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Somatechnics and Difference

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Somatechnics and Difference

Cover Page Footnote

The Design and Performance Lab (DAP) was founded in 2004; filmic excerpts of many of our dance works/installations are available online. DAPLab's website is here: <http://people.brunel.ac.uk/dap/>, with numerous links to publications, symposia and exhibitions that featured our innovations in wearable design created by fashion designer and co-director Michèle Danjoux. I wish to thank the performers, musicians and interface design collaborators (especially Doros Polydorou and Zhi Xu) on the metakimosphere series and the recent explorations of augmented reality/VR choreographies.

Somatechnics and Difference

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Abstract

This essay examines embodiment and technology with a special focus on dis/abilities in live performance during the current inter-pandemic era. After several workshops developed with performers and mixed ability artists during 2021, questions are raised about inclusion: how we consider impairment or how disabilities are reconfigured in our understanding. The somatechnics explored here are initially related to Seo Ji Won's exuberant and excessive motion installation, but also to the practices of other choreographers and designers who acknowledge different abilities and challenges to perception that are not necessarily all based in a technological understanding of movement. Although it can incorporate digital projections and prostheses, such an understanding emerges from anatomical and somatic experience, and also from an extended notion of social choreography.

Keywords: disability, somatechnics, virtual reality

Resumen

Este ensayo examina la encarnación y la tecnología con un enfoque especial en las discapacidades en la actuación en vivo durante la era interpandémica actual. Después de varios talleres desarrollados con performers y artistas de habilidades mixtas durante 2021, surgen interrogantes sobre la inclusión: cómo consideramos la discapacidad o cómo se reconfiguran las discapacidades en nuestro entendimiento. Las somatécnicas exploradas aquí están inicialmente relacionadas con la instalación de movimiento exhuberante y excesivo de Seo Ji Won, pero también con las prácticas de otros coreógrafos y diseñadores que reconocen diferentes habilidades y desafíos a la percepción que no necesariamente se basan en una comprensión tecnológica del movimiento. Si bien puede incorporar proyecciones digitales y prótesis, tal comprensión surge de la experiencia anatómica y somática, y también de una noción ampliada de coreografía social.

Palabras clave: discapacidad, somatécnicas, realidad virtual



Figure 1. siren eun young jung, A Performing by Flash, Afterimage, Velocity, and Noise (2019), audiovisual installation, multi-channel video, stereo and 5.1 surround sound, dimensions variable. History Has Failed Us, but No Matter, Korean Pavilion, the 58th Venice Biennale, May 11-November 24, 2019. Photo by Kyungho Kim.

1. A ROOM WITH A VIEW

Video installations of dance, theatre or performance art create a strangely beautiful paradox, especially now in the times of the Covid-19 pandemic when dancing is not quite possible, musicians or singers are not setting us on fire in live concert appearing under the beams of light and color that fill a stage with electric luminance. Actors find it hard to rehearse under a mask, orchestras and choirs are not yet allowed to perform again, dance halls and techno clubs are closed. Immersive theatre, where performers are literally within arm's reach or where you can smell flesh and sweaty presence, is on hold for the time being. Rather, we look at screens, we participate in Zoom meetings, endlessly. And on occasion, when permitted, we walk at the appointed hour into a museum room to be alone with paintings, sculptures, or digital projections — a moving-image atmosphere as it is intimated, albeit by a still image (“afterimage”), in the photo above (Fig.1). The room of this kinetic atmosphere, at first sight, appears boxed in, closed on three sides by the media façades. Yet the photo does reflect movement, traversing energies, phrasings, bodily rhythms, writings, temporal and spatial configurations, somatechnical virtuosity, a wheelchair floating. All these impressions are evoked. But the image cannot approximate the pulsating sound and the vibrations audible and

felt inside *A Performing by Flash, Afterimage, Velocity, and Noise*, a multi-channel video installation by siren eun young jung,¹ featuring four performers.

On your left, you can see Seo Ji Won (서지원), a dancer with disabilities and a director and member of the Disabled Women's Theater Group "Dancing Waist," here shown in a choreographic moment in which she exceeds any restricted possibilities for action in a wheelchair—an exceptional, viscerally captured movement-moment in which limitation or encumbrance is transcended. Letters and characters also seem to float in this choreographic space of light—mysterious impressions of spatial ambience and temporal flows.

The pulsating sound and the vibrations have to be imagined: performance's multisensory engagements are familiar to us from our affective embodied experience. Thus, we can project—we imagine through our various sensory registers and what Dorinne Kondo refers to as theatre audiences' "common sense" and kinesthetic knowledge, their affective/emotional responses. She ascertains that these "corporeal epistemologies," whether in ethnography or in "film, video, and critical race studies" are not focused primarily on the visual, though she seems to have less faith in film theory's exploration of hapticity or kinetic impact, and thus prefers theatre's communal sharing of space and time (Kondo 26). Being in a room together. When speaking of "touch" in immediate performance, she calls it an "enfleshing" of the fluid and open relations between performing, directing, staging, lighting, set design, music, sound, venue, and audience (28). The worldmaking Kondo conjures up in her theory of performativity is above all a critical foray into "reparative creativity"—she addresses *difference* in her analysis of race-making and cultural reproduction of dominant ideologies, examining how we are interpellated as raced, classed, sexualized, and gendered subjects (she is less concerned with age and disability), and proposing that performance has the potential to redress the *choking* caused by affective violence.

