

Choreographic Phenomena: Negotiations Between Body, Material, and Site as Invisible Agencies

Andrea Peña

A Thesis
in the Department of
Design and Computation Arts

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Design

at Concordia University
Montréal, Québec, Canada

July 2023

© Andrea Peña

**CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

This is to certify that the thesis prepared

By: Andrea Peña

Entitled: Choreographic Phenomena: Negotiations Between Mind, Body and Site as
 Invisible Agencies

and submitted in partial fulfillment of the requirements for the degree of Master of Design that
complies with the regulations of the University and meets the accepted standards with respect to
originality and quality.

Signed by the final examining committee:

_____ Chair
Pippin Barr

_____ Examiner
Angelique Wilkie

_____ Examiner
Alice Jarry

_____ Supervisor
Christopher Salter

Approved by

_____ Graduate Program Director
Martin Racine

_____ Dean of Faculty
Annie Gérin

Date:

ABSTRACT FOR MASTER'S DEGREE

Choreographic Phenomena: Negotiations Between Body, Material, and Site as Invisible Agencies

Andrea Peña

This hybrid thesis situated between choreography and design investigates the relational dialogue between the body and the environment to reveal spatio-temporal choreographic parameters that operate in the way the body encounters the built environment. Part of the “corporeal turn” (Sheets Johnstone 2009) this research aims to consider the body as an agent and site of experience, to better understand *how it is affected, conditioned, and implicated in its relations and interactions with the built environment?* Through an embodied analysis the work proposes the active posture of *negotiation*, as a possible way of interacting with our environments that accounts for the potentials, possibilities and expressions of an individual body’s point of view. Choreography here is framed as an organization of movement in action (Forsythe, 2014) that occurs in the body, through the material medium across elements of time and space. Thus a choreographic conversation between body and environment, that goes beyond purposive and goal-oriented approaches (Herbert, 1999) embedded within material objects, to better understand the way we inhabit our bodies and how we are shaped by our environment. Aiming to subvert traditional choreographic practice while affirming the potential of practitioner situated knowledge, the research utilizes embodied practices through a hybrid assemblage of text-images-notes-analysis, that reveal the hidden parameters through four multi-sited bodily studies created between 2017-2019. The research centers the body as the site of analysis to explore four parameters of bodily negotiation as: *micro-macro scale, negative space, repetition and harmony*, which operate on the body through the environment’s characteristic constraints, and thus shape bodily experience and expression. If we were more aware of our bodily relationship to the built environment, and if we brought embodied awareness further to the forefront of our phenomenological experience, would this shift our embodied consciousness and the way we inhabit our bodies through the world?

ACKNOWLEDGEMENTS

I would like to express my heartfelt gratitude and appreciation to all those who have contributed to the completion of this hybrid research and the writing of this master's thesis. First and foremost, I extend my deepest thanks to my supervisor, Christopher Salter, for his unwavering rigor and invaluable insights throughout this multi-year journey. Salter's expertise, dedication and seminal experience in this field has been instrumental in shaping the comprehension of this complex and hybrid research and refining the development of my multifaceted practice as an academic and practitioner working between the fields of choreography and design.

Furthermore, I would like to acknowledge the support of my academic advisors, Angelique Willkie and Alice Jarry, for their guidance and support, which have played a significant role in shaping the multi-faceted dramaturgical structure and content of this non-traditional thesis.

I am immensely grateful to the collaborators across multiple mediums who generously shared their expertise, time, and resources, thereby enriching the scope and quality of this study. Their constructive feedback and thoughtful suggestions have been integral to the development and maturation of my ideas. Thank you to Bobby Leon and Cyrus Khalatbari. I am indebted to the co-participants of this study, whose willingness to engage in discussions and provide insights has been pivotal in shaping the conceptual foundation of this research: Francois, Richard, KT Yau HeiHei, Erin O'Loughlin, Laura Toma, Kevin Delaney, Márcio Vinícius Paulino Silveira, and Clara Json Borg. As well a great appreciation to the institutions that have supported this research work: FRQSC, AADK Center in Spain and Hong Kong International Choreography Festival. Their unwavering belief in my abilities has been my driving force.

In conclusion, the successful completion of this alternative master's thesis would not have been possible without the collective efforts and support of these individuals. Their contributions have not only enriched the academic content but have also significantly enhanced my personal and professional growth challenging the boundaries between the different files of choreography and design. I am truly grateful for their presence in my academic life and the lasting impact they have made.

CONTENTS

Prelude: Narrative	6
Introduction	8
A few base key terms	11
Somatic postures: specifying the embodied point of view	14
Context: why?	15
The four case studies	16
Crafting a hybrid practice	17
Framing the dramaturgy of the thesis structure	18
Study 1	21
Body and chair: choreographies of constraint	21
Negotiations with a chair	22
The other “agent”: the chair	26
Constraints within negotiations	26
Constraints at various scales	28
Negotiation at various scales	30
The environment has been left blank	32
Study 2.	33
Space: A Property of an object	36
Spatial properties as micro and macro space?	38
Micro and macro negative space	40
If we negotiate space: what is the sensation of space?	41
Action space: as irrelation, possibility and construction	44
A meshwork of actions: a space topology	45
The co-constructed nature of space	47
Study 3:	48
Repetition as habit	48
Returning to a “traditional choreographic approach”	52
Repetition at Various Scales	50
Narrative continued	52
An evolution towards soma material harmony	52
Framing the approach	53
Study 4:	55
Harmonies of scale, space and repetition	56
The workshop	59
Conclusion	63
The parameters of negotiation as revealed in each study	64
Negotiation as the way bodies could inhabit the world	66
Future implications	67
Bibliography	68

LIST OF FIGURES

Figure 1. Thesis Final Project	1
Figure 2. Body and Chair Choreographies	14
Figure 3: Digital Chair Choreographies	22
Figure 4. Digital Visualization + Inflatables of Space.	27
Figure 5. Negative Space of a Printer and a Room	32
Figure 6. Visualization of a Room's Micro and Macro Negative Space	33
Figure 7. Performers Testing the Capacity of an Inflatable Object to Receive Their Weight	35
Figure 8. Performer Exploring the Weight of Air	35
Figure 9. X-L Inflatables Created to Visualize Topography of Space.	39
Figure 10. Performers Exploring the Action of Walking Through Repetition	41
Figure 11. Movement Workshop Held in the Construction "Forest"	48
Figure 12 Workshop Participants Exploring the Negative Space of the Structure	52

PRELUDE: NARRATIVE

(video: [link](#))

I am in Murcia, Spain, in 40-degree heat in direct sunlight, witnessing a majestic performance by eight men building a bullfighting arena. Driving in circles around an immense area of sand in the middle of a quaint town plaza, a wide-open 50ft truck carries hundreds of diverse steel pieces. The men park the truck and begin unloading its contents. Among the contents are large 2m x 2m square sheets of steel—immensely heavy pieces leaned across their shoulders. As the first worker balances one large steel plate on his shoulder, he bends sideways slightly to support the weight of the square. He cups and holds the bottom edge with one hand and supports the frontal one with the other to balance the sheet from falling, never able to shift positions due to the demand of the object. I see him carry this object from the truck to the assembly circle; then a second worker follows, and a third, and a fourth, and so on, until these eight men are in pure synchronous form, moving from point a. (the truck) to point b. (the assembly circle).

Curiously, all eight men embody the same posture as the first: angled body, plate resting on shoulder, bottom hand cupping under, top hand balancing the front edge as if no other position would allow the bodies to carry this object from one place to the other. Their bodies perform the same choreography. They seem shaped by the demands of the object and the execution of the task at hand. Once these square steel pieces are off loaded, they move on to the next piece, and a similar pattern of bodily shape emerges — based on style, shape, form, and function — carefully placed in a pattern dictating assembly order. All sorts of particular positions emerge specific to each object being carried— metal sheets, long beams, square rods, triangular forms.

A few hours later, the men stand on the interior side of the built bleachers and with a strong and playful footwork they seal the plates previously carried, pressing them down towards the floor. As they press their foot onto the side walls, the plates slam down and seal the walls. Two men in a synchronous improvisation move across the circular arena, engaging with this weighted footwork, sealing all walls in a vertical manner until they complete the circle. My gaze follows them in an upward and downward rhythm as they use this vertical force. Remove the structures and this would clearly be a dance.

A CHOREOGRAPHY OF THE BODY AND ITS RELATION TO THE ENVIRONMENT: A CHOREOGRAPHY OF DIALOGUE

This thesis investigates the relational dialogue between body and environment to reveal spatio-temporal choreographic parameters that operate in the way the body encounters the built environment. Through a reflective (Schön, 1991) and hybrid approach between a choreographic and design practice, this study presents four case studies that each alters bodily-conversations with the built environment to extract parameters that explore alternative possibilities of embodiment in our quotidian experience. This thesis aims thus to uncover a “two-way dependance of human bodies and things” (Hodder, 2012, p. 30), as in the opening observation of the men building the bullfighting arena, their bodies are perpetually in dialogue with the proposed compositional attributes of the material properties of the arena. The body, as an agent of experience (Shusterman, 2012), reacts, engages, and responds to physical prompts in the compositional propositions (form and function) of the environment. Therefore, it is guided or even constrained by these compositional environment-based parameters. If we consider the body as continuously in dialogue with the environment, especially its ways of corporally inhabiting the world, what are the bodily dialogues that operate?

Defining this idea of dialogue as a *conversation or exchange between two agents* (the body and a situated environment in this case), *being in dialogue* implies exchange where—both agents can behave through the action of reception and reaction. The men carrying large plates adapt their bodily behaviors to the information given by the object’s formal qualities, reacting to these affordances (with a formal bodily proposition) to pursue a task. *Through the attributes of the objects these bodies were forced to: lean the steel plates on one shoulder, cup and hold the bottom edge with one hand and support the frontal edge with the other, balance the sheet from falling—unable to shift positions due to the demand of the object.* These dialogues are thus largely suggested by the object and expressed by the body, as they are mutually entangled (Hodder, 2012) with each other.

Yet in these entangled interactions, like that of the body’s dialogue with square steel plates, *does the material environment reciprocate at the same capacity as the body? Is the environment in equal interaction with the body or does it define and constrain it in new ways?*

The body shifted its postural engagement¹ to fit the object proportions in order to complete a task. *Is this “fitting” dialogue an act of bodily conformity? Is the body conformed to the constraints and demands from a fixed and unresponsive environment? In its agility, the body has the capacity to conform to many constraints, but what if the body could consider an interaction with the environment that did not require conformity?*

A choreographic conversation between body and environment, through purposive and goal-oriented approaches (Herbert, 1999) embedded within material objects, can shape the way we inhabit our bodies and so affects our possibilities of bodily expression. Recognizing the body as the center of experience, I explore what occurs in the body-environment dialogue. In other words, what parameters operate onto the body through the environment’s propositions that shape action through unseen movement behaviors?

This conditioning on the body substantially reflects a need for further consideration, for it is not only how the body reacts and responds, but also how it is affected and shaped through accumulations of interactions across time. In a hybrid choreographic and design approach, I propose the core research question: ***considering the body as an agent of experience, how is it affected, conditioned, and implicated in its relations and interactions with the built environment?***

This hybrid research-creation examines the research question through four situated and artificially created case studies, as seen in Figure 1 below. Created between 2017 and 2019, these constitute *choreographically designed multi-sited* situations that challenge and place the body in dialogue with alternative parameters of the built environment, across multiple sites and cultural contexts: a *studio and Arsenal Gallery in Montreal*, a *performance in Tokyo*, and a *gallery and bullfighting arena in Spain*. These situations aim to decode patterns and techniques of bodily engagement that operate across relational, temporal, spatial and material notions of interaction specific to each *choreographically designed* situation.

¹ Physical and active prompts on behalf of the body, meaning a position, an approach, or a way of being in the environment.

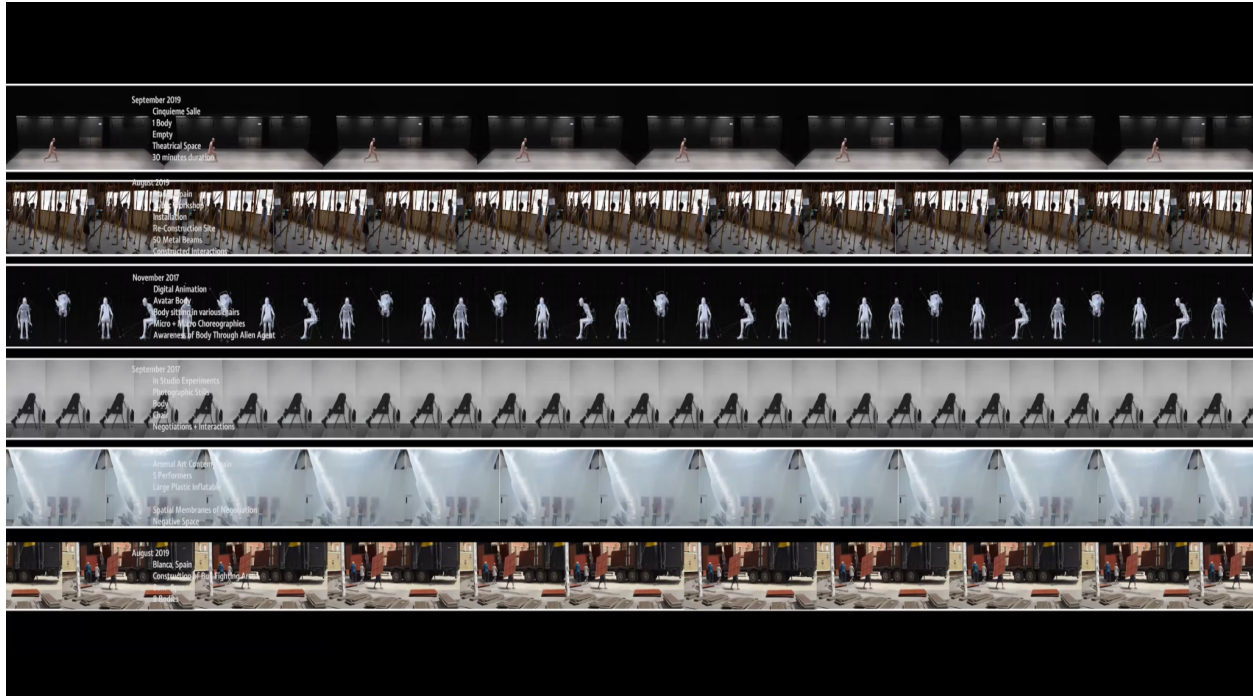


Figure 1. Thesis Final Project (all studies exposed in a multi-layered durational video)

Observing movement-based bodily behavior in each designed situation aims to propose the choreographic posture of *bodily negotiation* as a tool that brings awareness to our ability to navigate and interpret the surrounding environment through our bodies. The term choreographic *negotiation* here signifies an approach that accounts for the potential of expressive possibilities for the body within dynamic frameworks of how we experience the built environment. In other words, *how does negotiation as a choreographic notion serve as a tool to understand and bring agency to the body in its interactions with everyday environments? What bodily parameters allow for bodily negotiation?*

Finally, this thesis is seeded in hybrid practice, where the internal logic of engaging between theory and action is anchored in dramaturgical approaches to the ways in which I develop choreographic works. It aspires to be rigorous and intuitive, organic, and systematic, and supports the reader with structural indicators to ground the embodied research in a systematic and playful path of discovery. This text weaves several styles of writing (poetic, philosophical, anecdotal, and theoretical) to replicate the complexity of the research-creation process.

