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Task-Based Movement Practice as Dancers' Interdisciplinary Routine: Building the Inner Structure of the Dancing Body

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Preface

As a dancer and choreographer, dancing experiences for me were mostly confined to the area of a dance studio, where we (dancers and choreographers) create our own unique culture of interactions and physical and verbal communications. In their practice, dancers are used to finding systems of signs and terminology to aid their actions, which might be to explain a movement phrase, a transition in space, or to remember an old choreography. Due to its complexity, the dancing experience has no fixed single way to be (intellectually) put into words, interacted with, or communicated to a surrounding community, let alone other fields of study. Furthermore, observing a dance is mostly considered through the lens of movement reflection, which is, in at least one perceptive manner, reminiscent of political attitude or emotional statements or thoughts, and addressed by a folded physical experience in the state of *performance*. It could be suggested that a description of the dancing activity requires more than a specification of the cause: it might also require a description of the content held by every particular movement, as well as what is moved, felt, and thought throughout. In other words, the when, where, and why. This is apparent in all experiences of modern dance practice and is also what distinguishes one experience from another.

This thesis presents a theoretical study of task-based movement practice as a dance improvisation technique that encourages contemporary dancers and choreographers to inform and be informed by other research fields such as cognitive science, architecture, and fine arts. In the scope of this study, two key lines of questioning are approached: How do moving bodies become a source of information when systemic structure for movement production in dance is applied? How can a dancer's complex process of learning a sequence of movements or choreography contribute to the larger field of research and education with reference to dance?

By referring to analytical choreographic and systemic dance studies, specifically integrating those developed from technical writing methods in dance, this thesis will propose a series of movement exercises that were developed within two movement laboratories. These were initiated to examine the practice of choreographic mapping as a tool to enhance the expressive values of human body movement, resulting in a characteristic body expression within a specific context, and to examine task-based movement practice as the dancer's interdisciplinary routine.

1. Introduction

This thesis presents a choreographic map as a method for approaching contemporary dance practice in movement improvisation within pedagogical and artistic contexts. In addition, it aims to develop dynamic exercises, which may help the dance practitioner to instill spatial information, geometrical structures, and qualitative movement components into the body-instrument as part of basic embodied knowledge through imagination. While enhancing the dance practitioner's investigation in movement production, the potential is to convert the information about movement *score* as structures, patterns, and qualities into *second nature knowledge* established in the body, which can *retroactively* create an interface between the practice of dance improvisation and cognitive science, visual arts, architect, interactive technology, space and performance design.

To that end, a set of exercises was developed during the research phase for this thesis. The practice focused on movement grammar and systemic structure with regard to multiple layers of complexity, as a further investigation of the research topics covered during the Master Programme of Movement Research and Dance Pedagogy at the Institute of Dance Art, Anton Bruckner Private University. The study that introduces theories, methods, and results of applied research from modern dance routines, which are rooted in theoretical and systemic perspectives on dance practice and movement production, with the aim to enhance the mere study of dance activity from the site of art into a dimension of coherent and logical study of human body movement. This was achieved by dismantling historical, classical, and contemporary dance forms and applying movement grammar as well as a set of parameters serving the observation of dance, and examining task-based movement practice as the dancer's interdisciplinary routine.

1.1 Concept and proposed practice framework definition: retroactive score

Before diving into proposed practices and their framework, it is necessary to clarify the meaning of *retroactive score* as a key concept of this work. The English term *retroactive* is described in the English dictionary as *taking effect from data in the*

*past*¹ and has been employed particularly in this thesis to describe the kind of movement *score* that is physically practiced to remain in the practitioner's body as an embodied knowledge. The term *score* here refers to a map of instructions containing spatial information, geometric structures, and qualitative components of human body movement. The practice of *retroactive score* aims to translate written scores into movement tasks and to further develop them into embodied knowledge within the individual. It also provides interaction possibilities for a group of practitioners, thereby aiming to create a platform of common knowledge and structures that are to be used for improvisational performances or movement laboratories. In other words, it is an artistic practice comprising structured improvisation as an educational laboratory of system theories. Within said artistic practice, it becomes possible to play with spatial geometries, generating dynamics, forms, and structures through a process of group engagement. This can then be used to create interfaces between dance studies and visual arts, space design, architecture, performance design, and interactive technology to enrich the physical practice.

1.2 Framework

The term *retroactive score* was created to define the framework of the proposed practice and concept, which was developed over a five-day workshop of three hours per day. This period of time was necessary in order to present, practice, and discuss the exercises with the participants. It implements task-based dance performance founded in improvisation as a target of this specific practice. The core concept revolves around awakening the participants' embodied knowledge and creating a real-time experience whereby embodied knowledge may be examined and individual movement choices can be made in an interactive environment.

The workshop took place in the above described form two times. The first workshop was hosted during the Participatory Art Panel (PAP 2019, Linz) with a group of nine participants from different practice backgrounds: three dance students, one advanced dancer, one performance artist, three architects and one assistant professor of the Space and Design Strategies Department at the University of Art

¹ *retroactive* as defined by <https://dictionary.cambridge.org/dictionary/english/retroactive> (accessed on 22.01.2020)¹

and Design Linz, who later organised the second workshop opportunity. This second workshop took place in January 2020 at the University of Art and Design Linz with a group of twelve participants from the Master Programme of Space and Design Strategies. For this workshop, the practice of the designed score system was adapted to suit the focus of the students' recent research topic, which was *mimicry*. Their research aimed to find a strategy to create new relations between the individual body and societal institutions. Within this context, institutions were defined as the space that emerges from functional relations between specific resources, such as art museums, supermarkets, waste management, airports, schools or universities, and more. The practice of these two workshops will be further referred to and discussed in the scope of this thesis by way of examples, excerpts, and feedback from participants, as well as process-oriented results.

1.3 Structure

In order to lay the foundation for further review, investigation, and discussion, Chapter 2 will present how a research question was generated by way of the choreographic laboratory during the Master Programme in Movement Research and Dance Pedagogy at the Institute of Dance Art, ABPU in Linz, in response to a study of materials from modern dance history and system theories. A choreographic method was developed to provide a map of physical activities within a designed environment. This map was then applied in practice through interactive improvisation for a group of eight dancers of the Master Programme, aiming to further examine the possible artistic outputs of this specific choreographic design.

The following Chapter 3 will present a historical review in the form of an investigation into the research topics by addressing and discussing materials from modern dance history and system theories of the early 20th century, which particularly aided dance studies in the evolutionary work of Russian dancer and choreographer Vaslav Nijinsky (1890-1950). They also influenced the work of Rudolf von Laban (1879-1958), the Austro-Hungarian dance theorist who developed his theories of movement in a unique system for conceptualizing and performing spatial forms created by bodily movements and positions. His system has become known as "*choreutics*" or "*space harmony*" (Laban, Ullmann 1966). Laban's system has served

as inspiration for the applied scores in this thesis, proving itself a fundamental source for this practice.

Chapter 4 will discuss the key aspects of modern dance research in correlation to other disciplines that concern the human body's physical activity as a source of knowledge. A crucial component of this is to shed light on the dancers' learning and practicing process of a series of movements that require a high level of split concentration on several aspects of their performance, starting with the most basic elements of body movement. This helps to address the correlation between dance phenomenology and cognitive science, which is also represented by the complex process of learning a canonised sequence of movements or performing a choreography. Furthermore, this chapter will serve to approach the pedagogical aspects of this thesis.

The following Chapter 5 will portray the practice through a set of proposed exercises that were composed and adapted with the application of the research topic in mind. It will also describe the framework and content of the workshops by including examples, excerpts, and feedback from the participants and their process-oriented results. Additionally, the reader is invited to participate and enact the task-based exercises, which are possible to practice in one square meter of space around the standing body.

The final chapter will comprise the presentation of a final analysis, as well as potential benefits and stimuli for further investigation into the research topic in the form of reflective assessment and questions.

2. Research location and context

In 2017, the dance scholars Rose Breuss and Claudia Jeschke established and developed the practice-based research laboratory *de-archiving Movement* in cooperation with the IDA² research lab within the Master Programme of Movement Research and Dance Pedagogy at the Anton Bruckner Private University in Linz, Austria. *de-archiving Movement* introduces theories, methods, and numerous applied research results that involve a complex approach to movement research. This approach is rooted in theoretical and systematic perspectives on dance practice and movement analysis, and is primarily carried out by approaching the abstraction of dance phenomena at its origin, by describing movement in body-centered terms such as weight, space, time, flow, the body architecture, and articulation of limbs. As Breuss describes in her research paper:

“[...] such searching movements require ‘different’, non-conventional parameters of movement, rendering necessary a review of dance-analytical methodology. The referential, stable system of the conventional parameters and grammar of movement (what it is that moves, when, where to and how) can sometimes suffice in composition and performance [...]” (Breuss & Jeschke 2017, p.1).

Such a perspective allowed the study of dance to reach beyond the typical stylistic or formal perspective towards its practice, namely by dismantling the historical, classical dance forms and contemporary practices, as well as through the application of movement grammar and a set of parameters that serve the observation of dance and body movement. Thus, this approach to the study of dance practice required a methodology for embodying historical materials, creating a platform for bodily interaction and bringing it to life. This systemic approach towards movement analysis enhances the potential to seek for new movement opportunities and sheds light on its process, all while keeping in mind the question: What is the danced material and what generates it?

² IDA: is the Institute of Dance Art at the Anton Bruckner Private University in Linz, Austria. The department of modern dance was founded by Isolde Klettmann in 1927, followed by the Music School of the Musikverein (the Predecessor of today's ABPU). It was the first modern dance department in German-speaking countries.

2.1 Transformation of choreographic practice through historical material

Initially, the research questions that form the basis of this thesis emerged while studying, analysing, and practicing the choreographic methods and concepts developed by the Russian dancer and choreographer Vaslav Nijinsky. His choreographic work appears to be oriented towards the dancer's embodiment of complex content and enhancing the expressive values of the human body movement. His dancers embody specifically designed body architectures and form specific articulations of the limbs (designing the shape of the dancing body) and extend this shape to become part of his space design (the floor plan), which can be considered to be a basic idea for the creation of a field of physical relations that will further express the content of his choreographies. The analysis of his ideal choreographic design led to an observation of choreography as the design for information and relations between a dancer's body parts, subdividing them into "*the internal body*" in relation to their surroundings and "*the external body*" (Louppe, 1994). Furthermore, for a better understanding of Nijinsky's choreographic method, it was necessary to create a choreographic practice that responds to his methodology. To fulfill this purpose, as an experiment, a choreographic structure was designed on paper as a set of movement tasks for a group of eight professional dancers (fellow colleagues in the Master Programme of Movement Research at IDA). The movement tasks were designed to be performed instantly as an improvisational performance. Each dancer received a different paper containing a written score that consisted of a number or set of tasks. These tasks were created to provide a map of bodily activities for each of the dancers in different levels.

The first task aimed to map the location of the body in space. The second task concerned the body shape and mapped a certain relation between body parts. The third task was designed to characterise the movement quality of each of the dancers, and the last task was to create a field of dynamic relations between all the dancers in the space. The dancers had fifteen minutes to read their movement tasks and ask questions before they performed it on stage. The tasks aimed at motivating the participants to move and form their bodies in relation to space and other dancers in specific dynamics that were controlled by musical cues. The dancers had to orient their bodies in the space according to the written tasks, from the location on stage

(e.g.: dancer 1, with your back facing the audience, locate yourself at the extreme right side of the stage) to specific relations between body parts (e.g.: your right elbow is in relation to your left knee; the relation begins when touching they touch each other as the starting point; move them apart, opening the space between them as an imaginary line, revealing and describing the distance between them; draw four different shapes of this line: vertically straight, curvy, circular around your right knee, and circular around another body in the space). Another task was to add a layer to the quality of the movement, e.g.: imagine the lines that you create by opening the space between your right elbow and left knee have a strong tendency to resist this expansion, quickly intending to fold themselves back to the starting point; this resistance is activated immediately after your completed expansion of the line into one of the previous shapes. Other tasks were designed to add a value of interactive relation between dancers. For instance, dancer 2 may have been given the instruction to address or relate to specific body parts of movements of dancer 1 (e.g.: your second task is to stay at a distance of approximately one meter to dancer 1, facing their back to copy their movements until the music stops).

It is important to note the deliberate decision that none of the dancers were aware of the other dancers' tasks. However, they were instantly stimulated to recognise each other's activity and movement according to their own tasks as they transformed them from a written score on a paper into a physical movement, e.g.: Can you imagine what might happen when dancer 1 aims to draw the line around dancer 2, while at the same time, dancer 2 aims to remain facing the back of dancer 1? The picture may seem to be simple while reading or assigning the tasks, but that which happens in the real physical enactment of the task while both dancers are situated in a physical conflict in real time and space is complex and can not be predicted beforehand. In order to complete their tasks, the dancers must find their own way to respond to each other, relying on their own perspective, body culture, and knowledge, as well as their commitment to complete what they have been instructed to do on paper. The written tasks aimed at generating a live experience consisting of the dancers' physical expressions that also stood in relation to each other, integrating a whole map of actions and spatial structure.

The outcome of this work uncovered a number of topics and questions for further investigation concerning the dancers' spontaneous responses to external stimuli and

the embodiment of a complex activity. Regarding the observer's perspective, with no information about the movement tasks embodied by the dancers, it can be assumed that the observer is only able to perceive a physical conflict that is being performed on stage. In order to instantly stimulate the body to move, the dancers were motivated to recognise the necessary connections between themselves and their relation to space, other dancers, music elements, and objects. However, the dancers' spontaneous interactions with unexpected changes instantly resulted in process-oriented dramaturgical outputs.

2.2 From a choreographic to a pedagogical approach

The previously described choreographic experiment was created by a number of noteworthy aspects. Firstly, the participants who performed the tasks were well-trained dancers with a wide range of physical knowledge and movement vocabulary. Secondly, the dancers were colleagues of the same study program, which means that they had studied, researched and shared their knowledge beforehand. This was an essential aspect in order to find a common vocabulary to generate the tasks. Thirdly, the dancers were at the level in their practice that allowed them to understand what the term *score* means within the field of contemporary dance practice. Similarly, they were also aware of how to imagine traces and lines of body movements and how to embody a movement task. More importantly, in the case of this study, they were able to suggest movements or adapt their bodies spontaneously to any changes during their performance without requiring explanation from a choreographer in advance.

The above aspects from the dancers' practice were immediately formulated into questions for any demand of further investigation for this choreographic and artistic approach: In case of any further application of this choreographic method with different groups of dancers, which kind of movement vocabulary is applicable and accessible for every dancer? If the dancers come from different dance practice backgrounds, might it be necessary for the choreographer to find a common platform of movement vocabulary and concepts? If so, they would need to be introduced to the dancers before the commencement of the improvisation tasks. Furthermore, which kind of movement vocabulary can be practiced and is easily accessible for dancers with diverse knowledge and backgrounds? If this method is applied with

groups of movement practitioners that are at different levels of their practices, they might also require an introduction to physically understand such concepts as *embodiment* of a movement task, *drawing* or *tracing* a movement in space, and *movement sensation*. What might these terms mean for a reader who has not yet physically practiced these concepts? The continued investigation into finding a methodology to expand the choreographic practice and enable further applications, specifically targeting a pedagogical approach, will be further developed within the scope of this thesis.

2.3 Approaching the field of dance research

In order to establish a thorough and well-rounded investigation, it was necessary to research various forms of scores, notation systems, publications of dance books, texts, interviews, diagrams, images, online digital software platforms, and drawings pertaining to the field of dance research. As a starting point, focus was placed on the following aspects: The performer in relation to the danced material and the danced material in relation to the observer. This approach to dance studies motivated an openness towards the aspect of the performed movements as a container for values and information, all while posing a particular question: What do we see when we observe a dancer performing a movement? What of the danced material is visible to us (the observer), and what is the dancer's activity beyond the visible movement? These questions provoked a need to seek for the dancer's performing values beyond the appearance of their movement, such as aesthetics or perfect technique. This, in turn, led to a different understanding of what a performance can be, as Breuss describes that:

"[...] The dancer acts as a searching figure within such body layers. He moves into his body, finds movement in the midst of routines, constructs routes. He maps movement in the dancing body, a body that becomes an object of research. He thus develops a nuanced awareness of movement in the manifold layers of the body, and localises it in many possible (body) subjects." (Breuss and Jeschke 2017, p. 11).

Additionally, researching and discoursing dance notation systems and dance analysis strategies provides a basic tool to study the dance practitioner routine by

looking at particular elements of movement all the way from intention to *enaction*³. (Warburton 2014) Thus, this thesis will also discuss the concept of dance notation systems and how they offer a relational domain of knowledge by looking at geometrical and motoric aspects, structures, and dynamics in human body movement. Additionally, it will discuss how this viewpoint supports the understanding of physical motion, raising the question of what makes the dancers' complex and abstract movements appear as communicative activity within its surroundings? In this instance, it is key is to consider movement as a living architecture in the sense that body parts change their placement, while categorising it as spatial information in accordance with Laban's suggestion that the body-architecture is made up of pathways, tracing shapes in space which can be called "*trace forms*" (Laban & Ullmann 1966, p.46).

³ Edward C. Warburton proposed the theoretical construct of dance enaction to understand how experiences of dance emerge from more basic processes, and how dancing shapes the mind, body, and brain. The concept of *enactment* was established as a cornerstone of the embodied cognition literature, which claims that cognition is *for action* (i.e. the function of the mind is to guide action) and is a *situated activity* (i.e. it takes place in the context of a real-world environment). An enactive approach emphasizes the emotional and relational nature of thought in action. For more information, see Warburton, Edward. (2014). *Body Double: The Enactive Approach to Research on Marking in Dance*. www.researchgate.net/publication/320084228. (accessed on 2nd March 2021)

3. Theoretical review: Choreographic and systemic dance studies that reinforce improvisation techniques and task-based movement practice

Given that this thesis aims to propose movement exercises relying on movement grammar and systemic practices, it is pertinent to address and discuss materials from modern dance history and system theories in the early twentieth century as part of the research topics. Works of particular interest are the evolutionary choreographic design of the Russian dancer and choreographer Vaslav Nijinsky (1890-1950), more specifically his masterpiece *Le Sacre du Printemps* (*The rite of spring*), as well as the later work of Rudolf von Laban (1879-1958), the Austro-hungarian dance theorist who developed theories of movement into a unique system for conceptualising and performing spatial forms created by bodily movements and positions. His system has become known as *Choreutics* or *space harmony* (Laban & Ullmann 1966) and has proven to be a main source of material within the scope of this thesis.