2. SOMATECHNICAL UNCHOKING

However, if there were no "common" sense, as I suspect, following this argument of differentiated somatechnical and ideological interpellation, then what do I mean by exceeding physical restrictions? What "commons" are shared and equally accessed and experienced? Who can ever exceed? Can we unchoke affective or discriminatory violence? Is the choking not experienced differently by persons who are stigmatized or experience discrimination, abuse, belittlement—or think of children or the elderly who have to learn to tolerate patronizing and condescending jolts of micro-aggression, arousals of unpleasantness? Interestingly, in a yoga class taught by Israeli physiotherapist

¹ I discovered this stunning image in an article by Hyunjin Kim, "Anomalous Tradition, Queer Enchantment: On the Work of siren eun young jung," *Afterall*, 49 (spring/summer 2020): 48-57. See also Chang 2020. For the notion of media projection surface or media façade, see Song 109-112, and for the "audibility" of dance, see Birringer 2017.

Idan Kirshner, I am admonished to smile while doing the exercises for lower back pain and sciatic relief – and in fact I crack up when I repeatedly hear him use a very funny expression throughout his teaching. The smile also helps me to relax and go deeper into the stretches.

And what would an assumed common sense or *commons* –Anna Tsing, in her ethnographic study of fungal ecologies and foraging speaks of “latent commons” as a mobilization of entanglements, an assemblage-maneuvering for a common cause and shifting, diverse coalitions (135) – signal to others who are concerned with age, atypical bodies or the performance of disabilities? What common senses are shared by people with disabilities and nondisabled people? Writing from London and my base (with the DAP-Lab) within a research institution where I was hired as a professor of performance technologies, how can I begin to address difference and inclusivity without acknowledging privilege, the general whiteness of artistic research in the UK (or in the US or Germany, for that matter), and therefore by association its heteronormativity and ableism?

Petra Kuppers, in “The Wheelchair’s Rhetoric” (as in her other important publications on disability culture), reminds us that in recent history the creative industries tended to “admire the skill it takes to change bodily, transform at will, and to portray a way of being that is so strongly associated with the opposite of skill, choice, and ability, underlining the freedom of the nondisabled actor. Disability (often played as tragic, confining, and negative) is a foil to narratives of nondisabled achievement” (Kuppers 81). The foil, then, persists in long-held normative views of disability and what disablement rhetorically signifies to the nondisabled, rather than to a different, shared understanding and assemblage of languages of embodiment, of movement not overburdened with loss, incapacity or pejorative associations.

Foraging and exceeding, somatechnically, also of course implies its opposite, namely the daily physical and metaphysical accommodations, with wheelchairs, crutches, canes, cochlear implants, or other prosthetics, medications, and necessary skills to meet challenges, coping with attrition, pain, chronic fatigue, lack of motor control or motor neuron disease. Foraging, thus, as survival techniques. Neurological physiotherapist and researcher Gemma Cook, working with adults with Cerebral Palsy, emphasizes states of vulnerability, now exacerbated by the COVID-19 pandemic, which affect the persons who have this condition in complex ways, impacting functions such as learning abilities, speech, hearing, mental health, but also their societal integration and their experience having to contend with stigma and discrimination (Cook). Views and perspectives, and perceptual vocabularies on physical/cognitive encumbrances need to change.

“Disabled Theatre” – this is what choreographer Jérôme Bel called a work he created in collaboration with Theater HORA and presented at the 2014 Dance Umbrella in London, causing much critical confusion over his choice to feature a group of performers with cognitive disabilities, such as Down syndrome or Asperger syndrome, and asking them to talk about themselves,

perform “themselves.” The project raised numerous ethical questions about exploitation (even though Theater HORA had commissioned Bel to create the piece) and the exposition of disabilities as if they could speak an “unspeakableness” by exhibiting them, posing them as not easily absorbed into systems of signification, legibility or recognition. Yet, regardless now of Bel as choreographer working with professional or amateur performers with “cognitive alterations” (Bel’s term), the project also proposed something quite straightforward to its audiences, namely an unusual and perhaps not comfortable confrontation with disability in the flesh, with performers enjoying themselves performing (in most instances but not in all) or being aware that they are exposing themselves.



Figure 2. Performer Gianni Blumer performs a solo during Disabled Theatre, directed by Jérôme Bel. Photo: Ian Douglas, courtesy New York Live Arts.

