Concepts of Embodiment in Interdisciplinary Work Within a Musical Context

Research Question:
"How does the concept of embodiment serve the creation of interdisciplinary work within a musical context?"

MMus NAIP

Royal Conservatoire of The Hague / Koninklijk Conservatorium

By: Sarah Albu
KC Student Number: 3073394

Research Supervisor: Renee Jonker

Research realized with the support of FRQSC – Fonds de Recherche Société et Culture Québec

Presentation:
August 22, 2018, Den Haag
August 29, 2019, Groningen

Table of Contents

1. INTRODUCTION AND BACKGROUND

For as long as I can remember, I have been a maker of things and a spinner of stories. Someone who likes to share news, events, ideas, presented in a creative way as filtered through the many lenses of my interests and existence. As a storyteller, even as a child I intuitively used my voice, my gestures, props (found and fabricated) to help illustrate whatever it was, reality or fiction, that I was trying to convey to my audience, to those around me.

As a child I never thought about whether or not these were separate disciplines or what a discipline was; if the puppet helped to tell the story, then the puppet was part of the story, and if that puppet sang then the voice was part of the puppet; if the puppet happened to be a potato, then the potato became a creature, more than a root vegetable with makeshift eyes and mouth. All elements came together in a sort of *Theatre of Confluence*, a term I came across years later as an undergraduate in Canadian composer R. Murray Schafer's course at Concordia University in Montreal. Schafer describes the Theatre of Confluence as "a theatre in which all the arts are fused together, but without negating the strong and healthy character of each" (Schafer 26).

It was mostly by chance that singing became the centre of my activities; deemed the "most important" of the things that I do because it seemed at the time necessary to specialize, to declare something to be the one thing. It was through formal studies that I learned that all of these things are separate, different, have lives of their own. Live in their own little boxes. While I do discount the importance of the attention to detail that focusing for a period of time on a specific discipline affords, the following research aims to highlight strategies for cultivating and maintaining an integrated approach to project design, creation and execution through a breadth of awareness of the various elements, physical, visual as well as sonic, that make up a whole performance.

In the textile museum in Brussels, there is a corner dedicated to the work of the Belgian dancer and multidisciplinary artist Marguerite Acarin, known as Akarova. I visited the museum in 2014. I had never heard of her or her work, but I was drawn into the exhibition by a large quotation which reads:

"For me painting, sculpture, music, dance, poetry were never disciplines independent of one another."

This resonates with me. I tend to look for the common thread in my experience whether it be in everyday life or in a performance setting; connecting a similar feeling or essence that can be found in multiple forms, sonic, physical, visual, tactile. Through an embodied approach to interdisciplinary creation researched from the perspective of a performing musician, a tuning of the awareness towards these connecting points can strengthen presentation style and performance context, leading to wholistic creation experiences that draw on elements beyond the sonic.

2. RESEARCH QUESTIONS AND SUBQUESTIONS

The major inquiry of this research is therefore "How does the concept of embodiment serve the creation of interdisciplinary work within a musical context?"

This will be explored in an examination of my own artistic practice through artistic research methodology, with the theoretical framework I have developed over the course of my degree and through the following sub-questions:

-**What** strategies can help to encourage, support, and develop the creation of "embodied" interdisciplinary work both in educational and professional settings?

-**How** does knowledge of specific extra musical practices – in this case textile craft and ancient wool traditions, coupled with theatre, dance and movement – relate to and inform the musical process and content of an artistic project?

3. RESEARCH METHODOLOGY

The methodology employed in order to answer these questions is composed of three steps:

a. setting up a theoretical framework for keywords in my research (embodiment; spinning; technology; community; interdisciplinary; multi- or intermediality)

b. taking a closer look into the works of *significant others* in relation to these keywords

c. performing two case studies of my own work, focusing on two projects I have realized: *FutureMoves* and *Rokkur*

4. THEORETICAL FRAMEWORK – DEFINITIONS OF KEY TERMS

4.1 Embodiment

Embodiment or incarnation is defined as the giving of human form to a spirit – to make manifest or comprehensible an idea or concept, through a physical presentation. In the biblical definition, incarnation is the manifestation of the holy spirit in human form. Similarly, in performance, the body is the canvas or the medium for expressing and bringing to life a concept, emotion, story or idea, before an audience.

As musicians, we do the work of embodiment by bringing written or otherwise documented suggestions of sound into physicality. We take an idea about a sound or musical gesture or combination thereof transmitted and preserved through written symbols, verbal instructions or spontaneous inspiration, take this into our bodies and express it through sound and action, using either voice or an instrument to bring the idea into the air and thus into the listener's body via the ear.

In my work as a singer, I use emotional content and physical action in parallel with the sung music and text, in order to fully incarnate the content or the "essence" of the piece I am performing. I am interested in the moment at which one becomes a medium (medium is the message – this concept will be elaborated later), an interface, a filter for a piece, and in the process of refinement by which one may continuously allow shades of one's own experience to colour an interpretation, while always keeping the focus on making appropriate space for the material to come through. This is effectively the moment at which the body becomes "technology"; a means to achieve a result; a complex system of reception, transformation, and production. Applied to vocal music, these principles encourage a subtle shift in intention and focus; that the training of the vocal instrument be in place already and that the focus of performance be the communication of the text, emotional content and intention of the piece rather than on vocal technique in itself. I consider this approach of the body as a filter or a medium not to be in opposition to technique, but rather a legitimate technique in itself.

At the beginning of my studies in the NAIP program, I was specifically interested in the idea of embodiment of landscape through vocal music. The works I have created throughout the period of study wound up dealing with this question, albeit in a less direct way. Where *FutureMOVES* interacts with landscape brings up questions about the nature of a landscape and what can constitute a "landscape"; the Oxford English dictionary includes in its definition of landscape "all the visible features of an area of land" and "the distinctive features of a sphere of activity"; if a landscape is a place that we spend time interacting with our surroundings and each other, it can be argued that the internet has become as much a landscape as any of our physical surroundings.

4.1.1 Embodied Cognition

The field of embodied cognition draws on early philosophical ideas of bodily experience as integral to reasoning, stemming from the work of philosophers Maurice Merleau-Ponty and John Dewey. They oppose the Cartesian theory known as *mind-body dualism,* which sees mind and body as wholly separate. The contemporary study of embodiment in cognitive science posits that "our ideas are shaped by our bodily experiences – not in any simpleminded one-to-one way but indirectly, through the grounding of our entire conceptual system in everyday life" (Lakoff and Nunez, *xiv).*

Where Descartes insists that the mind is a nonphysical and non-spatial substance and therefore logic

and reasoning separate from bodily experience (Robinson, web resource), embodied cognition embraces a theory which suggests that "the mind is not merely embodied, but embodied in such a way that our conceptual systems draw largely upon the commonalities of our bodies and of the environments we live in" (Johnson and Lakoff 16).

"Because our conceptual systems grow out of our bodies, meaning is grounded in and through our bodies... There is no such thing as a computational person, whose mind is like computer software, able to work on any suitable computer or neural hardware, whose mind somehow derives meaning from taking meaningless symbols as input, manipulating them by rule, and giving meaningless symbols as output. Real people have embodied minds whose conceptual systems arise from, are shaped by, and are given meaning through living human bodies. The neural structures of our brains produce conceptual systems and linguistic structures that cannot be adequately accounted for by formal systems that only manipulate symbols" (Johnson and Lakoff 17).

4.1.2 Embodiment Theory in Artificial Intelligence

In AI, the two general schools of machine intelligence are represented by the terms *Symbolic* and *Subsymbolic.* Symbolic knowledge relies on pre-programmed representational internal systems, where subsymbolic (or "connectionist") knowledge synthesizes a human neural network, allowing for environmental input and deep learning (Lieberman; Bhatia, web resources). In this context, the concept of embodiment deals with "embodied systems in the real physical and social world", which "...are highly complex and their investigation requires the cooperation of many different areas" (Pfeifer and Iida 1). Pfeifer and Iida elaborate on the two schools of AI: "one meaning stands for GOFAI (Good Old-Fashioned Artificial Intelligence), the traditional algorithmic approach. The other one designates the embodied approach, a paradigm that employs the synthetic methodology which has three goals: (1) understanding biological systems, (2) abstracting general principles of intelligent behavior, and (3) the application of this knowledge to build artificial systems such as robots or intelligent devices in general. As a result, the modern, embodied approach started to move out of computer science laboratories more into robotics and engineering or biology labs" (Pfeifer and Iida 5).

Thus, the concept of *embodiment* in terms of AI encompasses not only a physical body moving in a specific environment, but an integrated approach towards reaching a sort of composite intelligence that draws on multiple types and forms of knowledge and experience. This raises questions about a developing symbiosis between human and machine; whether intelligent machines are extensions of the human body in some spheres and whether this relationship is reciprocated in the human body behaving as an extension of the machine in the physical world - feeding information back into it through our daily and most basic interactions with communications technology.

4.1.3 Embodiment Theory In Physical Theatre

Embodiment in physical theatre practices and actor training methods refers to the eradication of a perceived separation between mind and body, allowing for a "pure" communication between dramatic impulses and bodily expression on stage. Drawing on the philosophy of Maurice Merleau-Ponty's Phenomenology of Perception, which argues against previous philosophical discussions separating mind and body and posits the self as synthesis of landscape, experience and bodily sensation (Merleau-Ponty 61) various theatre practitioners developed specific systems to approach the process of embodiment and to train the body and mind to work together towards this goal.

Polish director and pedagogue Jerzy Grotowski's "Poor Theatre" method combined rigorous physical training with exercises designed to help performers overcome psychological barriers and obstacles to performance. He believed that "text per se is not theatre, that it becomes theatre only through the actors' use of it, that is to say, thanks to intonations, to the association of sounds, to the musicality of language"; linking embodiment of a text to vocal work, which was also a major facet of his practice (Grotowski 21). Konstantin Stanislavski was another pioneer of Western acting training; his "system" of training and role preparation went through several transformations which later became known as "method acting". In his original "system", Stanislavski sought to cultivate what he called an "art of experiencing", as opposed to an "art of representation" (Stanislavski 19).