In order to establish the basis for later extrapolation, the following sections comprise a presentation and studied view of the discourses in Nijinsky's choreographic method. While his choreographic approach seemed to be oriented towards the dancers' embodiment of the complex content of physical tasks, Nijinsky searched for the expressive values of human body movement through the dancers' embodiment of a specifically designed space, the floor plan, body architecture, the articulations of the limbs, the shape of the body, and irregular rhythmical patterns. These formed the basic elements for the design of his choreography. For a more comprehensive understanding, the following is a presentation of a historical review and analytical study of Nijinski's masterpiece *Le Sacre du Printemps*⁴, referring to methods that were applied by the dance designer Millicent Hodson who studied ballets and reconstructed modern masterpieces from the Ballets Russes.

⁴ Nijinsky's choreography for *Le Sacre du Printemps* anticipated in the early years of the 20th century what has lately been regarded as novel and even unique. It bears closer resemblance to certain postmodern dances of the last decade than to anything that has happened choreographically since 1913. (Hodson 1985, p. 35)

3.1 Nijinsky Choreographic-map

Nijinsky's choreographic design of *Le Sacre du Printemps* provides ample platform for the discussion of narratives pertaining to the concept of body expression stimulation through the embodiment of specifically designed body architecture, with particular reference to the reproduction of the ballet by Hodson, who worked with Kenneth Archer as part of the dance-design team. They created ballets and reconstructed modern masterpieces from the *Ballets Russes* and *Ballets Suédois*, and also worked together on a series of dance articles in publications such as *Dance Now*, *Dancing Times*, *Dance Theatre Journal*, *Dance Research*, *Ballet Review*, *Dance Magazine*, and *Dance Research Journal*.⁵ (Bolshoi 2011, web) Much has been said of the 1913 premiere of *Le Sacre du Printemps*, but not many authors have focused on the actual bodies performing on stage. (Järvinen 2013, p.69) In 1987, the piece was reconstructed by Hodson and Archer who collected parts of the archive, bringing them together to form a new product in their repertoire. (Järvinen 2013, p.70).

Hodson mentioned that the issue of reconstructing Nijinsky's *Le Sacre du Printemps* was that it had been one of the so-called lost masterpieces (Hodson 1985, p.36), as there were no records of any dance notation for it (ibid, p.36). Perhaps this was due to the piece being unlike any previous ballet, posing the difficulty of using one of the era's established notation systems to capture the expressive new movements from Nijinsky's choreography (Papanikolaou 2008, p.577). It is even said that the most effort spent on the reconstruction of *Le Sacre du Printemps* was in Hodson's research, writing, and choreographing (Järvinen 2013, p.70). The existing fragments of dance documentation available to Hodson came in a variety of forms, from sketches to eyewitness accounts written down in interviews or diaries (Papanikolaou 2008, p. 577).

⁵ Bolshoi. (n.d.). *Millicent Hodson, Kenneth Archer - Biography*. The State Academic Bolshoi Theatre of Russia. <https://www.bolshoi.ru/en/persons/people/2516/> (accessed on 25th February 2021)



Figure 1: Pastel drawing by Valentine Hugo Gross showing a moment from the end of the first scene of *Le Sacre du Printemps*. (Diaghilev Ballets Russes 1913)

3.2 Stimulating body expression through the embodiment of physical structure

In the original production of *Le Sacre du Printemps* in 1913, Nijinsky, together with Nicholas Roerich (the scenarist, stage and costume designer), Igor Stravinsky (the composer of the ballet) and Diaghilev's Ballets Russes, designed the ballet around the ritual sacrifice of a young maiden by members of an archaic tribe. The chosen maiden dances herself to death to assure the return of spring. (Hodson 1985, p.81; Hodson 1986, p.72; Järvinen 2013, p.70)

“In the first act of Nijinsky's *Sacre* the 'Games of the Rival Tribes' are a contest of strength, not a battle for life or death; they are a type of martial arts demonstration, competitive but congenial. In the second act Nijinsky's ordeals of repetition and restriction become sombre in tone, revealing spiritual effort and the tension of the impending sacrifice, when a young woman dances herself to death to ensure the return of spring, or - to use Nijinska's significant phrase- 'to save the earth'.” (Hodson 1986, p.64)

According to Hodson's research, much of what Roerich offered to Vaslav Nijinsky, the choreographer of the ballet, was based on his extensive archeological background (Hodson 1986, p.71). *Le Sacre du printemps* had been inspired by the observation of archaeological documents from primitive Slavic paintings collected by Roerich (ibid, p.71), so it seems that Nijinsky transferred this inspiration to his dancers in terms of movement motive and expression.

As his new approach was oriented towards the dancers' embodiment of complex content in order to enhance the expressive values of the human body movement, the result was a characteristic body expression, where the knees were turned in and the arms twisted back. Nijinsky followed this by reversing the positions of academic ballet dance at that time (Hodson 1986; Järvinen 2013). It seems that he viewed the resource material at hand as a source of motivation to move the dancing body, instead of the aesthetic values that could serve the classical ballet performance at that time. Such an argument supports the notion that Nijinsky was seeking for a new possibility to address the dancing body to reach beyond the typical stylistic, aesthetic, or formal perspectives towards dance at his time, even though Nijinsky was and is known as an iconic ballet dancer at the time, having been highly rewarded for his technique (Järvinen 2013, p.89). However, as a choreographer, Nijinsky seemed to be breaking down his formal practice and knowledge. According to Hodson's findings in early memoirs of the ballet dancer and choreographer Bronislava Nijinska, sister of Nijinsky, Nijinsky struggled to find a partition of movement. His sister recalled her experiences in *Le sacre du Printemps*, addressing the discussions between Roerich and Nijinsky, which her brother reported to her at length (Robinson 2017). Nijinsky said:

"I am forced to cry for a 'partition of movements' where to place my instruments which are the human bodies [...]. My composition is even less simple because the human body does not possess just 4 strings but an infinite multitude of sensitive and expressive elements." (Robinson 2017, p.7)

Was this to say that Nijinsky desired to move towards a new understanding of human body movement by looking at its intention and motivation, to find new values in what makes the body move and express? In this sense, his choreographic approach for *Le Sacre du Printemps* can be seen as a design of dancers' intentions and attention towards their movements. Thus, the movement itself becomes the result of forms of expression and dramaturgy.

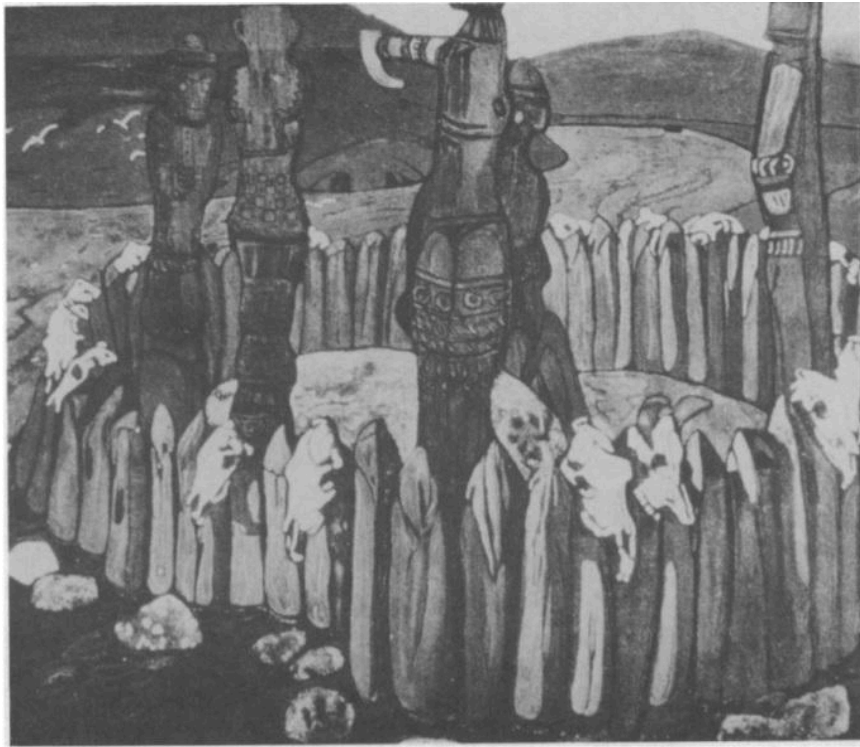


Figure 2: Idols of Ancient Russia, painting by Nicholas Roerich for *Le Sacre du Printemps* (Hodson 1986-1987, p.8)

In Nijinsky's choreography, Marie Rambert, his assistant for *Le Sacre du Printemps*, emphasised "*the basic posture of the dance and the creative limitations it imposes on all aspects of movement*" (Hodson 1986, p.66). This information addresses how Nijinsky's choreographic method was oriented towards designing a series of complex physical tasks posed to the dancers. The dance itself provided a dynamic and logical design of relations, from the particular elements of the dancer's body to the paintings, music, costume, and the general space of *Le Sacre du Printemps*.

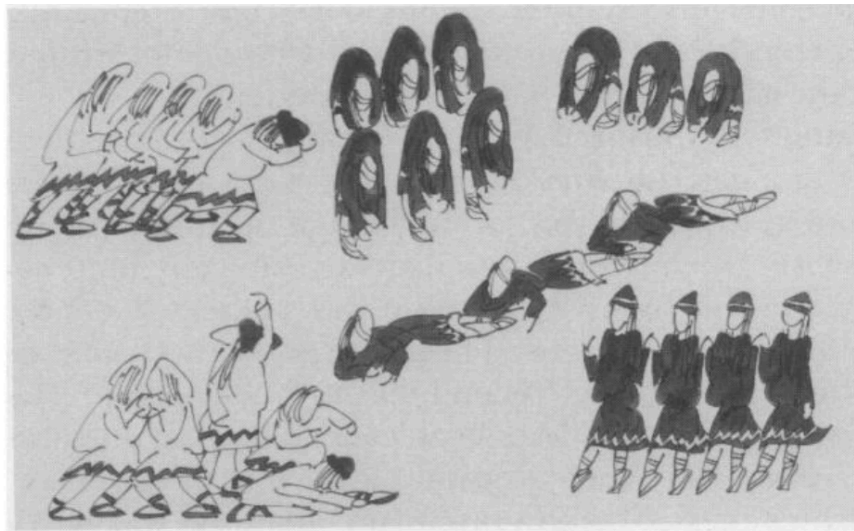


Figure 3: Sketch by Millicent Hodson for the reconstruction of *Le Sacre du printemps* (Hodson 1985, p.39)

The systemisation of this sort of movement practice for *Le Sacre du Printemps* remains to be explored, not only choreographically, but also with a view to studying the resulting impact on the dancer's movement practice and physicality: the dance demonstrates each of the dancers' the *effort* to create a real time experience. For *Le Sacre du Printemps*, Nijinsky seemed to insist on the dancers' expressivity through the great cost of the physical and cognitive exhaustion. However, this creates an opportunity to approach the dancing body as "*an instrument of consciousness of the dancers themselves*" (Hodson 1985, p.40). This questions the cognitive aspect of dance practice, an aspect that has proven itself key to the investigation within the scope of this thesis.

3.3 Considering choreographic practice as a pedagogical thesis

While it remains impossible to discern Nijinsky's plans precisely, he certainly succeeded in creating a virtual *rite* for his performance and, by extension, the modern dance scene, establishing a basis of actual dance experience consisting of complex movement tasks for his dancers. Furthermore, Nijinski's work appears to be oriented towards a dancer's embodiment of complex physical tasks in order to generate movement and expression. One could say that Nijinsky searched for the expressive values of human body movement in a different way, through the dancer's

embodiment of movement structures, spacial design (the floor plan), body architecture (the articulation of limbs and the shape of the body), and by his dancers' commitment to demonstrating irregular rhythmic patterns (Hodson 1985). Initially, the questions for this thesis emerged after studying, analysing, and practicing some aspects of Nijinsky's choreographic method and by drawing the focus to dismantling the choreographic design of *Le Sacre du Printemps* from its original cause, which is the ritual. By stripping the content of the masterpiece into its basic elements of the choreography, using a systemic structure for movement production, and applying physical tasks that draws attention to what makes the dancers move instead of how they should move. This approach kindled a process of re-imagining, much like how the classically-trained dancers of *Le Sacre du Printemps* challenged their training in order to uncover new ways to approach choreography. Additionally, it is important to address how Nijinsky's new approach to choreography and the dancing body provoked modern dance theorists to apply different vocabulary, terminology, and linguistic descriptions like *the dancer effort*, *inwards bound shape*, *natural asymmetry* and *fragmented attention* in order to analyse the movement design and choreographic methodology. (Järvinen 2013, p.88-89) In order to discover and develop the notion of task-based practice for this thesis, Nijinsky's evolutionary choreographic design was considered as one of the key sources to invest in.

It was therefore necessary to develop a systemic structure for movement production and apply physical tasks that draw the dancers' attention towards what makes them move instead of how they should move. Exercises that were shaped and supported by aspects of systemic movement theories and body-space structures proved themselves particularly useful, specifically integrating those that were developed from technical writing methods such as *Choreutics* by Rudolf von Laban. The use of specific aspects, structures, and fundamentals from Rudolf von Laban's theories of human body movement as a tool to design the proposed task-based movement practice also became essential. Laban's movement theory is considered to be a unique system for conceptualising and performing spatial forms that are created by bodily movements and positions (Longstaff 1996). His system became known as *Choreutics* or *space harmony* (Laban & Ullmann 1966; Newlove, Dalby 2004), and can be defined as "*the study of harmonic spatial forms, which [...] materialise in movement*" (Longstaff 1996, p.19). *Choreutics* became a core tool for the investigation of this thesis, involving the examination of a combination of task-based

exercises that would help the dancer to instill scales, as well as internal and external geometrical structures, into the bodily instrument, combined with different dynamics and intensities. This practice aids dance students' investigations to physically understand particular movement components in relation to expressive values of the body, which essentially constitute the core concept used in dance notation systems.

3.4 Introduction to dance notation, movement writing, and analysis

Choreography literally means the designing or writing of circles, and the word is continually used today when referring to the design or composition of dance choreography. (Laban & Ullmann 1966, p.viii) The application of this word therefore refers to two kinds of actions: dancing, *choros*, and writing, *graphie*. (ibid) As such, the word choreography seems to present a theory of the relation between dance and scripturality, “*writing as movement and dance as text*” (Franko 2011, p.321). In this way, to study something called choreography might “*require [looking] at both, the score of a dance and the dance itself as observed in real time and space*” (ibid), as Franko suggested in his paper *Writing For The Body* (2011)⁶. Nevertheless, the concept of dance as writing was always challenged with the claim that “*dance goes beyond the grasp of the written language*” (ibid, p.322), and the history of dance notation reflects the complex interplay between dance, language, and writing (Louppe 1994)⁷. This relationship was reinforced by the appearance of notated dances toward the end of the sixteenth century (Franko 2011, p.322), when choreography emulated the spatial presentation of written characters as well as geometrical patterns, and had an identical significance “*as letters forming words*” (Franko 2011, p.323). During the Baroque dance era, which developed chiefly in

⁶ Mark Franko is a Professor of Dance and Chair of the Theater Arts Department at the University of California, Santa Cruz, and Director of the interdisciplinary Center for Visual and Performance Studies at the same university. (For more biographical information, see <https://boyer.temple.edu/about/faculty-staff/mark-franko-tuf08933> and <http://artsites.ucsc.edu/faculty/franko/>) (accessed on 22.02.2021)

⁷ Laurence Louppe was a French writer, critic, and historian of dance, a specialist in the aesthetics of dance and visual arts, and a choreographic artist. She taught at the Université du Québec à Montréal, at the Performing Arts Research and Training Studios in Brussels, and created a higher education in choreographic culture at the Cefedem-Sud in Aubagne. She was made a Chevalier of the Ordre des Arts et des Lettres on 1st January 2009. (For more information, see <https://peoplepill.com/people/laurence-louppe/>)

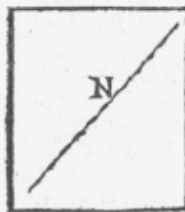
France during the seventeenth century, an extended and complicated vocabulary of dance evolved (Louppe 1994). Another form of notation was later developed by *Raoul-Auger Feuillet* (Franko 2011, p.323), based on the work of choreographer Pierre Beauchamps, which appeared in print by 1700 (ibid). Feuillet notation, “*which codified the step, the path of the choreography through space, and its relationship to music*” (Franko 2011, p.323) made tracking the body as a whole through notation far more comprehensive, but therefore also more difficult to decode (ibid).

L A D A N C E

Ligne Circulaire, celle qui va en circulant de costé & d'autre, comme marque la ligne M.



Ligne Oblique, celle qui va obliquement d'un coin de la Salle vers l'autre coin, comme marque la ligne N.



Chacune de ces lignes séparées ou jointes ensemble peuvent former un chemin propre à danser, sur lequel on pourra écrire les Pas & les Positions, comme marque la figure O, dont le commencement se connoitra par ce qui marque la présence du corps, que j'y joins pour marquer devant quel costé de la Salle le devant du corps doit être avant de danser.



A iij

Figure 4: Feuillet notation (Franko 2011, p.325)

In the late 19th and 20th centuries, technical writing of dance became more associated with the dancer's technique (Franko 2011, p.325), diverting focus to the dancing body as a living instrument, but without reducing any focus on the path through space or the spatial relationships between dancers and general space

(Franko 2011, p.325-326). When speaking of notations, the most influential system of our days was developed by Rudolf von Laban as *Kinetography* or *Labanotation*, and was first formulated as *Schrifttanz* in 1928 (Franko 2011, p.327). Laban's system analyzed and described the human body as a moving architecture in body-centred terms: weight, space, time, flow (Franko 2011), with certain subdivisions of the body in relation to space to make the description of the movement as exact as possible.