This enjoyment would be the unchoking. I cannot surmise what went on inside the performers as I have not spoken to them. In workshops conducted during 2020-21, I hope to learn more, and listen to collaborators from the danceability community – for example Vera Rosner who worked with the DAP-

Lab at the 2021 Body IQ Somatic Festival in Berlin.² In the following, I first backtrack for a moment to reflect on notions of exceeding in performance, then revert to the idea of a *disabled theatre* that in fact is not disabled but provocatively modular and somatechnically transitional, a highly complex material-bound space that can expand and contract, able to accommodate so many diverse gestures (and gestures responding to gestures) – in this sense the performance of/in material spaces evoking an image of the “sieve,” of porosity and liquidity (cf. Cox 73).

Still moving bodies, bodies still moving, even if sometimes only imperceptively, minimally. The expansive is also interior, it can happen on levels of *interoception* where consciousness (our brain functions) monitors, before predicting response behaviors, the information received about heart rate, pulse, lung activity, the immune system, blood sugar and hormone levels, and multiple other sensory inputs happening, in our somatic being, from moment to moment (cf. Barrett). From breath to breath: our somatic being generating constant, and constantly evolving, patterns of behavior and reaction constitutes a part of our bodily techniques and “technologies,” so to speak, and these somatechniques I wish to draw attention to here.

Exceeding space. Let us think for a moment of enabling scores (*Partituren*, in German). Adolphe Appia, the Swiss scenographer, at the beginning of the 20th century spoke of “gestaltendes Licht” (shaping or creative light), an idea of light as animating force that is similar to a composition – architectural-musical – of space.³ Such extending choreography of the spatial, or *Raumpartitur*, can also be linked to the kind of movement installations that William Forsythe has called “choreographic objects”,⁴ or to the architectural

² BODY IQ Festival 2021: Bodies of Cultures, Communities & Places took place on November 19-21. The workshop we offered was called “Somatechnics and Dis-ability” (<https://www.bodyiq.berlin/bodyiq21-1/somatechnics-and-dis-ability>) and introduced Oculus Quest2 VR headsets as well as new soft NoOculus prototypes designed by Michèle Danjoux. Michèle name for the prototypes is an homage to Brazilian artist Lygia Clark’s 1968 “Óculos”[Goggles].

³ See Beacham 2010. The editors of the collection of essays on a “theatre without vanishing points” emphasize the significance of stage designer Adolphe Appia’s invention of “scenic modules” and exploration of a new performativity of space and light, of course envisioned – in his collaboration with Émile Jacques-Dalcroze at the Hellerau Festspielhaus in Dresden – for the interplay between space and the bodies of actors/dancers (the inter-action of music, rhythm, and diffused light). This interplay could also be considered a *mise en scène* of dance-light, in the sense in which Loïe Fuller developed her own technical innovations of moving her costumed body and bodily extensions to moving electric light.

⁴ The term was first used by choreographer William Forsythe (artistic director of the Frankfurt Ballet from 1984 to 2004) who over the past decades began 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 published *Synchronous Objects* (<http://synchronousobjects.osu.edu/>), a web-based research archive detailing numerous provocative recombinations of visual, descriptive and sonic analyses of his dance work *One*

polytopes and diatopes that composer Iannis Xenakis devised in his designs and spatial scores. Collaborating with architect Le Corbusier on the Philips Pavilion (1958 Brussels Worldfair), Xenakis deployed his work *Metastasis*, based on the designs and mathematical proportions given by Le Corbusier's Modulor, in order to compose the micro- and macrostructures of the sonic architecture. His sketch was in graphic notation looking more like a blueprint than a musical score, displaying graphs of mass motion and glissandi that float like structural beams of the piece, with pitch on one axis and time on the other. The overall structure and the control of elements, such as the massive glissandi, culminated in the idea of the hyperbolic paraboloids to be built into the pavilion – a very particular *kinetic atmosphere*.⁵ The work-title *Metastasis* carries architectural as well as biomedical connotations that could impel us to move across borders of different epistemes and pathologies (the behavior of cell organisms and their relationships to microperformativity) – a temptation now much explored in current performance and dark ecological research.⁶

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 (and my colleague Scott deLahunta was one of the research coordinators for *Synchronous Objects* and the subsequent *Motion Bank*, initiated in Frankfurt, now moved to Mainz (<http://motionbank.org/>)).

⁵ The concept of *kinetic atmospheres* was a matter of exploration for a number of years. Our DAP-Lab ensemble staged a series of installations (*metakimospheres*) exploring not only the modes of interactive architecture that have been evolved through interface design and sonic/visual sensing or capture technologies, but also the sensorial challenges that can be evoked with installations involving a range of sensory interfaces for audiences with variable perceptual abilities. After completing my book on *Kinetic Atmospheres* (2021), I started to collaborate on a series of workshops on disability tech staged at Brunel University: "Re-embodiment and Dis/abilities: Disability Tech" (April 2021) and Performance and the Repair of Public Space and Collective Ritual (June 2021). See my research website: <https://www.brunel.ac.uk/research/Groups/Performance-and-Ephemeral-Sustainabilities>.

⁶ See, for example, the special issue 25:3 (2020) of *Performance Research* dedicated to boundaries objects and non-human agencies in microscopic life; e.g. Jens Hauser, "Microperformativity and Biomediality." For dark ecologies, see Morton 2016, and the *Performance Research* issue 25:2 (2020) inspired by Morton's writings.

