kinetic atmospheres in

question do not just happen or emerge; they are produced and therefore my writing intends to test a poetics, or a working methodology, for presenting experiences of being in space, possibilities that move us to ask how we perceive and relate to environments, to the organisms of our *Umwelt* (a pertinent term here adopted for our discussion from biologist Jakob von Uexküll).⁶ If *Umwelt* exceeds consciousness (and thus the choreographic as a human mode of composing), then what kind of movement unfolds here? Is *Umwelt* a choreographer of assemblages producing a “cascade” of vibratory effects (Bennett 2010: 37)?

Movement is still the basis of the work I have created with the DAP-Lab over the past ten years, but movement is of course no longer the clear medium-specific concept that I once associated with dance and the moving body. In regard to the design of *performance-wearables*, which our lab has investigated and developed since fashion designer Michèle Danjoux and I founded it (in 2004), movement or movement-design acts in a much closer relationship to the visual arts, fashion design, sculpture, expanded cinema, architecture, sound/installations and sonic ecologies, rather than to theatre and the proscenium stage. The expansion of movement-design at the same time reflects back on the biological extension into space as *Umwelt*. Movement and motion thus also gain new meanings, contingent on the morphing material conditions of expression and the different but determining historical conditions we recognise in the current forces of technological representation, modeling, and measuring. The quality or ability of movement may depend on our 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 human contingency and disability perspectives was less acknowledged. The notion of prosthetics as aesthetics was controversial,⁷ and fashion had not been thought of—as “critical costume”—in the way it sometimes is today (cf. Ryan 2014). 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.

Our dance-theatre work has been less recognisable as dance since it focused on sculptural costumes, fabrics, sensortised and slightly perverse accoutrements.⁸ Movement has become polymorphous, constantly shifting the shape (Gestalt) of its forms of appearance and affect, its objects and “equipments” (as Trisha Brown once named her choreographic instruments⁹), its milieus and extensions of mediascaped *mise en scène*. The equipments required work—to learn new ways of material engagement and behavior. The dancers in our company have a difficult job, they are not only dancing but adapting to instruments all the time.

But 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 excitable spaces. Kinetic movement, in this sense, also links and intertwines the physical, conceived as living

organism, with other manipulable and 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 light *entre chien et loup*, as French cinematographers call it.



Fig 6. *Metakimosphere no. 1*, created by DAP-Lab. Artaud Performance Center, Brunel University London, 2015. © Christopher Bishop

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 the performer or recipient, the lights that clothe the space in a warm ambience or a more eerie green or blue timbre, the cables that hang from the ceiling and connect to membranes). The garments, the sculptural objects and the equipment, in other words, become essential components of the performer’s embodied experience; they also are instrumental in facilitating the experience of the visitors who enter into the spatial resonances, and the material and temporal processes happening in the architectural environment. Microphones, speakers, cords, vital things—they form presence and carry relational energies and qualities.



Fig 7. *Metakimosphere no. 1*, Yoko Ishiguro listening to SpeakerVeil, designed by Michèle Danjoux/DAP-Lab, 2015. © DAP-Lab

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 potentials of expression. 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”)¹⁰ and also the question of defocusing perception. Such defocusing means becoming comfortable with peripheral perception which, as Juhani Pallasmaa argues, is ‘the perceptual mode through which we grasp atmospheres’ and the diffused ambience of

aural, tactile, and olfactory qualities, very near or distant, like the weather (Pallasmaa 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. The metakimospheres behave as if they are active living architectural organisms that have 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 twilight, they are there and do not have to be worn to allow atmospheric sensing.



Fig. 8. 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

After this opening evocation, I will first explain the context of this work and then proceed to dig deeper under the skin of these strange wearables, define their heritage and shamanic role in a larger organism that is to be built over the next few years (the HyperLoop), and then anticipate some questions, within the context of contemporary interactive digital art, that can be posed about the understanding and perception of the work as a participatory and immersive, fluid and mobile phenomenon.¹¹ Ultimately, I also expect the shamanic and etheric dimension of the work to generate a ritual dimension.