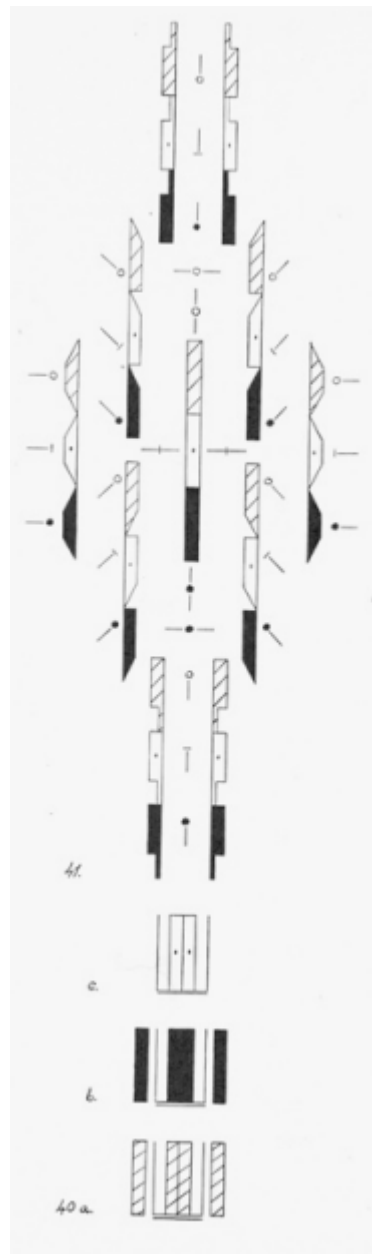


Figure 5: “The notation of weight level and the directions of movement” from Rudolf Laban’s Principles of Dance and Movement Notation (Franko 2011, p.327)

However, Franko argued that *“even an anti-notational prejudice remains noticeable in much contemporary thinking about dance”* (ibid, p.328). Moreover, Laurence Louppe stated that:

“Dance is lived and traversed as a living presence; it has, in appearance, no need for a symbolizing system that would be incompatible with experiential givens and would reduce the sensible fabric of movement to an all-resuming graph, universal, transferable from one place to another, from one textuality to another.” (Louppe 1994, p.9)

From this point of view, it seems that it has been difficult in the past to think of notation in relation to choreographing a new dance, as it has been used to document existing dance pieces or movement exercises. Additionally, notation has become associated with *“reconstruction as a phenomenon of historical interest”* (Franko 2011, p.328). At the same time, Franko also stated that the sense of the score and some kind of notation *“seems to remain within the body and the mind of the dancer as a danced possibility”* (ibid). While notation systems are considered to be *coded systems* (Louppe 1994), they create a universal value of the human body’s movement and provide a force for body expression. As a document, dance notation becomes the visual energy that is related to the body and its movement.

For the purpose of this thesis, literal notation is of secondary importance. The primary focus lies in the consideration of the idea of movement scores (systems, logics, functions, and structures) when they become embodied knowledge within the body. Other issues that are more deeply involved with the body of a dancer are its state, psychology, and its reasons to move, which may be more fundamental to dance practice and the movement learning process: *“The body realizes itself in embodying its own notation”* (Franko 2011, p.333-334). In terms of this thesis, the above issues emerged while attempting to embody a notated exercise described in a given dance notation document. Demonstrating the symbols on the paper and re-forming the body in space represents a cognitive demand on the performer *“in the process of mediatizing the dancing body itself”* (deLahunta & Jenett 2017, p. 63-79). In other words, embodying different forms and structures from notation systems helps the body to be its own medium. It was Franko who described that *“the body must itself become an image mediating between subject (or task) and movement”* (Franko 2011, p.334). Following this approach, re-embodying dance

notation also requires some aspects of the dancers' choreographic routine practice to be questioned, such as the dancer's "*cognitive mapping*" (Franko 2010, p.328) and "*embodiment*" (Warburton 2011), aspects which will be further discussed in Chapter 4.4. The following chapter will focus on the use of specific structures and fundamentals from Rudolf von Laban's theories of human body movement as a tool for designing the proposed task-based exercises for this thesis.

3.5 Introduction to Choreutics and Laban movement analysis

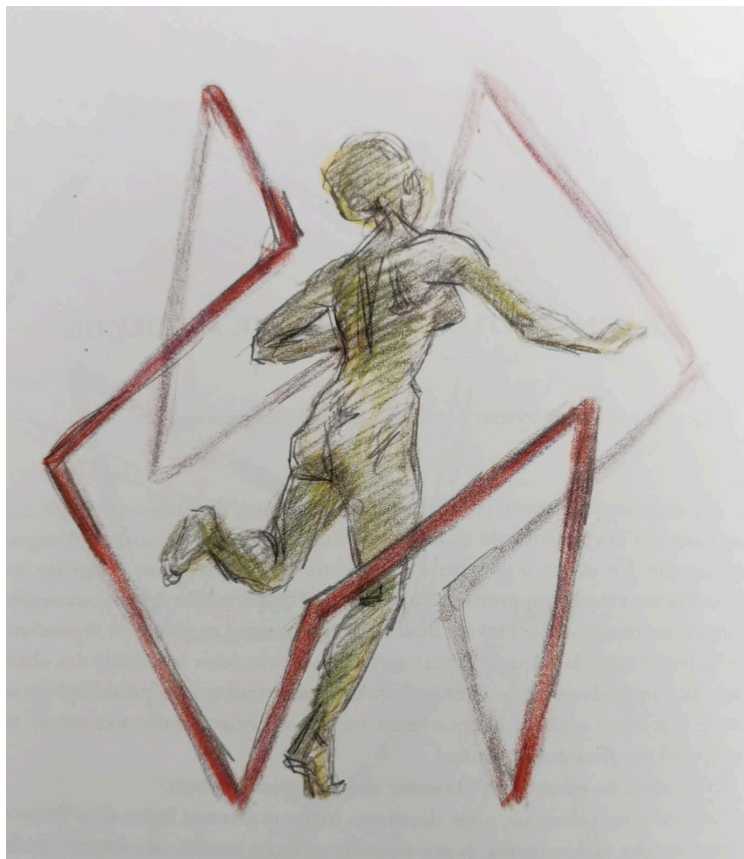


Figure 6: Sketch by Rudolf von Laban. Credits: Rudolf Laban Archive, National Resource Center for Dance. (Schwartz-Remy 2003, p.44)

Rudolf von Laban, Born in Bratislava, Slovakia in 1879, has been described as a philosopher, scientist, mathematician, theorist, architect, dancer, and choreographer

(Newlove, Dalby 2004, p.11)⁸. Since he was a boy, Laban was interested in dance and by traveling with his father, he was able to witness the folk dances of Yugoslavia, Turkey, Germany, and the ballroom dances of Vienna (Newlove, Dalby 2004, p.2). Later, he moved to Paris, where he continued his studies in architecture before opening his own studio and following up with his passion for theatre, dance, and mime (Newlove, Dalby 2004, p.11). Laban's theories are considered to be a unique system for movement analysis and conceptualizing and performing spatial forms through bodily movements or gestures (Scott Longstaff 1996, p.19). His system, known as *Choreutics* or *Space Harmony* (Laban & Ullmann 1966; Newlove 2004), has also been defined as “*the study of harmonic spatial forms and the manner in which they materialise in movement*” (Scott Longstaff 1996, p.19). The notation is based on a desire to free dance from the restrictions of music, believing that “*the natural rhythms of the body [are] more inherent than metric rhythms*” (Newlove, Dalby 2004, p.13). While he was teaching and lecturing, work on his main project, dance notation, steadily continued. (Newlove, Dalby 2004, p.12) In addition, he wrote books about the topic and published many articles. In 1930, he worked as a Director of Movement at the state theatres in Berlin, which included being a ballet master at the State Opera (Newlove, Dalby 2004, p.13). By then, the Nazis had the arts and all cultural activities firmly in their grasp, but Laban was able to leave the country and eventually arrived in Paris, from where Kurt Jooss⁹ and Lisa Ullmann brought him to England. Jooss was widely regarded as the founder of Tanztheater, and Lisa Ullmann was one of Jooss' assistants and a former student of Laban. She later became Laban's mouthpiece, lecturing on his behalf, demonstrating the effectiveness of his dance notation, and, eventually, they gave classes together. Their work soon attracted the attention of physical educationalists and dance

⁸ Jean Newlove was invited at the age of eighteen to dance for Rudolf Laban and, as a result, Laban asked her to train with him and become his personal assistant. In this role, she worked with Laban on a variety of projects, including his work in industry. She worked with Joan Littlewood for fifteen years at Theatre Workshop, where the value of Laban's work was recognised. Alongside giving daily movement classes to the company, she choreographed productions and performed as a dancer and actor. Her work includes *The Hostage*, *The Quare Fellow*, *Fings Ain't Wot They Used T'Be*, *A Taste of Honey* and *Oh What a Lovely War*. She travelled widely with Theatre Workshop in Europe, giving workshops in Laban's workplaces, and received awards for her work in Poland and Russia. (Newlove, 2004)

⁹ Kurt Jooss created one of the, to this day, most powerful Laban-influenced and anti-war choreographies, *The Green Table*. Jooss started the Folkwangschule in 1929 in Essen before having to leave, but returned to Essen in 1951. Pina Bausch's initial training took place there under Jooss, making her connection “*to Laban's dance theatre [...] visible*” (Preston-Dunlop 1998, p. 271), (Fernandes, Ciane 2014). *The Moving Researcher*. Jessica Kingsley Publishers).

teachers (ibid, p.14-17). Lisa Ullmann later worked with a faculty of assistants who were instrumental in establishing Laban's work in Britain (ibid, p.16). Laban's notation system, known as *Labanotation* or *Kinetography* (Scott Longstaff 1996, p.19; Franko 2011, p.327) became well developed and used for the documentation of a large number of dance pieces (Franko 2011). As a basic analytical principle of Laban's Kinetography, that body-movement is described by which body parts move, in which level, in which direction and for how long. By using symbols for body parts that differentiate the body to a finer degree.

Table:

Basic subdivisions of the body parts, Laban's Kinetography (Ullman 2011, p.26)

Left-side articulation

Right-side articulation



Foot
Toes

Foot
Toes

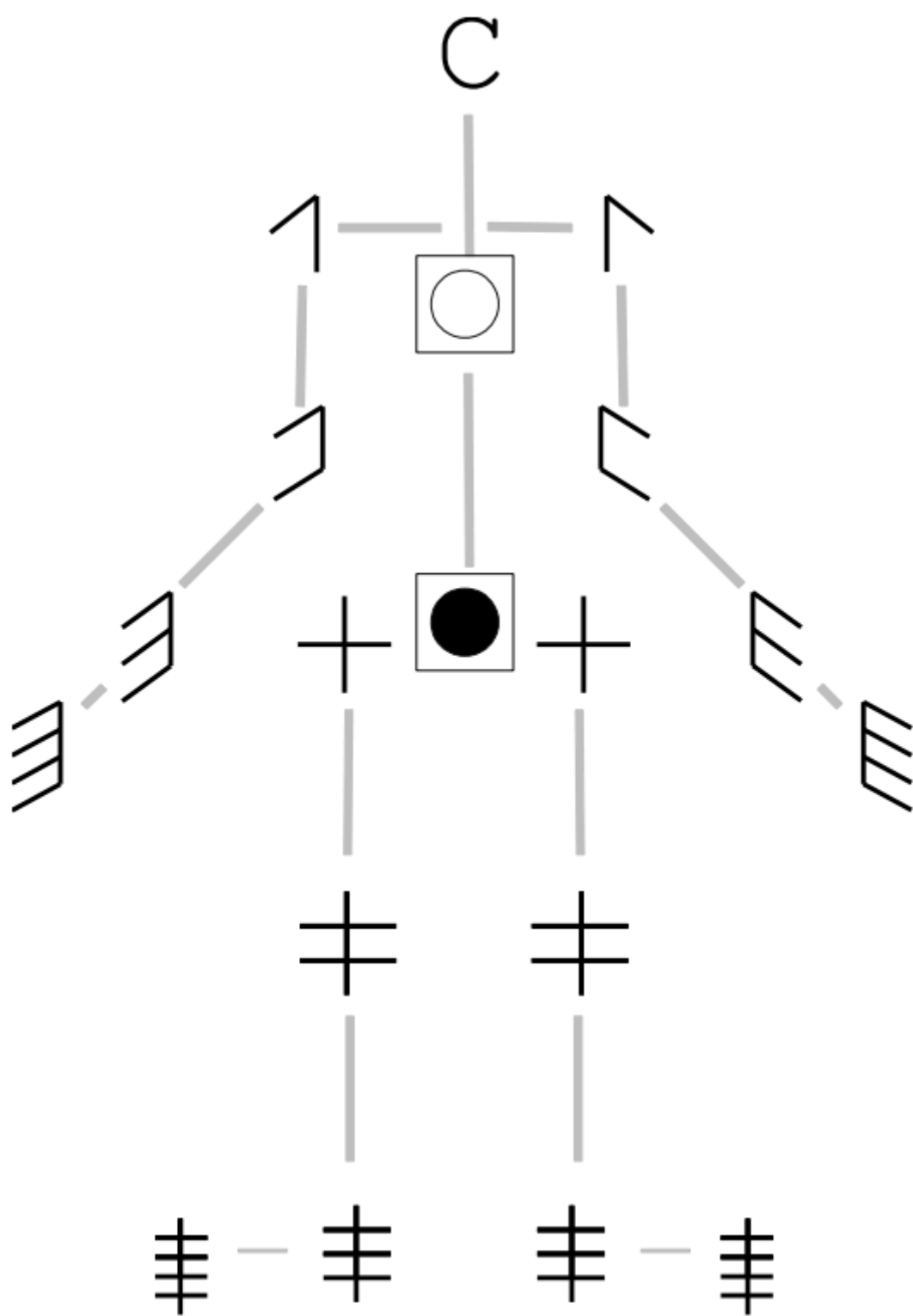


Figure 7: Basic Movement Analysis with Kinetography Laban, body signs

(Drewes 2015, p.5)

The symbols are used to assign a body part in spatial relation to space, time, and gravity. (Drewes 2015) Other notation symbols indicate the levels and directions of the movement, all manifested as geometrical shapes that create a tangible image for the moving body in in three dimensional space.

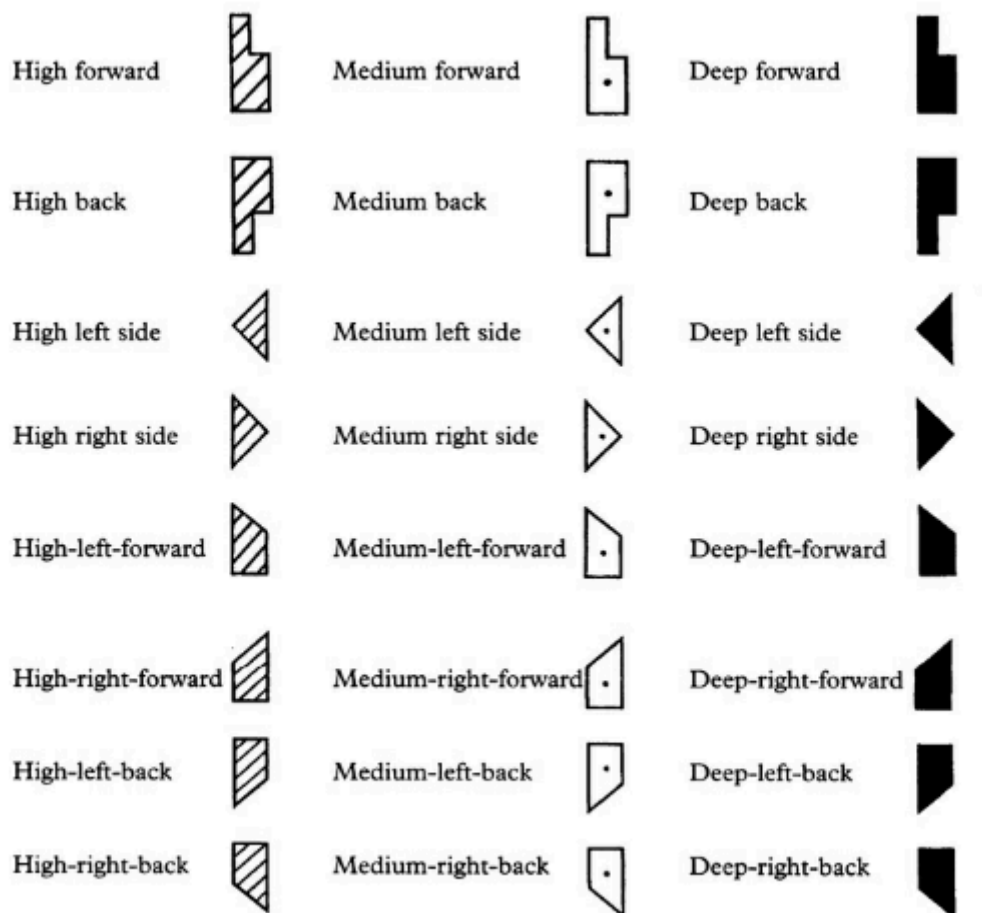


Figure 8: Symbols that indicate both the levels and the directions of movements,
Kinetography, Labanotation (Newlove, Dalby 2004, p.61)

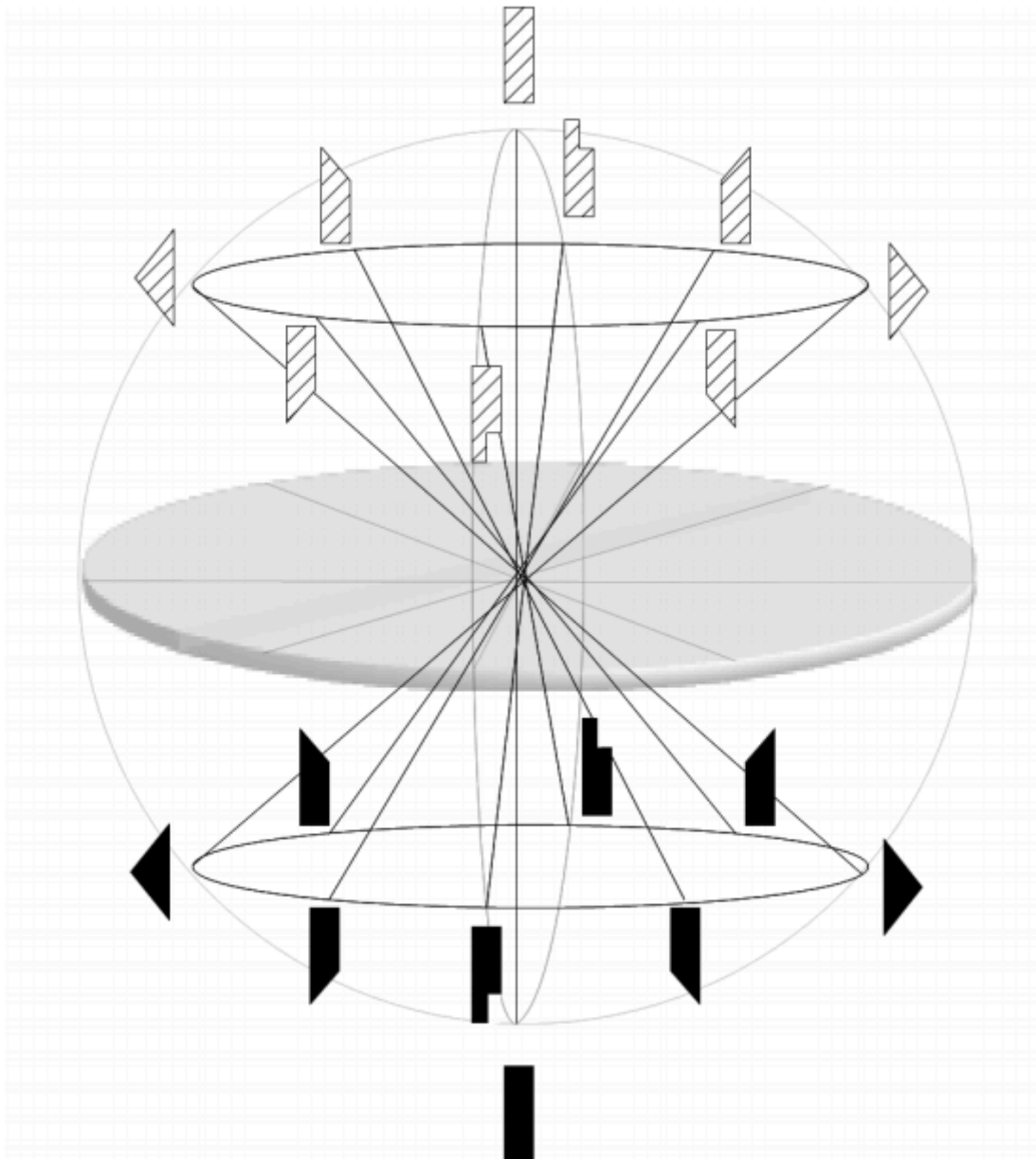


Figure 9: Levels combined with Horizontal Directions, Kinetography, Labanotation. (Drewes 2015, p.10)

While studying and working on developing his movement writing system, Laban took into account earlier attempts of Rameau, Arbeau, Feuillet, and ballet-master Jean Georges Noverre (Newlove, Dalby 2004, p.60,61). Laban aimed at establishing a notation system that not only captured human body movement in writing, but that

could cover every articulation of given movements while also indicating the expressive values of these movements.