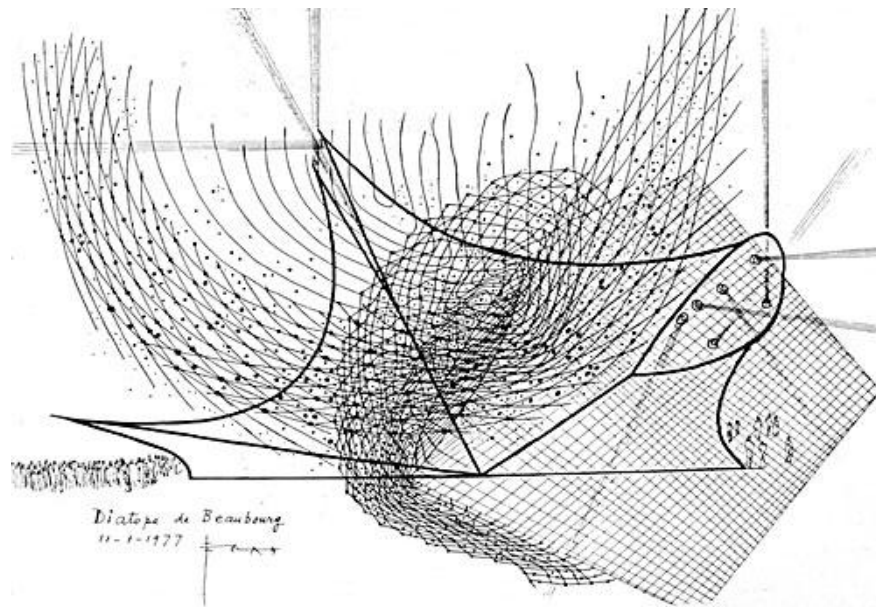


Figure 3. Iannis Xenakis, diagram score for *Diatope de Beaubourg*, Paris 1977. *Diatope* with its curvaceous architectural construction was realized in 1978 outside the Centre Pompidou using Xenakis's electroacoustic piece *La Légende d'Eer* plus a computer generated light show involving some 1600 electronic flashes, 4 laser projectors and 400 pivoting mirrors and prisms. © Socks

Xenakis' scrupulously detailed work on rhythm became crucial for the designing of the undulating panes of the façade. When I look at the diagrams, I see rhythms of fascia-like lines and cyanobacteria filaments reflecting the laminar structure of stromatolites, fossilized 2.5 billion years ago into sedimented rock. I can also imagine animated trilobites, with legs, limbs like antennae – appendages construing a lively exoskeleton. In Houston's Museum of Natural Science, I came across the 130-million-year-old fossil of a bird with featherlike traces, the creature etched into rock as if caught dancing. Paleo matter like scores – physical evidence of the life activities and movements of now long vanished organisms. Trace fossils, for example, include tracks, trails, burrows, feeding marks, and resting marks, an implied social choreography of an ancient creature that dragged its tail in mud. Some fossils are showing missing limbs or strangely alluring asymmetries or motorsensory challenges.



Figure 4. *Rhamphorhynchus*, late Jurassic period. Museum of Natural Science, Morian Hall of Paleontology, Houston, 2019. Photo: J Birringer.

What exactly do you imagine when you study anatomy, skeletal structures, or disablements? What comes round in the melancholic “loop” – the key metaphor Timothy Morton uses in *Dark Ecology* – of species evolution? In one exhibit at the Hall of Paleontology, the Sphenacodontidae discovered in Archer, Texas, looks just like a Dimetrodon with a fin back, the tops of vertebrae grown into tall rods of bone, presumably held together by a thin sheet of skin. This Dimetrodon’s fin, we are told by a plaque, limited its mobility; and although its silhouette was impressive, the creature could not easily hide from the sun and needed a lot of calcium phosphate in its food for the extra bone material. It did not survive. I marveled at this Dimetrodon creature and its evolutionary problems, as I did when pondering the earliest amphibians (in the Devonian period) who were deaf and could not hear airborne sound or noise. How did they communicate without hearing, without eardrums, ear bones, sensory hairs, nerves, without such necessary equipment? What was their proprioception and sense of balance like?

3. AUGMENTED REALITY AND IMMERSION

The somatechnics (to some extent we have already been addressing questions of “equipment” as well) examined in this essay are related to Seo Ji

Won's exuberant and excessive motion, to different abilities and challenges of perception that are not necessarily all based in a technological understanding of movement (and its digital projections and prostheses), but emerge from anatomical and somatic experience, and also an extended notion of social choreography. At the same time, I am influenced by my own experience in the dance-tech community, having learnt to integrate a wide variety of sensory technologies and software supported interactive technologies into movement performance, becoming aware that somatechnically speaking our bodies are indefinably expansive; they can also easily communicate telematically in distributed space. They comprehend multitudes. They also grapple well with constrictions and encapsulations, in regard to wearables, equipment-extensions and accoutrements that are difficult to maneuver. It was when our own ensemble (DAP-Lab) began working with extravagant wearables designed by Michèle Danjoux, that I became quite aware of the restrictions (requiring motorsensory, somatosensory and cognitive adaptation) that signaled alterity – different affordances and sense-certainties. If you cannot move your head, for example, how do you use your peripheral and eccentric vision? How do you deal with discrepancies of perception, mislocalized sensation?