Questions that may have thus far been raised about the difference between imitation (mimesis) and embodiment can be addressed through an understanding of this divide; in terms of the present research, an embodied approach is an intentionally integrated approach, like in Stanislavski's "art of experiencing", distinct from imitation. Imitation (or "art of representation") can be a starting point for embodiment, and there will be a certain amount of embodiment that occurs naturally in any sort of physical representation by virtue of having a body and lived experience. Nevertheless, to work deliberately on a practice of embodiment means to go essentially beyond imitation, to willfully train the body and mind to be able to consciously access and integrate tools from lived experience into performance.

These same principles have been further applied to voice training for theatre by notable voice coaches and theorists Patsy Rodenburg and Cicely Berry:

In her seminal book on working with the voice, *The Right To Speak*, Rodenburg challenges notions of standard beauty in vocal delivery, emphasizing instead the importance of working with the performer's whole instrument, including identity and psyche, to help access the "authentic" voice. Her approach seeks "not a 'beautiful' voice but a voice rid of doubt and insecurity, a voice perfectly in pitch with the honesty of any text or feeling, a voice that in essence is sincere." According to her, "sincerity gives any voice compelling beauty." (Rodenburg 16)

Rodenburg's approach to the voice honours and works with the sometimes-neglected truth that the human voice is contained within a body, and that body has life experience, emotions and memories, in addition to very specific and unique physicality, all of which contribute to shaping the instrument. Rather than seeing this as an obstacle to overcome, her method encourages rooted, connected, fully embodied use of the voice that recognizes the source from which it comes. In her approach, damaging habits must be overcome in order to allow the performer access to their "authentic" voice.

Cicely Berry was a mentor to Rodenburg and developed a method mixing rigorous technical training with razor sharp awareness exercises to allow for a natural and free voice. Her work also deals with undoing damaging habits and preparing the body to receive and transmit dramatic impulses, effectively a preparation for embodiment. "It is only if, as an actor, you are in a state of total readiness that you are free to be part of the action, which is new every moment. In other words, you do not have time to come out of the situation to reflect and think 'How can I do this'; you do it at the moment the action arises, because the voice is so free." (Berry 11)

Embodiment in terms of integrated performance practice can thus be defined as a state in which the material of performance is being fully expressed by the performer. In most cases, one type of embodiment is not practiced alone; the different shades of embodiment blur together with one another,

though the performer may be deliberately working through only one approach.

4.2 Spinning

In terms of a connection with textile work which will be reflected as a framework for comparison throughout the text, we can see the application of the principle of embodiment in several ways. First, in order to create a garment, over numerous steps the fibres pass many times through an artisan (or multiple artisans') hands; the raw material of the sheep's wool, or other fibre, is chosen, separated from the source, cleaned, brushed, then literally stretched, twisted, shaped and formed into long string by the artisan's hands, filtered through their personal touch and combination of tension, release and guidance of the fiber in a marriage between material and approach. Colour may be added, and the string can be plied upon itself or mixed with other strings made from similar or different fibre, according to the desires of the artisan or prescribed method for making a particular kind of fibre. Some possible approaches: to strive for uniformity; to purposely integrate seemingly chaotic mixes of materials and textures; to alter the movements of the hands deliberately and follow the whims of the different fibres; or, to aim to sculpt different materials into threads that fit together in unique ways.

Once the fibre has been spun into a yarn, the artisan has another series of choices to make regarding the next form of technology (both the specific tool and the needlecraft practice) that will be used, as well as the form that the yarn will take in the final garment or object. Depending upon how the yarn is worked, looped through and folded back upon itself, or combined with other yarns, the final garment can take an endless number of forms:

The artisan can follow an established pattern (parallel with reading a work of music in the intended style, respecting all conventions and indications), can elaborate on or modify an existing pattern by adding, subtracting, embellishing parts. In music, a parallel can be drawn to “arranging” (doing “cover songs” in pop practices), starting from an existing piece and altering the interpretation style, instrumentation, tempo, timbre, context, or other parameters in relation to its performance. Alternatively, musicians can create patchwork-like “mashups” or “pastiches” of other, larger pieces; either by combining fragments from several complete works or by creating a new take on a traditional original item, drawing inspiration and thematically borrowing from other pieces or styles in the process. A third approach is pure creation or improvisation, which deals primarily with the pure materials and is less concerned with form or formal structure; experimentation and direct contact with the materials are favoured here – the final form is of less concern throughout the process, than the process of discovery of matching materials and approaches together to gather information about what happens when they interact in combination in various settings.

4.3 Technology, Spinning and Embodiment

In order to discuss the technologies employed in the case-studied works I will begin with a basic definition of technology, moving to the relationships between *technology, embodiment* and *spinning*/textile arts practices.

4.3.1 Technology and Technological Systems

Dr. Ursula Franklin describes “technology as practice”, highlighting that in her definition, “technology is not the sum of the artifacts, of the wheels and gears, of the rails and electronic transmitters. Technology is a *system.* It entails far more than its individual material components. Technology

involves organization, procedures, symbols, new words, equations, and, most of all, a mindset" (Franklin 10).

Thus technology in the context of this paper concerns not only digital technology or physical tools but any set of practices, developed and planned applications of knowledge or systems of human/material/human interaction. Music notation for example is a technology, and so are specific techniques and approaches for singing or playing an instrument. An instrument is also a technology; an extension of the human body. Using the body in a specific and deliberate way to achieve a goal can also be considered a technology; as can the body itself while engaged in a particular method. To this end, Franklin goes on to discuss technology as a "multifaceted entity" which "includes activities as well as a body of knowledge, structures as well as the act of structuring" (Franklin 12).

Franklin's definition of technology splits technology into two main categories, work-related and control-related: "Work-related technologies make the actual practice easier. Take, for instance, the substitution of electric typewriters for mechanical ones; this is indeed a work-related technological improvement. Secondly there are control-related technologies, those developments that do not primarily address the process of work with the aim of making it easier, but try to increase control over the operation. Think of a word processor. A freestanding word processor is indeed work-related technology. But link those work processors into a work station – that is, into a system – and the technology becomes control-related. Now workers can be timed, assignments can be broken up, and the interaction between the operators can be monitored. Most modern technological changes involve control and thus new control-related applications have increased much faster than work-related ones" (Franklin 14).

She also defines the difference between (*w)holistic* and *prescriptive* technological development, outlining that the distinction lies in whether the means of control over the process are held by the individual artisan or by a collective, repetitive, fragmented process. A clear parallel can be drawn between this idea and the concepts this research presents itself in terms of crafting interdisciplinary performances from a (w)holistic perspective. In *holistic* technological processes, a single artisan (or, in the case of a performance team, a collective) is responsible for the entire process, entailing specialized but also general overarching process-based knowledge and aptitude for an array of different tasks which align to create a complete work. This differs from the traditional hierarchical composer-performer relationship, which bears a closer resemblance to *prescriptive* technologies wherein the division of labour is meticulously controlled and separated, with one worker performing one respective task, or set of tasks, at a high rate of repetition. *Prescriptive* systems can be credited with allowing for a higher level of "efficacy", in terms of the conversion from time into a material product; it can thus be argued that the *prescriptive* model is more "efficient", for producing a work at a high rate of speed, whereas a *holistic* model allows control over many aspects of creation to be more evenly distributed thus creating space for unexpected synthesis of knowledge between seemingly unrelated steps of a process (Franklin 15).

"It is the first kind of specialization, by product, that I call holistic technology, and it is important because it leaves the doer in total control of the process. The opposite is specialization by process; this I call prescriptive technology. It is based on a quite different division of labour. Here, the making or doing of something is broken down into clearly identifiable steps. Each step is carried out by a separate worker, or group of workers, who need to be familiar only with the skills of performing that one step. This is what is normally meant by 'division of labour'" (Franklin 15).

4.3.2 Technology and Embodiment

Embodiment explored from the perspective of this definition of *technology* can be considered in several ways. First, we can conceive of the body itself as technology; a tool which helps us achieve goals, move through space, manipulate objects. We can consider the various methods and theories of training for embodied performance technologies as well; a poetic example of this is Pauline Oliveros' concept of "Software for People"- practices that are employed in order to experience the world from a slightly altered or more finely tuned perspective, often in a group and often with the goal of creating a common sonic experience: "no matter how diverse the lifestyles or music, a common denominator might be found in the study of sensory and attention processes which enable humans to perceive, organize, interpret, and interact with the intelligence that is music. It is no longer sufficient to dwell solely on the music; the perceiver must be included" (Oliveros 180).

The technology of embodiment as discussed in the framework of this research and my case studies deals with shaping an approach to and conception of what constitutes a technological system – drawing heavily on handcraft and communal physical activity in juxtaposition with "futuristic" aesthetics to encourage the audience to reflect on this term and its implications from different perspectives.

4.3.3 The Technology of Spinning and Embodiment

In terms of spinning, the word technology can be applied in several senses. First; there are the physical tools of spinning – moving forward from the earliest hand or "drop" spindles. Later, mechanical spinning wheels were developed, with larger wheels driving the turning of the spindle first without foot pedals and later with, allowing for faster (and therefore, more "efficient") production. The act of spinning itself is embodied knowledge applied through an embodied practice – we can understand theoretically how spinning fibre works, but until someone has tried it and has felt their own unique combination of tension and release working with the fibre and practiced this until the body becomes as much a part of the process as the spinning wheel, they cannot be said to "know" how to spin.