In 1970, Irmgard Bartenieff¹⁰ described three Systems developed by Laban for movement analysis as *Labanotation*, *Effort-Shape*, and *Space Harmony* (Longstaff 1996, p.19-20), which involve the movement category of space in relation to the human body, and encompass a category of dynamics and movement sensation, as well as the *effort* of the moving body. (Longstaff 1996, p.20; Newlove, Dalby 2004, p.59)

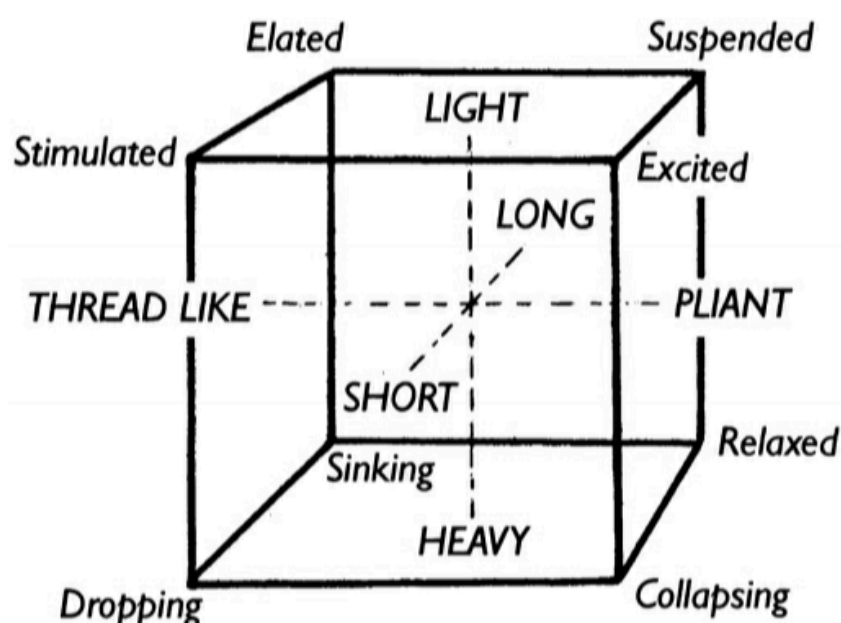


Figure 10: The Effort Graph. (Newlove, Jean; Dalby, John. *Laban for All* (p. 163). Taylor and Francis. Kindle Edition).

¹⁰ Irmgard Bartenieff (1900–1981) was a dancer, physical therapist, cross-cultural scholar and pioneer in the field of dance/movement therapy. A Renaissance woman who enjoyed weaving disciplines together, she was always ready to investigate movement in a variety of fields—including child development, ethnic dances, nonverbal communication and physical rehabilitation. Source; Laban/Bartenieff Institute of Movement Studies: <https://labaninstitute.org/about/irmgard-bartenieff/>

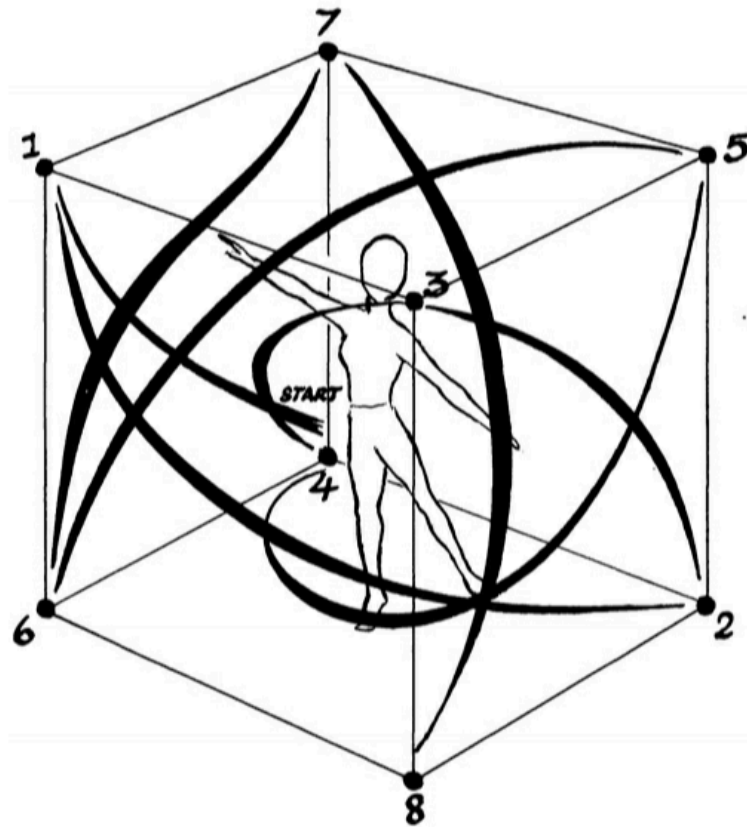


Figure 11: The body movement in relation to the Effort Graph. (Newlove, Jean; Dalby, John. *Laban for All* (p. 78). Taylor and Francis. Kindle Edition).

Initially, Laban movement analysis was based on the belief that the human body and mind are one and inseparably fused. That is to say, it enhanced the importance of the link between the culture of the mind and the state of the body (Bartenieff, Lewis 2002, p.14-16). This seems to transfer the dancing activity from the site of art to becoming a coherent and logical study, and has been applied in several fields that are concerned with human body movement productivity, such as work efficiency in the domain of industrial work (ibid, p.9), personal assessment, decision-making style (Longstaff 1996, p.47), as well as social or cultural studies (Bartenieff, Lewis 2002, p.14). In principle, Laban's work of choreutic writing was developed in relation to

dance as: 1) the science of dance, 2) the art of dance, and 3) dance pedagogy (Longstaff 1996; Bartenieff, Lewis 2002; Newlove, Dalby 2004). It also offers movement grammar and a set of parameters to describe movement in body-centered terms such as weight, space, time, and flow (Bartenieff & Lewis 2002), and sees the human body as moving architecture.

“We should be able to do every imaginable movement and then select those which seem to be the most suitable and desirable for our own nature. These can be found only by each individual himself. For this reason, practice of the free use of kinetic and dynamic possibilities is of the greatest advantage.” (Bartenieff & Lewis 2002, p. 17)

However, when the geometrical structures are rooted firmly in the mind as maps, we are able to traverse them like dynamic structures to arrive at movements that are precise and expressive in space. Compiled scores based on technical writing of dance may also serve as a document of replication that can define the composition of an art piece, while leaving the dancers in the field free for interpretation. To use a comparison from the field of theatre or music: in a theatre play, scripts are usually written, but not how they are meant to be acted or inscened, while the physical interactions between actors and circumstances take the first place for the observer. In Jazz music, while improvising or *jazzing*, the main harmony is not defined by an exactly determined note that is to be played, but through the interaction between musicians who had previously practiced a variety systemic forms, themes, and structures that now permit them to travel through scales and dynamics, allowing them to respond to each other and their surroundings. Might task-based practice for dance students help to find a narrative tool for dance creation similar to how defining a musical key for the musicians to start their improvisation? If so, what is the equivalent scale? What is the rhythm? Once these key factors have been established, the rest may emerge through automated knowledge and interaction.

While considering the playfulness of the improvised tasks and their power to emancipate the dancer as a dramaturgical entity, the tasks also serve in a pedagogical approach, tracing a way to the understanding of movement composition. They suggest a motivation or theme and structure for movement without defining the looks or the stylistic output of that movement or action. This freedom may enhance a dancer's attention and concentration in performing their

task, producing a deeper body awareness and understanding of their own practice. For dancers, embodying a series of movement tasks in improvisation allows the moving body to become a source of information when systemic structure for movement production is applied. This perspective for task-based movement practice as a dance improvisation technique opens the door for contemporary dancers and choreographers to inform and be informed about other research fields such as cognitive science, architecture and fine arts.

4. Dance improvisation as dancer's interdisciplinary practice

This chapter will address and discuss some aspects of modern dance research and choreographic practices in relation to other disciplines that concern the human body's physical activity as a source of knowledge. In the scope of this, light must be shed on *Improvisation Technologies*, the work of the choreographer and dance scholar William Forsythe, who designed a multimedia dance training program to regulate and teach principles of improvisation in a series of video segments. Forsythe performed demonstrations for the camera that were then marked with animated graphics to trace his movement paths and map spatial relationships in and around his body. The discussion will continue to divulge the process of the dancer's learning and performing of a series of movements, which requires them to concentrate on many aspects of their performance, starting from the most basic elements of human body movement. In order to support the pedagogical approach of this thesis, the intersection points between dance phenomenology and cognitive science will be addressed. How do moving bodies become a source of information when systemic structure for movement production in dance is applied, and how can a dancer's complex process of learning a sequence of movements or choreography contribute to the larger field of human body movement research and education with reference to dance?

By referencing analytical choreographic and systemic dance studies, specifically integrating those that were developed from technical writing methods in dance, the following will comprise a discussion of the practice of dance improvisation. As a modern dance discipline, it encourages contemporary dancers and choreographers to be informed by other research fields such as cognitive science, architecture, the fine arts, and vice versa to learn more about how moving bodies are perceived. To discuss this topic, reference must be made to the work and remarkable innovations in choreographic practices in dance improvisation made by the American dancer and choreographer William Forsythe, who is also known for his work with Ballet Frankfurt and the Forsythe company (1984–2004)¹¹.

¹¹ For more biographical information on William Forsythe, see <https://www.williamforsythe.com/biography.html> (accessed on 20th March 2020)

4.1 Improvisation Technologies

*“Choreography elicits action upon action: the methodology for deriving methods. It presents an environment of grammatical rule governed by exception [...]”*¹²

During the late 20th century, Forsythe designed and produced a multimedia dance training programme to regulate and teach principles of dance improvisation in a series of video segments, a project known as *Improvisation Technologies* on CD-ROM.¹³ In these videos, Forsythe demonstrated movement sequences for the camera which have been marked with animated graphics to trace his movement paths and map spatial relationships in and around his body. (deLahunta, Zuniga Shaw, Groves 2007, p. 92 ff.)

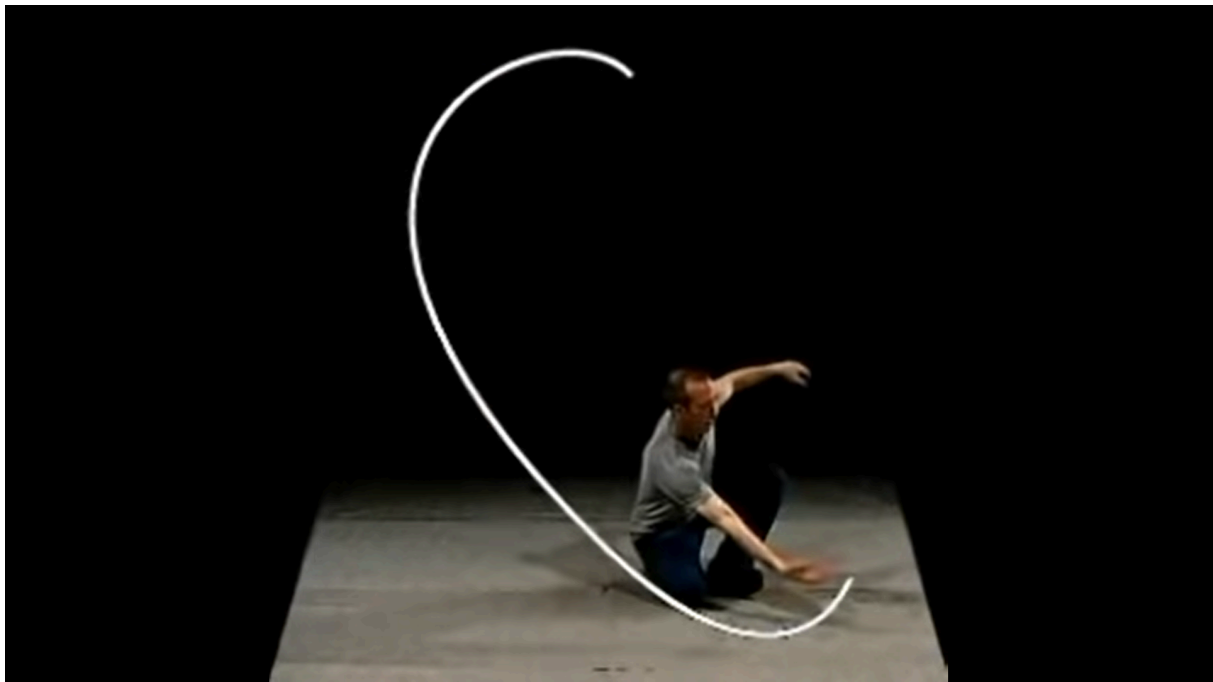


Figure 12: William Forsythe demonstrating movement to the camera for his project *Improvisation Technologies*

Forsythe's manifestation shows how we can think of the human body as living architecture: the body constructs imaginary lines and curves in the space while

¹² <https://www.williamforsythe.com/essay.html> (accessed on 20th March 2020)

¹³ <https://www.williamforsythe.com/biography.html> (accessed on 20th March 2020)

moving. His concept addresses a tool to track the movements of the body and makes it possible to describe them as spatial information. Furthermore, he reverses this idea by thinking of the construction of lines and curves as a principle to motivate the body to move and express itself. It is this line of thought that inspired the development of a practice in the scope of this thesis that might help dance practitioners instill spatial information, geometrical structures, and qualitative movement components into the body-instrument through imagination.

The ideal principle in Forsythe's work is to dismantle the structure of body movement into simple geometrical elements as points and lines, such as when he visualises the joints of body parts to demonstrate connected points that shape lines. One such example is to see the elbow and wrist of the right arm as two points connected by a line. In her essay *William Forsythe and the Practice of Choreography: It Starts from Any Point*, Rebecca Groves emphasises that "*Forsythe has explicitly thematized the work of translating knowledge from one idiom to another*" (2012, p.119). Groves maintains that Forsythe constructed various systems of translation and presented the idea of the score in several different ways, such as the online digital media score *Synchronous Objects for One Flat Thing - Reproduced*, which is "*the pilot project for Motion Bank*" (Groves 2012, p.120). The project was realised with a team of individuals (designers, dancers, specialists from other disciplines and more) who were working in dialogue with Forsythe in an interactive design process. *Motion bank*¹⁴ describes procedures involved in developing an online interactive score for the piece *One Flat Thing - Reproduced*. (DeLahunta, Zuniga Shaw, Groves 2007; Groves 2012) Whether through graphic visualisation of danced movement, gesture tracking and analysis, or annotated dance phrases, such a perspective made the study of dance reach beyond the typical stylistic or formal perspective towards its practice. Through the application of movement grammar and a set of parameters, dance practice was intellectualised and could simultaneously inform and be informed by other disciplines.

"It could be mathematics or architecture. It is in-formation. It's about attention. It's about autonomy in a system. It is form and flow. It is an expression of a way of thinking that is shared among many forms of knowledge." (DeLahunta, Zuniga Shaw, Groves 2007, p.94)

¹⁴ For more information, see <http://motionbank.org/en/content/scores.html> (accessed on 12th March 2020)

A great variety of improvisation techniques were developed in the last century, bringing the idea of movement score into existence and encouraging dancers and choreographers to learn about it, advancing this knowledge by the production of art-making processes. The idea for the choreography of *One Flat Thing - Reproduced* by Forsythe was particularly exciting with a view to translating the danced material into a *multimedia choreographic score* (DeLahunta, Zuniga Shaw, Groves 2007). By referring to the use of movement scores, as a map of structures instead of the choreography itself, movement becomes a form of knowledge that is largely evaluated on the strength of its contribution from the dancer to the public space. This evaluation is what makes exchanges with other non-art disciplines and practices possible.