Metalevels

When I read the communiqués of the coordinator of our European METABODY project, I cannot help but smile at the ever-widening perimeter of his naming of prototypes that we are meant 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.’¹² Jaime del Val himself has of course been very active in the development of some of the prototypes, and he has built a wearable “metadress” constructed out of a number of modular components that he refers to as “readymades.”¹³

When the DAP-Lab joined METABODY in 2013, we knew that the development of the project would depend on many contingencies, the various interests and strands of expertise brought together and ultimately on the convergence between partner organisations. I noticed that amongst the artists and scientists involved in the research 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.¹⁴ Movement, as we recall, attracted early modernist stage designers like Adolphe Appia as much as the sculptors and painters in the Bauhaus or the equally radical avant-garde of Russian futurists and constructivists (Tatlin’s Tower and monument to the Revolution being an obvious example of a visionary design). Amongst the Russian artists we find many examples (if we think of Malevich, Gastev, and Khlebnikov, in particular) of a spiritual passion for technological/mathematical poetry in the fusion of art and engineering. Design and photography, along with early film, also converged in these experimentations that conceived of a new ‘poetics in space’ (Artaud). Bauhaus teacher László Moholy-Nagy was one of the early adapters of film and kinetic art using light projection and motion to create his work, for example *Ein Lichtspiel: schwarz weiss grau* (Light Play: black white grey), created in 1930 with the kinetic assemblage/sculpture (Light Space Modulator) he built to produce the mesmerising shadow and light effects.

In the 1960s and 1970s, Lawrence Halprin’s “Experiments in Environments” workshops in California (often conducted together with dancer Anna Halprin) aimed to foster a shared collective creativity amongst performers and architects. In 1968 the Halprins explored outdoor happenings (staging “kinetic environments” in San Francisco) that were meant to develop awareness of distinct senses, of sounds, smells, textures, tactility, etc.¹⁵ 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. One of the most unusual and complex projects that comes to mind is Diller + Scofidio’s *Blur Pavilion*, a suspended platform shrouded in a perpetual cloud of man made fog (water droplets sprayed through steel jets) created for the 2002 Swiss National

Expo and installed on the lake at Yverdon-les-Bains. Walking down a long ramp, visitors would arrive on a large open-air platform at the center of the fog mass; the only sound heard was the white noise of pulsing water nozzles. Computers were adjusting the strength of the high-pressure spraying according to the different climactic conditions of temperature, humidity, wind speed and direction; thus the fog mass changed from minute to minute.¹⁶ It is hard not to think here also of John Cage's meditations on sound as weather, as boundless, ephemeral and undefined materiality, as flows and "imaginary landscapes" beyond music.

Flow and movement, in fact, are the primary poetic and phenomenological key to architectural philosopher Wolfgang Meisenheimer's *Choreography of the Architectural Space (Choreografie des architektonischen Raumes)*,¹⁷ especially in his chapters on "Gestures of Places" and the threshold phenomena of the gestures of "Passageways." I found Meisenheimer's book in the architecture section of a museum bookstore. What impressed me particularly were the highly evocative black and white photographs of butoh dance and gestural choreography that intersperse his incisive reflections on ambiguous thresholds enabling movement "from the outside to the inside, from the inside to the outside"—what he calls the disappearance of space in time. The book was published in three languages (German, English, Korean) and is an enticing visual art work in itself, gesturing at what we could consider a form of performance-writing.