A further link between textiles and embodiment is found in Krista Tippett's book "Becoming Wise", in an interview between the author and artist Ann Hamilton: the importance of textiles in relation to the body is highlighted with the realization that "textiles are the first house of the body, 'the body's first architecture'". Hamilton, quoted here, links storytelling and bodily experience to textile craft: "How do we know things? We grow up or we're educated in a world that ascribes a lot of value to those things that we can say or name. And, but, there are all these hundreds of ways that we know things through our skin, which is the largest organ of our body. So my first hand is that textile hand, and text and textiles are woven, always, experientially for me" (qtd. in Tippett 182).

4.4 Community

Community and culture are terms that are connected though not synonymous. Ursula Franklin outlines a connection between technology and culture thus:

"Looking at technology as practice, indeed as formalized practice, has some quite interesting consequences. One is that it links technology directly to culture, because culture, after all, is a set of socially accepted practices and values. Well laid down and agreed upon practices also define the practitioners as a group of people who have something in common because of the way they are doing things. Out of this notion of unifying practice springs the historical definition of 'us' and 'them.' I think

it is important to realize that the experience of common practice is one of the ways in which people define themselves as groups and set themselves apart from others... A different way of doing something, a different tool for the same task, separates the outsider from the insider" (Franklin 12).

Looking at how community relates to culture, we must also consider the technology of community. The organization of communities is changing rapidly because our communication media is changing rapidly; communities no longer have to be limited to geographical location – people united by common practice or interest can be in touch digitally without ever meeting in person. I am interested in comparisons of online vs physical "communities" and in the possibilities (and realities) of these coexisting.

My research and my works deal with community because of deep connections to specific traditions and practices, for which there are already-existing "communities". Some examples of this are knitters and spinners, folk dancers, or experimental instrument builders. My works seek also to create or synthesize community within the context of performance, by guiding a group of people through an experience together. (This will be elaborated later in the case studies). When I speak about community in this research, I am referring to a group of people who share some common experience, practice, or set of beliefs. Some definitions of "community" art or "community-engaged practice" deal with art for and/or by people whose primary source of income is not normally art-making. Community-engaged practice in this definition could mean that; but what it means overall in the context of the present research is a practice that considers its community and its context and holds these at equal importance to the work being presented.

4.5 Interdisciplinary Work / Multidisciplinary / Intermediality

"Just before an airplane breaks the sound barrier, sound waves become visible on the wings of the plane. The sudden visibility of sound just as sound ends is an apt instance of that great pattern of being that reveals new and opposite forms just as the earlier forms reach their peak performance."
-Marshall McLuhan, Understanding Media

"I work in between the cracks, where the voice starts dancing, where the body starts singing, where theatre becomes cinema." -Meredith Monk, 1984 Interview

Inside this section, I begin with definitions of media and discipline before moving forward into their larger applications.

4.5.1 Media

In the opening phrase of Marshall McLuhan's groundbreaking work *Understanding Media,* he posits that "in a culture like ours, long accustomed to splitting and dividing all things as a means of control, it is sometimes a bit of a shock to be reminded that, in operational and practical fact, the medium is the message" (McLuhan 1).

So what can we consider a medium? In practical and simple terms, media concerns a material way of delivering or presenting content. But it can also concern the content itself: traditionally, we can think of categories like painting or sound as media. McLuhan takes this distinction further and presses the reader to look deeper into the smaller compartments of what constitutes a medium by exploring the phenomenon of the electric light: "The electric light is pure information. It is a medium without a

message, as it were, unless it is used to spell out some verbal ad or name. This fact, characteristic of all media, means that the 'content' of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph. If it is asked, 'What is the content of speech?' it is necessary to say, 'It is an actual process of thought, which is in itself nonverbal.' An abstract painting represents direct manifestation of creative thought processes as they might appear in computer designs. What we are considering here, however, are the psychic and social consequences of the designs or patterns as they amplify or accelerate existing processes. For the 'message' of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs" (McLuahn 12).

In terms of the present research and the case studies in the following section, the definition of media relates primarily to material form: wool, amplified sound, musical song, square dance, orally performed story. In terms of my exploration of the concept of performative embodiment, media can relate to using the body as a medium, and to the different ways the body can be used to carry and transmit information – movement, song, shaping of textile. A body onstage performing the act of spinning or knitting is a medium for the media of spinning or knitting a garment; the body draws the audience's attention to the fact that many of our textiles were (and are) shaped by human hands. The resulting garment is a medium for delivering warmth to the body that receives it. For a very basic definition, it can be helpful to think of media as ingredients as in a recipe – the tomato brings the tomato-y flavour; the pepper brings the spice; rice is the perfect medium for delivering a mixture of vegetable stock and chives.

According to McLuhan's definition, there are two basic types of media – *hot* and *cool*. "A hot medium is one that extends one single sense in 'high definition.' High definition is the state of being well filled with data. A photograph is, visually, 'high definition,' simply because very little visual information is provided. Telephone is a cool medium, or one of low definition, because the ear is given a meager amount of information. And speech is a cool medium of low definition, because so little is given and so much has to be filled in by the listener. On the other hand, hot media do not leave so much to be filled in or completed by the audience. Hot media are, therefore, low in participation, and cool media are high in participation or completion by the audience" (McLuhan 26).

Media hot and cool are important in relation to the concept of community, defined in the previous section and elaborated within the case studies that follow. My research considers the environments in which we make our work equally integral as the "inner materials" of the work itself. In terms of McLuhan's definition, the community or performance context for this work is as much the medium as the music. Therefore, consideration of whether the method of delivery of a work is "hot" or "cool" according to McLuhan's definition, thus asking oneself what is expected of/required from an audience or participants in a given situation, is essential. But context can also refer to discipline, when examining which larger form or container is most appropriate for presenting a work.

4.5.2 Discipline

A discipline is a clearly defined field of practice or study, usually entailing a community of peers also working in this or a similar field. Discipline is a framework for analyzing, creating or practicing something in a specific way according to specific criteria. Usually this is according to historical separations, sometimes these separations are questionable, as there are the elements of positionality, education, conditioning and perception to consider when we begin to examine where one discipline stops and another begins. If media are the different ingredients inside of a recipe, the discipline is the recipe, or the cookbook, or the general style of cuisine concerned. Discipline is a larger vessel for the

presentation and organization of one or more media, which are used either on their own as a display of their selfness (as in the example of ingredients in a recipe), or as expressive agents for carrying more media (a clarinet inside of a stage play playing a song in a specific style – the discipline is theatre, with a section of music inside of it, played on a specific instrument in a specific style). Some things are both media and discipline i.e. music played traditionally, within a traditionally musical context. In this case it is important to recognize in which way music is the discipline (providing the performance and practice context) and in which way it is the medium (expressing theoretical or emotional content through specifically-organized sound). In Jennifer Walshe's 2016 "compositional manifesto" *The New Discipline,* the author aims to define/describe an emerging style of working inside of contemporary "classical" compositional circles, focusing precisely on practices of embodiment and recognition of the performing body onstage in musical contexts, arguing that the visual/physical is as important and present as the sound in an audience's perception and reception of a work (Walshe, web resource). This will be discussed in greater detail in the chapter on "significant others".

There are many ways to describe work that is situated between clearly defined disciplines or media, and there are many shades of styles of work that don't fit easily into one category. The major distinction can be found in the type of interaction the different media and disciplines have inside of the working process.

4.5.3 Interdisciplinary

Work that is situated between disciplines, work that exists at the meeting place of two or more distinct disciplines outside of one specific field, independent of the constraints or conventions of the respective fields. The goal of this work may be to find solutions that couldn't normally be found within the constraints of one discipline. Interdisciplinary approaches encourage cross-pollination of thought and technique across perceived borders. An interesting and materially relevant example of development resulting from interdisciplinary knowledge is the Jacquard Loom: Knowledge of perforated paper systems for programing the music on automatic organs was transplanted to the loom by Basile Bouchon, the son of an organ maker, in 1725, allowing for the mechanization of weaving of more complex patterns. His design was elaborated by his colleague Jean Baptiste Falcon in 1728. The Bouchon-Falcon loom was further improved by Jacques Vaucanson in 1745, and Joseph-Marie Jacquard integrated these developments with his own designs to create the Jacquard Loom, which operated on the same principle of guiding the hooks and needles of the loom through the use of perforated strings of cards. The punch-card system that was developed for this purpose over this period became the inspiration for early computer programming, which used paper punched with holes in order to communicate information to the computer systems (online resource, "Loom History Moving to Computer").

4.5.4 Multidisciplinary

Work that incorporates multiple disciplines, which may remain distinct in their presentation and may (or may not) retain their conventions, characteristics or normal behaviours. Several disciplines can exist at once, in one place and inside one project but they may not necessarily influence each other; each discipline remains neatly intact for the most part.

4.5.5 Intermedia

In intermedia practice, the materials of the work are drawn from different media. This practice varies

from interdisciplinarity because it may be situated within one discipline (i.e. visual art or even as specific as sculpture for example), but there are multiple media working together to create the fabric of the work, and the goal is that the media blend to become a new form.

4.5.6 Multimedia

In multimedia, the materials of the work are also drawn from different media. Again, multimedia work may remain situated within one discipline. In multimedia work, it is not required that the multiple media interact in a way that causes them to blend; they may remain distinct and separate.

5. SIGNIFICANT OTHERS

In this section I have included a collection of *significant others*, important influences on the work and approach outlined in this research. *Significant others* are described as "supportive personal, professional and social relations with people" (Smilde 86). I extend this to also include phenomena, movements and groups or collectives engaged in particular practices. I have deliberately mixed academic with non-academic influences within the same category, and presented them in alphabetical order, to highlight their equal importance in my frame of reference and course of study.