Some of these ideas of somatechnics are object-oriented, cultural and ontological; yet I question assumptions about bodies and phenomena that in current discourse often tend to get glossed over when there is facile talk of embodiment and corporeality, cyborgs, digital selves, data objects or telepresence, for example (cf. Thompson Bell 2021). I begin by proposing a slow approach to animacy (Tim Ingold has spoken of an animic ontology in his anthropological writings) – listening perhaps in a deeper sense of our theatrical and indigenous understanding of how participation happens, how animal matter, living matter, organisms transmit energies. Deep listening, to our virtual imaginary.

A long time before Pauline Oliveros introduced the notion of *deep listening*,⁷ Appia had shifted attention to radically new scenographic concepts, focusing on music and abstracted rhythmic forms interacting with light. In his collaborations with Dalcroze at the newly built Hellerau Festspielhaus (1909-1914) in Dresden, he worked with ideas of open environments in which performers and spectators shared the same spatial volume which was designed like a musical space, a rhythmicized *mise en scène* – often displaying only simple geometric modular elements such as raked stairs or platforms – coming alive through the movement of the dancers, the sound, and the lighting. Appia was preoccupied with the plasticity of light and motion, and in his writings (*La musique et la mise en scène*, 1899) he formulated this vision fervently:

⁷ See Oliveros 2005; 2010. There are many ideas on perception and proprioception that flow into the composer's understanding of sound, spatial relations, and "composition," but what interests me in particular is the somatechnical idea that proprioception enhances our capacity – through deep listening – for spatial and visual mental imagery. See also Forcucci 2019.

In itself, lighting is an element that can produce unlimited effects; restored to its freedom, it becomes for us what the palette is for the painter...through projections that can be simple or complex, stationary or shifting, through partial obstruction, through varying gradations of transparency, we can obtain an infinite number of modulations. (Quoted in Bablet/Bablet 43)

How radical this conception must have been can only be faintly imagined today, since spaces such as Hellerau, with its vast empty hall measuring 50m x 16 m x 15 m, did not become a prototype for the mainstream theatres of the modern age in the West. However, other conceptions of open, rhythmicized space and song lines for dance, theatre, and music have surely existed in other cultural contexts, of aboriginal and indigenous African and South East Asian performance traditions; Petra Kuppers inspiringly describes an open workshop experience on the Waikuku beach in New Zealand (Kuppers). Appia's experimentation with indirect lighting and rhythmic spaces has been influential, even today amongst the digital artists and virtual reality designers who are sensitive to the animated, transformable spaces Appia proposed. Michael Takeo Magruder is one of the contemporary artists/scientists who has worked directly from the Appian vision. He created a virtual 3D reconstruction of Hellerau in the multi-user environment of Second Life for *Theatron*, an explorable model of theatre architecture in virtual space, and then *Rhythmic Space(s)/Meeting Places* as two joint performances created in Second Life and in Hellerau's Great Hall for the CYNETart_07 festival. For *Rhythmic Space(s)/Meeting Places*, he asked Hellerau's technical team to build a white, life-size staircase configuration consisting of three symmetrical platforms onto which the virtual environment (built in Second Life) was projected via a large-format digital projection system. Using slowly transforming colors – red, green and blue – the modular staircase was at once the real and virtual world for seven performers who improvised a Dalcrozian choreography to live piano music. Magruder also explores the mingling of virtual and real architectures in site-specific projections, as in his project *Vanishing Point(s)*.⁸

The Scandinavian theatre group Hotel Pro Forma also used such modular designs for their staging of *Operation: Orfeo* (1993), the use of staircases resonating with Appia's scenographies with percolating, trickling light (*rieselnde Flächen*). Over the last five or six decades, we also have witnessed various forms of video art, video installation, and expanded cinema which proved influential for today's digital era of media arts and performance, if we trace the idea of expansion and projection and what it might enable for bodily vocabularies. What concerns us here are inclusive intermedialities – intersectional practices that not only combine real and virtual spaces, or forms

⁸ See: <http://www.takeo.org/nspace/sl005/>. This particular project conjoins Magruder's long-standing use of computational processes and virtual environment composition with his collaborator Hugh Denard's studies of the playfully illusionistic and fantastical worlds of Roman fresco art.

of hypermedial intimacy, but reflect consciously on boundaries and transfers of perception, proprioception and interoception, and on how synergies and affective relationships can be experienced by practitioners and audiences who need different points of access, modes of beholding.