For the METABODY project, the philosophical and aesthetic aspects of such writing, and of architectural and theatrical theory (if you think, for example, of the scenographic impact on perceptions of performance that directors such as Robert Wilson, Romeo Castellucci, Elizabeth LeCompte, Ariane Mnouchkine, Robert Lepage, Frank Castorf, Penelope Wehrli, Katie Mitchell, and others have had), receded somewhat compared to the political challenges that the collaborators sought to generate. Jaime del Val edited and 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 thus 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 standardisation 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, which accounts for the changing nature of cultural expressions as process of diversification.¹⁸

METABODY builds upon the many fields of cognitive sciences affirming that cognition and affects are embodied and relational processes, which take changing forms in different environments and are irreducible to standardised 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 would 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, for instance, she evokes the beautiful example (drawn from Kuppers's *Disability and Performance*) of a movement practice from the 19th century—the “turtle walk” from around 1840 when *flâneurs* took their turtles for a walk in the arcades, as Walter Benjamin noted with astonishment in his study of Baudelaire and 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 calls “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, and such an idea 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's²⁰ theory of performativity implies, or if plants or objects relate to us and the world through a combination of auditory, kinaesthetic, and visual perception systems. What frequencies, say, determine which forms of sociality? What threshold shifts can be imagined between the human, the animal, the vegetal, the mineral, the machinic, etc?



Fig. 5 Michèle Danjoux {right} working on design for OrigamiDress with dancer Vanessa Michielon. Medialab Prado, Madrid, July 2015. © DAP-Lab 2015

Metakimospheres: Human and Non-Human Materialities

Early in 2015, the DAP-Lab began to collaborate with one of the Hyperbody teams (TU Delft), planning the development of a performative interaction during the Madrid METABODY forum. The architect-team then travelled to Madrid to install the *{/S}caring-ami* prototype, which they had built and tested in the Netherlands, envisioning it as a “creature” (manufactured out of polypropylene origami sheeting) which—in terms of its underlying narrative of loving embrace or defensive retreat—interacts with its surroundings via vision-sensing response to the proximity and movement patterns of people. Its responsive behaviour allows alternating light patterns (red, blue, white) and a motion behaviour; 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 dynamic system also envisions local sound behaviour (the noise of the motors tended to overrule this function). The main physical behaviour, termed “global interaction” by the architects, was conceived as either a forward embrace (inclining) or a backward defence (declining, become tall and rigid), a representation of the potential fear of the unknown and the misunderstood.²¹ These concepts were conveyed to us; the architects sent us samples of their origami method, which was not new to us as Danjoux had created pleated costumes before and we were familiar with 3D laser printing techniques. Before we travelled to Madrid, Danjoux already drew up some sketches of an origami-like object (accordion) that could generate sound.

After the DAP-Lab's arrival in Madrid, 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, Nicolás 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 *Scaringami* architecture prototype. Interactions described below were part of a larger installation-parcours, involving many METABODY partners and spreading out over a very large space.



Fig 10. Vanessa Michielon performing with “OrigamiDress” by Michèle Danjoux, in front of *Scaringami* architectural structure by Anisa Nachett, Alessandro Giacomelli, Giulio Mariano, Yizhe Guo, Xiangting Meng (Hyperbody). Azzie McCutcheon moves inside foreground gauze. © DAP-Lab 2015

Evoking a Parcours already implies that the audience was not static or seated, as in a theatre or concert hall, but moved around and engaged. If we want to theorise the new materialism of kinetic atmospheres and develop a better grasp of participation and experiential relationships, or how the audience might become material of a different kind, we need to observe and ask how audiences engage choreographic design. How do they become immersed and entangled, or sense and express being captured in an atmosphere? How do they embrace, support or avoid and leave that which is constructed (the atmosphere of the installation) and toward which their behavior is guided?²²

Ideas of participation/immersion stretch back, after all, to well known traditions of live art/installation art, e.g. to happenings, site-specific performances, situationist and environmental art, processual theatre, interactive media art, invisible theatre (Boal), social works, etc. Gareth White, in *Audience Participation in the Theatre*, in fact evokes an early 1960s live art performance by Yoko Ono, *Cut Piece*, during which Ono, who was quietly kneeling on a gallery floor, invited audience members to cut up her clothing, which they

did (White 2013: 8). White correctly suggests that the spectators' involvement in the action, or even their becoming the subject of the action as performers, constitutes the process of the act of symbolic and real violence (initiated by Ono herself on or 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 spatialised 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 60s and 70s, and now a part of our punk legacy.