5.1 Akarova (Acarin, Marguerite)

Akarova (Marguerite Acarin) was a Belgian dancer, singer, choreographer and artist born in 1904 in Brussels. Her performances mixed costume and stage design with music and movement, and she was a classically trained singer and dancer who studied Dalcroze's eurythmics system of embodiment of musical gesture. Her work became known as "music architecture", "living geometry" and "pure plastics"; "Akarova accorded primary place to the materials, construction and organization of avant-garde aesthetics", where "the importance of lighting, design, space, audience experience, political content and overall synthesis took precedence over any authority previously held by the dramatic text or conventions of theatre" (Andrews 27-30). There is no known existing footage of her dancing onstage during her most prolific period, in post World War I Belgium, therefore all accounts of her dance process are drawn either from archival photographs, or from interviews with Akarova herself, her colleagues or spectators. She described the relationship of dance to music in her work as fluid, that both media would be changing and informing each other even in performance, without one taking precedence or remaining static. This would be especially true in cases where the music had not been finalized or recorded yet - she would often ask composers to make changes and revisions in the music and likewise she would change her movements or improvise sections in performance. She designed and sewed all her own costumes and did her own lighting and stage design, and her choreography was said to "emphasize the musical structure that exists in sound waves between the stage and the audience" (Andrews 34). Her unified approach to performance through the medium of dance represents a perspective that considers all elements essential contributors to the form. Because of her attention to all of these elements and their *confluence* within her work, her output was perceived "not as an expression of the music, but as a comprehensive artistic experience"; a description of performative embodiment similar to the distinction made in the previous chapter between an "art of representation" and "art of experiencing". Her process is described as a series of "structural frameworks with assigned landmarks, a schema for development, or a consistent movement motif. Within that framework, however, change was an important creative factor." Her body became the translator, the medium of connecting threads in performance; this was present both in her performance practice and her conceptual framework (Andrews 36). Learning about her work inspired me to pursue training and workshops in improvised dance, which in turn helped me liberate my vocal practice by training my entire body (and not only the vocal apparatus) to respond to impulses and inspirations. This is helpful in improvisation but also in a creation process – where bringing an idea into some form of physical or aural existence requires recognizing an impulse and then understanding how to manifest it.

5.2 Dance your Dissertation

The "Dance your Dissertation" competition is an online forum that asks doctoral candidates in mainly scientific fields to create an abstract of their research in dance form, effectively creating a human "embodiment" of their work. Ridiculous as it is, it points to several of the themes present in my

research and the direction I have been exploring in performance-creation– first, in its form as a prescriptive work – the organizer, presenting itself in the form of a website, asks the "performing body" - in this case many different bodies in many different physical and geographical locations – to perform a series of actions. It is, in effect, a text score; a "cool" medium; a participatory work which asks a form of "audience" to participate in the completion/achievement of the work. Second, it considers and makes appropriate use of the medium of the internet as a tool for dissemination – the performance space IS the internet – while simultaneously encouraging participants to take time away from heavy computer work, to get out of their heads, and into their bodies. It is a hilarious example of a cyclical relationship between form and content – the ease of sharing video files across large distances allows for many participants to meet in virtual space to share windows into physical performative moments; a step beyond the exercise video which asks many people in many locations to perform specific actions at different times, which is a step beyond verbally-guided folk dance traditions, which asks a group of people situated in common space to perform a synchronized action in real-time response to the vocal directions.

A TED Talk given in Brussels in 2011 by molecular biologist and Dance your PhD founder John Bohannon proposes live dancers both as collaborators in scientific research (citing true examples) and as an alternative to PowerPoint presentations. In a brilliant performative statement, dancers surround him while he speaks against the separation of knowledge by discipline/from body as well as against the elimination of public arts funding, the perceived need to measure efficiency in all endeavours, and the ever-increasing presence of automation and machine labour. Using irony, satire and sarcasm, he imagines a world where dancers are used to explain political and economic situations, naming the human body as a powerful "technology of persuasion". Considered in this way when compared to PowerPoint or other representative forms, he makes a striking commentary on the expendability assigned to human beings when we are reduced to statistics or cogs in a mechanized process, and makes a strong case for preserving and perpetuating practices of embodiment, *holistic* technological processes, as it were.

The form of the performance is also notable – the talk is given in the context of the TEDx conference, but could easily hold its own in an avant-garde performance art setting. The scope of audience that this competition and its results are able to reach both online and off is an excellent example for fostering multi-platform interdisciplinary knowledge and collaboration (online resource "Dance Your PhD...").

5.3 Folk Dancing

Since 2015, I have been actively participating in several folk dance forms in Montreal and elsewhere. Aside from its recreational value, folk dancing and social dancing are of interest to me because they are participatory forms; the audience are also the participants, who effectively "create" their own entertainment. In many cases, there is a caller or facilitator teaching a dance, and helping the participants organize their movements with the music. In cases where there is no caller or facilitator (i.e. many Scandinavian and Balkan dances), there is a tradition of experiential learning and passing on of knowledge; generally there is very little theoretical guidance given beforehand; the best way to learn to dance is to go directly into the dance. Commonly, in these settings, someone will help you learn the dance as you pick it up by being part of it. I appreciate this form of learning and its parallels to DIY and traditional music practices, and am continually inspired by and attracted to this approach.

5.3.1 Contra Dance

The form I practice the most regularly is called contra dancing, which developed among the early settlers of New England (Northeastern US) and is derived from country dances of France and the British Isles. In contra dancing, a band plays while a caller dictates moves from a repertoire of gestures which fit together in different combinations to make up the different dances. It is danced in sets, usually of eight (four couples), which are composed in long lines. Some figures use the "square" sets, and some, the long lines which can stretch the entirety of the dance hall. These are used together in different combinations which allow couples to progress up and down the line, meaning that dancers also have the chance to experience dancing with a variety of other dancers during any given dance. I often describe it to colleagues as "the wonky lovechild of square dancing and swing dancing". There is a revitalized practice of both archiving and dancing the old dances, and composing new dances. Contra dancing is very structured, however in certain places in the dance there is space for improvisation – variations on conventional moves, primarily the "partner swing"; opportunities to switch partners or switch roles and freedom to add embellishments (twirls, lifts, dips) to the partner swing and some traveling figures. The new wave of contra dance societies are known to be welcoming and inclusive, queer-friendly and intergenerational, all of which are appealing to me as a community-minded artist aiming to engage diverse audiences in the various facets of my practice. As with most things, it is difficult to make a distinction between my private and professional life, and what began as a hobby has begun to creep into my artistic work, as outlined in the case studies in the next chapter.

5.3.2 Faroese Chain Dance

Faroese chain dance is an ancient dance form still practiced in the Faroe Islands. It is a physical vehicle for folk ballads. The Faroese dance is performed in a circle, with hands held, and consists of a repeated left, left, right step pattern. A leader provides the tempo for the dance and sings the first part of each ballad, allowing a call-and-response dramatic reincarnation of the story, as the bodies of the dancers effectively become the body of the story and a collective technology for its retelling.

"To take part in the Faroese dance is to retell a story and to relive the events of that story... The dance itself revolves around its own centre, to which the thoughts of the dancers are drawn. In this centre the leaders and the other dancers create a world – an ordered world, where they once more relive the events of the ballads, their backs presenting a wall to the chaos outside. The Faroese dance is made up of several elements; the text, the melody, the rhythm of the melody and 'stevið' – the rhythm made by the feet of the dancers. These are the foundations on which the stage is built, where the events in the ballads can unfold. There is too the movement of the ring: the same faces meeting again and again, and with the repeated, suggestive rhythm, with the constantly recurring melody, an intense feeling of fellowship is created around the ballad and the events it relates. The dancers are transported from their ordinary lives into the arena that they have created in the ring. The Faroese dance is folk art – but created by the dancers for themselves. Thought is seldom given to an audience" (Blak et al. 14-15).

Although the ballads can be performed separately, especially in contemporary applications, the dance and ballad is considered one form. Within this form, the lyrics and vocal delivery and theatricality as well as the dance steps and setting for the dance are all part of one practice, and feed each other in a literal physical circle of sound and movement.

5.4 Gava, Amalia – My Maternal Grandmother and her Handcraft Practice

Work with handcraft and textiles is deeply ingrained in my family history. Both of my grandmothers (Italian on my mother's side, Romanian on my father's side) were proficient in knitting and crochet, as well as sewing, embroidery and lace making and I understand this goes back for many generations. Watching both grandmothers make so many household things out of tradition and habit and stubborn all-weathering creativity, after it was no longer a necessity, heavily influenced the way I make music and my DIY roots/sensibilities. I don't understand if it was in my surroundings or in my blood, but I have always been crafty, keen on creating projects using different methods, out of whatever is around. The first time I picked up a pair of knitting needles, though, I knew I would never really put them down!

As I got more interested in knitting, it became a connecting point between me and my maternal grandmother, Amalia "Mae" Gava of Hymers, Ontario, Canada, a small village 40km west of Thunder Bay. We were only in the same place once or twice a year. She would send me stitch swatches in the mail with handwritten instructions on how to do different stitches, or half-finished projects for me to continue knitting. I inherited all of her books and needles/notions as well as many handwritten patterns and cherish them, my last link to her, tools and garments that passed through her hands and kept so many people warm all those long Northern Ontario winters.

Living in a remote village and growing up on a farm, she had to be resourceful and creative. From tea towels to dresses, dolls, Halloween costumes, bingo bags, socks and sweaters, if there was a way to make something instead of buying a disposable one, she did it. I am still inspired by her ability to see materials for what they could become, and likewise to imagine a finished project and be able to identify the required elements from objects in her immediate surroundings.

5.5 Joik (Sami Vocal Practice)

Joik is a form of vocal music that originated amongst the Sami peoples of Northern Scandinavia. Rather than being a song "about" a person, animal, place or object, a joik *is* that thing; it is a sonic invocation of the essence of something or someone or somewhere (Burke, web resource). This conceptual framework is integral to the research I have pursued which searches for strategies to highlight essential truths and specific aspects of situations or experiences. I have not however chosen at this time and within the framework of this paper to undertake a detailed ethnographic study of this form. Most relevant to this research is not the specificities of the sonority or performance practice of this form, but its idea and aim.