A few base key terms

Returning to “**negotiation**” as a term, it implies a compromise to satisfy varying interests; a constraint one must compromise on and respond to. The idea of resistance in negotiation denotes two perspectives trying to express equally. From a choreographic perspective, negotiation exists in my practice as a performer’s agency towards pre-determined choreographic propositions, constraints, and parameters by the choreographer. As a choreographer, I use negotiation as a dialogue with something—not only as an exchange between two entities (e.g., men carrying steel plates) but also more specifically as a *resistance*, where each can to propose its own force and point of view onto the other. Applied to the body and environment, negotiation within constraints is a way of engaging between: (1) the external propositions from the environment onto the body, and (2) the body’s intent (site of the body, i.e., the person through their body) beyond what is proposed by the environment as interaction.

If we imagine an *interaction* between two people, as a discussion, each receives and reacts to the opinions and thoughts of the other. In this thesis, *interaction*² means receiving and acting in response to a proposition and *negotiation*³ signifies challenging a proposition with one’s point of view. I suggest that thinking in terms of negotiation in the body-environment relationship means making space for the possibility of agency with the body’s own intention, beyond an action-reaction dynamic.

As negotiation accounts for an active process between subject and environment, the notion of **choreography** finds its place within this subject-object dialogue, as dance has long been preoccupied with questions of how bodies shape and are shaped by environmental conditions. Yet, current embodied design methodologies do not utilize choreographic frameworks and knowledge as practices (Poutanen, Hoppu, Ylirisku, 2017) to comprehend everyday movement interactions. Choreography, as a field of movement knowledge, thus has the potential to serve as an observational, epistemological, and methodological tool for understanding the organization of body-environment interactions and their implications.

² *Interaction* within the scope of this thesis, does not refer to interactive media or interaction design, instead it is situated in choreographic contexts, within the scope of bodily performances. An occasion of communication when two or more people or things communicate with or react to each other.

³ If we imagine a *negotiation* between two persons, say in bargaining to reduce the cost of a product, these two persons are attempting to propose their own point of view (intention) in relation to how much this purse would cost.

If we remove choreography from its traditional role in performance (Butterworth, Wildschut, 2009), as that which occurs on stage and is to be acted upon by trained dancers (i.e., ballet, contemporary jazz, or hip hop), we can then frame it as quotidian movement, as with the men moving metal steel plates. These quotidian series of movements and actions can more generally be seen as the organization of the body in motion, where choreography is inscribed in the action(s) of one or many bodies across material, spatial, or temporal parameters. Choreography can thus be understood as “autonomous expressions that reside[s]” with and “without the body” ([Forsythe] Shaw, 2014, p. 96), outside of traditional notions of ‘performance and dance’.

I define choreographic knowledge and practice in the experience of the body more specifically through two postural approaches. I use the term “postural” to denote varying approaches from which to behave; approaches that account for intuition and subjective expression within the organization of a body. These two postural approaches are: (1) the physical organization and action of the body, and (2) an approach towards a means of self-expression. **Organization of action** ([Forsythe] Shaw, 2014, p. 118) signifies a spatio-temporal logic specific to how the body is structured through movement, while **means of self-expression** denotes the outcome of a bodily organization allowing a personal point of view.

Organizational techniques are no longer simply encountered in the training of an athletic body (educating it through technical rigor); technical training is recognized as embedded within the agency of our build environment (i.e., the laborious choreography in the worker’s dialogue with steel objects). Mauss (1979) presents the “techniques du corps”— **techniques of the body**, which, through engagements with form and function, dictate how the body is physically situated and thus constitute our human subjectivity and intersubjective domains of experience.

The dexterity developed by the body to carry steel plates as labor practices demonstrates techniques of the body as patterns of somatic organization that must be embodied to carry out the purposive nature of the object. (*Plate leaning on shoulder, right bottom hand cupping metal sheet, neck bent sideways, right hand balancing the sheet forward.*) This organization of a body in movement frames the parameters of possibility for a bodily and individual point of view. Laban (1947) presents the idea of **eukineti c expression**, as the study of “temporal and dynamic occurrences within the rendering of expression” (Maletic, 1987, p. 98), which extends beyond utilitarian purposes dictated by a body’s organization in space, towards an understanding of

bodily dynamics that allow for more individuality. Therefore, bodily organization and expression are postures and techniques that go hand in hand in choreographic negotiation.

Throughout the thesis, I deconstruct my own choreographic knowledge and practice (knowledge embodied and learned through 25+ years of physical experience) as part of this dialogue, to unpack my personal choreographic thinking towards observing bodily and environment interactions as negotiations. Using movement practitioner knowledge as someone trained to defy space and time possibilities through bodily engagements, one becomes an ontological site of being offering new research observations within embodied methodologies (Ulmer, 2015, p. 39). Here, choreography will be a lens to observe both what occurs in the body and what is embedded in the formal specificity of materiality, function and intentionality of the situated built environment.

While focused on the body's expression via its environment, I do not solely aim to provide a perspective on somatic awareness but acknowledge "humans and nonhumans on the same ontological footing" (Salter, 2015, p. 9). A dialogue between human and non-human agents that reveals co-produced manifestations in the porosity between the somatic and the environment. Here, "environment" means external, unchanging properties within our built landscape that form material-based and dynamic constraints. Constraints as the artificial things or artifacts (Hodder, 2012) composing the situated environment and the body's experiences (Crossley, 1996) created through designerly propositions. Thus fulfilling the engagement proposed by the material world involves attuning to the "purpose or goal, the character of the artifact and the environment in which the artifact performs" (Herbert, 1996, p. 5). These parameters are utilitarian. Returning to the choreography of labor in Spain, the steel objects in a sand dune and bull fighting arena have an intended purpose and constitute a goal driven built environment. Their purpose, qualities, and thus what Shiffer (1999) calls *performance characteristics* create prompts for the body to inhabit; thus the situated environments I am observing are material landscapes made of interaction artifacts. Shiffer signified these performance characteristics as the "material characteristics that enable certain tasks to be fulfilled" (Hodder, 2012, p. 55). These artifacts act as co-producers of bodily movement and action, where a leveling between body and its material counterpart of experience makes space to acknowledge their interdependence as co-producers of experience (Hodder, 2012). The situated artificially-built environment is thus a co-agent of the somatic experience and behaves as an

implicated choreographic actor (Latour, 1990) possessing its own prescriptions independently of the body's intent.

To approach the notion of **body** from a clear perspective, situating it as the container for experience and action, this thesis is centered around embodiment theories. Supporting this bodily-centric perspective, philosopher Richard Shusterman discusses *somaesthetics*—a recognition of the “body as a site of active perception and subjectivity,” where body or *soma* is the living sentient, purposive body—the medium for all aesthetic and experience-based perception (2012, p. 3).

Soma, from the Greek word *sôma* (body), “designat[ing] embodiment, is both the sentient lived site of mind and body, yet without the problematic social or cultural associations of the term body” (Shusterman, 2012, p. 5). Here, I use *somatic*, as presented by Shusterman (2012), to specifically frame *the body* as the site of self; as the physical, conscious, sentient, and biological container. Thus, the work here engages with *somatic* values, recognizing the body as a site of physical existence, in this case through the two choreographic parameters of bodily techniques of organization (Mauss, 1979) and Laban's *eukinetik* expression ([Laban, 1947] Maletic, 1987).

Importantly, I do not refer to body solely as a socio-cultural term that carries with it a reductionist history of “body image,” the “perfect body,” the “idealized body,” singular “body.” Here, *body* refers to the corporality of site: the body as *soma*, location of sensation, appreciation and experience, in which the body becomes a methodological starting point rather than solely an object of study (Csordas, 2009, p. 137). The *body* is recognized as a site of knowing through action and perception (Polanyi, 1966, p. 64). For simplicity and consistency, I use *body* when referring to the *soma* as the site of appreciation, and *somatic* to denote the practice of centering the body as a complex location of embodied experience.

Somatic postures: specifying the embodied point of view

In taking “the material body seriously as a valuable dimension of human experience and knowledge,” (Shusterman, 2012, p. 3) I introduce three somatic frames of observation as a means of active embodied and perceptual engagement: *quotidian bodies*, *trained bodies*, and *my own practitioner body*. These somatic frames are intended to situate the body in a history of embodied practice, framing the *a priori* knowledge of movement practices and are neither intended to be

exclusionary to other bodies or capacities, nor to create boundaries and division between bodies. **Quotidian** refers to a body not professionally trained in movement practices (i.e., choreographic understandings of space, time, and a highly physical awareness). Its physical experience is rooted in daily engagements and inhabitations with the situated environment. **Trained** signifies a high awareness of corporeality and movement through extensive training practices, which is by nature a quotidian body. Therefore, dance practitioners are “knowing beings within dynamic systems of movement,” embodied beings offering a somatic approach or tacit knowledge for embodied methodologies (Ulmer, 2015, p. 39). My **choreographic and research body** represents a trained dance practitioner, choreographer-thinker, and design researcher body. This personal perspective is significant. The practice is informed by histories of personally embedded kinetic and cognitive considerations (Ulmer, 2015, p. 40); these form a thinking and communicating bodily practice studying “the social world from the perspective of the interacting individual” (Denzin, 1997, p. xv).

Context: why?

This research-creation based project explores larger questions on how the body reacts, engages, and responds to our environment. These questions are rooted in the larger “corporeal turn” (Sheets Johnstone 2009): an epistemological shift emphasizing renewed corporal and embodied awareness. The affect and conditioning of proposed built environments on the body substantially reflects a need for further consideration, where it is not only how the body reacts and responds, but how it is affected and shaped through interaction and how these interactions shape the environment.

Moreover, choreographic possibility as a position is important as the body’s role in future notions of technology, human life, daily experience, self, and image continues to face significant developments. Theoretical and practice-based shifts towards notions of embodiment with the environment, are seen across disciplines of industrial design, user experience design, interaction design, architecture, urban planning, and various others—practices created for embodied engagements and interactions (Flach, Stappers, Voorhorst 2017).

Evolutionary developments across various fields bring body consciousness into practices, propositions, experiences, and designs, yet are based on the notion of body in *interaction* with its environment. *Where can we use somatic knowledge to prepare and account for new capacities*

for interaction (or I would add negotiation) and living in the world (Shusterman, 2023, p. 11)?

These fields use choreography as the knowledge and practice of the moving body, yet across such implementations neglected the essence of choreographic thinking as a form of somatic knowledge, outside of a superficial understanding of the moving body. This anthropology of human movement raises new research questions and searches for new resources, bringing the “sociocultural, linguistic, visual, and cognitive anthropologies into dialogue with each other” (Farnell, 1999, p. 342). Through this embodied turn we return historical and anthropological forms of being in our bodies, which are constantly performed, and are perceived as neutral action, yet they are complex actions interwoven within relationships between culture and material environments.

The four case studies

The case studies presented below derive from four experiments conducted between 2017-2019 in different sites in Canada and abroad. They offer lenses to observe choreographic parameters situated in the organizational relationship between body and environment revealed in each study. Such relationships involve what the artist Madeline Gins calls an “organism-person-environment that consists of sites and would-be sites” (Gins, 2002, p. 34), models operating as techniques on bodies through each designed situation. The focus is not particularly on the artistic creations; it is rather an exploration of these studies as methodological tools. In other words, the four situations operate as strategic interventions (Rietveld, 2017, p. 929) to engage with corporal and material complexity at various scales and across multiple material and spatial frameworks. Multi-sited situations in this case are studies “designed around chains, paths, threads, conjunctions and juxtapositions of locations” whereby “the core of the study may itself not be known before but emerges based on the links and associations assembled” ([Marcus,] Salter, 2015, p.12). Conceptually, this work extracts the following *techniques of the body* within a negotiation through each of these sites: (1) **Negotiation and bodily scale** ([Archaeologies of Movement](#), September 2017); (2) **Negotiation and space** ([Spatial Geographies](#), March 2018); (3) **Negotiation and repetition** ([Bodies of Repetition](#), June 2018) (4) **Negotiation and harmony** ([Construction Forest](#), August 2018).

The four works were carried out chronologically for 13 months, permitting an organic evolution and combination of parameters, and the development of analytical observations that builds from one project to the next. Embodied knowledge, accumulated through each project, nurtures the situation of the following project. These studies thus reveal an epistemology of methods arising sequentially from September 2017 to August 2018.

Crafting a hybrid practice

Contrary to a more traditional anthropological or ethnographic approach, focused on cultural conceptions of the body (Halliburton, 2022) and environment through observation, the multiple sites have been imagined and carefully designed to challenge and destabilize ingrained patterns of movement interaction, and to bring awareness to normative “bodily situations” (Simonsen, 2007, p. 173). Each site places the body under parameters requiring negotiation; an approach focused on both body and materiality and the interconnected effect of these two in an environmental situation, with the goal to unravel how bodily actions are usually taken for granted through our tacit integration in our experience.

If the body were simply observed, as in the bullfighting construction site, we would be limited in our analysis to the always—already existing habits of interaction and constraints that are pre-determined ([Bourdieu, 1977, 1990] Simonsen, 2007) through quotidian interaction. The “how” of the negotiation was not developed (i.e., the body’s in situ approach), but rather the “what” through choreographic interventions made to propel the body beyond its own comfort zone and habitual bodily patterns. This process was guided not via choreographic tasks directly explored onto the body, but through choreographic potentials explored in a material environment, directly situating my choreographic and design practice as “a process which is generated through ethnography itself, with the researcher and researched in tandem” (Falzon, 2009, p. 18).

As a designer-choreographer working with material, sculptural, and digital mediums, I design situations modulating environmental constraints. These situations develop from both a choreographic and design practice that intuitively combines material and corporal awareness as two agents negotiating in dialogue such that they may “transform a dance from one manifestation (the performance on stage) into an array of other possibilities” ([Forsythe] Shaw, 2014, p. 118). *These situations are then simultaneously designed to explore how the environmental situation*

may affect the body and vice versa: how the body might be challenged by this altered environment.