Immersion may imply chaos, irritation, danger, as well as the holding of hands, the gentle manoeuvring, 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 and instruction are concerned. I tend to think audiences always already are "emancipated." They can decide for themselves and do not need a recipe or instruction to follow. They do not need to be animated (cf. Rancière 2009).

We need to examine such instruction to experience. Audiences, I assume, sense the mood of a space or social situation they enter, without advice. Architect Juhani Pallasmaa suggests that we project our emotions 'onto abstract symbolic structures,' and that felt atmospheres emphasise 'a sustained being in a situation' or an internalised projection or *introjection*, an interiority that implies peripheral perception (Pallasmaa 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 sense and 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 the sturdy, the reverberant or the resistant, evoked in the atmosphere. They can sit or stand or 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 or place 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 here become crucial as they are worn on the skin, thus 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 we placed onto a metal sheet near the perimeter of the *Scaringami* architectural structure—and the proximity sensing device generates sound effects as the dancer moves near the sheet. Suddenly,

after we had only perceived 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 large 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 *scaring-ami* architecture using the sensing data to affect the creature's (motorised) behavior, while the other camera sent the dancer's 3D motion data to a particle physics software visualisation 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 11. Azzie McCutcheon emerging from inside the gauze dress which she wears. Design by Michèle Danjoux. 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 internalised, 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. Her 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.



Fig 12. Miri Lee in first rehearsal with BeakHandSpeaker, designed by Michèle Danjoux. STEIM IMF, Amsterdam © DAP-Lab 2014

The shamanic voice is meant to be heard, not seen. The chanting is, in a sense, also a perceptual illusion. As Lee moves in and out of the audience, McCutcheon slowly stretches out the ghostly mantle, and she too moves a voice, coming from a small round Acouspade speaker she points in all directions (this new device, developed by Slovene artists, emits multidirectional amplified sound). The shamanic voice, “illegible” to most Western ears, reverberates around the vast building, then slowly disappears beyond the horizons.²³ 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 and 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*. Architectures and 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 (Isadora) I work with, the settings, screens, perimeters and filters are called “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), and the agency of entities formerly considered passive objects, inanimate things, inert matter. Installations, as we understand them today, are agential, vibrant, and mobilising—and yet one needs to look closely at what they mobilise and how they mobilise, 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.

The METATOPIA Parcours thus requires exploration of how kimospheres afford various possibilities of visitor engagement, for an audience of abled and disabled persons. METABODY explicitly targets a very diverse range of audiences, and also organises workshops for “metamovers”—inclusionary labs with new expressive technologies, such as Palindrome’s Motion Composer software which transforms gestures into music, for persons with physical and mental disabilities. In my concluding reflections, 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 the dramaturgical methods offered to them for accepting or declining the invitation to act.

Metakimospheres as Social Choreographies

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 set (installation), the research or interactions created in the tents, the dynamic-active architecture, live performance (for the audience/with the audience/by the audience)—how did the different invitations work, what was excluded, what needs to be included, developed further? What is the consensus on the architectural sensing environments, or the data capture theme for “illegible affects” that was mentioned in the foyer by del Val—how did that relate to our kimospheres and soft speakers, if at all? Other narratives or atmospheric possibilities—what did they suggest, such as the nonverbal “interviews,” the inclusion of persons with disabilities and their sensory experience?

I observed all the intra-actions, between visitors and animated objects, between visitors and performers, stage managers, solicitors, environments and audio-visual concatenation, paying close attention to non-verbal communication, the roles of participants and facilitators, the lighting, the sound modulations, the sequencing of the Parcours. Yet my conclusions are obviously provisional, as there are too many questions. And as I do not know the final architectural pavilion, and how this overall architecture can further the

convergence between the various METABODY prototypes that are being developed, I cannot know the outcome.

The stage management I observed made me think about the autopoiesis and heteronomy of such a large constellation. Visitors will not have a preconception about the work, and they may not have an 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 so during the 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 and fascinating, not least because they seemed to draw no police or security guard 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 the Kinect camera, they know that the motion of the visual projection is caused by them. Almost inevitably, this seems to create a joyful or playful response, especially among younger audience. But some visitors also realise 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 may allow wonder, puzzlement, and adventure to guide them nowhere. They will also realise 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.”