5.6 Knitters/Spinners, contemporary communities

In November and December 2017 I apprenticed with a spinner named Sharon Orpin in Lunenburg, Nova Scotia and began working with spinning wheels and drop spindles. My interest was primarily to come back with physical knowledge for the *Rokkur* project, described in the case studies, but once again I was hooked by the process, with feeling the fiber transform between my fingers, and I have been continuing making my own yarn separate from any musical practice.

During this time we had many discussions about life and the importance of preserving tradition and slow creation processes. In terms of the symbolism of handcraft I find it quite radical to continue making slow work by hand inside capitalist society, tracing materials back to their source (sweater-

yarn-wool-sheep-grass). I'm highly compelled to continue physical tangible practices as I experience the world and even our work as artists being pulled more and more in the direction of online, extra-physical space. I draw a connection to experimental music and small-scale music production in the process of going from something raw and wild to something more refined (or not); filtering material (fiber or sound) through a process of combing, examining, combination of tension and release, the thrill of choosing what goes where and in which way.

Knitting is a unifying practice; knitting in public is a sure way to meet other knitters or just curious passersby. I have stopped counting the number of times I have been knitting on some form of transit that have turned into conversations. Handcraft practices have incredible family lineages; the image of someone knitting or spinning activates amazing stories and memories in many people. Outside of that, knitting and yarn-loving is an instant community-anchor, meaning that there is a global community of knitters united either online or instantaneously though the practice. One can arrive in many cities, find a local yarn store and spark a conversation. Knitters are at once social and reserved; detail oriented and resourceful. It takes a certain personality to become obsessed with a practice that has been rendered obsolete by mechanized production, to study it, celebrate it, and become specialized in certain areas of it. The women I worked with in Newfoundland were intelligent, quirky, strong and very creative, and knitting was their outlet for creation in everyday life. As an integrated creation practice and a form of "social acupuncture", a term coined by Canadian Theatre director Darren O'Donnell to mean performative practices that stimulate social situations and interactions and encompasses audience participation (Kaplan, online resource), knitting is very valuable, and I am continually learning from my engagement with communities of knitters.

5.7 Monk, Meredith

American composer, choreographer, and extended-voice pioneer Meredith Monk is an important figure to consider when examining interdisciplinary performance work. With voice at the centre of her work, which flows from solo improvisation, concert and choral music to dance, to installation, site-specific performance, film and opera, she has been a clear influence on my output as a performer-composer. As the creative head behind entire productions she has crafted a singular approach to weaving together many perspectives and art forms into unique performances that are difficult to situate in specific genres. Her working approach has been described as closer to a choreographic process than strictly notated contemporary music, and through this she creates highly personal and precise, engaging work.

5.8 Music Theatre (Goebbels, Kagel, et al.)

"While Kagel and others are clear ancestors, too much has happened since the 1970s for that term to work here." -Jennifer Walshe, The New Discipline

Among the pioneers of the genre known inside of contemporary music as "Music-Theatre" are Mauricio Kagel, Heiner Goebbels, Vinko Globokar and Georges Aperghis. Not to be confused with popular Musical Theatre (related to operetta), music-theatre is a genre of contemporary music performance that also uses gesture, objects and theatrical elements in the expression of the music, within a concert-music context.

While the contents of this research are clearly influenced by the wave of music-theatre composers, the focus has been on influences from knowledge outside of one's own genre; I embarked on this research process intending to study a comprehensive history of theatrical music or *music-theatre*, and wound up

focusing on interpretations of the term “embodiment” in search of my own embodied approach to creation. My work does end up situated within musical contexts most often, because of my training and positionality as a singer who has done most of my professional work in contemporary music settings. However while I am aware that these figures did influence and pave the way for extra-musical elements on the concert music stage, I have been consistently drawing on different approaches and concepts from outside the discipline of music and thus feel further away from the work of these artists.

Having performed extensively, as a singer, music-theatre work by composers including Georges Aperghis, François Sarhan, R. Murray Schafer, Karlheinz Stockhausen and others who notate extra-musical material towards theatrical effect, I am well aware of scored/composed physicality as a phenomenon within contemporary music. I recognize that more detailed consideration of this material especially from a compositional perspective would be valuable to my overall artistic development, however within this research I have chosen to focus more on what has been done outside of pure “musical” environments and how these approaches can be applied.

5.9 Peers, mine

While creating requires making space for much solitary work and thought, I thrive on collaborating with other artists- improvisors, stage directors, composers, media artists, dancers and other artists and practitioners. Their work and approach has influenced me greatly in developing my own approach to creation. I parallel this to my grandmother's resourcefulness in working with the materials in her immediate environment; when I began to understand that I could allow myself to be influenced as greatly by my peers as by major international and historical figures, I felt an incredible liberation. I consider the great value of this section in the research framework to be continual cultivation of awareness of my immediate surroundings, the work of those around me, and how I might learn from observing and taking part in this.

5.10 Walshe, Jennifer and the “New Discipline”

In Jennifer Walshe's 2016 “compositional manifesto” *The New Discipline,* she defines and describes an emerging style of working inside of contemporary “classical” compositional circles, focusing precisely on practices of embodiment and recognition of the performing body onstage in musical contexts, arguing that the visual has become as important and present as the sound in an audience's perception and reception of a work.

“The New Discipline is a way of working, both in terms of composing and preparing pieces for performance. It isn’t a style, though pieces may share similar aesthetic concerns. Composers working in this way draw on dance, theatre, film, video, visual art, installation, literature, stand-up comedy. In the rehearsal room the composer functions as a director or choreographer, perhaps most completely as an auteur. The composer doesn’t have aspirations to start a theatre group – they simply need to bring the tools of the director or choreographer to bear on compositional problems, on problems of musical performance. This is the discipline – the rigour of finding, learning and developing new compositional and performative tools. How to locate a psychological/physiological node which produces a very specific sound; how to notate tiny head movements alongside complex bow manoeuvres; how to train your body so that you can run 10 circuits of the performance space before the piece begins; how to make and maintain sexualised eye contact with audience members whilst manipulating electronics; how to dissolve the concept of a single author and work collectively; how to dissolve the normal concept of what a composition is.”

“New Discipline works can easily be designated, even well-meaningly ghettoised, as “music theatre”. While Kagel and others are clear ancestors, too much has happened since the 1970s for that term to work here. MTV, the Internet, Beyonce ripping off Anne Teresa De Keersmaeker, Stewart Lee, Girls, style blogs and yoga classes at Darmstadt, Mykki Blanco, the availability of cheap cameras and projectors, the supremacy of YouTube documentations over performances. Maybe what is at stake for the New Discipline is the fact that these pieces, these modes of thinking about the world, these compositional techniques – they are not “music theatre”, they *are* music. Or from a different perspective, maybe what is at stake is the idea that all music is music theatre. Perhaps we are finally willing to accept that the bodies playing the music are part of the music, that they’re present, they’re valid and they inform our listening whether subconsciously or consciously. That it’s not too late for us to have bodies” (Walshe).

In this case, embodiment is treated literally, and deals very concretely with the materials of performance. Notable in the first paragraph is Walshe's attention to detail in “finding and developing new compositional and performative tools”, her proposition of borrowing from other fields in a way that goes beyond the superficial. Equally notable, and at the crux of this research, is the recognition of the body (and, I elaborate, the whole being) of the performer as an essential part of the music; that visual elements, context, presentation as well as the personal connection of the performer to the material all play major roles in the audience, performer and composer's respective perceptions and experience of a performance. Beyond this, a creative process (whether it be collaboration towards a new composition, adaptation or or rehearsal of an already existing work) in a case where the physical and wholistic life experience of the performer carries equal weight to the sonic output creates a more meaningful experience and in most cases a more authentic and interesting/personal sonic result as a side effect. A creative process that recognizes the whole being and idiosyncracies of the performer and uses it towards the performance – like in theatre – recognizes that everything is material for creation: rather than filtering out certain phenomena or sounds or actions and encouraging others, we must sharpen ourselves to observe and choose our material well, and then develop it to “perfection”.

5.11 Yoga Music (live)

When I first began working with electronics and looping, I secured a weekly residency at a yoga studio in my neighbourhood where I performed live music for yoga classes in exchange for free classes. This process, and experiencing the classes from both sides (as a facilitator and as a participant) allowed me to reflect on many aspects of teaching, performing and guiding a public through an experience. Things like tone of voice, speed/tempo, clarity, willingness to perform the action alongside those being taught, confidence and sense of humour were important factors contributing to how far I was willing to give myself to the experience of the class. Some days I would find it bizarre to see one body instructing other beings on how to use their own bodies; this prompted me to reflect on the nature of vocal education as well, and gave me ideas about how to approach teaching voice, especially to beginners. In the case of practices like yoga, dance and singing, that don't require “extra” instruments, students are working with familiar material (their bodies) used in slightly altered, new and possibly unfamiliar ways. It can be wonderfully disorienting to discover that your body can do something you had never previously imagined or explored. Pedagogues and performers working with this material must be aware of this fact and provide a safe environment for exploration and learning through responsible teaching, emotional presence and encouraging, supportive guidance.

6. MY OWN ARTISTIC PRACTICE – Two Case Studies

Introduction to this section:

In the works and processes that I will analyze in this section, physicality and physical processes are the basis for performative sonic/musical, theatrical and visual work. Sometimes sound is completely integrated and sometimes it is imagined/elaborated from an internal sonic representative reaction; sometimes it is sourced directly from the movement. This new way (for me) of working has marked a turning point in my practice: while I am aware of the sonic aspects of a performance, I am paying increasing attention to the whole, how the elements fit together in order to serve the essential material, the story or the integral core of the piece. When I began to move away from theatre as a discipline and to work in a focused way on a contemporary vocal music practice, I felt pressure to discard my theatrical sensibilities and concerns in favour of creating the most polished sonic result possible. I became obsessed with technique and clean, precise execution. While these are undoubtedly valuable, I eventually became frustrated, and began to search for more before realizing through much reflection that the seeds and the way back to this kind of wholistic practice had already been planted early in my education and experience as a performer; all I had to do was integrate them with my new toolkit.