I am not sure yet what I am getting at, with the installation idea of a room, with modularity, with viewing. Those inside the room are also outside the screenic space, but what if the screen is not over there, distant from you, but close, almost like a skin, a contact lens? What if you are inside the screen? When referring to the performative dimension of projected art (for the 2007 exhibition *Beyond Cinema: The Art of Projection*, curated by Joachim Jäger at Hamburger Bahnhof in Berlin), the curator speaks of *embodiment*, especially in regard to the *inclusion of the physical presence* of the viewer in the projection interfaces. He was thus pointing to the current trends for immersive interactive art, physical/affective computing, augmented reality, locative media, pervasive computing and microperformativities, which draw both on the experience of interactive performance and the compositional, time-based techniques of other media forms and biomedialities. With this we need to think about variable media skins, and about difference and atypical abilities. Yet in terms of abilities of movement, or perception of movement in a room, we also need to start with a very differentiated understanding of projection and mobility.

4. MEDIA SKINS AND EXPLORABLE MODELS: YOUR BRIGHT FUTURE⁹

Perhaps I thought of rooms with a view and mobility in order to address access to and comfort within built space, and more importantly differences in perception, beholding, sensory collection and orientation. How do we enter into, and leave out of? How do we need to orient ourselves along different lines of contact or observation, intuition and adaptation, when impairments of functional motion or vision, hearing or proprioception enter into challenged experience of perceptual accessibility or engagement with aesthetic-affective experience? Ageing changes and weakens all these modalities too. Given my own weaknesses now, growing older, the sense of enfeeblement as impairment is debilitating and foreboding. A Houston friend who suffers from wet macular degeneration tells me he is suicidal since he cannot read anymore. Disorientation has become a notable result of the condition, with what he calls a nearly complete loss of recognition of the familiar. But in the conversation he also pointed out that, even with the overall loss of confidence as a result of the diminution of abilities, the *sense of feel* has grown important (so that, as an example, screws can be touched, located, and thus unscrewed). This is the trans-sensory dimension crucial for an understanding of how we can reconsider acts of affect.

⁹ My heading for this last section is borrowed from *Your Bright Future*, an exhibition of 12 Korean artists staged at the MFA Houston (November 21, 2009 – February 14, 2010), featuring site-specific installations as well as video, computer animation, and sculpture, curated by Lynn Zelevansky, Christine Starkman, and Kim Sunjung. A stunning large scale “broken”, caved-in, severely disabled building, *Fallen Star 1.5*, by Do Ho Suh, had caught my attention.



Figure 5. Tactile Dialogues. Artist: Fayen d’Evie and Shelley Lasica, performed by Fayen d’Evie and Irina Povolotskaya. Medium: Performance, 2016. Exhibition: Human Commonalities at V.A.C. and Vadim Sidur Museum (Museum and Exhibition Association Manezh). Curators: Anna Ilchenko and Yaroslav Alyoshin. Photo: Evgeniya Chapaykina

Challenges to interaction: orientation, first of all, is the opposite of participation if I ask myself where or how to move in an environment I cannot see, hear or over-view.

The theatrical or Virtual Reality notion of immersion loses all its glamour. Rather, vision-impaired choreographer Fayen d’Evie speaks of “blundering” – stumbling blindly – as a method of unstructuring, and staggering against, the “ocular-normative” (described by her as the “perpetuation of ocularcentric epistemologies that equate seeing with knowing, and visual perception as the norm for gathering knowledge”) and thus also enabling new ways of activating *attentiveness* in audiences. She proposes to shift “blindness away from segregated accessibility policy, shepherding it instead towards generative artistic practice and curatorial thinking” (d’Evie 43). This is a vital contribution to our practices, as d’Evie very convincingly writes about her curatorial work, and her inversion of the concept of accessibility, “shifting to models that activate attentiveness and extend the movement vocabularies more broadly,” namely to intricacies and intensities of tactile and haptic intervention that become possible when moving attentively within a performance-exhibition topology (d’Evie 59). She also carefully details some of the activities she tested in her installations, which involved touching, handling objects and passing them between other participants.

Mark Hansen had also written provocatively about corporal schema and sensoriality in *Bodies in Code*, addressing a “primary tactility” (in the relation between vision and touch) that is a fundamental phenomenological basis for the functioning of the body as an interface, a passage to the outside, from inside, from the skin and orifices to the world (Hansen 87). It is persuasive, therefore, to return to tactile perception and dwell on its rehearsal. When I touch, I make

contact through skin and nerve ends, and I also conceive or imagine, depending on the surfaces I touch, what the object, body, or material is like I that come into touch with. The vaguely futuristic work¹⁰ we are doing with VR headsets in our DAP-Lab installations and workshops thus probes the lack of vision, in fact, that results from wearing relatively heavy Oculus Quest2 VR headsets that enable moving into 3D illusionary spaces while awareness or use of your lower body (from the neck down) and proprioceptions is diminished.