Framing the dramaturgy of the thesis structure

Due to the hybrid approach in this thesis, I propose a dramaturgical framework that lays out the **structural organization**, **conceptual ambitions**, and **choreographic writing practice**. This framework is as much part of the research as the studies themselves; it attempts to develop methods accounting for the complexity of intra-relations of the body via a written theoretical practice. The analysis of this work is one of intra-analysis, moving continuously forward and backward to create feedback loops that progress the research. My goal is to support the reading through the ways in which this work weaves: embodied anecdotes, theoretical framing, and conceptual analysis to make sense of the body of work.

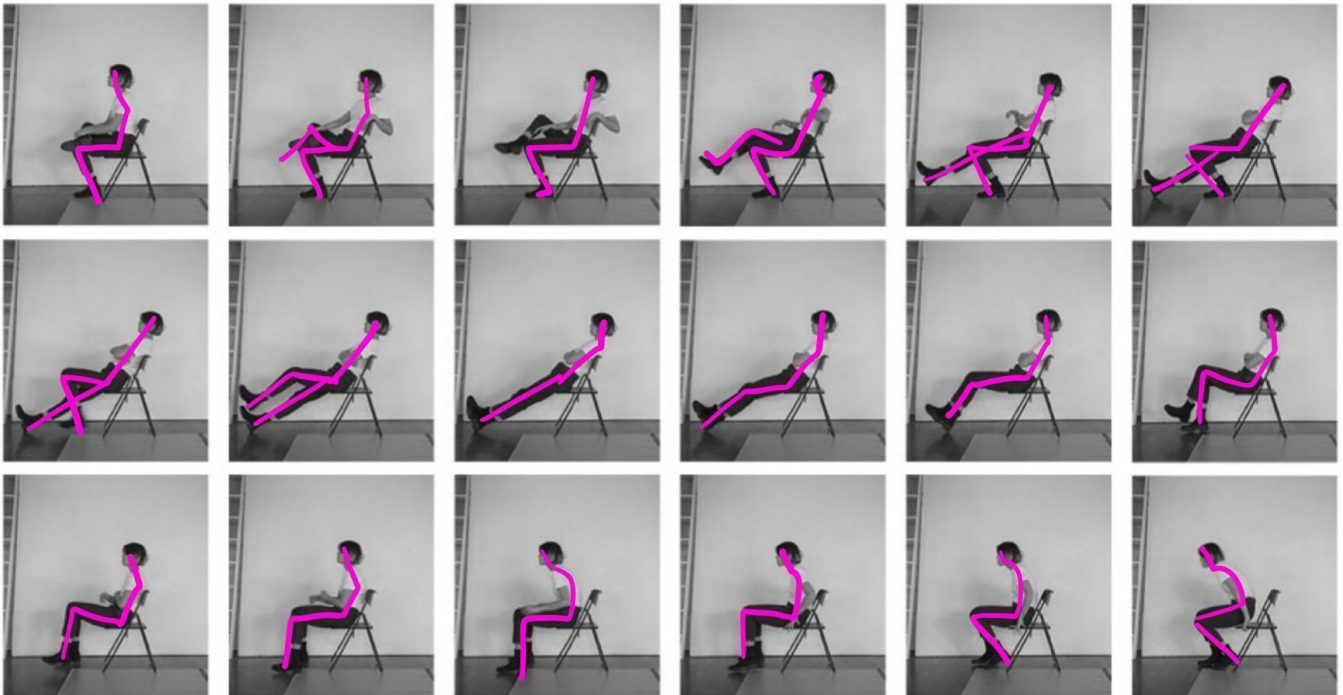
Structurally, each chapter approaches the analysis from three angles (body, concept, observation) central to my reflections as choreographer and designer with each practice and its hybrid form. These three angles include: (1) **Body**: somatic anecdotes (body-based narrative accounts of all situations); (2) **Concepts**: a conceptual and theoretical grounding framing the narrative (how the research is applied); and (3) **Observation**: analysis of negotiations (notions or methodologies that emerge). These three voices weave the temporal and circular process of making sense of “design” situations through a choreographic lens. The chapters end by showing where this has led, a culminating link to the following research question addressed in the next study.

Conceptually, I aim to make the invisible visible by attempting to linguistically frame embodied parameters and bodily negotiations to question bodily conformity and constraint as a recursive dialogue. Here, negotiation means a physical *and* cognitive posture, understanding it is not the creations themselves that hold truth or knowledge, but the analysis and dialogue that highlight the operating embodied principles revealed in each creation. Embodiment does not only exist within the works themselves, but in the intuitive process of embodied analysis through writing about what each of the works employs, presents, and develops.

What I call a choreographic *writing practice is what links the structural and conceptual parts*. It centers around bodily experience, attempting to reveal the nuanced embodied knowledge incarnated in the practitioner’s kinetic and cognitive considerations (Bennerman,

2010). This research contains choreographic *and* design considerations that attempt to triangulate a body-centered writing within a conceptual approach to guide an intra-analysis of each work that considers the complexity of body and environment. This process tries to address several questions: *What did I do? Why? How? How did I make choices? What was revealed?* In taking a dramaturgical approach the thesis reveals how negotiation as a choreographic notion may be a tool for understanding and bringing agency to the body in its interactions with everyday environments, decoding and identifying which bodily parameters allow for bodily negotiation. Thus, each situated study, based on choreographic and designerly practice, aims to reveal an account of possible parameters of negotiation through four choreographic and environmental properties of **scale, space, repetition** and **harmony**.

THE STUDIES



STUDY 1: NEGOTIATION AT VARIOUS SCALES

Figure 2. Body and Chair Choreographies. Digital Photography. 2017. Montréal, Québec.

Question: What are bodily negotiations with a chair object?

Material Agents: plastic foldable chair, video camera

Somatic Agents: trained performer + choreographer + design practitioner

Parameters: sitting postures

Site: Mile End studio

Year: 2017

Body and chair: choreographies of constraint

My body lies square against the formal materiality of a black foldable chair. I have taken a very ergonomically correct posture: back straight at 90 degrees; hips far back on the seat of the chair, both feet placed flat on the ground, gaze forward. The type of posture

that if you googled: “How to sit on a chair properly?” you would see a pictogram of an almost industrialized avatar-like body, sitting perfectly on a drawn rectangular chair. I embody an “ergonomic” action of sitting. I respect the intentions proposed by the object. As I sit here, I begin to question what else I may do with this object. How else can I sit? How else can I interact? I start by exploring sitting postures I remember, that I have recognized in images, or in the idea of what we consider sitting. I sit cross-legged, crossing the right leg over the left, the left over the right. I slouch, curving my body forwards, resting my elbows on my knees as my back bends over. I lean back onto the chair, move my pelvis to the edge of the seat and extend my legs straight, crossing one ankle over the other. I go through a few of these postures and begin to get irritated with the limited expressions of sitting my body remembers, or those it has considered as “normal.” So, I decide to allow my body to explore further, beyond any ways I have sat on a foldable chair before. I continue with my experiment. I start by kneeling on the seat of the chair, first with one leg folded up into my chest, then with both. I face the video camera (recording my experiment) and sit perpendicularly to the chair, resting my side ribs on its back, yet this is not enough—it still feels habitual. I decide to face the chair to see what else I can do with this object, what interactions or perhaps negotiations come from this. As if I were riding a pony, I straddle the chair, holding the back as its reins, testing the capacity of the object to hold and support my weight in a position that is not purposive to its design. Facing the chair, I decide to flip my body, put my upper torso and the weight of my chest on the back of the chair. Why not? Why does my back have to go on the back of the chair? Why not my front body? I slouch over the chair, almost like a string spaghetti over the back, (afraid that it’s going to fall over) allowing with time the weight of gravity to slide my body downwards towards the floor and in a way fail in this experimented position of “sitting with the front body.” I recover this failed action by then placing my two legs over the back of the chair, sitting in a sort of V position on top of the seat of the chair. My abs are really working now; they must be fully engaged to sit in this awkward position. Is it awkward though? Or is it playful? Finally with my legs resting on the back of this object I realize I can drop my torso and allow it to collapse over the seat bending and folding backwards onto the front legs of the object, seeing the world upside-down. I had to trust the chair to hold me up. In this upside down position, I

noticed for the first time a sense of curious bodily play. Am I seeing the chair differently? Or am I perceiving my possibilities differently? Is it offering new possibilities? Why have I never thought of sitting on a chair like this? Why haven't I let my body go there before? I notice I am actually having fun.

Negotiations with a chair

Examining the idea of a choreographic negotiation of body and environment, beyond that of a choreographic practice (in a studio, with performative bodies in space), I start small. I narrow my observation onto a mundane, utilitarian design object: an ordinary chair. The first question I ask is even simpler: how do I sit in a chair? What is the negotiation process between my body and this object? Through this somatic research, if choreographic negotiation is the possibility of bodily agency in interaction with an object, simply observing interactivity and its limitations seems the most transparent starting point.

A chair is a seminal design object with a history of re-design in its imagined potentials towards interactivity, comfort, or utility. As an everyday object, it becomes highly evident to our bodily experience. The chair is an invitation of action to the body, an artifact with an underlying choreographic proposition in its use. By questioning and reconsidering the chair not simply as an artifact but as a choreographic device, I try to understand how it guides the gestural experience of human bodies in a reciprocal material exchange. I chose this artifact as the starting point of this research, not for the sake of simplicity through prevalence, but rather for the purposes of familiarity of the body's engagement with this object. Industrial designer Peter Opsvik (2009) highlights the enormous repertoire of sitting postures the human body can command. "Why did standardization committees around the world choose a single sitting posture as the starting point for their standards?" (19). As Opsvik claims, sitting on a chair has become one of the most dominating parts of our everyday lives, where sitting is historically rooted within industrialized ideologies of efficiency, standardization, and functionality (2009, p. 25).

In this study, however, the chair was not used for the choreographic analysis towards a re-design of its ergonomic or functional characteristics, but as a reflective method examining /exploring the behavior of a performative body relative to a quotidian object we negotiate with every day.

Movement analysis: an object's characteristics

The starting point of the study is based on the use of movement analysis to analyze the visual organization of how the human body negotiates with the chair-object. I draw on the theoretical work dancer and theorist Rudolf von Laban, who described movement analysis as the study of human movement through three characteristics: action (what movement is done), space (where the movement takes place), and effort (how and to what qualitative level) (Susan S.W. & Dils, A. 2008). Movement analysis, as a method of study and practice, is a means to recognize and engage the significance of the research body, in this case my performative and designerly body—a movement practitioner with 25+ years of dance training—as the somatic instrument of qualitative experience and research.

The opening section of this chapter describes a habitual or quotidian engagement my body affords to the performance characteristics (Shiffer, 1999) proposed by the object. *A rigid plastic back with a gentle concave curve to welcome the back body. A rigid plastic seat, also with a gentle concave circle carved out of its base to make space for the pelvis. Thin metal rod legs supporting the seat in a U shape against the ground, at the back and the front of the chair, limiting the directionality of my legs on the ground.* Yet these fixed characteristics embedded in the performance characteristics of the chair do not necessarily support my physical intentionality with the object. In the form, materiality and functionality of the object, they function as the “capabilities, skills, or competences that material culture and people must have to perform their functions” (Hoddler, 2015, p. 54). These characteristics are thus part of the bodily memory and awareness of habitual experience towards an object and a conformity within the pre-disposed definitions of correct “chair behavior.” In this case, such performance characteristics include Rigid / Molded / Plastic / Curved metal / Foldable (as for packing efficiency) / 2.5 ft tall, 2 ft wide.

These characteristics have also shaped the pre-disposed form of engagements my body is aware of in the multiple possible interactions with a chair—a way of interacting with objects that is composed through accumulation, by means of gradual and almost evolutionary techniques of the body anchored in our experiences with the environment across time (Mauss, 1979). In other words, such gestural body forms become choreographic techniques or “*techniques du corps*” (Mauss 1979, p. 343). They constitute our subjectivity and possible domains of experience, as

embedded relationships between the body and material medium of the chair. This is similar to how my body began to engage with the chair-object through what it perceived as normative sitting postures suggested by the characteristics of the chair object. Such techniques are so replicable in the body's experience of the quotidian day to day that they are mastered through habit and embodied in physical and cognitive memory (Shusterman, 2012) in what we perceive is possible or not with an object. These techniques are therefore no longer simply encountered in the training of an athletic body—educating the body through technical rigor. Instead, they are traditional or normative systems of bodily action shaping or training the intentionality (Gibson 1979, p. 218-19) in how we engage with these objects.

However, as my body began to allow room for playful engagement, the more rigorous or purposeful techniques shifted and or failed in the experiment as my body became frustrated with the limitations of the object. As the purposive nature of sitting was challenged, my body no longer had to think in terms of purpose or goal. It began to allow the possibility of expression and play.

From the movement practitioner's perspective: fun or postural normativity?

As my body began to shift and find playful negotiations with the object (i.e., attempting to propose its own point of view in the gestures of sitting), a sense of encountering a habitual object as if it was the first time allowed for the experience of fun and the emergence of a form of agency. This aperture towards the idea and experience of fun within the simple and yet complexified action of sitting through this experiment opened a preliminary dialogue of a choreographic negotiation. The arrival of fun as a posture in my body invited a reflection of fun as surprise, novelty, play, expression, as a dimension that avails the possibility of the body differently. The notion of fun reveals an opposition, not as a fixed binary, yet as the other extent of the spectrum of bodily expression. If the body was surprised by the activation of fun, what is the posture it normatively inhabits? What is the body's relationship to this idea of a corporal place of play?

Through play, my body became aware of the possibility of being *in negotiation* with the object. Bodily play and exploration, as non-normative techniques of the body rooted in movement practices, can extend an interaction with an object beyond quotidian and normative bodily practices. This experimentation and improvisation, rooted in somatic awareness and

choreographic practice, becomes a method for the body to engage *through* negotiation allowing it to express its own agency, in this case with the chair. This opened new postural engagements for different possibilities of sitting on the object that fracture bodily pattern and efficiency. My body was no longer limited to performing the ergonomic sitting-postures normally considered efficient, or the habituated ones ingrained in the physical memory of the performance properties of a chair. My body began negotiating and proposing the chair postures *it* considers appropriate, interesting, and playful, allowing itself to engage with bodily expression. This somatic agency, as the ability to express my bodily point of view, is informed here by methods of play, experimentation, and improvisation.

The expression referenced here is a subtle shift grounded on the corporal knowledge and training I have developed as a movement practitioner in 30 years and encompasses spectrums of expression, from the most minimal and subconscious to a loud and conscious bodily rupture. A bodily knowing that already embodies a practice of negotiation therefore has the instinct to challenge its environment and be in “movement improvisation” with what is proposed by the chair. As the body constantly dialogues with its environment, the specificity of the expressive shift that aims to focus on awareness, choice, and situatedness, is not one incarnated in memory and replicability, but one whose temporality would be in a constant state of renewal: a constant state of re-definition and re-construction through possible negotiation.