In the autumn of 2017, I undertook a fiber arts residency in Nova Scotia, Canada, which I consider to have been an internship crucial to the realization of my project. To truly work with a material or subject matter we need more than a superficial understanding of it; our personal relationship with a subject greatly shapes the way we treat it. In this residency, I worked specifically on preparing a raw fiber (in this case, wool) for spinning, and then spinning the fiber into yarn. Since I am already knowledgable about working with yarn (knitting, crochet, etc.), this allowed me to grasp further back into the process, and to feel the difference between making a work WITH elements, or making a work ABOUT elements or a theme. The deeper I got into an understanding of where the materials came from and how they worked together to create familiar things like yarn, the stronger and clearer my ideas got about how to work with these materials in the context of a performance project.

I will case study two major works in this section: *FutureMoves* (solo)*,* and *Rokkur* (collective). For each project, my line of inquiry started with an image – for *FutureMoves*, I began with the image and setting of a guided exercise class or social dance gathering, and specifically wanted to explore the relationship between a person delivering a realtime verbal/vocal and physical score for immediate participatory performance. *Rokkur* is an exploration of textile tools and the sonification and amplification of a normally quiet, albeit often social, process of working with textiles. Moving outward from the image or what I will come to call a *technological practice*, I then explored themes, questions, and approaches raised by each specific image using a mixture of sound/music, physical theatricality and artistic form, material and methodology related to that practice. NOTE: In this case *technological practice* is defined not necessarily as an integration of digital technology, but rather according to Dr. Ursula Franklin's definition, cited above, of a set of practices, a routine, a methodology.

At the beginning of my studies in the NAIP program, I was specifically interested in the embodiment of landscape through vocal music. The works I have created throughout the period of study wound up dealing with this question, albeit in a less direct way. Where *FutureMoves* interacts with landscape brings up questions about the nature of a landscape and what can constitute a “landscape”; if a landscape is a place were we spend time, working, socializing, interacting with our surroundings and each other, it can be argued that the internet has become as much a landscape as any physical location. *Rokkur* incorporates this line of inquiry though less immediately; it does investigate specific

geographical locations and local cultural traditions of working with wool in each place where it is performed. Traced far enough back, woolworking is effectively a way of embodying landscape – sheep eat the grass grown in the soil of a place (watered by rain and heated by sun) – sheep are sheared and the wool is turned into yarn which gets knit into a garment, which embodies the landscape, and then eventually a person wears the garment.

Finally, we exist as part of communities, none of us operates in a vacuum. The works I wanted to explore through this study of embodiment are also works which activate an audience or a population to contribute in some way, examining another level of embodiment as our interactions with other humans, other bodies. As Darren O'Donnell proposes in one interview, "People want to do stuff, they don't want to sit and watch stuff" (qtd. In Kaplan).

6.1 *FutureMoves*

"Have you been feeling a little disconnected? Trying too hard to complete too many tasks with too many bodies in too many places all at once? Is your mind constantly hitting walls working on physical problems you can't solve in the here and now simply because your present body is somewhere else? Do you ever wonder where you really are whilst your mind is occupied with your requisite daily flight through the tubes and tunnels of the information superhighway? The FutureMoves routine is guaranteed to tone and refine your adaptability to the rapidly changing requirements of earthly existence." -Sarah Albu, FutureMoves

6.1.1 Description and Motivation

FUTUREMOVES: 7 Steps to a Perfect! Future! Body!!! is a participatory performance work I created in Jennifer Walshe and David Helbich's Composer Performer workshop during the Darmstadt Summer Course in 2016, and refined through multiple performances during my period of study. The work explores group dynamics, the limits of the physical body, the use of voice as collective/individual action, and separation and awareness of the position of the mind and body. It takes the form of an experimental aerobics routine and social dance primer for the "FutureBody", or the part of the body/mind connection that navigates human existence between corporeal and online realities. I appear in the room (or, in one version, remotely on video) in character as an aerobics instructor, and ask the audience to perform actions with me and eventually, with each other. Suddenly, the performance space is transformed into an exercise class as the audience is activated into performing an essential part of the work. Drawing on community storytelling traditions and juxtaposing group physical actions with references to disembodied or "future-bodied" actions, I guide my audience of "particip-actors" through a series of gestures inspired by retro-aerobics, "jazzercise" and North American/British folk dance forms. In later versions, this finishes with a group dance involving awkward attempts at taking selfies while dancing two-by-two through a human tunnel, and a call-and-response chant of the text "my body is technology", with accompanying choreography. This section was specifically inspired by group storytelling traditions such as the Faroese Chain Dance, wherein a group of people participate together, forming one body with their bodies and one voice with their united voices, in order to tell a story. Referring to Dr. Franklin's definition of technology, the participants effectively merge their bodies into a "technology" through which they embody a story and a series of synchronized movements. At its very core, *FutureMoves* came from a need I perceived from Darmstadt participants to loosen up and have some fun, and from a simultaneous personal desire to create a work that was at once engaging, fun/funny and challenging.

In the earliest version, I had intended to create a sound and video work for a passive audience, possibly with my own participation as a performer. As I began to work with the material though, which I had decided would be abstract collages of gestures drawn from exercise videos of the 1980s and 90s, I realized that this content in its natural form is part of what McLuhan would call a "cool" or participatory medium; the gestures exist not as spectacle but as instructions; a visual/physical score for the audience to follow along with. I realized that my message, largely concerned with highlighting the absurdity of these movements and the heightened absurdity and wonderfulness of the fact that many people are willing to follow whoever has deemed themselves "leader" in executing these actions as a group, would be much better conveyed by having the audience experience this dynamic firsthand. There are several levels to this dynamic – a dynamic wherein those who are put in the position of "followers" , in whatever setting – choir, orchestra, society – give their bodies over in designated spaces and for a designated period to whoever is deemed the "leader"; and second, a dynamic wherein the more group members are willing to follow the leader, the more comfortable others feel in participating in group action, no matter how ridiculous.

The piece integrates sonic, visual, performative and participatory actions in a setting which invite the audience to experience a very obvious application of "embodiment" firsthand: when I ask participants to mirror my movements, I am also asking them to give over control of their bodies and allow themselves to be controlled remotely by my instructions, which function as a vocal/aural as well as a physical/visual "score" for the performance. Although musical elements are present – there is composed electronic music in the background and the text is sometimes sung – it is a composition for a group of moving, sounding bodies in a room. In the performance, I take a literal and humorous approach to the embodiment of a series of common online actions by transforming them into aerobics and social dance movements, juxtaposing physical action and face-to-face interaction with concepts normally executed in the extra-physical world of the internet. This 1:1 relationship, while ridiculous, demonstrates one very direct avenue for illustrative embodiment of what is effectively a landscape – a place where we live, work, socialize and otherwise spend our time.

Undertaking a collective action allows a public to bond, to create solidarity through shared experience, and this was something I was looking to explore with the performance. I also wanted to explore group dynamics and the extent to which my audience would participate in the actions I asked them to perform with me and amongst themselves; in a way that remained respectful I wanted to test how ridiculously people would be willing to behave once I gave them "permission" or created the impression that they were integrated as a collective entity or technological process, while also drawing attention to the absurdity of common online interaction through physical embodiment of said actions.

6.1.2 Process and Audience Response

The feedback I had from participants after each performance influenced the growth of the piece, and through repeated presentations, I was able to shape and change my approach to tailor the experience to come closer to transmitting the message I had hoped to share from the beginning. Sometimes, I even discovered new messages and meanings through discussing with participants and hearing about their experiences within it.

The first version of the piece was without video, and happened in a large open gallery space as part of a longer evening of performances situated in different rooms around the gallery. The response was positive in general, and many members of the audience, comprised mostly of my colleagues also studying in the Darmstadt Summer Course, expressed enjoyment at being able to participate in a

performance and use their bodies actively during such an intense two weeks of sitting in lectures, listening to concerts and getting into serious discussions about sound. One very practical piece of feedback I received was that it was difficult for everyone to see me, since I wasn't on a raised stage. Visually the performance space was very minimally affected, and though I liked this as a connection to a "real" exercise class in a "real" gym, I agreed that for practical as well as aesthetic reasons it would be interesting to have a video component.

When I found out I wouldn't be able to make it to Montreal for the next scheduled performance in October 2016, I negotiated with the concert series' artistic director to try making a fully video version. This was also an interesting challenge for me from the perspective of the original idea for the piece, which came from thinking about remote control of the body from an external source, and the absurdity of exercise and learn-to-dance videos as artifacts which activate their audiences to perform a series of actions. I took the opportunity to create a special "Montreal" version, with bilingual English-French instructions, similar to the way many yoga classes I have attended are led in the city. I had positive feedback from the video performance however there were several audience members present who had also seen the Darmstadt performance, including the series director. Among the positive responses I had received in Darmstadt was the sentiment from multiple participants that my connection with the audience was key; that something about the way I perform and connect with people made them want to trust me immediately, and made them more likely to participate. Although I attempted to be encouraging and to give positive reinforcement (i.e. sporadic utterings of "that's fantastic!") in the video version, the major response was that it was not as effective in terms of encouraging the audience to dance along; since I was not present in person, people felt less pressured/encouraged to participate. We had discussed this prior to the performance, and had designated a few specific people in the room to encourage concert attendees to participate – this seemed to be a good strategy, although again, it was felt that the participation would have been stronger had I been physically in the room giving the instructions and performing as well.