4.2 Dancers' physical thinking - sharing physical knowledge

In the area of contemporary dance research, performing choreography is a complex human activity. From the perspective of a dancer, performing a movement sequence or a phrase of choreography is highly demanding on many levels: physically, emotionally, and cognitively as well. (Warburton 2011, p.43/2) To learn and practice a series of movements requires a dancer to concentrate on many different aspects of the performed movements, starting from the most basic elements of body positioning (spacing) while moving in correct timing, to other features of their physical activity, such as conveying flow and weight for specific demands in the choreography or the movement task which they perform. (Warburton 2018, p.7) The body of a performing dancer must also meet other physical demands to perform the movements, such as maintaining balance, which may also increase a cognitive load in every change of position, (Warburton 2011, p. 75) How do dancers develop and improve their ability to map their cognition? To answer this question, it is necessary to discuss the dancers' most conventional ability, which is *embodiment* (for definitions of embodiment, see Chapter 5). Dancers' embodied practice and knowledge may serve not only to expand their physical abilities while dancing, but may also relieve the cognitive load. Furthermore, it may allow them to rehearse some aspects of their improvisation performance without the need to allocate attention to other aspects, generating an authentic living experience. These processes raise a number of other questions: Which kind of practice is relevant to improve the cognitive processes for

dance students and practitioners? How can dance students improve their cognitive mapping skills? What are (in this case) the scores that can remain in the body of the dance student to support their movement production or practice of movement sequences? Finally, what else can embodied knowledge of space structures offer to a dancer's imagination while performing a movement task?

David Kirsh is a cognitive scientist and Professor at the University of California, San Diego¹⁵. He has investigated the topic of *situated and embodied cognition* and how an environment can be shaped in order to simplify or to extend cognition load. His research has given insight into how the body itself, when recognised as an instrument, becomes an interactive tool for thought through space and external representations. (Kirsh 2010) During the 32nd Meeting of the Cognitive Science Society, Kirsh suggested that:

“[...] creating an external structure connected to a thought – whether that external structure is a gesture, dance form, or linguistic structure – is part of an interactive strategy of bootstrapping thought by providing an anchor for mental projection.” (Kirsh 2010, p.1/2864)

When a mental projection is expressed through body gestures, the body instrument is perceived as a container of information, sensors, and interactive possibilities that can be characterized by a set of parameters regarding the performer's choices and abilities to embody movement tasks. In other words, not only is a dancing body perceived as a producer of movement, but consideration is also given to the fact that the dancer's intentions, attention, and communication approaches influence the movement task and the surroundings.

In modern dance, task-based movement practice is a tool that enriches a mover's expressions by using the idea of physical scores. These scores can be generated by a map of movement traces, geometric shapes and functional relations between points, lines and curves, or a choreographed space *“to create an external structure connected to a thought”*, as emphasised by Kirsh (2010, p.2864/1). By connecting this information to William Forsythe's thematised concept of translating bodily knowledge from one medium to another using improvisation techniques, the human

¹⁵ For more biographical information on David Kirsh, see <http://adrenaline.ucsd.edu/kirsh/> (accessed on 20th March 2020)

body's physical activity begins to take on form as a source of knowledge. This also helps to address the correlation between dance phenomenology and cognitive science, which is represented by the complex process of dancers learning a canonised sequence of movements or embodying a map of movement tasks.

4.3 Embodiment as a key factor of physical learning

In the study *Interconnectedness of Lived Experience and Meaning* on the embodied nature of physical literacy, it is stated that “*knowing is achieved by perceptuomotor movement within the lifeworld and that physical activity must be understood as an embodied experience with lifelong implications.*” (Durden-Myers, Meloche, Dhillon 2020, p. 15). To describe the term *embodiment* within this context, here is an example: we learn to count using our fingers and to position each finger to indicate a number in a canonised pattern, carefully raising one finger after the other to reach the number we want. Only after a number of repetitions are we able to confidently show or visualize the right number of fingers without prior counting.¹⁶ Thus, counting with fingers is transformed into embodied knowledge with lifelong implication.

Let us consider another example to simplify the concept of *embodiment*: driving a car is one of the most complex coordinative daily activities that one can learn. At first, one might suffer from the amount of tasks and the load of physical cognition that is required to coordinate multiple movements of the body, changing locations of the left and right legs and arms with correct timing and in specific ways, applying a specific amount of pressure to certain devices inside the car, while necessarily recognising the surroundings. If we assume that these are some of the scores given to a driver to perform their activity (driving), then by practicing this coordinated physical activity (through a number of repetitions to embody the score) driving the car becomes an axiomatic activity for the body. As a result, the body is ultimately able to subconsciously lead an instrument (the car). The driver no longer needs to

¹⁶ This example is a reflection by Univ. Ass. Larissa Meyer, MA on her participation in the *Retroactive-Score* workshop during the Participatory Art Panel of April 2019 in Linz. She found the systemic movement practice to be valuable in accessing body knowledge. Meyer's work questions behavioral certainties in relation to material culture and designed space, and her projects, contextualized site-specifically, are developed through the observation of phenomena in daily life, brought into association possibilities through performative strategies. Meyer has a BA-degree in Industrial Design and holds a MA-degree of the crossover faculty space&designSTRATEGIES science 2017, where she is working as professor assistant.

remember what goes where at which point in the action sequence to make the car move, because the body simply knows. Therefore, the driver is now able to complete their duties, all while additionally singing, switching the radio on, communicating with passengers, or performing a more complex activity, such as searching for a desired location on a GPS-screen.

In dance, to learn a choreography or an exercise, dancers go through similar cognitive mapping processes. They learn particular phrases of movements with a very specific use of space (body positioning), time (or dynamics), weight distribution, physical and cognitive effort, in complex combinations and for different purposes. (Warburton 2011) However, after a number of repetitions of the canonised activities, dancers are able to start building relationships with other subjects and communicate with their surroundings, thereby improving their movement quality and cognition of the intuitive context. (ibid.) What began as a more complex combination of dancing activities becomes an easier and more automated process by which dancers are able to control their *emotional tenor* (ibid., p. 76) for the context of performance in the same way that they control their physical presentation.

The term '*embodiment*' is used mostly by dancers and choreographers when referring to the enactment of physical conflict or task, or to motivate and enhance the physical expressivity of the dancer through their movement (Warburton 2011). In this context, *embodiment* also refers to the emotional and cognitive engagement of the dancer when enacting an action or movement task (ibid). Warburton proposed the theoretical construct of dance enactment to better understand how experiences of dance emerge from more basic processes, and how dancing shapes the mind, body and brain. He established the concept of enactment as a cornerstone of embodied cognition literature, which claims that "*cognition is for action*" (Warburton 2011, p. 67). In his article *Of meanings and movements: Re-languaging embodiment in dance phenomenology and cognition*, Warburton discusses the complex process of learning a canonised sequence of movements or choreography, and how the dancer can remember what occurs when and where. Ultimately, one of the "*dancer's main goals is to embody*" (Warburton 2011, p.76). He refers to dancers as the creators of their own intention in order to move, express, feel, anticipate, and generate an expressive movement that somehow corresponds to their intention and desires to connect with their surroundings (Warburton 2011).

“[...] the dancer is undeniably situated in relationship to self (as an instructor) and thinking “in real-time.” At the same time, the dancer is manipulating their environment, for instance by using movement. The fact that the success of this activity depends crucially on each individual’s own cognitive mapping of somatic, kinesthetic, and mimetic knowledge and skills underscores the ways dancers actively generate and maintain their identities, and thereby enact talk from the body in a unique cognitive activity [...]” (Warburton 2011, p. 70)

This point of view begins to shed some light onto how a dancer is able to produce and reproduce the emotional tenor and movement of a particular dance. However, in task-based movement practice, the practitioner is not geared solely towards learning a specific sequence of movements. In fact, it is rather through the creation and repetition of an inner and external structure and a design of logical relations as embodied forms that the dancer can practice and constantly evolve in different ways. This creation and repetition can be referred to as “*physical thinking*” (Muntanyola-Saura, Kirsh 2010)¹⁷. Physical thinking can provide integration access for students from different research fields concerned with human body knowledge to discover and physically understand the functional inter-relation that applies to the body within the functional and architectural design of its surroundings. The moving body is considered to be part of its functions. In this way, task-based practice becomes a tool to dismantle these complex relations and translate them into single physical tasks to be performed, providing a basis to discuss the basic aspects of body movement interaction within these particular spaces. The following chapter will present the specific exercises for task-based movement practice that were developed and applied during the movement laboratories.

¹⁷ *A Cognitive Ethnography of Dance: A practice-based research* by Dafne Muntanyola-Saura and David Kirsh (Department of Cognitive Science, University of California, San Diego) classifies and discovers new functions, aspects, and types of *marking* in dance as a remarkable body skill, with cognitive ethnography collected through extensive video data on the complete dancers-rehearsal process. (Muntanyola-Saura, Kirsh 2014)

5. Task-Based movement practice - in practice

The framework of the movement research laboratory was formed as a practice-based research in a five-day workshop lasting three hours a day. This period of time was necessary in order to present, practice, and discuss the exercises with the participants. The workshop took place in this form twice, once during the Participatory Art Panel 2019, Linz. The panel was co-organised by *SOS-Menschenrechte*, *Linz Kultur* and *Redsapata-Tanzfabrik*. The workshop group consisted of nine participants from different dance practice backgrounds: three dance students, one advanced dancer, one performance artist, three architects, and one Assistant Professor of the Space and Design Strategies Department at the University of Art and Design Linz. The Assistant Professor later organised the second workshop opportunity, which took place in January 2020 at the University of Art and Design Linz with a group of twelve participants from the master study programme of Space and Design Strategies. The practice of the designed score system was adapted to suit the focus on the students' recent research topic titled *Mimicry*. Their research was geared towards finding a strategy to create new relations between the individual body and societal institutions. Within this context, institutions were defined as the space that emerges from functional relations between specific resources, such as art museums, supermarkets, waste management, airports, schools or universities, and more.

For the introduction of task-based exercises for the practitioners of each workshop, it was necessary to provide a framework and review of certain terms, concepts, and expressions that were to be explained and physically applied, all to help in the understanding of their use. Referring to theory is to establish a base of physical knowledge that will be applied further through the exercises. the following concepts and terminology were introduced through immediate physical application with the practitioners:

The *Kinesphere* is Laban's term for the personal space that surrounds each one of us and extends as far as we can reach with our limbs in any direction around the body. That which lies outside our kinesphere, according to Laban, is called the general space. Whenever and wherever we move, our kinesphere moves with us

and displaces the general space. If we turn around on the spot, our kinesphere turns with us, but the general space remains the same. Sometimes, we share another person's kinesphere when we get too close (Laban, Ullmann. 1966. P18-19) .

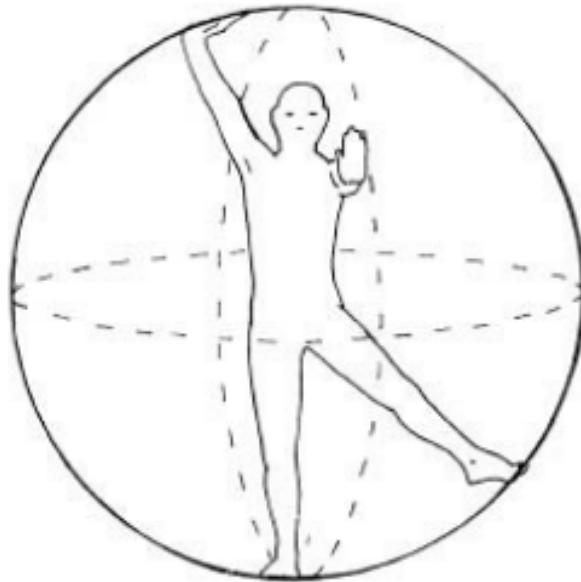


Figure 13: Body Movement in the *Kinesphere*, (Bartenieff, Lewis 2004, p. 25).

The Dimensional Cross, is one of the bases of Laban's structures for movement analysis, which helps to visualise movement in a three-dimensional manner. Physically practicing and discovering the dimensional cross is one of the basic exercises for participants in task based workshops, where they apply movements with their limbs to reach high and low, from one side to another, as well as forwards and backwards. (Newlove, Dalby 2004,p. 23)

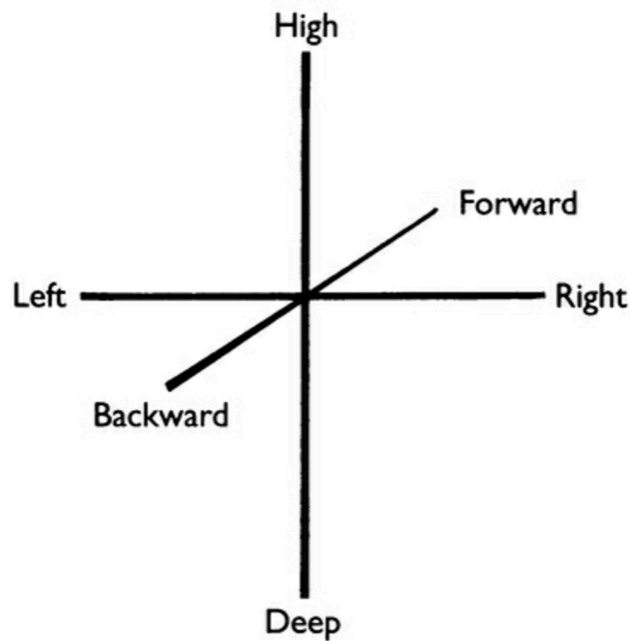


Figure 14: The Dimensional Cross with the Dimensional terms

Newlove, Dalby. Laban for All (p. 50).

Furthermore, by moving each one of these three dimensions with their bodies and limbs, practitioners complete the additional task of connecting the poles of each dimension with circular movements. This allows them to become much wider than the singular lines of the diagram and to discover the three distinct planes. The High-Deep dimension extends to the right and left and becomes what Laban called *“the Door Plane”* (Newlove, Dalby 2004). The Forward-Backward dimension extends through the High-Deep dimension and becomes what Laban called *“the Wheel Plane”* (ibid). The Right-Left dimension extends through the Forward-Backward dimension and becomes what Laban called *“the Table Plane”* (ibid). When all three planes are brought together as a geometrical construction they can be imagined as follows:

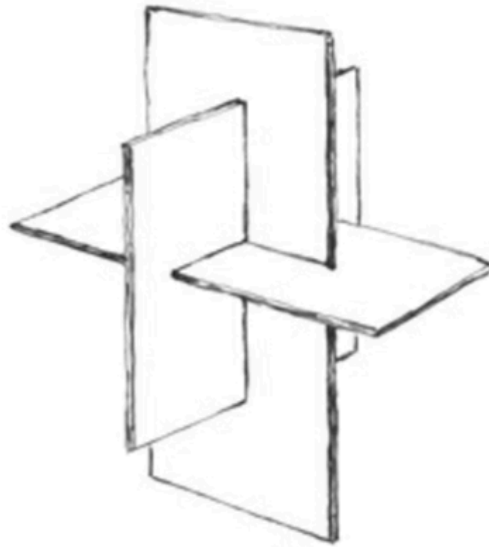


Figure 15: The Three Dimensional Planes. Newlove, Dalby. Laban for All (p. 50).

The Diagonal Cross is the geometrical construction of the lines that connect the diagonal directions, creating four pathways. Each diagonal direction can be indicated by three directions at once: Right-High-Forward to Left-Deep-Backward, Left-High-Forward to Right-Deep-Backward, Left-High-Backward to Right-Deep-Forward, and Right-High-Backward to Left-Deep-Forward. These directions can be also reversed, creating a total of eight paths that intersect at the center of the body. (Newlove, Dalby 2004,p. 70)

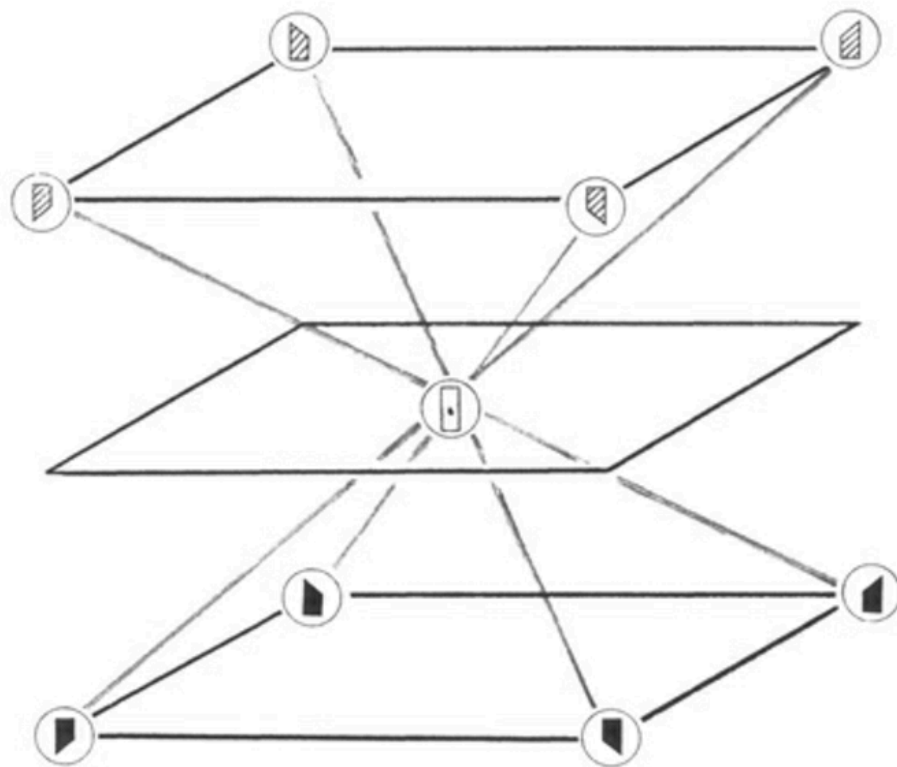


Figure 16: The Diagonal Cross (Newlove, Dalby, Laban for All p. 71)

With *Levels and Zones*, Laban distinguished three levels of body movement: movement in a high level, movement in a medium level, and movement in deep level. As an example, the high level is where the arms reach above shoulder height, the medium level surrounds the waist, and the deep level is movement that reaches towards the floor. Furthermore, Laban defined five main zones for the body, which can be clearly identified when the body is in an upright or vertical position. These are divided into the zone of the head, two zones of the arms, and the two zones of the legs. (Newlove, Dalby 2004,p. 24).



Figure 17: A flat, pentagonal pose of the body showing the five zones (Newlove, Dalby. Laban for All p. 57)

Pathways and Trace Forms describe directional movements and their respective shapes. *Pathways* described the route of a single movement being traced by a body part, for example: using the left hand to trace an imaginary line connecting two extreme points from stance, such as Right-High-Forward to Left-Deep-Backward. A *trace form* is the shape that the movement makes in the air. For instance, tracing an imaginary circle with the right elbow on the right side of the body. (Newlove, Dalby 2004, p. 23)

The practice of drawing pathways and trace forms is the basis of the task based movement practice proposed for workshop participants. It supports the practitioners' imagination in the discovery of a form for their movement, the starting point, the direction, as well as the level of tension that is applied throughout the movement.