The other “agent”: the chair

Turning a focus from the body to the chair, as the other agent present in this dialogue, what does this situation of a choreographic negotiation look like from its perspective, from this object whose ability to respond throughout the experiment is limited to its formal properties (performance characteristics) inscribed in its design? Bringing the chair into focus, we see it is unresponsive and unavailable to participate in negotiation, as it holds a fixed perspective and a fixed “object-posture.” I am not considering the object as inactive, and therefore do not aim to narrow this dialogue towards a binary subject-object paradigm. Instead, I intend to recognize the weighted agency in the performativity, or lack thereof, of an object (Salter, 2015) and the complexity of its design. But how may we question the chair’s ability to be in physical dialogue with the somatic and sentient expressions of bodily gesture? How may this object that is fixed, as its property of interaction, become animate?

The chair, in its humble posture as a fixed *object of design*, is incapable of *responding* to the propositions of my body in its agency of expression. Instead, the geometric format of the chair *proposes* choreographic constraints for my body to work with (and from) as possibilities of gestures and physical engagements. These can be understood as physicalized material choreographic constraints. Would there be a possibility where artifacts/ objects support how the body wants to behave, rather than the body responding or re(acting) to these guiding properties/characteristics of objects? Are performance characteristics of objects operating on the body as subtle choreographic constraints guiding a particularly defined bodily posture?

Constraints *within* negotiations

What do I mean by performance characteristics as constraints? In choreographing, we work with constraints as conceptual or material frameworks for a choreographic negotiation. *Constraints are the foundation from which we negotiate, as material or conceptual limits we want to challenge.* Constraints are the frameworks or boundaries that make space for a posture of choreographic negotiation. Without a constraint, I am not aware of what I am negotiating with, therefore I am not aware of the potential to negotiate with something.

I require bodily, material, and conceptual constraints to perceive the possibility of tension as a force I will then challenge, surrender to, obstruct, and fracture. In this awareness of a force separate from mine I can call the agency of my own bodily expression, bringing to awareness my ability to resist and propose within a situation. As the characteristic properties of the chair-object operate as material and conceptual constraints onto my body through the experiment, the form and function of the chair object denotes a purposive and predetermined choreography onto my body. It is purposive as there have been intentional parameters of bodily use integrated into the object's composition in the idealized bodily use of the object. This is where we can return to the idea of *interaction* in design. In this case, interaction for me as a choreographer is to act *within* the parameters of a constraint, whereas negotiation is a place from which to *challenge* the parameters of a constraint. **Therefore, a process of resisting constraint occurs *within* a bodily posture of negotiation.**

It is important to state I am not arguing for the customization for variations of bodies, which we can see in various propositions of chair design, but rather for the inability for this object to be adapted to bodily desires and on the other hand, the unawareness on behalf of our

own bodies to acknowledge our potential to resist constraint towards various corporal expressions. Of course, if I were sitting on a bean bag, the object would mold and be sculpted by the propositions of my expressive and agential body, yet it is rare to encounter the fluidity, malleability, and flexibility of an object such as a bean bag.⁴

The plastic foldable chair works in the first experimentation phase as a very simple tool demonstrating a basic formal set of environmental constraints influencing normative choreographic engagements in the body as we interact with objects. Such constraints are enactive within the performance characteristics of the environment our bodies are constantly in dialogue and negotiation with and that tend to reduce the possibility for expressive and playful movement engagements on behalf of the body. These movement constraints are in the form, materiality, shape, dimensions, angles, malleability, or rigidity of the object, extending from the body to the object and back again. **These characteristics then become inherently choreographic and specifically shape the kinds of movement possibilities with the object.**

⁴ In this case negotiation would still occur at the bodily level, yet it would be present under very different parameters. The body would be negotiating a constant collapsibility of form in the object, and thus a body in negotiation would be a body working towards finding comfort and stability with the malleable proposition object.

Constraints at various scales



Figure 3: Digital Chair Choreographies. Digital Avatar. Blender. 2017

Question 2: How is the body organized in a negotiation?

Agents: 4 digital avatars

Somatic Agents: trained performer + design practitioner (in the making)

Parameters: animated choreographies of sitting

Location: 3D blender software

Year: 2017

On a large screen, there are 4 digital sitting avatar bodies, each in a different view relative to the frame. Body 1 sits in front view - facing forward; Body 2 sits in back view; body 3 sits in side view; and Body 4 is seen from above in top view. In stillness, these digital avatars embody the same ergonomic posture I began my experiment with, the ergonomic posture of sitting: back straight, both feet on the ground, head straight with the gaze forward. These bodies, however, are floating on the screen—as the object of negotiation, the chair has been removed from the digital environment (I return to this later). Sitting in front of my computer, on 3D Blender software, I begin to animate the digital avatars, guiding their body in the postures of sitting. Moving individual pivot points in the body—like a marionette,

I shift individual limbs, articulations: spine, wrist, elbow, shoulder, clavicle, neck, hip, knee, ankle, toes... to create a shift of the body as a whole. As the animation begins, the 4 view avatars start shifting between the postural engagements of sitting previously recorded in my experiment. We see them from all angles slouching on the chair; crossing one leg over the other, sitting back, standing up, shifting postures, one knee bent, then the other... They shift from one position to the next, going through various postures of sitting, allowing us to view my body's movement negotiations from four different digital perspectives: front, back, side and top view. Yet as they shift, they do not do so smoothly, as my body would in the video; they shift in phases, evolutionary steps, almost as though allowing us to perceive the compilation of movements happening in the body, one at a time. Through them we perceive the action of sitting as incongruous individual gestures of movement. Interesting, yet of course I cannot help to think that perhaps this is because I have animated the avatars on Blender myself, and well, I am not a professional animator.

Transcription: Why an Avatar?

In creating these digital avatars, I was curious to develop representations of my own body sitting in order to extrapolate myself from the experience and externally view these dynamics through practices of choreographic inscription and annotation. As a framework and practice, choreography is rarely annotated through alternative languages other than that of the body itself (i.e., in the performer's memory or in video documentation of the performing body). Movement annotation has its history with such movement-based notation systems such as Rudolf von Laban's Labanotation, a notation system with symbols and its own internal logic that extrapolates the body's relationship to action, space, shape, effort (1966). Following annotation systems like that of Laban, my aim was to find an annotative language to observe the body in motion outside habituated lenses to understand the body's hidden negotiations. Similar to ergonomic visualization software such as Tumeke.io (2023) and Scalefit (2023), transposing my body to an avatar allowed for projection onto a fictional inscriptive-agent capable of embodying my gestures with close accuracy. It was important that gestural patterns, bodily organization,

temporal composition, and movement detail were not lost in the process, but brought forward to reveal other forms of analysis.

Like a choreographic inscription, where annotation focuses on the body and not the material site contextual to a moving body, the chair was not included in the digital inscription. This observation technique borrowed from a choreographic perspective solely focuses on bodily information and removes the body from the context in which it is being observed. Removing the chair enables us to observe the body in its purity of form, function, and movement, allowing a choreographic gaze to be placed on this body for its bodily techniques to be revealed. With this strategy, we can focus on how it interacts with the object versus how it behaves in interaction.

Negotiation at various scales

As the avatar shifts incongruously from one posture to the next, we perceive the micro-phases of organization between the various body parts. *We sense the scapulae shift as the body bends over to lean on its legs. We sense the neck shift as the spine readjusts and the ankles shift to balance the motion occurring in the body above.* This disjointed rhythm of motion reveals a kinematic hierarchy in the organization of movement in the body of the avatars every time a shift in motion occurs. *For the avatar to cross its leg, it shifts its pelvis, thigh, knee, and ankle in a chain-like reaction; and shifts its spine, neck, chin, and gaze in similar fashion.* These seemingly minute and incongruous movements localized at individual body junctures are simultaneously composing the sitting postures. What becomes evident in this digital situation is not a choreographic negotiation of the body as a whole, but rather *techniques of the body* (Mauss, 1979) occurring across localized parts of the body within the negotiation posture. It is as if the body, to negotiate with the constraints provided by the *invisible* chair, does so at various “micro to macro scales” (Parviainen, Tuuri and Pirhonen, 2013, p. 103). The choreographic term *composition* enters this observation as the assemblage of parts towards the construction of a harmonious whole. Physical gestures are performed not simply through the whole body in motion, but via the assemblage of multiple body parts: micro movement that *composes* movement.

In the previous chair sitting experiment, choreographic negotiation took the form of negotiating through performance characteristic (Shiffer, 1999) constraints to express agency in bodily engagement with play. Through the avatars, negotiation situates itself in the body not as the expressive body challenging constraints but as the compositional framework for physical gesture: the physical container of action and container of expression. This denotes a shifting, from the body as a site *of appreciation* and expression, to observing it also as a site across micro to macro scales.

This awareness of bodily negotiation across various localized body scales also shows the multiplicity of engagements in the body beyond the physical point of contact with an object. The body sitting on a chair is not only negotiating with this object by means of the body part touching the chair form (i.e., spine, back of thighs, buttocks). Instead, these initial points of contact diffuse the information received by the constraints of the chair to the rest of the body and vice versa. These micro and macro levels of organization (Flach, Stappers, Voorhorst, 2017) are techniques of the body required for a body to attend to an object. Thus, a possibility for awareness of bodily negotiation exists at multiple levels of the body, from micro negotiations that can affect macro negotiation as a whole and vice versa.

The environment has been left blank

So, the avatars have been left without a chair? Was this a stylistic choice? A theoretical anomaly? Or merely a limitation in my ability to model a 3D chair and animate it in dialogue with a moving body. Removing the body from the context was a method and choreographic technique that revealed itself through exploration, by reflecting the impact of viewing a floating body while engaging and negotiating with *something*. Removing the chair made micro-macro (Parviainen, Tuuri, Pirhonen, 2013) invisibilities of the body's negotiation visible.

These daily forms of interaction are so tacit we don't need to visibly see the object in dialogue, as we clearly recognize the movement of these digital bodies, without needing to see the object itself. Instead, it places observation on the habitable and normative body techniques embedded in our ability to recognize corporal patterns. We discern the object by perceiving what has become a choreography onto the body—a replicable movement organization and body pattern in space and time. Can a choreography that is deeply ingrained in our bodies and seemingly becomes quotidian, reveal techniques of sitting that are no longer only embedded in

the interaction with objects, but are embedded in the patterns of the industrialized body? This “catalog” of chair postures no longer requires the chair for them to be perceived, as they are normalized within our bodies and what we consider “sitting.”

Furthermore, as the chair is absent, I begin to consider the surrounding space the body inhabits. Since the chair is not present it is not the chair that the avatar is inhabiting, it inhabits the space that is available from the chair’s shape, form, materiality. What is it about the chair and its spatial properties that makes space for the body to perform these techniques of sitting? Space as a parameter entangled in the idea of a situated environment becomes a sequential element to explore in bodily negotiation. Considering the idea of a situated environment beyond that of the material container, the role of space as an element and tool of bodily negotiation becomes the next parameter of observation. It moves us from exploring bodily negotiation directly with an object towards an interplay of body, object, and space.

Space affords bodily exploration beyond the container (the object) towards an entangled presence in a wider environment and situation. Yet, *what role does space play in negotiation and how does it influence the ways bodies negotiate the environment.*

STUDY 2. SPACE AS THE INHABITABLE MEDIUM



Figure 4. Digital Visualization + Inflatables of Space. 2018.

Question: How does the body interact with the space of an object?

Material Agents: metal chair, plastic sheets, tape, fan

Somatic Agents: trained performer and design practitioner

Parameters: visualizing space

Location: studio in the Mile End

Year: 2017

Visualizing space through inflatables

Sitting in my studio, I try to imagine ways to depict through a material shape the space (non-visible matter) enveloping the spatial container of a chair object. I turn to digital 3D rendering tools to visualize these properties as a material form. I find a chair on rhino-objects.com that resembles the chair at my studio—a basic, traditional chair: four legs, square straight back, armrests, and seat. I place this object in Rhino and start exploring ways to extract its spatial properties. Using extrusion, I manage to “extract” the spatial volume properties of the digital chair. Yet, observing this block of volume cut out from the positive material form and contour of a chair on a screen feels viscerally frustrating, and my embodied practitioner self wants to feel and negotiate this object live.

So, I decide to create this extruded spatial-volume block as an inflatable. I take the studio chair and measure the curves of the arm rests, the height of the space between the seat and the back, the height, width and length of the legs and the available space under the seat of the chair, the height of the back that will determine the available height for the back body. I begin by creating a transparent inflatable object that follows the material, form-based characteristics of a chair. Doing so, I develop a meticulous sewing pattern using the chair crevices and potentials not to reproduce the object but the space around it created by its formal and material qualities. A bizarre pattern emerges. I then map it out onto transparent plastic material, glue it together and attempt to inflate it: a large glob-like object floats above the available space of a chair. Looking at this transparent and inflated membrane, I see its attempt to wrap itself inside the crevices of a chair, as though holding space for it.

This inflated membrane is about the size of the chair and frames the formal contours of the object. It bends where the chair bends, folds as the chair folds, squeezes where the chair squeezes. This object attempts to encapsulate the space made available by the formal landscape of this object. As I observe the inflated object, I quickly prove to myself the impossibility of visualizing this negative volumetric space with the rigor and accuracy I was hoping to achieve. I decide to leave this makeshift visualization as an experiment.

Space as an invisible material medium escapes my ability to visualize it with quantitative rigor or accuracy via this inflatable construction.

Space: A Property of an Object

This attempted visualization, though lacking the rigor I was aiming for, presents a space of representation (Lefebvre, 1905, p.139): a subtle visualization of the space my body inhabits (Ponty 1962, as cited in Simonsen, 2005) when sitting in a chair. This representation-based approach was inspired by the inflatable works of visual artist Ana Rewakowicz (*Inside Out*, 2001), where engaging with this metaphorical inflatable chair-tool made room to play with or attempt to visualize “spatial practices by which space is produced or performed through the interactions of bodies, objects and environments” (Lefebvre, 1905, p. 139). As between avatar and chair, when the body leans into an object, it leans into its visible formal properties, guiding its bodily organization. Returning to the performance characteristics of an object (Schiffer, 1999) as that which enables certain tasks to be fulfilled, the inflatable shifts the attention to space as an object’s *performative property*, a co-produced form of spatial knowledge afforded by the object.

What if the body does not only engage with the *material performance characteristics* of an object (chair seat, back, legs, frame etc.) but with its *spatial performance characteristics* as well? These spatial-performance characteristics are spatial properties that objects too contain. If the chair is square, will the space for my body be square? What are the “spatial implications” in the making of objects (Law, 2000)? Will the gestural engagement of my body be constrained to ‘choreographic parameters as the inflatable was?’ In what new ways can we examine the body and space negotiation through choreographic training practices?

What is space in choreography?