At this point, it was still just an aerobics routine. Over the winter of 2016 I began to reflect more deeply on the physical solitude of online interaction and decided to try to integrate something a little more aggressive as a means of stimulating contact between participants. I have several years of experience as a folk dancer, specifically in North American and British Isles styles. I did the same thing with folk dancing as I did with aerobics – I took some familiar movements and some invented movements, and assigned them meaning according to different common online actions. For example, there is a moment where participants, divided into groups of 4, "Google" their partners – creating glasses out of their hands and looking in the direction of the dancer next to them. Another move asks dancers to "like" each other – two dancers create a thumbs up in the centre of each dance square. For this version I didn't want to completely discard the video, but I thought that a full video running the entire length of the performance would be cumbersome and difficult sync with the performance, so I decided to create a power point presentation in a late 1990s aesthetic, to match the nostalgic mood of the reference to exercise videos. This contained small photo and video demonstrations of the dance moves, adding another layer to the performance. This also allowed me to focus on my text and movement delivery while demonstrating the dance motions to the audience on several levels. The video was created mainly using clips from the full-length video version, with a few supplementary inserts (for example, the folk-dance sections, which were filmed separately at a later date). Another section which was added for the next performances was "emoji yoga", a facial exercise which asks audience members to reproduce common emojis with their own faces and eventually to relate to other participants using their emoji-derived expressions.

I was fortunate enough with this version to have three relatively closely spaced opportunities to perform the piece, which allowed rapid development through micro-adjustments based on immediate feedback from participants. I performed in early February 2017 in the Ephemère series in the Hague, in early March at Borealis Festival in Bergen, Norway, and in late March at the WWW conference on art and the Internet at the Iceland Academy of the Arts. I also performed it in Tampere, Finland at the Tampering Festival in August of the same year. An added benefit was that David Helbich, who was a mentor for the first version of the piece, was present in Bergen, and gave detailed feedback which I was able to integrate immediately for the subsequent performance. David's feedback dealt primarily with the order of the movements; for example he had experienced that integrating the emoji facial yoga once we had already started "dancing" broke the physical flow state. I was able to experiment with the subsequent performance, by placing the emoji section earlier in the piece and was not completely satisfied, as that seemed to colour the character of the piece by diving into the absurd too quickly. By the time I performed in Tampere, I had found a satisfactory solution by asking participants to continue walking on the spot while performing the emoji embodiment exercise – thus continuing the flow of movement while allowing the arc of absurdity to remain intact.

One major point of learning in these settings was precision of language, especially in sections where the text was semi-improvised. At a certain point during the performance in Bergen, I instructed the audience to "stomp", thinking I was indicating stepping heavily. Instead, most of the audience stopped moving and looked at me, awaiting further instruction. I was caught off guard until I realized that the audience was mostly people who have a mother tongue other than English, and that combined with the chaos of music and movement going on at the time, the word was unclear and broke the flow of the performance for myself and for participants. This also reminded me of the delicate energetic link between audience and performer; that if the performer guiding an audience through an experience loses concentration, the whole thing can go off the rails very easily; that re-establishing that contact once it has been broken is a form of re-establishing trust. I was reminded of the great responsibility of being on stage and guiding a group of other humans' experience.

6.1.3 Analysis/Outcome

With each repetition, I got more comfortable guiding participants through the movements with minimal explanation, realizing that my movements were far more instructive than my words, and that audiences would begin to mirror my actions before I even finished explaining, in many cases. It seems that this is an especially effective piece in the context of avant-garde music and performance festivals and series, where the majority of the audience members are also performers of some type.

The piece, in its complete and final form (in each iteration) cannot exist without the interactive relationship between myself as a "guide" or "instructor" and the audience members, who effectively "perform". True, there are several layers to the performance, and one could argue that there are several layers of spectatorship in the context of this project; from the perspective of a "participant" in the "class", from the perspective of someone watching just me "teaching" the class but without dancing along, and then someone observing my interplay with the audience members who are participating in the "course" from further outside. This creates an opportunity for audience members to choose different perspectives from which to experience the work, which in turn greatly influences their own reading of it.

The most helpful framework for shaping the evolution of the piece came from going back to the original medium and subject material – making it as similar as possible to an actual exercise class,

using that medium to highlight something about another facet of experience. Using a performance envelope that confronts audiences directly and experientially with the content (the body) allowed for an effective delivery of the message. Feedback from participants reassured me that the absurdity primarily came not from the content but from the confluence of forms: aerobics as performance as a way to explore real and imagined physical experiences of increasing online interaction. The closer I got to recreating a realistic exercise class setting, the more I felt I could ask audiences to voyage with me into the world of the FutureBody.

6.2 *Rokkur*

" 'It is hard to resist a technology that is also a tool of pleasure,' write Sarah Leonard and Kate Losse in the new issue of Dissent. 'The Luddites smashed their power looms, but who wants to smash Facebook-- with all one's photos, birthday greetings and invitations?'

That's on the money. Things do get messy, confused, when the means of production is also the means of communication, the means of expression, the means of entertainment, the means of shopping, the means of fill-in-the-blank. But out of such confusion comes, eventually, simplification, a concentration of effort and effect. Imagine if, at the turn of the nineteenth century, the power loom also served as a social medium. In weaving your quota of cloth, you also wove the story of your life and unfurled it in the public eye. Think of how attached you'd become to your loom. You'd find yourself staying late at the mill, off the clock, working the levers and foot pedals, the shuttle purring. Hopelessly entangled in the threads, you'd demand a miniature loom that you could use at home, and then an even smaller one that you could carry around with you. Every chance you got, you'd pull out your little loom and start weaving, and all around you others would be doing the same, weaving, weaving, weaving.

I have taken my life from the world, you would say, and I have turned it into cloth, and the pattern in the cloth: that is who I am." -Nicholas Carr, The Loom of the Self

6.2.1 Description and Motivation

Rokkur began with the idea of handcraft and the history of tools for creating textile materials, and various parallels to DIY practices in sound. It is is a multi-layered instrument and performance creation project, using traditional textile tools and implements as a starting point for sound-making objects and multidisciplinary community-engaged performance. The three core members, Reuben Fenemore, Hedin Ziska Davidsen and myself, wondered what kinds of sounds could be made or triggered with these tools, and how they could be integrated in the context of the instruments we already play (clarinet, flutes, electronics; guitar, synth and electronics and voice, electronics, respectively.).

In our early discussions about the project, one of the things we were most fascinated with was the contrast between the perceived silence of these activities and the inner experience of knitting or spinning. These are not loud processes, but they have an internal rhythm that is experienced by the spinner/knitter. We were very interested in exploring the kinds of "imaginary" sounds that we could relate to the rhythm of the physical work, or even extract from the physical process. We are also interested in the space for solitary reflection and community gathering that woolworking offers in many cultures.

The project has a large community engagement aspect, as stories and community histories surrounding the culture and development of textile - and especially wool harvesting and processing – are gathered, explored and told through theatrical/performative events. These events are usually created in

cooperation with residents of the communities where we perform. Prior to performance, participants from local communities engage in wool-working, instrument/sound-making and storytelling sessions facilitated by the team of artists according to personal areas of interest and expertise. Sound and video material is gathered during these sessions (with permission of participants) for later inclusion either as performance material or as a starting point to develop the music and structure of the performances.

An interesting aspect of the community participation lies in the form of the instruments themselves; because they are not "traditional" instruments, there is no established performance practice for using them. This allows us to transcend perceived barriers of "capacity" on playing these instruments and foster a sense of shared sonic exploration and discovery among participants, both community members and participating artist-researchers.

The initial idea to create this project was deepened through exploring the linguistic connections between words for spinning and working with wool:

Rokkur is the word used in the Faroe Islands for a spinning wheel. The word can also be used to mean rock music. (Globse online Faroese-English Dictionary). Embedded in this word, is the Swedish word for clock, which is *ur,* representing time. On a basic spinning wheel, the large wheel drives a spindle that twists the wool into yarn. This makes it more efficient than a handheld spindle, as more wool can be spun in a shorter amount of time. So by using a handheld "drop" spindle and going to the next level of spinning with a "rokkur" we indicate a transition demonstrating more efficiency. As a handheld spindle and rokkur use the same amount of wool to produce the same amount of yarn, we measure the efficiency as the ratio between product and the time it takes to produce the product. A transition also operates within time, effectively indicating a timeline.

Fabric in English relates to material, often cloth. In germanic languages the word *fabrik* translates into factory, echoing our connection between industry and product. The word *spuni* comes from the word, *spinna*, for spinning wool. In the Old Norse language, a North Germanic language spoken by the Vikings and from which the modern Swedish, Norwegian, Icelandic, Danish and Faroese languages (Barnes, 1-2) are descended, *spuni* can also mean "imagined"; *heila-spuni* means fantasy. *Heili* is the Norse word for brain (Old Norse Dictionary). *Spunatónleikur* is a word used for improvised music in Iceland. This is interesting in the context of the project, as the word for spinning translates into the actual spinning of the wheel but also the the nature of the music, that is largely devised from collective improvisation sessions as well as improvisation with the sometimes unpredictable sounds coming from the process and the tools themselves.

The linguistic links, while very abstract, wound up giving very concrete ideas for sonic and physical realization/embodiment, and in binding together the many threads of this project.

6.2.2 Process and Audience Response

Aside from being a collaboration with two other core artists, the material of the project and the process for arriving at this material is similar to that of *FutureMOVES;* while the content is highly conceptual, the music and performance again came from the actual physical action of creating yarn from wool and then knitting it into a garment; the "new" art, in this case, was actually created by carrying out the steps of the process of the "old" art, through a new lens.

The mention of the concept of efficiency in the section on linguistic history relates to Ursula Franklin's definitions of prescriptive and holistic technologies – the more compartmentalized the means of production, the more control bosses and business owners could have over their workers and the process. As workers move physically further from the work and more intermediary steps or mechanisms are created, work becomes more standardized and also faster or more "efficient". This was interesting to us politically in its relation to avant-garde interdisciplinary artistic practices, which seek to de-compartmentalize the different forms and organize them in new ways.