Finally, *counter-tension* signifies the application of one tension in opposition to another within one movement or while holding a position. For example: standing on the right leg with the left leg fully and horizontally extended behind the body, and with the right arm fully extended in front of the body. At this point, there is a *counter-tension* between the right arm and left leg, which helps the body to balance in the centre. (Newlove, Dalby 2004,p. 22) This concept by Laban was defined as a key factor for body equilibrium.



Figure 18: Demonstrating counter-tension between right arm and left leg (Newlove & Dalby, 2013. p.65)

5.1 Retroactive-Score: first workshop

On the first day of the workshop, before introducing the task-based exercises to the practitioners, it was necessary to provide a framework for the workshop and review certain terms, concepts, and expressions to help in the understanding of their use in the scope of this thesis. Referring to theory allows a basis to be formed for physical knowledge that is applied throughout the exercises. Additionally, concepts and terminology for the scores were introduced through immediate physical application together with the practitioners.

5.1.1 The core exercises

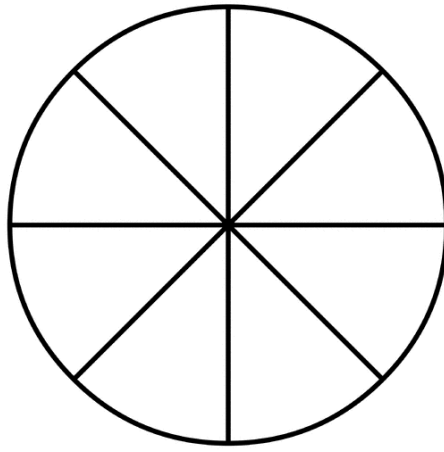
The exercises described in the subsections below are examples for targeted movement motivation with the following core topics in mind: 1) movement that is inspired by imagery; 2) body architecture and space design; 3) movements and structures that are led or followed by a partner. These approaches to movement creation will be used in order to draft scores from exercises that also represent common knowledge and experience.

5.1.2 Space dynamics - The Body Clock exercise

This exercise enhances a deep understanding of spatial recognition in the horizontal and vertical planes. Additionally, it enables the individual to align outer and inner spatial directions, teaches strong coordination skills, fosters deep concentration, and the ability to establish a link between different planes and motoric functions of the body-mind. It is an exercise that will be used as a basic dynamic structure for all further tasks of movement production or choreographic design.

The exercise is carried out as follows:

You are standing in the centre of the Body Clock depicted below. Divide the space by tracing imaginary lines in 8 basic directions away from your body into general space (front, back, left, right, and the cross diagonals). This gives you eight sections from which to perform the following 4 phases in either the Table Plane or the Door Plane.



Phase 1: The body clock on the Table Plane - movement in Kinesphere¹⁸

Starting in stance¹⁹, all directions are given a number from 1 – 8. Place your body in the centre of the circle. The front of your body and the aligned view will define the direction in which you will move. Stance at the centre of the circle is always number 0. Each further direction and counter-direction is addressed in the following canonised pattern and is right in front of you (the direction of your gaze). Every counter-direction is the beginning of the next direction. For now, imagine your spine as an axis that does not fold. This means that your body is in an upright position and resembles a vertical line on the Table Plane. Begin to get acquainted with the different directions, always positioning your body to look in one of the given directions in the following pattern:

- Turn 1 section clockwise (turn one section to the right), then turn 4 sections anti-clockwise (turn back in a half circle in the counter-direction)
- Turn 2 sections clockwise, turn 4 sections anti-clockwise
- Turn 3 sections clockwise, turn 4 sections anti-clockwise
- Turn 4 sections clockwise, turn 4 sections anti-clockwise
- Turn 5 sections clockwise, turn 4 sections anti-clockwise

¹⁸ The *Kinesphere* is the personal space surrounding every one of us, and it extends as far as we can reach in any direction. Outside our kinesphere is general space. Whenever we move, we take our kinesphere with us and displace the general space. If we turn round, our kinesphere turns with us while the general space remains the same. (Laban & Ullmann 1966, p.18-19)

¹⁹ *Stance*: According to Choreutic writing, this simply means standing in a state of preparedness before embarking on an exercise or movement sequence. The feet should be slightly apart, positioned approximately below the shoulders, with the weight equally distributed and the arms hanging loosely at the sides. (Newlove & Dalby 2004, p. 17)

- Turn 6 sections clockwise, turn 4 sections anti-clockwise
- Turn 7 sections clockwise, turn 4 sections anti-clockwise
- Turn 8 sections clockwise, turn 4 sections anti-clockwise (this will give you a counter-directional starting point)

Phase 2: The Body clock on the Table Plane - movement in Dynamosphere²⁰

This exercise is completed in four verbally signalled counts (Ta-ki-ti_Da). Make 3 steps and a turn in a different direction (travel in space following the same vertices as in Phase 1). You will need to add turns in order to change your directions, and the turns will be made on the last count of Da (3 beats for steps, Ta-ki-ti, and Da for the turn). This will add a rhythmical element to the exercise, providing an opportunity for instruments to be used in order to enhance or delay the speed of the exercise. Phase 2 increases recognition for the spatial mapping of the exercise and therefore enhances space-coordination in the Dynamosphere. Eighth, quarter, half, and full circle turns must be executed at any given speed in order to keep the rhythm and movement pattern (Ta-ki-ti_Da). The verbal rhythm becomes an application of self spatial recognition, helping to create reference to time (self-timing) and enhancing concentration. Furthermore, it allows a group of individuals to keep an equal pace if they wish to carry out the exercise simultaneously. The pattern must be practiced several times to ensure that the score is literally embodied.

Phase 3: The Body Clock on the Door Plane - movement in Kinesphere

The same image of a circle divided into 8 sections as depicted above is now implemented in a vertical plane. The centre of your body is positioned in the central line of this circle (the Body Clock) and your arms can be seen as the hands of the clock, addressing the different directions in this vertical plane. The axis moves through your body vertically and your arms trace the 8 sections into which the circle is split. When executing turns, both clockwise and anticlockwise, it is important to remember that you are not looking at the clock, but you are the clock.

Begin moving your arms clockwise as if they were the hands of the clock face. In

²⁰ The *Dynamosphere* was Laban's term for the imaginary structure or three-dimensional chart that shows the dynamics of the eight basic efforts and their relationship to each other within the our movement globe, the kinesphere. (Newlove, Dalby 2013, p. 141)

order to indicate a direction, both arms are used. This means that, to address the first direction (1) of the movement pattern, both arms are positioned diagonally downwards on the right side of the Body Clock. To address the counter-direction of (1), position the arms diagonally upwards on the left side of the body, remembering to move only in the door plane. Now, apply the same pattern:

- Move the arms 1 section clockwise (one section to the right), then move them 4 sections anti-clockwise (turn back in a half circle in the counter-direction)
- Move the arms 2 sections clockwise, then move them 4 sections anti-clockwise
- Move the arms 3 sections clockwise, then move them 4 sections anti-clockwise
- Move the arms 4 sections clockwise, then move them 4 sections anti-clockwise
- Move the arms 5 sections clockwise, then move them 4 sections anti-clockwise
- Move the arms 6 sections clockwise, then move them 4 sections anti-clockwise
- Move the arms 7 sections clockwise, then move them 4 sections anti-clockwise
- Move the arms 8 sections clockwise, then move them 4 sections anti-clockwise

Phase 4: Combination of Body Clocks in the Table and Door Planes - movement in Kinesphere and Dynamosphere

This is the last phase of the exercise and it combines the previous 3 well practiced phases. It requires the body to indicate the same score in different planes using arms and legs while traveling in space. In order to complete one full combination, great effort, focus, and concentration are important. Once you are able to confidently execute the scores after several repetitions, the body-memory stores a rational understanding of directions in each of the planes and enables visualisation, the same way we learn to count using our fingers. One of the principle benefits of this exercise is that, once learned, it produces an embodied score that is easily accessible at any moment, just like learning to count with the fingers or driving a car. Once the complex learning process is completed, the implications of movement tasks within this basic structure can be explored and new ones can be implemented. This allows us to see a particular body movement and architecture in relation to abstract space, objects, or subjects. As such, it can be used as a dancer's body tool to enhance their cognitive-mapping ability, which is essential for learning, researching, producing, and reproducing movements.



Figure 19: Participants practicing Phase 4 of the Body Clock exercise during the *Retroactive-Score* research workshop. © Samer Alkurdi, Linz 2019.

5.1.3 Figure 8 exercise

The figure 8 exercise has many goals: mobilisation, spiral dynamics, full body activation, discovering movement possibilities, reaching all directions, following an image (enabling the discovery of a range of movements according to specific task), and activating sensory awareness. Also known as the infinity sign (∞), the figure 8 represents a natural structure of the body known as the *Moebius Strip* according to Bartenieff (Bartenieff, Lewis 2002, p.46). For this exercise, the figure 8 is used in order to provoke intrinsically motivated movement following an imagery pattering, which is the recreation of the figure 8 in the kinesthetic sphere. As with the previous exercise, the practitioner begins in stance.

- Begin by imagining the number 8 or the infinity sign. Then, imagine the highest point on the top of your head as the point that is tracing or drawing in space. From this point, start tracing the figure 8 as if it were on the ceiling

above your head. Work with your imagination, think as the top of your head as the tip of a pencil. You are drawing this figure on the Table Plane above your body. From here, choose different starting points for the physical creation and representation of this figure. This will allow you to slowly activate your joints in a smooth and rotational way that will also produce a specific movement quality, which you might call flowy (always controlling your weight distribution, direction, etc.)

- Now, continue to lead from your nose and create the figure 8 on the Door Plane in front of you. You will discover a variety of ranges of this figure 8, such as its size. The bigger it becomes, the more the factor of weight distribution will arise in the body as shifting your weight from one leg to the other becomes a primary movement. At the same time, you can start to draw the figure from your right side to your left, which will activate not only the use of weight but also the spiraling of the spine. In this way, more overall mobilisation of the body is initiated and many other joints and mechanisms are put into action. Therefore, the exercise can be continued with further sources of movement.
- Begin by tracing the infinity sign with the middle of your chest on the Door Plane in front of you. Optionally, add a curve to your figure 8, spiraling your spine between the left and right sides of your body. Allow the movement to continue through the body as necessary to fulfill the task.
- Then, do the same with your upper back and imagine writing the figure 8 on the Door Plane behind you.
- Next, trace the same figure on the Door Plane in front of you using the centre of your belly.
- Next, trace the same figure on the Door Plane to your right using your right hip, and change to do the same on the left side.
- Next, use the lowest point in your spine to trace the same figure on the Door Plane behind you.
- Next, begin drawing the same figure using your knees, starting in the air by lifting one leg and then moving it towards the floor in a figure 8. Keep the knee of your supporting leg bent before changing to the other leg.
- Finally, trace the figure on the Table Plane using your feet while maintaining contact with the floor and trying to use all sides of your feet.

By this point, the exercise has begun to shape the body in its Kinesphere, allowing it to mobilise completely without the need of the practitioner to copy any given movement. Rather, they use the natural alignment of the body to achieve physical mobilisation and activation, as well as increased imagination and an understanding for the movement scope of their own body and its natural abilities.

5.1.5 Results

Task-based movement practice can be applied to either an individual or a group, and conflict can be created between tasks by adding specific orders. For organisation, it is advisable to choose the number of people performing one task before adding layers of tasks according to the chosen concept by relating to the embodied information of dynamics and space structures that the practitioners have previously practiced. This leads to instant dramaturgical outputs that can be aligned under a united theme or topic, adapted to each surrounding or interest differently, and can be analysed according to a given set of parameters. The given improvisation tasks can be communicated to the participants beforehand for both shared or solo performance settings, organised, and dramaturgically aligned. Additional factors such as music, props, an audience, and specific movement or performance techniques can be added or adjusted as necessary for a more analytic or outcome-oriented process. The goal and potential benefits for the participants in these tasks are awareness with regards to their body, their sense of self, the space, the audience, understanding of their presence in the context of the surrounding parameters, and the ability to control the part they play (their performance, the information they share, the readability for observers, their communicating logics).

5.2 Retroactive-Score: second workshop

“Thus, the introduction of the term “choreographic object” is intended as a categorizing tool that can help identify sites within which to locate the understanding of potential organization and instigation of action-based knowledge. With this tool, the proliferation of choreographic thinking across a wider domain of arts practice can be thrown into relief.” (Forsythe, n.d.)²¹

The score system designed for the practice in this workshop was adapted to focus

²¹ Forsythe William, Choreographic objects, Essay <https://www.williamforsythe.com/essay.html> (Accessed on 25.03.2020)

on the participating MA students' recent research topic *mimicry* with the aim of finding a strategy to create new relations between the individual body and societal institutions. In this demand, the task-based practice became a tool for the students to discover the gap of perspective between designers (in this case: the students) and their target audience according to the given research topic. The fundamental idea was to apply the concept of *enactment* to allow the designer to take on the role of the target audience (the visitor or the participant in an institution). This would help the students physically understand the functional inter-relation between the body of the visitor and the architectural design of the institution while considering the moving body as a part of its functions. By enacting the situations in a studio space and addressing this relationship between the body and functional spaces from the point of view of choreographic practice, the task-based practice became a tool to help dismantle these complex relations, translate it into single physical performative tasks, and to discuss the basic aspects of the body movement interaction within these particular spaces.

The first day of the workshop was spent on introducing concepts of choreographic practice as a practice of design. The choreographer's basic target is to establish a dynamical relationship between sets of information (bodies, objects, forms, furniture, colors, light, sound, music, etc.) for them to make sense for the observer. This concept was discussed by referring to *The Fact of Matter Choreographic objects* by William Forsythe at the Museum für Modern Kunst in Frankfurt. In dance and system theories, space is used to be identified in relation to the body of the dancer who is manipulating the observer's perspective of the performed space. This concept was introduced with reference to the research paper by Jeffrey Scott Longstaff *Cognitive Structures of Kinesthetic Space, Reevaluating Rudolf Laban's Choreutics In the Context of Spatial Cognition and Motor Control* (1996). The aim of proposing particular aspects of Longstaff's research for discussion was to create a bridge between concepts of space from different disciplines and research fields to dance, cognitive science, and fine art. In his paper, Longstaff offers a category of space definitions as the *cognitive-space* or *representational space*, which are sometimes used to refer to how a concept can be mentally represented as the intersection of a set of any number of "*dimensions (eg. shape, size, colour, location)*" (Longstaff 1996, p.46). The *joint space* or the *intrinsic space of the joints* were an analytic proposal by Longstaff in order to refer to the space of a graph that, for example, plots the

relationship “*between the changing elbow and shoulder joint angles during a movement*” (ibid, p.43). Furthermore, the terms *perceptual-motor space* and *sensorimotor space* can be used, according to Longstaff, to refer to space perceived through any of the perceptual-motor systems of the body and sensorimotor fields, and which refer to the “*range of spatial stimulation reaching a particular perceptual system at any one moment*” (Longstaff 1996, p. 44 ff). The terms *perceptual field* or *perceptual space* are used to refer to the memorised aspects of the environment rather than those currently available to the visual receptors. The *perceptual-motor space* in particular was further divided by Longstaff into the *visual space* (referring to the space available through the visual perceptual-motor system), *audio space* (referring to the spatial information available through the auditory perceptual-motor system), *tactile space* (used to refer to the spatial information available through the sense of touch), and the *thermal space* (referring to the spatial environment that can be perceived through the “*thermal receptors in the skin*” (Longstaff 1996, p.46)). At this point, we may refer back to Laban’s concept of the Kinesphere to refer to “*the sphere around the body whose periphery can be reached by easily extended limbs*” (Laban & Ullmann 1966, p.18-19). Longstaff referred to the Kinesphere with the terms *gestural space* and the *zone of reach* (Longstaff 1996, p.47).

To proceed with the above detailed concepts, the participating students were first introduced to the core exercises of retroactive-score practice (as described in subsection 5.1), with the intention of enhancing their understanding of spatial recognition through movement. Furthermore, this would enable them to align the outer and inner directional spaces while physically understanding a dancer’s ability to shift their perception between different categories of space and manipulate their surroundings. Practicing the core exercises required the entire first and second workshop days, but it was necessary to establish a solid foundation of identified concepts that could be further applied in the development of task-based exercises. The exercises were made to target the students’ research topic *Mimicry* as a strategy to embody and understand the physical relationship between the body (the individual) within a context of designed spaces and the functions of those spaces. This workshop preparation was achieved with the help of a concept-summary paper prepared by Univ. Ass. Larissa Meyer. The paper described the research specific demands and asked the following questions: How should institutional bodies be depicted? What do they represent? If we consider *form* as the essential

communication tool, then what is the formal information that represents an institution? What are the layers that provide said information and how do they present themselves? How can the qualities of these forms be described?