Figure 6. Visitor seated on floor wearing Vive VR headset, with cables held by actor guide, and an object given to handle by another guide. VR Lost & Found exhibition, Trondheim Verkstedhallen, 2019 © Johannes Birringer

¹⁰ For the Berlin workshop at Body IQ we took two Oculus Quest2 devices with us, as well as two new soft NoÓculos prototypes designed by Danjoux. We were joined at the workshop by guest artist Wojciech Olchowski who brought 10 VR headsets (Oculus Go) that could play his 360 degree 3D film *Sector* which deals with the relationship between human body and nature/landscape. DAP-Lab collaborator Zhi Xu had prepared the draw-to-perform (Google Tilt Brush) software for real time movement we used in our own Oculus Quest2 headset screens. Danjoux and Vera Rosner collaborated on the relationship between the NoÓculos (which have no screens and deploy no software) and the “Guardian” idea of touchable threadings.



Figure 7. Visitor seated on floor wearing Vive VR headset moving inside virtual forest, with cables held by actor guide. VR Lost & Found exhibition, Trondheim Verkstedhallen, 2019 © Johannes Birringer

Between 2017 and 2019 I still worked with the VIVE VR headset requiring cables attached to a computer (cf. Birringer), and thus all sorts of skewed entanglements can occur when the user does not stand/sit still (Figs. 6 & 7) or is carefully aided by someone who holds the wires. Since November 2020 we have worked with the wireless Oculus Quest2 head sets, introduced to me by choreographer Zhi Xu, as well as the earlier Oculus Go “helmets” that can play prerecorded 3D films (synchronized with simultaneous playback for several users, depending on the number of devices passed out to participants). My own experience wearing the Oculus Quest2 headset is perhaps atypical – I almost immediately lost interest in the immersive virtual landscapes running in my headset goggle screens, but became curious about how I would be able to move with the headset while unable to see real space. I also wondered how I could interact with another person (in a duet), and whether interactions would be possible without guide or guardian.

Consequently, exceeding physical and perceptual restrictions became a search for room without a view, connecting real spatiality experience to movement in imagined space, to atmospheric space. In other words, wearing the Oculus Quest2 headset enables a potential approach to not-wearing VR but learning from not-seeing, transposing not seeing into feeling/sensing other possibilities. I cannot fully describe what we are doing, certainly not choreographically. But Zhi Xu and I are performing together: two “users” wearing the VR headset, one HMD is active, the other one not quite, as I have left the “Guardian” space I had drawn and no longer see a tropical island, as I am trying to “guard” my partner who is lost inside a virtual 3D landscape and cannot feel or see the actual space surrounding us. Since Zhi Xu had rehearsed drawing in real VR time (creating red silky lines in a 3D void that he can step over and crawl under), I actually cannot tell whether he is lost – from all I gather he is comfortable moving. Similar to Vera Rosner (in and out of her wheelchair),

as an experienced dancer he probably has internalized the space and knows it by heart.



Figure 8. Two performers in rehearsal, wearing Oculus Quest2 headsets, J. Birringer (left) and Z. Xu (right). Artaud Theatre, London 2021 © DAP-Lab

I lack such virtuosity and feel encumbered by the device I have not yet adapted to my body image (for example the use of “hands” or controllers in VR – the virtual hands float and are not attached to any arms). The initial drawing of the parameter (“Guardian” space), within which the VR world lives, is of considerable interest; Oculus’ Guardian system of built-in sensors lets you outline a VR area in any room one likes, the device setting up a virtual grid to ensure that one stays in the “secure” area. Leaving the safe space (usually 3x3 meters) means a blue grid appears in your VR screens, breaking your illusion of the virtual world. The mis- and dislocations interest us, however, as do the limitations and impairments we learn to comprehend and circumvent. Authors like Sarah Thompson Bell describe “data objects” through data object relations, arguing that one needs to give up a humanist or anthropocentric perspective when dealing with digital computation and mappings in VR (Thompson). At the same time, I worry that I am not moving with data as much as I become aware of delusions as aggravations (even wearing the headset becomes very tiring and disconcerting after a while). And as potential health risks. In any workshop now, bringing the Oculus along, I spend time reading through the Health & Safety Warning Guide with our participants: it is a substantial list, supplied by the manufacturer in the tiniest possible print edition, a mini booklet of warnings.

The difference I want to emphasize is the tactile relation we can harvest from all this. In rehearsal wearing the Oculus Quest2 headsets and improvising together (as a duet) in real space, Zhi Xu and I decided to try being “tied” in a tactile way, connecting our wrists with the red silks that Zhi had brought with him from China, where such ribbons are a part of the *yangge* dance tradition.

My dance partner and I are not not-I's trying to make contact as data doubles (via data objects), but still enact human guardian roles (the pun is on Oculus's parameter drawing, the manufacturer's "limit" space in which VR and its controllers work). And they are not virtual. For me the guardian role is holding/helping my partner in space even as I cannot see them. I hold them with my red silk, and they hold me. I hold and whisper. I am safe as long as I am held and can move without needing to "see" the real floor, since I feel it, and I can sense the environs, the shifting weight, sensation, sound and gravity. My eyes may be seeing some virtual data-world or whatever; in experiments using the Google Tiltbrush, my controller becomes a paint brush and I paint, moving. While I paint I sense the touch on my wrist and skin.