The environment as a whole, with its many dimensions, cannot be considered coherent. Nor do I think convergences can be forced from so many divergent aesthetic practices and their folds and gaps. There is no single narrative in the METATOPIA, but many, as well as many potential physical and intersubjective engagements. Too many atmospheres perhaps, or the overall atmosphere was inconclusive, illegible, without a “through-line” that could produce institutional affects for potential political dissensus, from which to go off outside to do “urban interventions”?

Yet there are images imprinted in my memory from the inside. One is a beautiful and 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 behaviours—*{/S}caring-ami* and the second complex Hyperbody architecture called *Textrinium*—and their intransigence.

Naturally, this is what we learn from prototyping. Participants will discover themselves inspired, moved and sensually seduced by some atmospheres and kinetic objects. They will discover an artistic-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 recognising 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 would be to ask visitors, as well as the actors, afterwards to comment on shared perceptions of the choreographic objects, the screens and the roles that were inhabited—the imagined landscapes. For example, in the case of DAP-Lab's performance 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 gently. It malfunctioned. Although the architectural vision of the LOOP pavilion may never fully materialise, the shape-shifting dance of conductivities we explored gave us a lot of motivations to test roles, functions and malfunctions, and 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 utopian space not fully apprehended yet.

Notes

1. The German philosopher Peter Sloterdijk (2004) has devised a philosophy of *spheres* and *envelopes* which contributes to the current interest in atmospheres, much as Andreas Philippopoulos-Mihalopoulos's critical study of 'lawscapes' as atmospheres draws attention to embodied social and political norms in the conflict between bodies 'moved by a desire to occupy the same space at the same time' (2015: 3). For the latter, see *Spatial Justice: Body, Lawscape, Atmosphere*; for the former, see *Sphären III – Schäume* [partial translation: Peter Sloterdijk, *Terror from the Air*, trans. Amy Patton & Steve Corcoran, Los Angeles: Semiotext(e), 2009].

3. The *METABODY* project 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. The *METABODY* project 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, and other associate partners (<http://www.metabody.eu>).

4. Nimish Bioria, email to all co-organisers, preparing work-in-progress presentations at the International Metabody Forum in Madrid (July 2015), June 17, 2015. Bioria works for Hyperbody, Digitally-Driven Architecture, Department of Architectural Engineering & Technology, Faculty of Architecture, TU Delft, the Netherlands.

5. The term was first used by William Forsythe who over the past decade had begun to create installations proposing movement possibilities of interaction to participant audiences; he explains the concept of a “choreographic object” in the catalog for the exhibition *Suspense* (Forsythe 2008). See also Birringer 2012. Together with researchers at Ohio State University’s Advanced Computing Center for the Arts and Design, Forsythe has also published *Synchronous Objects* (<http://synchronousobjects.osu.edu/>), a web-based research archive detailing numerous recombinations of visual, descriptive and sonic analyses of his dance work, *One Flat Thing, reproduced*, transformed into a creative resource for exploring space making, movement, spatial composition, and the complex, multi-layered, 4-dimensional construction of kinetic events. Forsythe’s work, obviously, has been a wonderful inspiration.

6. It will not come as a surprise that performance and architectural theory or practice here converge with other writings on environmental and ecological issues, phenomenology and embodiment, design and perception, issues of emplacement, spatial practices, and materiality, biophysics and engineering, etc. The word *Umwelt* is German for “environment,” and according to biologist Jakob von Uexküll, the *Umwelt* refers to the semiotic world of the organism that consists of specific “carriers of significance.” Cf. von Uexküll 2010 (original works published as *Streifzüge durch die Umwelten von Menschen und Tieren* [1934] and *Bedeutungslehre* [1940]).

7. Designers like Alexander McQueen, whose extravagant collections were exhibited in the posthumous *Savage Beauty* show at London’s V & A (March – August 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 2:1&2* appeared in 2014; see Danjoux (2014).