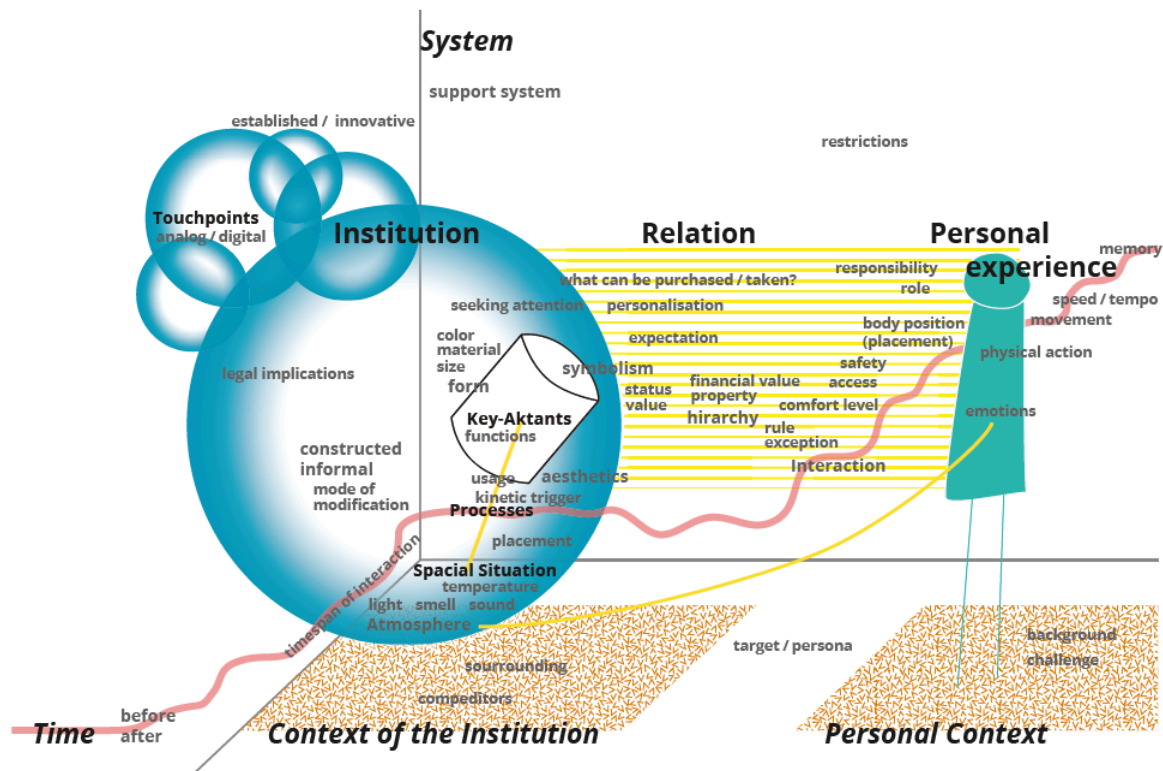


Figure 20: This figure shows the elements of relations between institutions and individuals, researched and designed by Students of the Master's Programme of Space and Design Strategies at the University of Art and Design Linz in 2020. Visual design completed by Univ. Ass. Larissa Meyer.

In order to approach such a critical topic from the perspective of a dance and movement teacher, it was necessary to carry out a conceptual translation of terminology used to describe the body of an institution with functions and forms in the domain of fine art studies, and transfer it to components and dynamic relations of the physical body. For that, the first narrative given to the participants was to look at

the human body as a *co-(i)-nstitution* that contains infinite forms, functions, rules, and relations resulting from movements or a single gesture of the participant's body in relation to its surroundings. This narrative was then followed by several exercises as described below.

5.2.1 Body sculpture design

The body sculpture design exercise was designed as an application of the concepts of *joint space* and the *Kinesphere* as a field of interactions that generate body expression. It sheds light on how dancers and choreographers understand and make use of such concepts when designing a body gesture. For this exercise, the participants were divided into duets (four duets and one student was positioned as an observer). Each duet was instructed to think of and generate a design for a sculpture that expresses the body in a specific expression. The final manifestation of the sculpture was to be the result of relations and dynamics between the constructed lines and structures of the body. The score for the given task was centred around *stillness from action*: The body is in action or moving between two actions and immediately responds to a spontaneous change in its environment. The body experiences a movement sensation.

The task was carried out in two stages. First, a practitioner (one from each group) performed their co-designed sculpture several times and held the position. In other words, they embodied the design, held the position, then released and took two steps back from their sculpture before entering it again. The enactments of their static designs were documented through pictures in order to allow later review and discussion.





Figure 21: Collection of 8 images showing participants in the second workshop performing stage 1 of a physical exercise of sculpture design. © Samer Alkurdi, Linz 2020.

The second stage of the exercise immediately followed the first, and the task was to generate and exchange a score for a desired design that would be created and performed by another group. The scores for this task were the following:

- Test, provoke, remind, trust, let insecurity happen, resist, and feel the action.
- The state of in-betweenness.
- I miss my mum.
- Destabilising the way forward.

The results were then performed and captured in the following images:





Figure 22: Collection of 6 images showing participants in the second workshop performing stage 2 of a physical exercise of sculpture design. © Samer Alkurdi, Linz 2020.

This time, the participants were asked to perform and re-perform their sculptures (the body / gesture designs) as they were capturing and freezing an expressive moment from the active body. The task aimed at making the participants physically think and feel the particular aspects of the body architecture in relation to its expressive values by asking relevant questions. How does the articulation of the joints form an inner state of the body, and for what? Where does the weight of the body go? How can the body, while dealing with its weight, express its effort within the action and stillness? These questions were given to the students during and after the exercise, and they also fuelled a discussion on the last day of the workshop.

5.2.2 Bodies in the supermarket

Created in response to a particular research topic of the participants' proposed research, this exercise was designed to stimulate questions and discussions about the particular relation between space design in supermarkets and the body of the visitor. Furthermore, it aimed at generating a set of scores that would describe the visitor's movement among these specific structures. For this exercise, a conscious

decision was made to not focus on the different characteristic aspects of how people use the spaces in between shelves and displays in a supermarket. Instead, attention was placed specifically on the systemic and functional interaction between the *body* of the supermarket and the *body* of the visitor. This was done by addressing a number of questions: How are the goods placed in the space? How do visitors move through the space, and how does the space move them? What does the visitor pay for their experience?

As with the previous exercise, the participants were asked to dismantle the designs of the supermarket stands into basic lines, forms, pathways, levels, and zones that ultimately determine the choreography of the visitors' movements and manipulate their attention and time. To do so, the participants worked together to build three different shapes in workshop space to project spaces and architecture design of supermarkets using the available objects in the studio, such as tables and chairs, to reestablish these forms. This also allowed them to define pathways for the entrance and the exit in the imaginary supermarket situation. An additional task was then given for them to improvise their movement through each spatial structure and reenact the supermarket visitors. Each member of the group was given a single specific aspect or movement element to focus on, such as their movement tempo, or tracing and remembering their pathways and interactions with others.



Figure 23: Participants in the second workshop performing an improvisational task in the exercise titled *In the supermarket*. © Samer Alkurdi, Linz 2020.

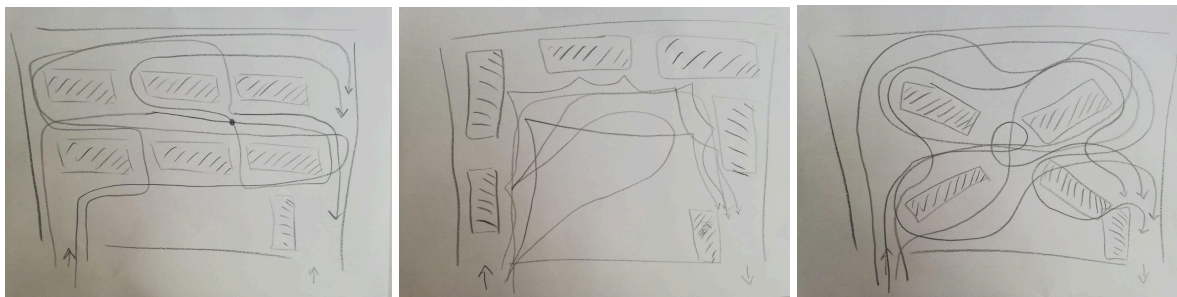


Figure 24: A collection of 3 sketches from the second workshop made to describe the pathways used by participants walking through three different setups of an imagined supermarket in the scope of an exercise titled *In the supermarket*. © Samer Alkurdi, Linz 2019.

5.2.3 Bodies in the art museum

This exercise was carried out on the last day of the workshop and was designed to discuss an application of the previously introduced and practiced concepts by switching and reconceptualising the relation from designer-visitor to choreographer-dancer. An art museum space contains a field of functional relations between objects (works of art) and an audience (visitors) in an artistic context, which raises the question of how the previously practiced body-space relation concepts can be applied to enhance the audience participation in this new context. Moreover, the exercise needed to address the participating students' research questions: What value is shown in the form of an art museum? How is the space organised? How does the visitor (in this case the participant) move through an art museum? How does one go about considering an art museum as a choreographed space?

In this demand, the students were divided to work in two groups. Each group received instructions to design a particular space in the workshop studio to present one object (an artwork) as an interactive element for the visitor. The design of the space should manipulate the visitor's perception, while the visitor should become a participant of the art museum experience. The created environment had to lead the visitor's attention to certain aspects that were related directly to the presented piece of art. In order to cover all aspects of the exercise, each group indicated the visitors'

role to the other group's particular space.

One of the chosen museum topics as an example was *mortuary*, and the designers of the respective group also participated in the constructed museum space to perform certain functions or implement certain rules: one performer as the doorman, two performers as reception staff, and one performer as a visitor, aiming to suggest or manipulate the movement and perception of real visitors in the space. The museum space itself was divided into four main sections: entrance, waiting room, a narrow and dark passage leading to the main room, and the main room where the artwork was displayed. The entrance and waiting room were connected by an outdoor terrace, but the entrance door was guarded by the designated doorkeeper to ensure that each group of visitors spent a few minutes waiting on the terrace outdoors before entering the waiting room. This particular space design and the functional participation by the designing group members were implemented to subtly direct the movement of the visitors and to instigate a specific physical experience and sense of the space. For example, the time that the visitor spent waiting outdoors before entering was a tactical decision in order to ensure that they felt cold, therefore simulating the thermospace sensation felt in a mortuary.

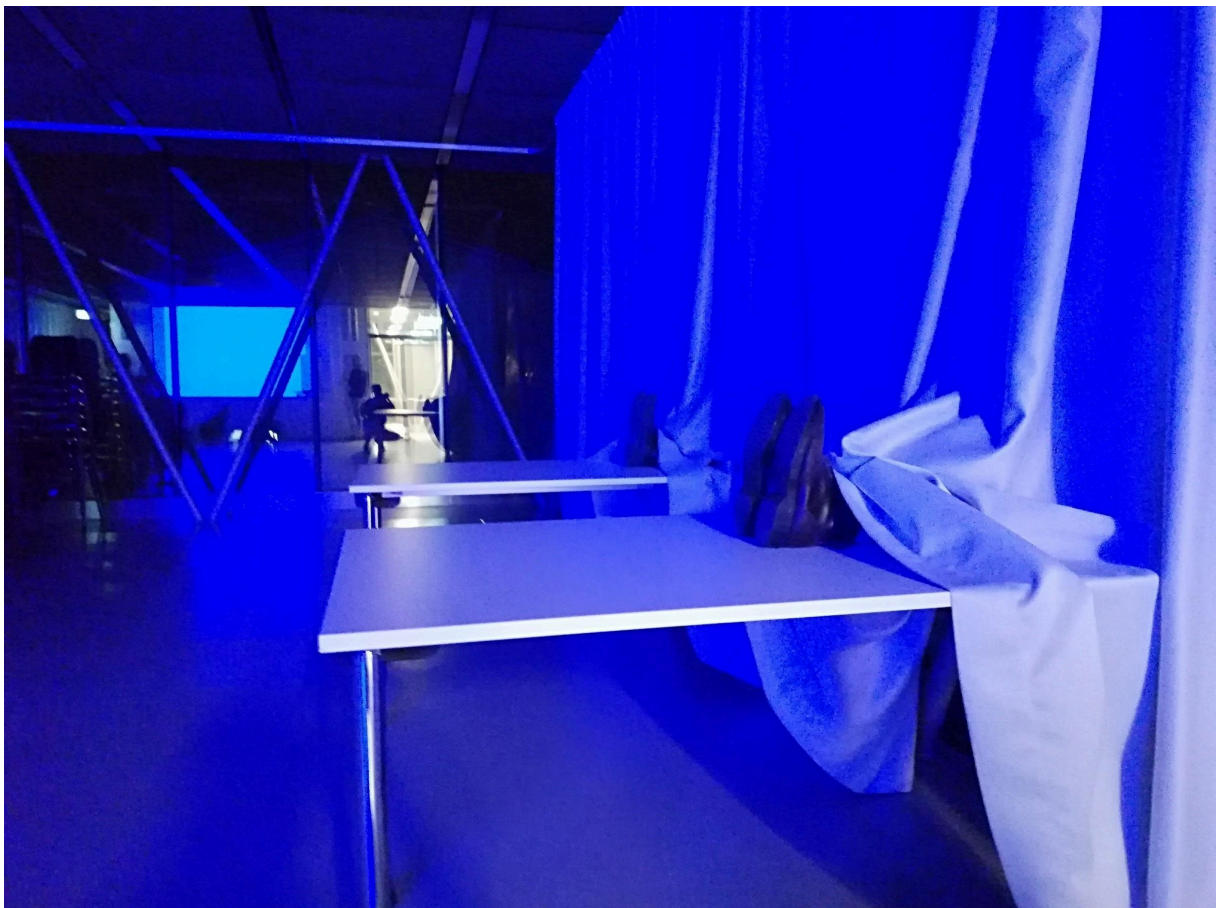


Figure 25: Space design based on choreographic practice during the second workshop in the scope of the exercise titled *Bodies in the art museum*. © Samer Alkurdi, Linz 2020.

Within the framework of this practice, which intended to enhance the student's understanding of spatial recognition of space through movement, and enabling them to align outer and inner space of structures and also to physically understand the ability to shift their perception between different categories of space as a dancing opportunity to manipulate their surroundings, the group of designers were able to think from the perspective of choreographer, by focusing on the body of the participant when designing an institutional space, and the space itself become the design of scores that motivate the body to move and interact within functional surrounding.

6. Discussions, Conclusions and Further investigation

The movement tasks carried out help to generate a live experience consisting of the practitioners' physical commitment to embodying given tasks and the integration of an entire map of actions and spatial structure. Therefore, the practitioners' embodiment of complex content enhanced the expressive values of the human body within a designed setting. Choreographic mapping was implemented as a tool to further enhance the expressive values of human body movement and provided a relational domain of knowledge through the consideration of geometric and motoric aspects, structures, and dynamics in human body movement, resulting in a characteristic body expression within a specific context.

This approach to dance practice motivated an openness towards the concept of performed movements being a container or vessel for values and information, encouraging the search for a dancer's performing values beyond the appearance of their movement, such as aesthetics or perfect technique. This, in turn, led to a different understanding of what the practice of dance can offer when used as a tool for scientific research, helping to uncover a particular element in each movement of the human body, all the way from intention to enaction. A significant aid in this endeavour is a dancer's ability in physical thinking, as it helps to design the intention and motivation for the body to move and express, as well as to analyse its reasons and decisions.

The exercises and methods described in the scope of the second workshop (as outlined in chapter 5.2) led to the observation that awareness for space, self, and others can be developed rapidly through a systemic approach. This awareness can also be internalised and stored after an initial application, enabling later performance of the exercise. Thus, in addition to rehearsal through frequent repetition, the cognitive mapping of a dancer's movement design archive can be fully activated through one-time action. In other words, by practicing a given exercise once and attaining the necessary ability to perform it, the gained knowledge remains in the body and does not necessarily need to be consciously activated. Furthermore, participants in the *Retroactive-Scores* research workshops described the exercises and tasks as highly useful, even in other fields of action, such as space design,

interior design, and architecture, stating that it provided them with a different orientation system towards their inner self and their surroundings, and that it raised their awareness for different parameters that define movement, spatial relationships, and time.

For further research, it would be desirable to apply the retroactive scores in a more diverse research field, as the testing of physical applications in different settings would allow for a more comprehensive discovery of potentially arising benefits and connections. When it comes to space and space design, the advantage of the retroactive score method is very clear: not only is a designer able to design a space using rational knowledge from an outside observer's point of view, but they are also encouraged to design by paying attention to their inner space. This allows them to acquire a new understanding of spatial structures and establish a deeper comprehension of their own work and actions. It would be of particular interest to investigate how the application of retroactive scores could benefit professionals in other fields, such as psychologists, construction site workers, teachers, and more. Such research would also provide knowledge and clarification as to the cognitive mapping of different groups of people or activities, thereby enabling them to adapt the retroactive score method to be used more specifically for different cases. This, in turn, would generate a wealth of pedagogical methodology and tools for movement analysis of the given practice.

Task-based movement practice can be implemented in both individual and group practice settings, with the option of increased research depth by applying a specific task order. To carry out a task-based movement exercise, it is first necessary to choose the number of practitioners for each task before adding more task layers according to the selected concept or research question. This is facilitated by relating it to embodied information of dynamics and space structures (maps) that the practitioners may have previously practiced. In this way, task-based movement practice can lead to instant dramaturgical outputs that can be aligned under a theme or topic, adapted to certain surroundings and interests, and analysed differently according to a given set of parameters. Improvisation tasks can be kept secret from the practitioners or communicated beforehand, shared with an entire group or only one member to be performed alone, set in a particular order, dramaturgically aligned, set to music, or can include objects, an audience or other observers, involve specific

movements or performance techniques, and changed to suit a more analytic or outcome-oriented process. The goal and potential benefits for the dancers, participants, or active players in the field carrying out these tasks include body and self awareness, space and audience awareness, an understanding of their presence in the context of certain surrounding parameters, and the ability to control their own *game*, or in other words, their performance, the information they share, the dramaturgical score, the readability for observers or audience members, their communicating logics, and the art piece itself.

Another potential benefit for the dancer or choreographer is the ability to broaden the methodical approach, increase awareness for artistic consequences, create individual and instant art pieces without a set of rehearsed sequences of specific movements, all while still having a set of rehearsed scores of systemic space structures and movement qualities at their disposal. Additionally, task-based movement practices provide a platform for the analysis of different communicative patterns, whether inherited or newly created cultural, individual or group patterns, or universal body languages. Furthermore, it is of particular interest that task-based movement can help foster and draw attention to different artistic expressions and ways of understanding any given tasks during an improvised performance, and helps to shed light on new approaches to choreography and performance by proactively involving the dancer in a purposeful movement design. As such, dancers may become the researchers of their own individual movement choices.

From another point of view, task-based movement practice may also serve as a document of replication that can define the composition of an art piece, while, however, leaving the practitioners in the field free to individual interpretation. This can be compared to and exemplified with the fields of theatre and music: in a theatre play, a script is usually written in detail, but it does not necessarily include detailed instructions as to how the words should be acted out or inscened. In Jazz music while *jamming*, the main harmony is not defined by exact notes that each musician is to play, but rather through the interactions between the musicians who had each previously practiced a variety of forms, themes, and structures that now allow them to travel between and through different scales and dynamics, and to respond to each other and their surroundings at will.

When contemplating the use of this method for stage and performance or dance art

work, there is the potential for a plethora of discoveries that can still be made with further research. For example, is it possible to define dramaturgy more precisely based on tasks by handing the responsibility over to the actors in the field rather than leaving the full decision up to the choreographer? If the task-based practice is not result-oriented, how should scores be added to create a field of comparison between groups or performers of these scores for further application in social and cultural studies or the like? Can the same given scores serve as a reference system by which similarities and differences between participants in this physical practice can be recognised or analysed? Similarly to the definition of a musical key for musicians to start jamming, task-based practice helps to question the potential discovery of a narrative tool for dance creation, but in this case, what are the set scale and rhythm? Once these fundamental but intrinsically formless parameters are laid down, the resulting work simply occurs and emerges through the automated knowledge and interaction between dancers.