Take the following exercise. A body is curved over in a “C” shape, with torso and head curved forwards, right arm held 2 ft in front of the torso in a semi-circular curved shape (a balloon’s width in front of the body), and left leg displaced two feet forwards from the right leg, receiving some weight of the over-curved torso. This body has created a shape in space, yet the body, through its positive form, has carved out space volumes that surround it. A dance partner is then invited to explore through improvisational tasks, not

the physical body and direct shapes of their partner's limbs, but the empty volumes created around the shape of the body. They are challenged to not interact directly with the body, but rather negotiate with the available space volumes around it. Volumes are like hollow spaces. They are formed by the right arm curved forwards, creating a sphere-like crevice around the front body, the torso bent forwards creating a roof-type of shape, the small triangle-like space made available through the left leg forwards. All invite movement in the space within the torso and limbs and not the limbs themselves.

These spaces and crevices, not in the body but in its shape, guide possibilities of bodily engagement of the partner within their partner's proposed spatial constraints. Bodies are therefore prompted to negotiate focusing on what I call the body's negative space, rather than negotiate by means of direct contact with the physical body of a partner: the positive form.

To consider the body-object dialogue through or within space, I turn to choreographic and bodily training exercises that have inherently anchored the relationship of the body to space in developing a *tacit bodily knowing* (Michael Polanyi, 1966) that includes the bodily space potentials. Within the choreographic practice of space, as in the example above, the notion of negative space is a term of practice that grounds the availability of an engagement with space and body, as the container of embodiment and action. Formal contemporary dance training and embodied practices train these somatic understandings of negative space through practices of volume that transform space as a tacit element occupying space within an environment. In this instance, “the spatiality of the body is not a spatiality of position, but one of situation” ([Ponty, 1962] Simonsen, 2005, p. 173), where space volume is the space available for occupation that creates a situation of negotiation for the body.

It is this spatial improvisation between two dancers that can also be equated to that of the body and chair, as the body forms its physical engagements to the spaces available around the chair. *A two-way negotiation between partners is focused not on the body's physical shape, but the form-based spatial volume the shape allows for.* Space thus is stretched as a network and medium (Falzon, 2009) of both a bodily and environmental coexistence situating the encounter

between human and non-human agents. Human geographer Dorren Massey offers the imperative capacities and complexities of space within mutualistic dialogue as:

*First, 'that we recognize space as the product of interrelations; as constituted through interactions, from the immensity of the global to the intimately tiny ... Second, that we understand space as the sphere of the possibility of the existence of multiplicity in the sense of contemporaneous plurality; as the sphere in which distinct trajectories coexist; as the sphere therefore of coexisting heterogeneity ... Third, that we recognize space as always under **construction**. [Massey, 2005, 9] (Falzon, 2009, p. 4)*

Parallel to this understanding of space as a place for *interrelations, possibility, and construction* (Massey, 2005) we refer to ideas of space in architectural contexts, whether the space of a room, of a hallway, or how a body performs in architectural spatial configurations (Hillier and Hanson, 1984: p. 6, 4; Hillier, 1996) (Turnbull, 2022). These remain predominantly situated amongst macro notions of spatial occupation. But we rarely refer to the more micro-spatial qualities of an object: how the body navigates, just like in architecture, the spatial characteristics directly associated with a small-to-medium scale object. These invisible spatial characteristics are not easily perceived by directly looking at an object but are more apparent by looking at an extraction of negative space form (giving it a shape, a size, a frame, and details). The inflatable object's role is thus to solidify negative space as an inflatable "thing" no longer ephemeral but now tangible.

Spatial properties as micro and macro space?

Study 2.2: Negative space of an object at various scales

Material agents: Blender software digital 3D rendering

Somatic Agents: none

Parameters: visualizing space volume with more accuracy

Location: studio in the Mile End

Year: 2017

Digital object #1: A printer

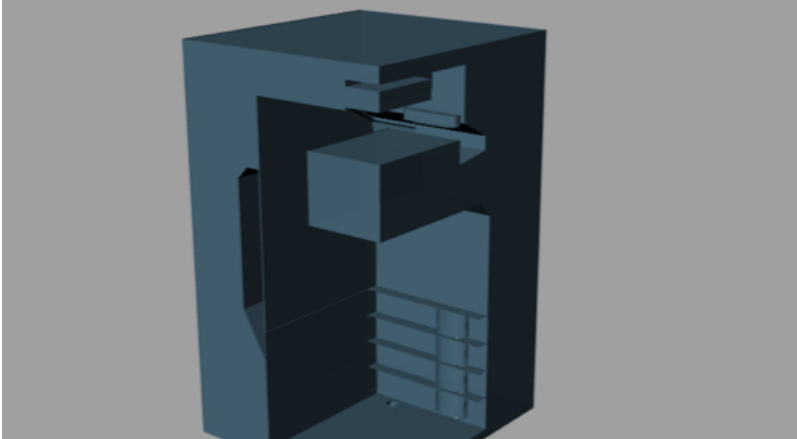


Figure 5. Negative Space of a Printer. Rhino Software. 2017

This is not a printer in digital space, but a block of digital mass made from the negative space volumes of a printer. A large block space has been carved out of it: a square for my hand to pull a handle; a concave ridge for my fingers to lift the lid; a hole for my finger to press a button. It represents an amalgamation of crevices to visualize the space for the limbs (particularly my fingers, hands, arms) to interact with spatial-performance characteristics, i.e., forms available for my body. This digital render presents not the object itself, but the micro spaces active for my body, through their tiny, small, square, and oddly shaped forms for interactions.

Digital object #2: A Room

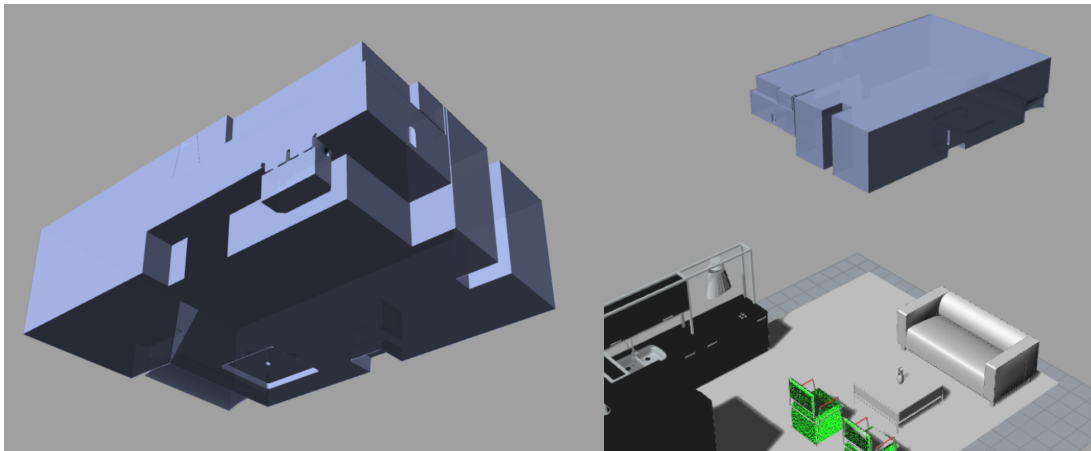


Figure 6. Visualization of a Room's Micro and Macro Negative Space. Rhino Software

In a digital 3D rendered room there are two chairs facing a small couch, a coffee table with a vase frames a division between them. An L-shaped kitchen on the left side of the chair holds a coffee pot resting on its counter and a sunken sink carves its space on the counter; all objects are placed inside four walls, a floor, and a roof that makes up the room. Blocks of mass that are large, small, medium, and tiny, are extruded as space volume-crevices in between everything inside of this digital room.

Together, these blocks compose a larger block that makes for the volume space of this architectural space, holding micro and macro-objects. Yet, the negative volume space here is not a cube as we would imagine when walking into the space of a room; it is a massive complexly shaped cube with cut out extrusions of everything situated in this room. Every object, big, small, medium, tiny, creates an imprint in the room's space mass volume—a labyrinth of spatial contours between objects creating an interconnected web of inhabitable macro + micro space between things.

Micro and macro negative space

Zooming in from the predominant macro architectural notions of space, the crevices and mass volumes of this printer and room reveal *micro spatial* occupations as parameters of negotiation. These complex crevices compose the network of “space volumes” (Falzon, 2009) around an object or an architectural space’s positive form. Crevices materializing the negotiating properties of the object move across different spatial scales. The body continuously engages with *macro negative space* (as the 3D room volume space between a landscape of objects) and with *micro negative space* (as the space around the characteristic form and function details of the printer’s properties such as its buttons, handle, or tray of the fax machine).

These 3D visualizations capture how the object and its qualities across size determines movement parameters in and around the object (Turnbull, 2002). The body does not solely occupy the material object (chair or fax machine). Instead, it occupies and engages with its predetermined *peripersonal negative space*. Peripersonal space (Hawksley, 2011) is a spatial sphere surrounding the body, framed by what is at reach through its limbs—a spatial framework as the body stands free in space (Laban, 1966, p. 59). Bringing this concept to that of an object allows us to understand the role of space within an object as an affording property belonging to

it, and thus to a negotiation with that object. Such negotiations are guided or challenged by the immediate shape based upon compositional qualities of the object's form (*space for the hand to pull a handle, a convex ridge for the fingers to lift the lid, a concave space for the finger to press a button*).

Engaging with the *spatial performance characteristics* of a site, considering both micro or macro space, the notion of negative space as a choreographic *technique of the body* (Mauss, 1979) becomes part of the reflection within the material and spatial forces of engaging with a situated environment. Giirdenfors (2007) presents the notion of an *action space* representative of possible somatic functions and properties of space, as seen in the available spaces and crevices of these objects' digital renderings. The *action space* of the negative volume of the fax machine's lid, or the negative space of the fax machines' paper handle, has movement limitations and constraints as frameworks for action, interactions, or negotiations. Hence, engagement somatic techniques occur within the object's materiality and engage with the action-space characteristics at the level of micro and macro peripersonal space. This action space as a characteristic offering proposed by a site also reveals its role as a constraint within what is spatially available for the body to occupy within the object. Therefore, negative space as a possible choreographic constraint, with a potential for negotiation, is embedded in the spatial-material performance characteristics of an object.

If we negotiate space: what is the sensation of space?



Figure 7. Performers Testing the Capacity of an Inflatable Object to Receive Their Weight. Arsenal Gallery. 2018



Figure 8. Performer Exploring the Weight of Air as the Inflatable Suctions the Body Against the Floor. Arsenal Gallery. 2018

Study 2.4: Brining movement practitioners to challenge space

Material Agents: XL inflatable, plastic tape, fan

Somatic Agents: 5 trained performers

Parameters: playing with invisible space volume

Location: studio in the Mile End

Year: 2017

(video: [link](#))

Bodies in tension with the material membrane of a large rectangular inflatable. Placed on the inside of a massive inflatable object, 5 performers press their limbs, torsos, and faces against the material tension of this large plastic inflatable. As if working through mud, or molasses, these trained movement practitioners explore the extremities of this large object, caressing with physical force the membrane of the material, challenging how far they can offer their weight to the inflatable with resistance and without rupturing it. They are negotiating the resistance of the object and how far they can challenge it with their physical weight. Performative bodies trained to understand space as an element, no longer ephemeral or weightless, challenge space through a playful negotiation with this delicate plastic membrane. The performers move from wall to wall inside the membrane, almost in a circular manner, investigating their own weight in relation to the shape and form of the object. As the bodies offer their weight and collide with this thin membrane, the amount of resistance their physical weight gives into the object shifts, as they realize the delicacy of the material in relation to their own physical weight. They feel the imprint of their bodies and the effect of the body on the tension held by the object. Time passes, and they begin to explore alternative relationships with the inflatable, placing themselves under the inflatable object, between it and the floor surface. As the performers attempt to slide under this massive yet light object, they confront the weight of the suction force that the air inside the inflatable presses on their bodies via an enveloping plastic membrane. They are completely suctioned between the floor and the plastic membrane as the weight of the air attempts to fill any possible crevice around the body that is not covered. As the body slithers under the inflatable, the object follows and makes it almost impossible to move as the suction force is so strong it envelops the body towards the ground in its successive movements. The body is constrained and in constant negotiation with the force of air that presses onto and swallows any available space around this moving body.

This second attempt to investigate inflatables borrowed somatic training, and shaped space through real material interactions (rather than visualizations) that placed spatial tension at the center of the research. My intention was to move beyond a representation of space (Lefebvre, 1905) towards challenging the spatial tension between a body and an inflatable, as a tangible sensation of negotiation. In other words, where the body is not in space, it inhabits space ([Merleau-Ponty, 1962] Simonsen, 2005). Space, an immaterial notion, was shaped to be a sensible quality in the form of weight and pressure, moving from an observational form of making sense and challenging these observations with somatic spatial situations (Merleau-Ponty, 1962) to be experienced. Using movement practitioner knowledge, as a unique understanding of “bodily-knowing” and “bodily-expressing” (Block and Kissell, 2001) as the way to reveal new notions about how bodies inhabit their existence in the world, the ability to bodily express other forms of knowledge through this inflatable situation reveals new engagements with the inflatable that challenge the object properties. These performers engage with alternative ways of taking “spatial risk” by challenging the possible weight, compression, and play of a site. As the “body determines what shows up in our world’ (Warburton 2011, 66), these alternative or non-normative *techniques of the body* made possible by movement practitioners, can challenge more traditional interactions between human and environment. It is through their playful somatic propositions and comfortability with risk that they make visible the invisible within what is proposed in a site’s spatial situation.

Action space: as irrelation, possibility and construction

Borrowing from profound thinker in human geography, Doreen Massey (2005) who categorizes the notion of space as *interrelations*, *possibilities*, and *construction*, we can equate these philosophical notions to the experimenting performers inside the inflatable who explore space through play. They extend the prompted spatial situation towards somatic interventions with space as a place of possibility and construction. Beginning with an exploration of weight, as the direct weight of the body onto that of the inflatable, the performers’ embodied consciousness quickly shifts towards nuanced explorations, guiding other somatic curiosities and possibilities. Placing themselves underneath this massive inflatable (being comfortable to have to negotiate the large suction force of air on their bodies), as something they considered fun or playful, brings the wrapping and swallowing capacity of this spatial membrane into focus. By representing the

landscape-like meshwork of space as something existing in the in-between, the invitation from the practitioner to negotiate what Giirdenfors calls the *action space* (2007) of the inflatable from the inside, outside and underneath, reveals a bodily awareness of the 360-degree nature of space (Rohrer, 2007).

Playing underneath the inflatable makes visible the possible 360-degree functions of this action space potentials, through its ability to compress all body contours, demonstrating its interconnected spatial meshwork. This plastic membrane became a blanket of spatial properties: a landscape of affordances (Rietveld, 2017) that calls to awareness the topographies (Giirdenfors, 2007) of objects in spaces. Although topography is considered the spatial region of a geographical area, Giirdenfors (2007) challenges topographical dimensions within geometric structures as parameters determining a spatial region for action space, in this case the actions space of objects. How then is the body in negotiation with the spatial action space of an object and environment?