8. Michèle Danjoux’s garments designs are fashion-technology prototypes built specifically for performance and with particular “characters” in mind (for our choreographies). The material and conceptual quality of the work, and especially the accoutrements worn on the body, however, associates it with the kind of “gothic romanticism” or perverse wonder cabinet spectacularity exhibited in the “Alexander McQueen: Savage Beauty” retrospective, first shown at the New York Metropolitan Museum of Art (2011), and subsequently and the V&A (London), March 14 – August

2, 2015. The exhibition's "Cabinet of Curiosities" focuses on atavistic and fetishistic paraphernalia produced by McQueen in collaboration with a number of accessory designers. One of Danjoux's typical accoutrements is the Tatlin Tower HeadDress designed for Helenna Ren featured in *for the time being [Victory over the Sun]*, a headgear we premiered at Watermans Art Centre in 2012, and showed again at KINETICA Art Fair (2013) and in a performance at Sadler's Wells (2014).

9. Cf. Birringer (2008: 6). I discovered Brown's early work in the travelling exhibition *Trisha Brown: Dance and Art in Dialogue, 1961-2001*, first shown at Addison Gallery of American Art (Andover, Massachusetts). Brown's early *Homemade* (1966), in which she dances with a film projector mounted on her back, was included in the show. In the catalogue for the exhibition she is quoted referring to notorious outdoor works, such as *Man Walking Down the Side of a Building*, as pieces created with technical equipment. Brown was also included in the Barbican Gallery, London, exhibition *Laurie Anderson, Trisha Brown, Gordon Matta-Clark: Pioneers of the Downtown Scene, New York 1970s*, 3 March – 22 May 2011, which included daily performances, and recreations, for example, of Brown's *Walking on the Wall* (1971), a piece featuring dancers harnessed and rigged to a track on the ceiling – as they are walking sideways on the wall they appear to defy gravity and radically shift the viewer's sense of perspective.

10. Cf. Louppe (2010: 150).

11. There have been numerous studies of digital art over the past years, looking at the impact of interactivity and other participatory arrangements in performance and installation art; see, for example, Munster (2006); Dixon (2007); Salter (2010); Portanova (2013); and Kwastek (2013). For architectural theory on atmospheres and environments, see Boehme (2013). See also Boehme (2011).

12. Jaime del Val, email letter to co-organisers and collaborators on the 2015 Madrid International METABODY Forum, June 2, 2015. The METABODY collaborators meet three times a year in different locations (where a forum is staged) chosen from amongst the participating organisations.

13. The ready-mades are small foldable goalposts made out of tent-like gauze and constructed for beach soccer. For del Val's use of them, see his performance with the dress-assemblage in New York in the spring of 2015: <http://metabody.eu/the-layering-of-empires/>. Subsequently del Val hacked the fabrication principles, purchased gauze/netting materials and copper wires, and built larger size metakinespheres that can be moved by a wearer in indoor or outdoor situations. For video documentation of their use outdoors during the Madrid Metatopia, see: <https://www.youtube.com/watch?v=KKo5I9B0VWA#t=750>.

14. Cf. Dwyre and Perry (2015: 2–7), introducing a special section that features ten collaborative design processes linking interactive architectures, dynamic environments and performances or different kinds of inhabitations.

15. Cf. Nelson (2015: 99–100). When I spoke of RSVP contexts earlier, I of course meant the inspiring writings on process and scores by Lawrence Halprin (1969).