Finally, while considering the playfulness of improvised tasks and their power to emancipate the dancer or performer as a dramaturgical entity, it also serves in a pedagogical approach, tracing a way from a suggestion to an understanding of movement composition. Task-based movement practice suggests a motivation or theme and structure for movement without defining the concrete appearance or stylistic output of that movement or action. On the grounds of this freedom, it simultaneously enhances the dancer's attention and concentration when performing a task, while also producing deeper body awareness and understanding of their own body's behaviour. Equipped with this awareness, the dancer is then free to compose their shapes and movements in space, continually finding new ways to do so.

Bibliography

Bartenieff, Irmgard; Lewis, Dori. (2002) *Body Movement*. Taylor and Francis. Kindle Edition.

Blades, Hetty. (2016) *Scoring Choreographic Poetics*. Choreographic Practices, volume 6 (2). Intellect. DOI 10.1386/chor.6.2.261_1.
http://dx.doi.org/10.1386/chor.6.2.261_1

Candy, Linda. (2006) *Practice Based Research: A Guide*. Research Gate. Creativity & Cognition Studios, University of Technology, Sydney.

deLahunta, Scott; Jenett, Florian (2017) *Making digital choreographic objects interrelate: a focus on coding practices*. In Leeker, Martina, Schipper, Imanuel and Beyes, Timon (eds), *Performing the digital: performativity and performance studies in digital cultures*, transcript. Bielefeld Verlag, Germany.
<http://www.transcript-verlag.de/978-3-8376-3355-9/performing-the-digital>.

Eichberg, Henning. (2007) *How to study body culture: Observing human practice*. Center for Sports, Health and Civil Society, University of Southern Denmark. ISSN 1652–7224. <http://www.idrottsforum.org/articles/eichberg/eichberg070606.html>.

Eichberg, Henning. (2009) *Body Culture*. Physical Culture and Sport. Studies and Research, vol. 46, no. 1. doi:10.2478/v10141-009-0006-0.
<https://www.researchgate.net/publication/270258024>.

Elizabeth J. Durden-Myers, E. S. Meloche & Karamjeet K. Dhillon. (2020) *The Embodied Nature of Physical Literacy: Interconnectedness of Lived Experience and Meaning*. Journal of Physical Education, Recreation & Dance. DOI: 10.1080/07303084.2019.1705213

Forsythe, William. *William Forsythe Choreographic Objects: Biography*. N.p., n.d.
<https://www.williamforsythe.com/biography.html>.

Forsythe, William. *William Forsythe Choreographic Objects: Essay*. N.p., n.d.
<https://www.williamforsythe.com/biography.html>.

Franko, Mark. (2011) *Writing for the Body: Notation, Reconstruction, and Reinvention*

in Dance. Common Knowledge. DOI: 10.1215/0961754X-1188004.

<https://www.researchgate.net/publication/254933819>.

Hodson, Millicent. (1996) *Nijinsky's Crime against Grace: Reconstruction Score of the Original Choreography for Le Sacre Du Printemps*. Pendragon Press.

<https://www.worldcat.org/title/nijinskys-crime-against-grace-reconstruction-score-of-the-original-choreography-for-le-sacre-du-printemps/oclc/34244441>.

Hodson, Millicent. (1986-1987) *Nijinsky's Choreographic Method: Visual Sources from Roerich for Le Sacre du printemps*. Reviewed work(s): Source: Dance Research Journal, Vol. 18, No. 2, Russian Folklore Abroad. Congress on Research in Dance <http://www.jstor.org/stable/1478047>.

Hodson, Millicent. (1985) *Ritual Design in the New Dance: Nijinsky's "Le Sacre du Printemps"*. Dance Research: The Journal of the Society for Dance Research, Vol. 3, No. 2. Edinburgh University Press. <http://www.jstor.org/stable/1290556>.

Hodson, Millicent. (1986) *Ritual Design in the New Dance: Nijinsky's Choreographic Method*. Dance Research: The Journal of the Society for Dance Research, Vol. 4, No. 1. Edinburgh University Press. <http://www.jstor.org/stable/1290674>.

Hoffman, Richard; Pelto, William; W. White, John. Takadimi. (1996) *A Beat-Oriented System of Rhythm Pedagogy*. Journal of Music Theory Pedagogy, vol 10. The Board of Regents, The University of Oklahoma.

<https://pdfs.semanticscholar.org/29ed/530117774455041237929412ce5cc3e2826a.pdf>.

Imschoot, Myriam. (2005) *Rests in pieces: On Scores, Notation and the Trace in Dance*. Multitudes. DOI: 21. 10.3917/mult.021.0107. Published online 2008.

https://www.researchgate.net/publication/240827631_Rests_in_pieces_Partitions_notation_et_trace_dans_la_danse.

Jeschke, Claudia; Breuss, Rose. (2016) *de-Archiving Movement/Instabile Wissensfelder – Lecture Performances Als Suchbewegungen Einer ›Zeitgenössischen‹ Tanzforschung*. Bewegungsmaterial. doi:10.14361/9783839434208-003.

Järvinen, Hanna. (2013) *They Never Dance: The Choreography of Le Sacre Du Printemps, 1913*. AVANT. The Journal of the Philosophical-Interdisciplinary Vanguard

3rd ser.

https://www.researchgate.net/publication/290586992_%27They_Never_Dance%27_The_Choreography_of_Le_Sacre_du_Printemps_1913.

Järvinen, Hanna. (2006) *Kinesthesia, Synesthesia and Le Sacre Du Printemps: Responses to Dance Modernism*. The Senses and Society 1, no. 1.

Kirsh, David. (2010) *Thinking with the Body*. in(eds)S. Ohlsson R. Catrambone, Proceedings of the 2nd Annual Conference of the Cognitive Science Society, Austin, TX: Cognitive Science Society.

https://www.researchgate.net/publication/236876077_Thinking_with_the_Body.

Kyselo, Miriam. (2014) *The Body Social: an Enactive Approach to the Self*. Frontiers in Psychology, vol. 5. doi:10.3389/fpsyg.2014.00986.

<https://www.researchgate.net/publication/265605751>.

Laban, Rudolf von; Ullmann, Lisa. (2011) *The Mastery of Movement*. Dance Books.

Laban, Rudolf von; Ullmann, Lisa. (2011) *Choreutics*. Dance Book Ltd. Alton, Hampshire, UK.

Longstaff, Jeffrey Scott. (1996) *Cognitive Structures of Kinesthetic Space Reevaluating Rudolf Laban's Choreutics In the Context of Spatial Cognition and Motor Control*. Perceptual and Motor Skills, vol. 91, no. 5.

doi:10.2466/pms.91.5.191-210. Submitted for the Degree of Doctor of Philosophy City University, London Human Movement Studies, Laban Centre, London.

Electronically Published: Core, 2000. <https://core.ac.uk/download/pdf/42628850.pdf>

Louppe, Laurence. (1994) *Notations and Drawings in Traces of Dance Drawings and Notations of Choreographers*. Dis Voir, Paris.

Fernandes, Ciane. (2014) *The Moving Researcher*. Jessica Kingsley Publishers.

Louppe, Lourence. (1994) *Traces of Dance Drawings and Notations of Choreographers*. Dis Voir, Paris.

Franko, Mark. (2011) *Writing for the Body: Notation, Reconstruction, and Reinvention in Dance*. Article in Common Knowledge.

<https://www.researchgate.net/publication/254933819>.

Muntanyola Saura, Dafne; Kirsh, David. (2014) *Marking as Physical Thinking: A Cognitive Ethnography of Dance*. Proc. of A Cognitive Ethnography of Dance, Department of Cognitive Science, University of California, San Diego.
<https://www.researchgate.net/publication/258976842>.

Newlove, Jean; Dalby, John. (2013) *Laban for All*. Nick Hern Books.

Papanikolaou, Eftychia. (2008) *The Art of the Ballets Russes Captured: Reconstructed Ballet Performances on Video*. Notes 64, no. 3.
doi:10.1353/not.2008.0014.

Robinson, Adelaide. *Notes Made in the Theatre and in the Dark: An Exploration of the Methods Used in Ballet Documentation and Reconstruction*. DocumentingPerformance. N.d.
<https://documentingperformance.com/2017/07/30/notes-made-in-the-theatre-and-in-the-dark/>.

Valentine, Gross. (2011) *Ballets Russes: Le Sacre Du Printemps*. V&A Collections. N.p.
<http://collections.vam.ac.uk/item/O1112109/le-sacre-du-printemps-drawing-gross-valentine/>

Warburton, Edward C. (2014) *Body Double: The Enactive Approach to Research on Marking in Dance*. Dance Current Selected Research, vol. 8.
<http://www.researchgate.net/publication/320084228>.

Warburton, Edward C. (2018) *Imagine the (Im)Possibilities: The Role of Constraints on Dance Creativity*. ResearchGate.
<http://www.researchgate.net/publication/333405571>.

Warburton, Edward C. (2011) *Of Meanings and Movements: Re-Languaging Embodiment in Dance Phenomenology and Cognition*. Dance Research Journal, vol. 43, no. 2. doi:10.1017/s0149767711000064.
<https://www.researchgate.net/publication/312537353>.

Nancy, Jean-Luc. *The Pleasure in Drawing*. New York: Fordham University Press, 2013.

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<http://www.jstor.org/stable/1478047> . (Accessed on 3rd February 2017)

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<http://www.jstor.org/stable/1478047>. (Accessed on 3rd February 2017)

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<https://www.researchgate.net/publication/254933819>. (Accessed in April 2019)

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<https://www.researchgate.net/publication/254933819>.

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Espace Dynamique: Textes inédits, Choreutique, Vision De L'espace Dynamique.
Translated by Schwartz-Rémy Elisabeth. Brussels: Contredanse, 2003.

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Newlove, Jean; Dalby, John. (2013) *Laban for All*. Nick Hern Books.

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Figure 23: Students of the Master's Programme of Space and Design Strategies at the University of Art and Design Linz during the *Retroactive-Score*: second workshop performing the improvisation task titled *In the supermarket*. © Samer Alkurdi, Linz 2019.

Figures 24: Sketches made to describe the used pathways of the students walking

through imagined supermarkets in three different setups for the improvisation task titled *In the supermarket* during *Retroactive-Score*: second workshop. Captured by the author.

Figure 25: Space design based on choreographic practice during the second workshop in the scope of the exercise titled *Bodies in the art museum*. © Samer Alkurdi, Linz 2020.

Appendix

Larissa Mayer. MA

Going to this workshop there was a lot of curiosity but also some kind of frightful doubt: I am not a dancer, I am a designer. Attending this course, I have to admit that I was quite sceptic towards the concept of Laban. Structuring the space geometrical and categorizing it with numbers, it felt like he was a typical man of his time: a functionalist. Functionalism as it is practiced today is understood as pragmatic efficiency through reduction on the essential. It is everywhere in design and architecture and it is seen as a value without critique or doubt. The individual is placed in the center and the designer's idea of the clean space tells: you got the freedom to do everything, while actually they structure efficiently the behavior in the space. You get to your goal without any »ornamental« distraction. So, from my profession as Designer I strongly feel that through the way we are designing our world, we are losing the process in order to reach the goal efficiently and easy, in order to be functional.

The retroactive scores were like the missing link. One could lose the outer orientation points (so clean spaces, who cares) and lay the directions in the body. I still carry the sentence »You are the source of the direction« with me. I mean, this is so simple and a little bit cheesy maybe, but it opened a door physically and theoretical for me. There were movements I never did consciously before. When you wanna go through the door to your left you turn a quarter left and probably never bother to turn three quarter right. It's a weird movement in a way, but with the sensation of finally finding out ALL the basics of your turn skill repertoire. And I wonder why I never learned that in school... This awareness felt so essential...

Learning retroactive scores has been like learning to count – you first carefully start to raise one finger after the other to get to the number you want. Only after a time of repetition it's no problem to show the right number of fingers without counting. The body remembers the movement to the number. But the process for the body is needed to understand what the mind seems to catch quickly, but is aware of its meaning only through the experience. So, where functionalism fails in architecture,

this concept empowers the individual in the awareness about movement in space and gives a tool to communicate about it. Reading a score is the most natural thing for me as a singer, I never thought about a score for movement – it intrigues me!

The whole workshop was leading up to the sovereignty to interpret a score together with the fellow participants. Exercises were building up the sensibility not only for the space around the own body but also for the spaces and relations between the individuals. The communication of partners through the touch on the spine as talking and the reacting movement as answering were quite hard but worth the struggle. Not only was it laying confidence in one self's movement through experiencing the spine as central, grounding yet initiating part of the body, it was also intensifying the openness for the other person's suggestions and letting reactions become natural communication. But also, the talk and practice about the quality of movement seemed essential for me. My choir conductor used to say: "Now we know the score, so let's start making music.« In the end the experience wasn't so different to a choir, only that movement filled the space instead of sound. But we had the score of our own part (aka register), we had the qualities/dynamics of our own movements (aka voices) and we had the relation to the fellow performers, composed in a harmonic dynamic of togetherness, repeating motives, answering... in this broader score which we did not see up front but that built up beautifully through doing. Also, for the choir it is relevant that in the moment the voices support each other though they are doing something different and if the energy is right you hear everything at the same time, fitting perfectly and you understand the music behind the score. It's not so easy to put this in words so I chose these comparisons. But I can say that I learned so much essential understanding of my body and the power of movement that there is a different joy about it since then. Usually I will get stage fright that »hopefully I will make no mistakes« (well, in a choir I became more confident through experience). But here was no experience at all and I was excited to share what I had the chance to get to know in this short time. I am still sharing it with people.

The work of the performative space strategist Larissa Meyer questions behavioral certainties in relation to material culture and the designed space. Contextualized site-specifically the projects are developed out of daily life phenomena observations, brought in associations to possibilities through performative strategies. She has a

BA-degree in Industrial Design and holds the MA-degree of the crossover faculty space & design STRATEGIES science 2017, where she is working as assistant professor now. Moreover, she is developing narrative installations in the three-woman collective MeyerSchinkSeyerlENTERTAINMENT and is co-curating for Kunsthalle Linz.

Julia Hartig. MA

I took part in Samer Alkurdi's Workshop Retroactive Scores at the Participatory Arts Panel at Red Sapata.

I'm a performance artist with a background in visual art and I'm practicing contemporary dance on an intermediate level.

Learning the methods of Retroactive Scores demanded a lot of thinking and practice to understand it and to embody it.

I understood it as a strategy of orientation without a reference to the space but a strategy that only refers to one's body. Meaning that oneself is the compass, which is not necessarily related to the outside neither to any inner emotion or memory. (So basically one could start from zero.)

Combined with the "Movement (Motion) Factors" by Irmgard Bartenieff Samer's research provided a diverse repertoire of tools to create one's choreography respectively to reflect it from a new perspective.

Besides the technical input, the practice offered a lot of space for improvisation and interaction and on top of that an atmosphere that allowed us to dig deep into our own movement research.

All in all it has been a very valuable course that opened up many things for my own artistic production.

Gabriela Gordillo.BA

Space and sound design artist

E1: LISTENER (Exercise 1)

1. Work by couples/ 2. One is a listener (receiver), the other guides / 3. Then switch

Closing the eyes, rediscovering space through different senses. Finding out that it is possible to forget about the whole world; to dance as if you were alone, while someone is maybe in front of you. Communicating in abstract ways; developing a communication with each person you work; every person and every iteration are a different story.

E2: SCULPTURE

1. Work by couples / 2. One makes a sculpture, by modeling the position of the other person / 3. Write down the "title" of this sculpture-action, in a piece of paper /4. Switch scores with another team / 5. Reproduce their sculpture

While doing this exercise it was not clear what the next step was going to be, as we were doing one thing at a time (sculpture in couples. then switching) which was useful to mark limits of focus, and then make associations into the reinterpretations of what we did.

Working in couples brings some responsibility to be creative, and make something good for the other, as a team. It brings the need of trust and non-verbal communication

The situations were mostly accidental and funny. It helped to improvise, explore possibilities in the moment and have short time to reflect on the idea, so things were more spontaneous and fresh. In the case of the first part of the exercise (first sculpture) the idea/name could be antecedent to the posture, or inversely after exploring a posture would come the idea.

The reinterpretation of making the posture of a text, and representing it in your own way, was funny, especially when the others had to guess.

When brought to a "name" for the posture, then associations to concepts, and characters started to pop-up. Maybe even with a theatrical connotation. It was interesting to see the different approaches to the exercise from the other participants.

I would be curious how else it would be possible to work with these mixed / interdisciplinary elements, of signs (scores) + verbal descriptions + sculptures, which interconnect the flow of the exercise within itself and in a group dynamic.

My impression was that every element of the exercise had equal importance, and each is a representative part of the whole. I would not make more the "posture" vs the "paper name" for example, because all were descriptions of the same in a different language. The translation from one to another expanded the meaning by making a reinterpretation, making it at the same time more specific.

It would be a nice complement to state what is a score, and how does it interact with the practice itself.

E3: COMPASS

Recently I was working in a project of *location* in relation to the *self*. I read that the method for birds or other animals in migration to know a direction or come back to the place of origin is called "dead reckoning", a calculation of all their steps-movements taking in account the origin+the present location+ and the previous one.

To me, that could be in a way what we were doing in this exercise: Knowing that we start in 0 we counted from there; we divided the space through an imaginary partition that allowed us to move in an abstract matrix; after learning how to move in this space according to our own north, we tried to embody- automatize the navigation in this rational space, developing a kind of body compass.

This transposes the use of a device outside the body, by instead using proprioception as a tool and extending our senses, in a training that joins rationalization and movement.

This confirms the idea I sometimes had that training the mind and the body, could be

better tools of evolution, than building and producing more gadgets and devices.

Concentrating was hard, but we improved. Nevertheless we never saw what could directly develop from the exercise- although for sure its just a good exercise of self-awareness

E: GENERAL

It predominates in this workshop an environment of trust, and very friendly interaction, between participants, provided by Samer. There are moments of work, but also moments for talking.

It was good to have a moment of reflection after each exercise. Although sometimes there were very abstract explanations of what we did.

In general I found it hard to put together practice and theory (the part of what is movement conformed by) because thinking of that limited my idea of doing the practice. I was wondering if this is the theory of a single person (who described movement in this way) or a general assumption from dance studies.

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Samer Alkurdi