Narrative Continued

Observing the inflatable swallowing space in the previous study invites me to inflate this xl-inflatable in various rooms. I bring the inflatable to my studio and inflate the massive volume in a space smaller than the object's dimensions. It again swallows the room. Like the 3D rendering, the studio walls, floor ceiling, chairs, tables, objects, kitchen, and cupboards become wrapped with the plastic membrane of the inflatable air overtaking the environment, pressing against the contours of all surfaces, crevices, and shapes in this room. As it is impossible to get around from outside the inflatable, I decide to get inside.



Figure 9. X-L Inflatables Created to Visualize Topography of Space. Arsenal Gallery, 2018.

Walking inside this membrane, I visualize the mesh-like landscape that has been created in the way the inflatable suctions the positive volumes of objects—landscapes of contours between, through, inside, outside objects all connected through the membrane of this plastic surface. I find this playful. I reconnect with the room I am in, but from a space of play. Suddenly, the objects no longer feel quotidian, but like a meshwork membrane of playful interactions. I also notice my body is not attending to each object individually, but to the seamless connections between objects through the plastic sheet. The space between these objects has become visible through this membrane that presses onto the topology of the room. My body wants to make sense of this landscape and the spaces in between, of possibilities in between the objects.

A meshwork of actions: a space topology

Inspired by the Jeffrey Shaw and Theo Botschijver’s Event-Space Research Group work *Airground (1968)*,⁵ this XL inflatable engages in a performative discourse that “combined narratives, bodies, and movement in the linking of people, practices and places,” (Lefebvre, 1905). Its meshwork-like landscape represents the space network in the rooms it inhabited, rather than objects, space, and body as individual nodes (Falzon, 2009). Space becomes a visible network, a landscape between things created with a plastic membrane and its topographical

⁵ “An important characteristic of the *Airground* was that each person’s movements would affect the behavior of the structure as a whole, and thereby the dynamics of other participants’ experience. It was the invention of a sculptural medium that could physically stimulate, embody and express human interactions and interrelations,” Jeffrey Shaw, 1968

capacity to extend everywhere in the room. This topographical representation is seen in the plastic membrane as the fascia connecting possibilities for action within each object, between the space of the various objects. The fascia of space is an invisible frame holding the capacities and complexities of dialogue, from the micro to the macro notions of space. We can imagine that through this massive inflatable, a topographical (Giirdenfors, 2007) membrane enables the composition of a landscape of interaction at the micro and macro scales of the body. Such an object can guide a body organization through a more complex and interrelated composition.

This xl-inflatable thus moves from a negative space inhabiting a singular object, towards a negative space *between* objects and their spatial composition relative to each other. As though looking at the *macro peripersonal* (Hawksley, 2011), the *negative space* of a room is created by the accumulation of spaces of and in between individual objects. Negative space is the inscribed volume of an artifact (large, small, one or many) predetermined by the topographical landscape (Giirdenfors, 2007) of the object, in which topography creates a landscape for meeting and negative space holds the micro, macro peri-personal space the body will inhabit in interaction. Moving bodies “measure space in their active construction of a meaningful world” and are thus “affected by the ‘where’ of that movement” (Simonsen, 2007, p. 173). What if topography, as a spatial landscape, was considered a tool to better visualize an object’s spatial performance characteristics, one that may support how space topographies can be considered tacit landscapes of possibility rather than fixed predetermined engagements?

The co-constructed nature of space

Within this notion of space, belonging to both micro and macro scales, is a corporeal understanding of the body as a space of interrelations, possibility, and continued construction. Such a spatial situated-ness encourages a harmonic co-construction by means of the body and the environment—a contingent relationship being produced, where space belongs, that combines and includes properties of the body and material sites. If we return to *techniques of the body* (Mauss, 1979) to think about interaction habits when attending to an object, we may begin to understand that pre-inscribed body techniques are not only embedded in the material composition of an object and the way the body attends to such pre-inscriptions, but are also inscribed in its *spatial performance characteristics*. Thus, our somesthetic awareness exists as much in objects as it does in the spaces our bodies inhabit.

STUDY 3: REPETITION + HARMONY



Figure 10. A Performer Exploring the Action of Walking Through Repetition

Study 3: Repetition as a Movement Technique That Shapes the Habitual Body

Material agents: theater, Marley dance floor, vast space

Somatic agents: trained performer

Parameters: repetition as the task

Location: dance studio | Tokyo, Japan

Year: 2018

Repetition as habit ([video](#))

On the left edge of a baren stage, standing straight, a performer subtly begins awakening movement in his ankle. He begins to lift the ankle up and down, gently moving his knee, hip, foot, leg. In continuous repetition, he allows the momentum of each repetition of the ankle gesture to inform re-generation of the following movement through the rest of the leg. The repetition of this up and forward motion in the leg increases as the movements

begin to grow in range and his body carries enough momentum for the leg to fully lift off the ground and take its first step forward. As time passes, these repetitions on each leg increase and evolve, until his body begins to generate the action of walking, shifting from one leg to the next. He begins to alternate his repetitive steps, using the ankle, knee and hip with both the right and left leg forward, accumulating these gestures that evolve into a forwards walk. The physical momentum increases so much that his body in this repetitive motion travels horizontally through the stage from point a. to point b and 15 ft later his body is lunging almost in preparation to run as he reaches the right side of the stage.

Once he has arrived at the other side of the stage, he transfers the energy in the repetitive forward and back, up and down leg motion, into another stage of repetition. This time the repetition is performed in relation to the ground, as the body lays on the stage floor and releases its weight to gravity. This repetition reflects a less quotidian movement, in that it does not deconstruct everyday motion like walking. Rather, it engages with a more choreographically constructed form. Lying on the ground, the body begins rolling, from one side and in reverse back to the other. In the first set, the body takes its time. Solid, present, and grounded in its engagement with the task, it rolls like a cradling log from left to right. The body then returns to its original position, reversing the movement as if playing the reverse button on a video cassette tape. It begins its second set, yet there is memory ingrained in the body. The second set appears more fluid, less solid, almost as if passing through the shapes of his body, and an availability in the form of the body is present. The more the body repeats this motion, the more it absorbs movement as part of itself. By the 10th set of this cradling roll, it is fully released into gravity, where the cradled log-like body moves and surrenders its gesture into memory in the form of choreographic repetition.

Similar to Edward Muybridge's 1877 photo series "Man walking, Plate 6 from Animal Locomotion," we have witnessed this performer incrementally through repetitive momentum construct walking and rolling. The performer has attempted to deconstruct the mechanical

motion the body performs to walk and roll, by achieving a bodily momentum accumulated in the body through time.

Returning to a more “traditional” choreographic approach

For this study, I turned to choreographic practice in studio and on stage to deconstruct and allow designerly practices and theories to influence an exploration with the body in a more “traditional” choreographic context. This initial part of Study 3 was carried out in collaboration with performer and long-time collaborator François Richard, who surrendered his artistry and physical body, to a curious exploration of repetitive practices involving repetitive accumulation of gestures, weight, and form. This exploration bears similarity to the works of choreographer Yvonne Rainer (1966) who focused on task-based performances rather than narration and dancer and choreographer Steve Paxton (1977), who sought as an analyst of human form to understand the body as machine and focus his choreographic attention on pedestrian activities and everyday action (Banes, 2011).

Through this study we attempted to discover the plasticity of the body as a by-product of repetition, as a malleable somatic-site embodying its experience via semi-athletic, semi-mechanical, semi-pedestrian bodily engagements. *Semi-athletic* here denotes choreography from a purely athletic stance (i.e., removed from conceptual interpretation and geared towards an active engagement with task). *Semi-mechanical* suggests the physical equivalent to repetition: the body as a machine influenced by industrial systems that affect somatic engagements. Finally, *semi-pedestrian* signifies the appropriation of pedestrian action in order to deconstruct its various parameters in an artistic and performative study. This analysis of human form prioritized repetition to comprehend how it is incarnated in the behavioral affective memory of an athletic, mechanical and pedestrian body, as a technique of habituation (Mauss, 1979). Through repetitive practice and dexterity, these bodily techniques allow us to move every day using memory (Shusterman, 2012).

Repetition at various scales: a bodily technique

“The body does not represent what it performs, it does not memorize the past, it enacts the past bringing it to life.” ([Bourdieu, 1977, 1990] Simonsen, 2007)

The walking study attempted to deconstruct bodily dexterity by repeating the pedestrian and choreographic action of walking, by closely observing gestures such as lifting the ankle/knee, and using the hip to bring these limbs down to prepare the body for receiving weight as it steps forward. Such gestures, well understood in and by the body are familiar, second nature, and habitual (Farnell, 1999). They are everyday actions associated with walking, and unconsciously embedded in bodily memory associated with normative ways of being human, trained through repetitive engagements with our environment.⁶ These actions form *embodied and explicit* body memory that “unconsciously helps us perform various motor tasks we have somehow learned through habituation, either through explicit, intentional training or simply as the result of informal, unintentional or even unconscious learning from repeated prior experience” (Shusterman, 2012, p. 91). Looking further into the adapted and coordinated movements in the performer’s repetitive actions, parameters of micro and macro techniques too appear in repetition as embodied and explicit somatic forms. Micro and macro repetitive gestures that cohesively build physical dexterities in how the body situates itself in the environment through habituation.

Micro and macro, as repetition parameters, that go beyond “the body” as a general whole, but refer to the various components forming the whole. For example, the ankle, floor, knee, hip, and pelvis, which collectively comprise the normative or habitual actions in the study, each have embedded ways of moving in the world through repetitive practice. Repetition, as a body technique then, can also be more specifically understood as habits situated at various somatic scales. Moreover, repetition as a choreographic parameter can, through habituation and dexterity (Mauss, 1979) at the micro and macro level, bring walking or sitting to replicable physical gestures.

Narrative continued

Through each repetition, the body becomes more supple, more fluid. Its ability to give into gravity and the choreographic form proposed becomes malleable. We witness not the construction of an idea (as in walking) but rather the effect of repetition on this body. The work continues for 45 minutes, without rupture. We see this male performer experiencing different engagements with repetition, traveling through stage space and accumulative

⁶ I will return to this notion of normative training in the following study.

memories of his body. Each set is a different physical engagement showing the effect of repetition on the malleability of the performer's body. The body becomes more of what it is engaging with in movement, as through repetition it both masters and embodies form—as though he both creates the repetition but is created and shaped by the repetition itself. His 3rd set engages with a repetition across the vastness of the room. He is squatting and jumping as his body lunges forwards through space. This task seems to fatigue his body, as the possibilities of inhabiting and lunging through space are vast. Unlike his repetition of walking and rolling, tasks limited by room width, this jumping and lunging repetition is driven to play with space vastness, until the body fatigues. After over 25 sets of this lunging grasshopper-like task, having explored all stage surfaces, in a collapse of energy the body decrescendos its physicality to a halt.

An evolution towards soma-material harmony

The performer's *harmonic*⁷ repetitions present an engagement with space sensation and awareness. Here space is not an external choreographic organization parameter like negative space but an internal technique organizing the body in this repetitive task. As the performer builds on somatic repetition from micro to macro, the performer also engages with the parameter of space and negative space across these scales.

As a parameter, space grounds movement displacement in two ways: (1) displacing the body from one spatial location to another, point A. to point B; and (2), shifting the body's shape in its own peripheral position. As the performer does repetitive motions, an alteration of spatial awareness shifts in his body, as both somatic micro and macro cues are received from spatial potentials of the environment (e.g., stage width and length, floor texture and tape markings, distance from ceiling, proximity to the audience, etc.). Returning to Laban's notion of the kinesphere medium, as the periphery-sphere which holds the *spatial, active* and *efforting* harmonies of a movement structure within the body (Laban, 1966), we perceive the performer negotiating space through their kinesphere.

Within micro repetitive gestures, the body's kinesphere frame of awareness is proximal, close to the body. It considers the peri-personal negative space around its contours as movement

⁷ "Similarly, harmony in dance design is a state of balance, rest, and parallel movement in line, with either a succession of movements in one direction or a dove-tailing of patterns, symmetrically or asymmetrically," (Dissonance and Harmony in Dance Design, 2013).

gently shifts between shorter A. to B. distances. As these micro gestures build towards macro compositions, the A. to B. distance of motion extends, and the body expands its kinesphere awareness beyond its own peri-personal space, extending this negotiation to the spatial volume characteristics available within the larger environment or scale. Space negotiation begins as the body must listen to the spatial possibilities available for engagement and interaction. In the case of this performative study, the spatial volume of possibility is vast (30 ft x 40 ft). The range of possible motion is expanded and makes available space for play. In contrast, if we return to the avatar sitting on the chair, the spatial volume of this situation and object is closer to micro somatic possibilities, as the volume of engagement available is determined by the characteristics of the object rather than the extensive possibilities of space itself.

Repetition: framing the approach

In the study described, repetition becomes a choreographic approach of somatic pattern making across the environment and through space. Repetition is seen in multiple ways: a body technique supporting habituation in relation to the environment. Through recurrence, it narrows experience and thus forms an implicit subconscious body performativity in the environment. Like the avatar body sitting on a chair, repetition is a non-negotiation form designed within the formal properties for interaction of an object; and/ or choreographically composed by physically repeating a form; mastered at the micro and macro scale through space.

By exploring everyday movements and gestures, repetition hence makes us somatic experts and habituated-somatic beings in our interactions with space and the material objects and environments. It becomes the counterpart to normative somatic techniques in how we inhabit the built environment. These physical engagements transform into normative techniques when these somatic engagements can be reproduced or replicated through bodily dexterity. Engagement is selectively different from interaction or negotiation as here the body is not in dialogue with a designed environmental situation like that of a chair, a room, or an inflatable, but rather with itself. It engages with its physical action as tasks, unaffected or influenced by an environmental constraint, other than the floor or stage.

The performative engagement with repetition undertaken by performer Francois Richard clears a narrowed focus that allows the body to reveal its malleability and plasticity as a by-product of gestural repetition. Via continuous repetitive corporal engagements, from walking,

to rolling, to lunging across the room, François' *semi-athletic, semi-mechanical, semi-pedestrian* body incarnates our ability to habituate our bodies. It is through this performative representation that his *athleticism* brings to light bodily *dexterity*. His *mechanization* unveils our facility for *habituation* and his *pedestrian* approach simplifies our quotidian relation to bodily *memory*. These collective engagements with repetition each prioritize the behavioral affective memory embodied in bodily technique of how we move in situations within the everyday environments.