16. Diller + Scofidio 2002. The *Blur* book is unusual, in that it is a kind of scrapbook that traces the building of the pavilion from conception to realization while detailing all the contractual problems as well as the orchestrating efforts of the architects, engineers, meteorologists and fog manufacturers. At one point, the designers speak of their new architecture as "water-

based/pneumatic solution” (rather than a landscape), with “negligee skins...a fluid counterpart to the grid [that] can be customized to each exhibitor. Areas in the platform can be cut away to expose the water below and permit video projections onto screens just below the water’s surface... we now propose a ‘mist’ cloud emerging from the roof. Water atomizers could be sewn as fine tributaries into the soft pneumatic skin” (2002: 29). The final construction was a 60 x 100 x 20 metre metal sculpture constructed mostly out of steel, without sheets or skins. Yet the fascinating idea of skins, and sewing tiny spray jets into them, was recovered onto the audience, so to speak, as the architects provided wearables for their interactive media project, with wireless technology embedded into “brain coats”—technologically enhanced raincoats—so that visitors’ brain coats could react to each other, indicating either positive or negative affinity between visitors through color changes and sound (214ff). The scope of ambition of *Blur*, even today, is completely baffling.

17. See Meisenheimer (2007).

18. Cf. “Metabody: Media Embodiment Tekhné and Bridges of Diversity,” Project Description. Available online: <http://metabody.eu/>

20. Barad (2003). In her materialist and agential model, the “world is a dynamic process of intra-activity in the ongoing reconfiguring of locally determinate causal structures with determinate boundaries, properties, meanings, and patterns of marks on bodies. This ongoing flow of agency, through which ‘part’ of the world makes itself differentially intelligible to another ‘part’ of the world and through which local causal structures, boundaries and properties are stabilized and destabilized does not take place in space and time but in the making of spacetime itself” (817–18).

21. DAP-Lab wishes to thank all collaborators in the project for knowledge transfers and artistic co-operations. We acknowledge the inspiration of the mobile metakinespheres created by Jaime del Val during 2014, especially the smaller ready-mades brought to the STEIM workshop in December 2014 (animated by lighting during a test rehearsal with Dieter Vandoren). They sparked a series of smaller tests in London early in 2015, then gave way to DAP’s increasing interest in pro-active, dynamic and interactive architectures as proposed by Nimish Bitoria and Jia Rey Chang (LOOP Pavilion) and the Master students who worked on a computationally generated 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 wearables and proximity-sensing performance had evolved from her work with Jonathan Reus during the e-textile lab at STEIM (October 2014), and my scenographic sketches for “kinetic atmospheres” evolved in March 2015 during the first public presentation of *metakimosphere no.1* (with Azzie McCutcheon, Yoko Ishiguro, Helenna Ren performing). The dancers for *metakimosphere no.2* were Vanessa Michielon, Azzie McCutcheon and Miri Lee. For the 2016 presentations of *metakimosphere no.3*, DAP-Lab has invited additional dance artists to join, including Helenna Ren, Yoko Ishiguro, Aggeliki Margeti, Waka Arai, Elisabeth Sutherland, and Seeta Indrani. Visual interface design will be directed by Chris Bishop and Cameron McKirdy; documentary filming and production support by Martina Reynolds.

22. Testimony from audiences are available but have not been integrated in this essay due to limited space. After the first and second instalments, we received verbal and written feedback, and comments on facebook. Emma Filtness, a London-based writer, composed a poem after she

experienced the kimosphere, and we published her writing and our images of the work in an exhibit at Edmonton, Alberta, and in the Canadian journal *Transcultural*.

23. The shaman chant was recorded by Hae-in Song during her fieldwork on the Korean kut ritual.

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JOHANNES BIRRINGER is artistic co-director of the Design and Performance Lab (DAP) and professor of performance technologies at Brunel University London. He is also the founding director of Interaktionslabor (<http://interaktionslabor.de>); his books include *Theatre, Theory, Postmodernism* (1989), *Media and Performance* (1998), *Performance on the Edge* (2000), *Performance, Technology & Science* (2009), *Dance and Cognition* (2005), *Dance and Choreomania* (2011), and *Manifest der Interaktionskunst* (2014). He has created numerous dance-theatre works, videos, digital media installations and site-specific performances in collaboration with artists in Europe, the Americas, China, Japan and Australia. DAP-Lab's dance opera, *for the time being [Victory over the Sun]*, premiered at London's Sadlers Wells in 2014; a new series of immersive dance installations, *metakimospheres*, began touring in Europe in 2015–16.