Figure 9. Three performers in rehearsal (J. Birringer, Z. Xu, Y. Ishiguro) wearing Oculus Quest2 and NoÓculos, enguarded by red threads spun by Michèle Danjoux. Artaud Theatre, London 2021 © DAP-Lab

Very real, and subjectively affectively sensed. I move, without control. I could be moved by a carer, and yet feel as a partner to the carer, having my own volition. Karen Ann Donachie commented on my description of the work to the New Media Curating listserv, suggesting

I think one fascinating aspect of Johannes' hybrid and co-agentic performance research is the (very human) potential for co-materialisation, in- and out-of- immersive boundaries, VR worlds, tethered one to another across this multiplicity of place/space. In this regard I recognise the resistance to the term 'data-double' or 'data-object' —from what I can ascertain without seeing the piece, the 'data' merely accounts for a small facet (a minor narrative) of this multi-human, plurispatial experience, and one perhaps Johannes is attempting to mask out, or de-emphasize. (Donachie)

Recognizing Karen's illuminating response, I also owe gratitude to US-based artist-designers Avital Meshi and Treyden Chiaravalloti. They showed me video documentation of *InVISIBLE*, a duet they performed on a busy sidewalk outdoors in downtown Santa Cruz, California. In this surprising outdoor duet (Oculus Quest2 – soon to be called Meta Quest – needs Wifi and must be logged in via Facebook), Avital in the role of “architect” is drawing abstract curvy lines with the Google Tiltbrush, and Treyden in the role of “user” is dancing, following or picking up the drawing (in virtual space) as movement impetus. This precarious duet (the sidewalk is only a few feet away from cars driving past, and Treyden moves along shop windows, lampposts, benches) impelled me to figure out how relations in space – the guardian and guarded, space and spatial obstructions – can be felt, sensed, heard, intimated without being *seen*, if the performer is occluded from seeing the real but rather is immersed in the unreal (virtual). This has to be danced to be read, and if one cannot dance, one can perhaps imagine a cross-modal connection between movement and what is readable, collectively staged, felt and experienced. Each participant can attend to the movements that the tactile configuration and the gestures suggest. If one can imagine a sidewalk alongside a busy street, with shops on the other side exuding sounds of the kind we hear in shopping malls, one can move accordingly? Is it a caring and weight-caring, weight-bearing, space-guarding – hands drawn and “tied” in an affective, spatial-sentient, scent-aural – experience of wearers irrespective of their diverse abilities? And how would a different, less user-friendly barrio respond to two white VR performers jostling down the street?

In conclusion, the experience of wearing Danjoux's NoÓculos (with no VR illusions) felt like a revelation. I was eyeless but felt a smooth velvet texture caressing my facial skin. I cannot know what Xu saw and experienced, but we were exceeding, similar to the way in which Vera left her wheelchair to slide down and paint on the floor (with hands and feet) and work with Danjoux to thread visible and invisible lines across the space. We imagined the wearing of headgear as an interface action (not screenic), connecting inside somatic/internal experience with sensory relation to a space, outside “projection” of material experience (VR and imaginary VR as action). I imagined sensing Ariadne's thread against my neck, lower back, the back of my head. I felt, and then touched the threads with my fingers, to let them guide me on. The wearer may create their own 3D virtual data space experience, yet in movement improv we do not think data, we think movement – kinaesthetic and embodied affective experience. We feel alive, ready to roll.

We also stumble. Physicality in the work is always there. And this might be a humanist, feminist and queer argument: there is a relationship and physicality –gendered, racially/culturally and socially determined, always. There is age, and fingers feeling textile textures, velvet, wool, leather, thread. Materials also have different connotations for different creatures (Donna Haraway speaks of critters and we all love her tentacular thinking). Since we are talking relations (to data), I would like to keep the human or creaturely

involved at all times, across difference. I am not interested in “data object relations as a way of seeing ourselves as a variable that can be mapped, calculated and manipulated” (Thompson) – and why would I?

“Data” do not shape my way of moving. I continue to be physical, and I stumble, and eventually may lose my ability to move at all. Then I imagine to be somewhat closer to Donachie’s suggestion that “the data, the knowing of it and the very devices which capture it will inevitably shape the bodies in this work, as they move through these spaces; perhaps this can be harvested or captured, glitched, decanted or derailed in some way? Yes, derailing for sure. It seems a necessary and good idea, in order to gain a better sense of each of us having asymmetrical access to a hopefully shared environment.

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The Design and Performance Lab (DAP) was founded in 2004; filmic excerpts of many of our dance works/installations are available online. DAP-Lab’s website is here: <http://people.brunel.ac.uk/dap/>, with numerous links to publications, symposia and exhibitions that featured our innovations in wearable design created by fashion designer and co-director Michèle Danjoux. I wish to thank the performers, musicians and interface design collaborators (especially Doros Polydorou and Zhi Xu) on the *metakimosphere* series and the recent explorations of augmented reality/VR choreographies.

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