Repetition here acts as a choreographic parameter embedded in the normative body behaviors as it learns to behave and perform the environment, through micro-macro scales and through available volumes of space. A performance of behavior, through repetitive action is present in the embodied memory within the environment. As philosopher Catherine Malabou claims, “the human does not exist prior to repetition, but is designed by it. The human is the product, not the origin, of repetition” (Malabou, 1996, p. 105). If humans are the products of repetitive somatic engagements with their environment, what would a non-repetitive engagement look like? What disruption of implicit memory is needed to bring this habituation and impairment of experience to bodily consciousness?

STUDY 4: NON-NORMATIVE HARMONIES



Figure 11. Movement Workshop Held in the Construction “Forest.” Murcia, Spain. 2018

Question: Disrupting implicit memory to challenge habituation

Study: sew together = micro-macro + negative space + repetition

Material Agents: 40 construction beams, concrete studio

Somatic Agents: trained performers, quotidian bodies

Parameters: designing a situation / external to the experience / observing + guiding

Location: Murcia Gallery

Year: 2018

Harmonies of scale, space and repetition

Forty-five imposing bright yellow construction steel beams are organized (or perhaps disorganized) throughout a long corridor-like room. The room is a sandy and rocky space, rectangular yet organic in its form. The beams, 8-12 ft high, expand from floor to ceiling and scatter throughout the room to embody the spatial and asymmetrical properties of a forest. These beams, meant to stand perfectly vertical and hold the pouring of concrete, are placed at varying vertical angles from floor to ceiling, creating non-homogenous rhythms and variations throughout the hallway-like space. They are placed at seemingly random yet intuitive distances between beams, tilted sometimes in juxtaposition, sometimes parallel to an adjacent beam.

As you walk through this forest-like corridor room you are confronted with a steel beam in front, on your side, on your back, beams at wide ranges of varying degrees. This constant inconsistency of encounter augments as you transverse the corridor from one side of the room to the other. This inconsistency in form, pattern, and rhythm causes the body to be in constant fluctuation and listening. It is chaotic. It feels random. It feels challenging. It asks you to be attentive to what is coming in front of you as you might collide with an unexpected beam, or behind you as your feet might catch on a beam behind. Your upper body might have to curve and twist, bend and arch to transverse the vertical shapes of the paths within this corridor from point A. (the beginning of the corridor) to point B. (the exit). As you attempt this exit your feet are constantly awake, sharp, and shifting in their every step, as they move diagonally, stepping one across the other, forwards, backwards, sideways.

The previous studies explored environment negotiations via concepts of *micro-macro*, *negative space volumes*, and *repetition* to examine how habits (Mauss, 1979) like interacting with a chair, moving through space, and walking are shaped through a singular environment/situation. Inspired by Gretchen Schiller's choreomedia, "*the organization of kinesthetic or movement qualities, through artistic acts of temporal, spatial and qualitative rapport of people, objects, media and physical space*" (2008, 433), this final study aims to orchestrate a larger situation that would choreomEDIATE the body across the various parameters explored. This designed site would require the body to engage with micro-macro gestures, a negative space awareness and challenge repetition to choreomEDIATE the body outside normative expressions. Here, I return to the exploration of play and eukinetic (Laban, 1966) expressions revealed in the chair (Study 1) and inflatables (Study 2).

Thinking how to "choreomEDIATE" (Shiller, 2008) a situation that would challenge the body's *physical, material, and spatial* medium, I introduce complexity. In choreomEDIATION, complexity describes the latent potential of an environment in making certain kinds of bodily actions and negotiations in response to it possible. In this study, the forest became a complex site of organization, reflecting parameters of chaos and possibility while evoking the previous concept of topography (Giirdenfors, 2007); as the parameters of a region that allow for action

space within an area. An organic and unpredictable landscape, the forest is a complex space challenging the body in how it embodies movement negotiations while continuously experiencing new terrain. In other words, the forest can be seen as a complex yet playful environment in how it naturally challenges the micro-macro / negative space and repetition properties of a body. How then could such complexity be visualized and materialized to choreomediate alternative and non-habitual engagements between body and environment?

A choreomediated forest

The 45 yellow construction beams take the form of a forest. They create a disharmonious landscape that inches towards the organic qualities of a forest. This site of choreography and dynamic movement is a place that could challenge the kinesphere relationship of the body moving through a micro and macro complex landscape. The beams are organized in a disorderly fashion, out of pure choreographic intuition. Each beam dictates the position of the next, as if built in an echoing ecosystem interconnected in its aim to disrupt the body. Playing both designer and choreographer in this experiment, I subconsciously design the work in a practice of choreographic composition. Beams are placed at 2 feet, 3 feet and 1 foot away from each other on all angles, to challenge the sensation of space between these distances. They are tiled to the maximum possible vertical angle as to challenge the vertical notions of the body, and are placed in interrupting patterns, as to never allow the body to foresee its engagement with the next and challenge any possibility to anticipate rhythms of engagement. Although extremely industrial in its material property, this bruteness in form challenges the body with an affirmative structure in its form. I cannot move the object; therefore, how does my body respond? How does my body have to engage with a chaotic space that challenges what is required of my body?

This final study involves a series of utilitarian construction beams mounted inside a rocky and rectangularly shaped 10m x 5m gallery-like environment in the southern hills of Murcia, Spain. These utilitarian beams were re-purposed to build an organic, disruptive, challenging and “dancerly environment” beyond what a traditional hallway-like space would present. Moreover, the possibility of randomness as a formal property of how this space was built becomes central

for the experience of chaos, posture of spatial dissociation, need for bodily attentiveness across scales, and for the sensation of play. Such randomness, enabled by the conscious environment design, attempts to disrupt the implicit memory in embodied habits (Shushterman, 2012) of how a body walks across a hallway-like room. Randomness functions as a choreomedia (Schiller, 2008) framework to challenge how micro-macro, negative space, and repetition are body techniques (Mauss, 1979) to be negotiated. To challenge the randomness of this material artificial environment through a corporal experience, I organized a choreographic workshop inside the installation-like situation to explore these ideas within participants' situated and embodied experience, from trained to amateur bodies.

Harmonies of bodies, space and object: The Workshop

Laban's movement analysis in the study of human movement, particularly his characterization and perception of body movement as shape (what), space (where), and effort (how) provides simple parameters to conduct the workshop. *Shape* focuses on the position/form the body takes in space, *space* describes the awareness of a volume the body inhabits, and *effort* depicts the sense of weight, flow, and attentiveness to physical labor (Susan S.W. & Dils, A., 2008).

The choreographic workshop taking place inside the installation could thus easily disrupt qualities of shape, space, and effort. Such parameters are choreographic compositional elements that support the techniques of the body, not simply through habitual actions within and with the environment, but through the potentials of engagement inside of these patterns of movement.

While we use Laban's characteristics of *shape*, *space*, and *effort*, it is important, however, to highlight that the intention is not to create a rigid or reduced system between subject-object encounters, but to use a framework to understand how these characteristics operate transversally and in relation to each other in a situation. Laban's movement analysis is used here to understand the parallels and relationship between *shape*, *space* and *effort* to *micro-macro*, *negative space* and *repetition* as properties that together organize movement.

The Workshop: Playing in the Structure
(video: [link](#))



Figure 12 Workshop Participants Exploring the Negative Space of the Structure. Murcia Spain, 2018

The workshop participants are asked to traverse an installation, a “construction forest,” while focusing on Laban’s properties of movement: space, shape, and effort. The participants, coming all from various backgrounds include performers, architects, photographers, visual artists, as well as local Murcian village workers, exploring their bodies through this incongruous material and spatial proposition. They are guided to traverse the installation one person at a time, consciously keeping in mind and exploring each of Laban’s properties of movement.

*First, beginning with **shape**, the most familiar notion of our own bodies, the participants are asked to remember the formal shapes their bodies were taking throughout the installation, considering the macro and micro levels of a shape—a focus on carving architectural forms of the body through negotiation. How is your body oriented? What is its shape? What does it look like from the outside? How are the limbs positioned? What form is in the spine? Observing the participants’ bodies travel through the construction forest, they begin to engage with a modulating dance. A rhythmical negotiation with the*

obstacles makes them twist, turn, duck, bend—adopting positions that seem exaggerated and unusual for a body to use in moving from point a. to point b. One participant remarks, “I feel my body becoming a triangle. I am a triangle in order to pass by this triangular form.”

*Second, we test out **space**, as the volume where the body exists, looking at space from a more macro perspective. Space is a very difficult notion, as most non-expert practitioners struggled with imagining space. How to explain space? As in the 2- study, I present the notion of space volume as the negative space created by the positive space of a combination of forms. So, if beams created a triangle, then the negative space the body would enter in a triangular form; if the beams created the shape of a slanted cube, the body would transverse a space of a slanted cube. The challenge here was to bring participants’ awareness not to what their bodies were doing, but what volume-space-form their bodies were occupying to support the shape of the body that negotiated the situation. How can we support a visualization not of the form of the object in front of us, but rather the negative space the object provides as we move through an environment?*

*Finally, we returned the focus to the body and tested out the idea of **effort**. How can you bring awareness where the effort is situated in the body? Normally we pay attention to the effort of our larger limbs (legs, arms, back), those muscles that fatigue faster and are louder in their fatigue. What about other senses that fatigue? This notion of effort returned a focus towards micro and macro, expanding corporal awareness in a built environmental situation and the energy of attention placed in different parts of the body through a negotiation. Where is the balance? In the eyes, rather than the limbs. The ankles, which must delicately wobble to find equilibrium under demanding postures? Or peripheral vision? To keep track of obstacles we are encountering on our side bodies? Micro gestures of negotiation held the effort for the body as it negotiated with this complex spatial and material situation.*

Working towards disrupting these parameters (*shape, space, effort*) denoting bodily organization and bodily awareness by traversing a complex organization of construction beams,

this harmonic disruption highlights Laban's notion of kinesphere medium. As the "inhabited space medium in which the structural tension of man is built," this medium acts as a spatial corporal medium, sensitive to a form of feedback, that structures the experience of oneself (Meltic (Laban, 1987). As corporal perception and experience, it alters when the body negotiates a non-normative environment, whereby the body in relation against material **shape** and immaterial space, is prompted to actively employ varying levels of **effort** through this physical interplay as it adjusts in **space** and time to the **material** conditions surrounding it.

As seen in the workshop, participants are prompted to engage in an acute awareness of how their bodies are being situated physically, spatially, and cognitively through the demands of corporal attention required to engage with a complex, non-traditional, non repetitive and playful environment. These demands outside of normativity create a level of structural tension. This makes space for awareness and place as needed techniques to approach a new non habitual environment. Taking Schiller's (2008) notion of choreomedia, I extend this term towards that of *choreomeditation* - the eliciting of negotiable actions on humans through the organizational properties of a material situation. Such a situation alters habitual (Mauss, 1979), normative and repetitive (Malabou, 1996) choreographic organizations of movement. A choreographic approach through the material medium of this "construction forest" thus offers the potential for a conscious process of *choreomeditation*; a **choreographic bodily mediation that is embedded in the form and function of the situation of the artificially constructed environment.**

A choreographic thinking that is applied not to the body but to the performativity of things enables a form of somatic embodiment that is embedded within objects for the expressive and playful potential of bodies. *Choreo-mediation* then, as a notion, makes spaces towards the somatic spatio-temporal / micro macro / repetitive possibilities of a posture of negotiation in "interactive processes of feedback that take place between the body and its environment," (Shiller, 2008, p. 434).

CONCLUSION

Situating a practice of embodiment and embodied research by way of tacit knowledge (Polanyi, 1966), I have discussed the operating parameters occurring at the scale of the body within a dialogue with the built environment in order to reveal what I have called a “posture of bodily negotiation.” Inspired by body and social epistemologists, Parviainen, Tuuri and Pirhonen (2013), who use choreographic perspectives to question and further understand “bodily movements and other activities, in which movements appear to form meaningful interactions and relations between different animate or inanimate agents” (p. 109), I have focused the thesis on four case studies. Considering the body as an agent and site of experience, each study has aimed to unpack how the body is affected, conditioned, and implicated in its relations and encounters within situated built environment situations.

Aiming to subvert the choreographic practice while affirming the potential of practitioner situated, embodied knowledge through a hybrid assemblage of text-images-notes-analysis, I have aimed to reveal the hidden parameters (*micro-macro scale, negative space, repetition and harmony*) that enable and structure body-object encounters. Such parameters constitute relations between agents that are shaped by ‘strings of artifacts’ - interconnected laws that determine or pre-dispose content and consequence within the artificial and the natural (Herbert, 1996, 3). It is such symbols that are metaphorically observed as choreographic parameters, capturing performances of embodied encounters to understand the negotiation between humans and objects and the fluid parameters that shape these two entities.

Yet, if we acknowledge the potential of bodily interaction with its environment as a negotiation, we then return to the central research question: **how can the body negotiate the constraints imposed by the environment it encounters? What are the choreographic parameters of such negotiation?** Thus, the thesis and research, based on a selection of choreographic and designerly work, aims to reveal through each situated study, an account of possible parameters of negotiation through choreographic and environmental properties of **scale, space, repetition and harmony**.

Grounding the research in a process of somaesthetic engagement aims to provide in-action-reflections (Schön, 1991) that holds the body as the “central position in the production

of embodied knowledge” (Poiyani, 1966, p. 28). Such in-action-reflections, which Schön defines as the process of reflecting on behavior as it happens, thus enable me to create situations that emerge from a personal history of embodied knowledge; by way of a combination of movement, choreography and design praxis. Thus, the creation of such situations becomes part of a methodological framework that has emphasized the potential of integrating somatic and choreographic practices and knowledge in how the built environment is thought out. Here, each creation-based study sought to reveal combinations of bodily techniques that generate different dynamics of negotiation between body and site, inherent to each situation and their unique characteristic properties.

The parameters of negotiation as revealed in each study

To summarize the shaping of compositional choreographic capacities of the body and material agents, I return to the definition of choreography as an organization of movement in action (Forsythe, 2014); an organization that we may now agree occurs in the body, through the material medium across elements of time and space and has the possibility for eukinetic expression (Laban, 1947). This choreographic organization and expression is seen in each of the multi-sited studies and interventions (Rietveld, 2017) as the lenses and parameters of **scale**, **space**, **repetition** and **harmony** that emerge as operational systems in each unique bodily negotiation. These parameters have been summarized below to comprehend the way they collectively operate across the various performance characteristics of a body and material encounter.

In Study 1, *through* sitting engagements with a basic chair object, we revealed the notion of **micro and macro** scale (Parviainen, Tuuri and Pirhonen, 2013); components that compose the gestual engagements of the body within a chair encounter. In such encounters, a body as a whole is not simply a moving block but a larger system of smaller interconnected bodily parts that are each uniquely affected by the affordances of a material proposition within the environment (Rietveld, 2017). This notion of scale is revealed through what Shiffer labels “**performance characteristics**” (1999) as the material characteristics that enable certain tasks to be fulfilled – as properties particular to the chair’ formal attributes. Such properties propose, impose and constraint micro and macro bodily movements and thus limit the possibility of bodily **play** or eukinetic expression (Laban, 1947) to normative postures of sitting. Performance characteristics

in the material agency of a chair designed as purposive and goal oriented (Herbert, 1996) are thus properties that through their rigid and fixed logic, create habituation in the body (Farnell, 1999) and establish normative ways of engaging with a material encounter in the environment.

In contrast, **Study 2**, questioned the counterpart of a material environment, as its contouring **negative space** through spatial representations (Lefebvre, 1969) through the use of inflatables. Negative space through these ‘representational’ inflatables became the volume available for in-habitation by the body (Falzon, 2009), as the space that the body occupies when encountering the material contour of an object. Thus, negative space as a choreographic practice becomes a performance characteristic and *property on an object* as much as its tangible and physical material properties. Negative space becomes the available action space (Giirdenfors, 2007), that exists and operates across micro and macro spatial frameworks. This countering nature of space, that wrapped itself through inflatable membranes of the research revealed a spatial **topographical** (Giirdenfors, 2007) membrane as a meshwork of choreographic parameters embedded through space and materiality; a framework that exists in the specificity of an object as much as the vastness of a room.

Reflecting on the notions of bodily habits entangled in micro, macro and spatial performance characteristics of objects, the **3rd study** moved away from utilizing material encounters in the environment, to zoom into the normative habituation of the body that is instantiated through the performative act of repetition. Through a purely choreographic work situated on the body of a trained performer, repetition was used as a choreographic parameter to understand bodily dexterity through recurrent adaptation (Shusterman, 2012), a dexterity required also when interacting with our familiar quotidian environments. This focus on an isolated performative body highlighted how repetition as a bodily technique (Mauss, 1979) is being constantly enacted by the body as it unconsciously calls to its past bodily engagements within the repetitive performance characteristics of spatial situations. Repetition as a technique of the body is thus mastered through the memorized patterns across micro, macro and spatial properties proposed by the material environment.

Finally, **Study 4** prioritized the assemblage, links, paths, threads and conjunctions between the previously described notions of scale, space and repetition. Creating an environment of physical obstacles, a constructed “forest” out of construction pipes, I aimed to create a situation that explored how the environmental situation would affect the body and how the body

might be challenged by this altered environment. The construction forest reveals the notion of **complexity** as a compositional element in the meshwork between material and spatial that allows for the emergence of **harmony** between the properties of space, scale and repetition as seen throughout the workshop. What is thus revealed is how the body is continually **choreo-mediated** (Schiller, 2018) constantly through scale, space and repetition mutually shaped by the environment. Choreography thus functions as an act of negotiation, existing through both bodily movement and expression as a result of the mediations in the situated environment the body encounters.

Negotiation as the way bodies could inhabit the world

If we think of the verb *negotiate*, we empower the body and return ownership of action to our body and not the environment. Perhaps the body has more possibilities in carrying the steel objects described at the opening of the thesis than its purposive nature allows the body to explore. I can choose to negotiate differently with this object. I can choose to propose to the object a negotiation that feels right to my body in how it wants to express itself. As beings in this world, we are aware of our ability to interact, yet are we as conscious on a daily basis of our ability to negotiate through our bodies? The possibility thus becomes to move from thinking in terms of interactions within our quotidian, mundane, and repetitive ways of engaging with the world (patterns of *reacting*) and instead towards a bodily agency that carries an awareness of its ability to propose its expressive point of view -- to negotiate. **Negotiation can then be viewed as a process and form of embodied awareness on behalf of the body towards its environment, through different parameters: scale, space, repetition and harmony.** Through such parameters, there is then the opportunity for bodily agency to propose its own reaction, even if this means going against the purposive and intended nature afforded by the environment.

Negotiation through scale, space, repetition, and harmony **and beyond** constraint and purposiveness thus becomes the focus of the choreographic analysis that aims to question how limited our point of view and expressive potentials have become in our bodily engagements with everyday environments. In this case, we thus empower the body not to simply undergo habits and patterns through daily repetition, but rather to consider every interaction as an act of negotiation, whereby we must not necessarily follow the patterns associated with an object, yet create new ones?

Future implications

Currently situated in a “corporeal turn” (Sheets Johnstone 2009) that emphasizes corporal awareness and the significance of embodiment, choreography as a practice demonstrates its vast potential outside of its own domain. Utilizing the rich history of somatic movement practices and knowledge as anthropological forms of being in our bodies, we may then ameliorate the way bodies are affected and shaped through interactions and how in turn these interactions shape the environments we inhabit. In doing so, we awaken our own bodies to create and encounter the possibilities of *negotiating* differently within environments that invite an *interaction*. If we were more aware of our ability to negotiate, and if we brought this ability further to the forefront of our phenomenological experience, would this shift our embodied consciousness and the way we inhabit our bodies through the world? Perhaps we would have different and more empowered notions of how to individually engage with the world through our bodies? Negotiation therefore specifies a bodily interaction with a posture of expression and agency, two parameters that support a subjective point of view. If we are speaking about the body and the way the body interacts with the environment, negotiation is proposed not as an always—already way of being the world. Meaning a posture (or ways) of engagement that we are not currently aware of as possibility within bodily behavior and consciousness. Rather a posture that should be explored, questioned, and speculated towards, carving the possibility of richer bodily expression in everyday life.

BIBLIOGRAPHY

- Axel, N. (2018). *Superhumanity: Post-labor, psychopathology, plasticity*. ACTAR.
- Banes, S. (2011). Yvonne Rainer: The aesthetics of denial. In *Terpsichore in sneakers: Post-modern dance* (p. 44). Houghton Mifflin Harcourt.
- Bannerman, H. (2010). Choreographers' reflexive writing—A very special practice. In *Forum for modern language studies* (Vol. 46, No. 4, pp. 474-487). Oxford University Press.
- Block, B., & Kissell, J. L. (2001). The dance: Essence of embodiment. *Theoretical Medicine and Bioethics*, 22, 5-15. <https://doi.org/10.1023/A:1009928504969>
- Butterworth, J., & Wildschut, L. (Eds.). (2009). *Contemporary choreography: A critical reader*. Routledge.
- Combley, R. (Ed.). (2011). Interaction. In *Cambridge Business English Dictionary*. Cambridge University Press.
<https://dictionary.cambridge.org/dictionary/english/interaction>
- Crossley, N. (1996). *Intersubjectivity: The fabric of social becoming*. SAGE Publications.
- Csordas, T. J. (1993). Somatic modes of attention. *Cultural Anthropology*, 8(2), 135-156. <https://www.jstor.org/stable/656467>
- Dialogue. (2023, March 30). In *Wikipedia*. <https://en.wikipedia.org/wiki/Dialogue>
- Dissonance and harmony in dance design. (1934). *Design*, 36(1), 8-9. <https://doi.org/10.1080/00119253.1934.10740789>
- Falzon, M. A. (Ed.). (2009). *Multi-sited ethnography: Theory, praxis and locality in contemporary research*. Routledge.
- Farnell, B. (1999). Moving bodies, acting selves. *Annual Review of Anthropology*, 28(1), 341-373. <https://doi.org/10.1146/annurev.anthro.28.1.341>
- Flach, J. M., Stappers, P. J., & Voorhorst, F. A. (2017). Beyond affordances: Closing the generalization gap between design and cognitive science. *Design Issues*, 33(1), 76-89. https://doi.org/10.1162/DESI_a_00427

- Forsythe, W. (2009). Choreographic objects. In S. Spier (Ed.), *William Forsythe and the practice of choreography* (pp. 90-92). Routledge.
- Gärdenfors, P. (2007). Representing actions and functional properties in conceptual spaces. *Body, Language and Mind*, 1, 167-195.
<https://doi.org/10.1515/9783110207507.2.167>
- Gibson, J. J. (1979). *The ecological approach to visual perception*. Houghton Mifflin.
- Gins, M., & Arakawa, S. (2002). *Architectural body*. University of Alabama Press.
- Given, L. M. (Ed.). (2008). *The Sage encyclopedia of qualitative research methods*. SAGE Publications.
- Halliburton, M. (2002) Rethinking Anthropological Studies of the Body: Manas and Bōdham in Kerala. *American Anthropologist*, vol. 104, no. 4, 2002, pp. 1123–1134.,
<https://doi.org/10.1525/aa.2002.104.4.1123>.
- Hawksley, S. (2012). Choreographic and somatic strategies for navigating bodyscapes and tensegrity schemata. *Journal of Dance & Somatic Practices*, 3(1-2), 101-110.
https://doi.org/10.1386/jdsp.3.1-2.101_1
- Hodder, I. (2012). *Entangled: An archaeology of the relationships between humans and things* (1st ed.). John Wiley & Sons.
- Huang, S. C. (2020). *Mobile homes: Spatial and cultural negotiation in Asian American literature*. Routledge.
- Laban, R. V. (1966). *Choreutics*. Dance Books Ltd.
- Latour, B. (1996). On actor-network theory: A few clarifications. *Soziale Welt*, 369-381.
<https://www.jstor.org/stable/40878163>
- Latour, B. (2013). *Reassembling the social: An introduction to actor-network-theory*. Oxford University Press.
- Law, J. (1999). After ANT: Complexity, naming and topology. *The Sociological Review*, 47(S1), 1-14. <https://doi.org/10.1111/j.1467-954X.1999.tb03479.x>
- Law, J. (2000). *Objects, spaces and others*. Centre for Science Studies Lancaster University.
<https://www.comp.lancs.ac.uk/sociology/papers/Law-Objects-Spaces-Others.pdf>
- Lefebvre, H. (1991). *The production of space*. Basil Blackwell Ltd.
- Malabou, C. (2022). *Plasticity: The promise of explosion*. Edinburgh University Press.

- Maletic, V. (1987). *Body-space-expression: The development of Rudolf Laban's movement and dance concepts*. Walter de Gruyter.
- Marcus, G. E. (1995). Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography. *Annual Review of Anthropology*, 24, 95–117.
<http://www.jstor.org/stable/2155931>
- Mareis, C. (2012). The epistemology of the unspoken: On the concept of tacit knowledge in contemporary design research. *Design Issues*, 28(2), 61-71.
https://doi.org/10.1162/DESI_a_00143
- Massey, D. (2005). *For space*. SAGE Publications
- Mauss. M. (1973). Les techniques du corps. In *Éd. du portique* (pp. 77-79). Forgotten Books.
- Merleau-Ponty, M. (1945). *Phenomenology of perception*. Motilal Banarsidass Publishe.
- Muybridge, E. (1887). *Animal locomotion* (Vol. 534). Da Capo Press.
- Negotiation. (2023, March 26). In *Wikipedia*. <https://en.wikipedia.org/wiki/Negotiation>
- Opsvik, P. (2009). *Rethinking sitting*. WW Norton & Company.
- Papanikolaou, D. (2022). Design, control, actuation and modeling approaches for large-scale transformable inflatables. In *Towards radical regeneration: Design modelling symposium Berlin 2022* (pp. 305-319). Springer.
- Parviainen, J., Tuuri, K., & Pirhonen, A. (2013). Drifting down the technologization of life: Could choreography-based interaction design support us in engaging with the world and our embodied living?. *Challenges*, 4(1), 103-115.
<https://doi.org/10.3390/challe4010103>
- Polanyi, M. (1966). *The tacit dimension*. Doubleday & Company, Inc.
- Poutanen, O., Ylirisku, S., & Hoppu, P. (2017). Technology choreography: Studying interactions in Microsoft's future visions through dance. *Human Technology*, 13(1), 10-31. <https://doi.org/10.17011/ht/urn.201705272516>
- Rewakowicz, A. (2001). *Inflatable/installations/performance: Inside out*. Ana Rewakowicz. <https://rewana.com/inflatable-installations-performances-inside-out.html>
- Rietveld, E. (2016). Situating the embodied mind in a landscape of standing affordances for living without chairs: Materializing a philosophical worldview. *Sports Medicine*, 46(7), 927-932. <https://doi.org/10.1007/s40279-016-0520-2>

- Rohrer, T. (2007). The body in space: Dimensions of embodiment. *Body, Language and Mind*, 1, 339-378. <https://doi.org/10.1515/9783110207507.3.339>
- Salter, C. (2015). *Alien agency: Experimental encounters with art in the making*. MIT Press.
- Shiffer, M.B. (1999). *The Material Life of Human Beings: Artifacts, Behaviour and Communication*. New York: Routledge.
- Schiller, G. (2008). From the kinesphere to the kinesfield: Three choreographic interactive artworks. *Leonardo*, 41(5), 431-437. <https://doi.org/10.1162/leon.2008.41.5.431>
- Schon, D. A. (1984). *The reflective practitioner: How professionals think in action* (Vol. 5126). Basic books.
- Shaw, N. Z. (2014). Animate inscriptions, articulate data and algorithmic expressions of choreographic thinking. *Choreographic Practices*, 5(1), 95-119. https://doi.org/10.1386/chor.5.1.95_1
- Shusterman, R. (2012). *Thinking through the body: Essays in Somaesthetics*. Cambridge University Press.
- Simon, H. A. (1969). *The sciences of the artificial* (Vol. 1). MIT Press.
- Simonsen, K. (2005). Bodies, sensations, space and time: The contribution from Henri Lefebvre. *Geografiska Annaler: Series B, Human Geography*, 87(1), 1-14. <https://www.jstor.org/stable/3554441>
- Simonsen, K. (2007). Practice, spatiality and embodied emotions: An outline of a geography of practice. *Human Affairs*, (2), 168-181. <https://doi.org/10.2478/v10023-007-0015-8>
- Skibo, J. M., & Schiffer, M. (2008). *People and things: A behavioral approach to material culture*. Springer Science & Business Media.
- Taipale, J. (2014). *Phenomenology and embodiment: Husserl and the constitution of subjectivity*. Northwestern University Press.
- Turnbull, D. (2002). Performance and narrative, bodies and movement in the construction of places and objects, spaces and knowledges. *Theory, Culture & Society*, 19(5-6), 125-143. <https://doi.org/10.1177/026327602761899183>

Ulmer, J. B. (2015). Embodied writing: choreographic composition as methodology. *Research in Dance Education*, 16(1), 33-50.

<https://doi.org/10.1080/14647893.2014.971230>

Warburton, E. C. (2011). Of meanings and movements: Re-languaging embodiment in dance phenomenology and cognition. *Dance Research Journal*, 43(2), 65-84.

<https://doi.org/10.1017/S0149767711000064>

Withagen, R., De Poel, H. J., Araújo, D., & Pepping, G. J. (2012). Affordances can invite behavior: Reconsidering the relationship between affordances and agency. *New Ideas in Psychology*, 30(2), 250-258. <https://doi.org/10.1016/j.newideapsych.2011.12.003>