Our compositional work was structured around the actual chronological order of producing wool garments: beginning with raw unprocessed wool being combed on a pair of brushes in preparation for spinning, moving on to a hand-held drop spindle and then a spinning wheel, to knitting and finally, in the first version, to a section where we "played" sweaters by feeling their contours with gloves containing contact microphones embedded in the fingers. For each step, we experimented with different categories of sonic extraction processes, outlined below. We also included purely instrumental interludes, working with inspiration from the textile tool sounds as a starting point for improvisations on clarinet, guitar, synths and voice with electronic manipulation and accompaniment. Sometimes these were mixed with the textile tool sounds as well. Conceptually, these interludes could be read as "useless" within the context of a performance examining the nature of handcraft and labour, although the content was often intrinsically related to the sonic material from preceding sections involving the wool tools.

From a sonic/musical composition perspective, there were 3 categories of treatment for extracting sound from the knitting and spinning materials and processes:

1 – Natural/Acoustic

In this category, the sounds remain untreated; they become a part of the composition by virtue of a process of listening, theatrically or musically drawing the listener's attention to the raw natural sound of the object. Amplification is used not as a compositional device, but as an invisible adjustment to affect a "natural" atmosphere in terms of balance. Sounds that fit into this category include playing knitting needles as percussion instruments; voices telling stories in the foreground and chattering in the background; a recording of an electric kettle boiling water for tea. Amplification was used in order to effect a natural-sounding (in perspective) integration of sound; the purpose of amplification in this case was to make the stage sound audible at a "normal" level for the audience.

2 – Enhanced/Augmented (compositional amplification)

Amplification was used again in this category to make sounds considerably louder than normal; in this way the amplification was a used as a compositional device, bringing sounds to levels "unnaturally" higher than their normal levels to an enhanced and almost absurd effect. This category also includes subtle processing on the amplified sound, through the use of software (Ableton Live) and hardware (guitar pedals) as well as by slightly changing the way the woolworking tools are used, in some cases, such as by "preparing" a wool winder with card tags from skeins of heritage wool, playing another moving wool winder with a knitting needle to highlight its cyclical movement and to create an extra percussive effect, or striking the yarn on the winder with a plastic card-like device called a "needle guage" (used for measuring needle size) attached to a "stitch holder"- another knitting tool - a large object resembling a safety pin, causing a disturbance in the cyclical movement and thus a sonic intervention as well.

Transformation of the instrumental and sung vocal sounds was also used, through delay, looping and other subtle effects on the voice and clarinet, creating a musical tapestry behind the storytelling and the sonic interventions of the woolworking tools.

3 – Transformed/Translated/Assigned/Representative

In this third category, sounds were triggered by the knitting tools, but these sounds were artificial, or created through a transformation of some physical process or gesture of the tools into signal or data; this data is then turned back into sound through an external process. Examples used in previous versions include the use of a light sensor to track the movement of the spinning wheel by sending an impulse to the modular synthesizer each time a spoke passed the sensor; each passing spoke triggered one section of the pattern, which was pre-programmed using a sequencer. In the Newfoundland version, a hall effect sensor mounted on the stationary post of a homemade wool winder was triggered by a magnet attached to one of the rotating arms, sending a signal via midi to a Korg Volca Sample drum machine, triggering a drum sound in a random pattern. This was achieved through an Arduino Mega interface, nestled in a custom box designed in collaboration with media artist and creative technologist Patrick Saint-Denis, building on the ideas developed by Hedin Ziska Davidsen and Lex van den Broek. The Arduino was also used to translate the act of metal knitting needles touching into pitch, using the needles as a circuit to trigger specific pitches (one pitch per set of needles) using the "tone keyboard" sample code from the Arduino website. This was intended to be a preliminary test of the instruments which would later trigger fragments of text or perhaps recordings of sheep vocalizations, however after some experimentation we agreed that the pure sine tones were to date the most effective, as the relationship between the aural and visual experience was more immediately perceptible when we used a very simple sound. The monophonic nature of the tone library associated with the tone keyboard code also created interference or "glitch" sounds when more than one set of needles were touching at once – the effect is reminiscent of early video game systems and created a hilarious juxtaposition and comment on how rapidly something that seemed "futuristic" can become "archaic technology". The wool-winder sensor and the knitting needles can, in theory, be used to trigger any kind of sound. I chose in this version to keep the "primitive" electronic sounds of the basic synthesizer and vintage drum samples.

As previously mentioned, the piece is completed by the integration of local artists and practices in several ways. In most cases, a period before, during or after the performance, (depending on the audience and setting) is set aside for participation from people who are not members of our collective.

In the case of the first performance and residency in the Faroe Islands (August 2017), we traveled to the homes of spinners and knitters (mainly elderly women), who shared their stories and reflections with us. Their ideas became integrated into our work in two ways – first, their accounts of treating wool gave us cues for the form of the work, for example one woman shared a story of two people, singing while knitting together on one garment (both sides of a sweater) – this became integrated into a section of our work where the three of us knit side by side – we were directly inspired by the image she gave us. Later, I found footage of this practice through a random YouTube search ("Faroe singing"). Additionally, sound clips from the interviews became actual material for the performance – creating a parallel between oral history - taking and repeating verbal information - and material physical instruction.

A second series of performances took place in the Faroe Islands in March 2018, when we undertook a residency and tour of elementary schools in the Faroe Islands, sponsored by *Listaleypurin*, an

organization that promotes art in the schools in the Islands. These performances were slightly more interactive, and we tailored the performances to the age groups we were presenting for; sometimes stopping mid-performance to demonstrate or explain something, or ask the children questions in order to keep their attention.

The project developed rapidly in a new and much more community-oriented direction during the period of preparation for the *Sound Symposium* in St. John's, Newfoundland in June of 2018. I arrived six days ahead of my collaborator Reuben Fenemore, to meet with local fiber artists, knit with them, listen to their stories and prepare a performance. Using their own materials, the previously developed *Rokkur* instruments and hybrid instruments that we created together during our residency period, a 35-minute presentation was crafted. When Reuben arrived, he integrated subtly processed clarinet improvisations as a backdrop to the performance, largely comprised of storytelling, in addition to field recordings from the knitting group's soundscape (water boiling for tea), an account of a particular sweater from a Newfoundland storyteller, and previous field recordings from earlier iterations of the project (sheep recorded in Iceland). The major difference between this and earlier versions of the project was triggered by the absence of Hedin Ziska Davidsen, the third member of our group. As Hedin had previously been the major technological brain behind the project, I had to adjust and take on his role as well, as I would be working with the community artists before the arrival of Reuben and needed to be well versed in the technology we were using. I worked with Montreal robotics artist Patrick Saint-Denis to develop a compact system to house a) five pairs of knitting needles that each trigger a specific pitch on a basic sine-tone synthesizer built into the Arduino b) a hall effect sensor which triggers a drum machine via midi and c) a light sensor, to be used with a drop spindle equipped with a small LED flashlight. I also brought a bag of contact microphones that I built for another project, knowing that my own comfort level with this particular piece of technology would allow me to work on amplifying the instruments with a reasonable degree of success even without a technical director.

The modified instruments as well as the (physical and sonic) absence of the modular synthesizer allowed more space for the inclusion of members of the local community, something we hadn't fully succeeded in integrating in previous versions, although this was always a desired direction for the project. Because I am a knitter, my first contact with the local artists began not from sound but from shared obsession, respect and and active practice in traditional fibre craft. I believe this relationship was the cornerstone of the performance, and was what allowed it to be so different from earlier versions; rather than beginning from music and aiming to make a musical performance “about” knitting, we began with the essential subject matter of the piece and then worked our way either from physical movements used by knitters/spinners, stories and personal and family histories pertaining to these practices.

Another aspect of the essential subject matter of the piece came from subtly amplifying the natural sounds of the tools – the spinning wheel, several types of wool winders, knitting needles-- creating an acoustic and theatrical effect of “zooming in” on an otherwise tiny and intimate soundscape. Again, rather than beginning with already existing music or even with the expectation of making musical sound, all sonic material was generated through authentic engagement with the tools of woolworking – the sound was a result of the physical actions of knitting, spinning and preparing wool to be spin. The sonic presentation became a way to highlight this process and to ask the audience to meditate on a particular practice, distinct from cases where a theme is chosen as a superficial and imposed way of tying together a set of already-existing works. (I am not saying this is negative; simply that it is a distinctly different approach.)

6.2.3 Analysis/Outcome

This project is becoming a platform more than a specific formation – the starting point of mixing personal and site-specific histories of knitting/spinning with music allows for a wide range of possible forms. At the time of publication, I am pursuing an opportunity to return to Newfoundland with the project to do an installation version in the Gallery of the Craft Council of Newfoundland and Labrador. This would include interactive tactile elements as well as an audio score, sourced from local textile production and with a large documentary element. The performative duo and trio formation will continue, with a performance and workshop at the Open Waters Festival in Halifax, Nova Scotia, Canada in January 2019 and pending performance opportunities in Montreal and in Europe/Scandinavia.

As a format for creating a project, I believe the link with traditional textile arts has been an extremely effective means for engaging local and diverse communities in the reception and creation of experimental music. As one participant in the Sound Symposium performance noted, it becomes not about doing something “correctly”, but about being curious and taking risks, asking “what would it sound like if we...?”. A review of that performance celebrated the absurdity of the juxtaposition of such a traditionally soft and feminine-perceived practice with experimental electronic music; from my vantage point as an experimental music scholar, this subtly references the strong presence of female-identified composers in early electronic music. It also calls audiences to question prejudice about what qualifies as art and what qualifies as craft, and why. The reviewer also mentioned that she couldn't remember the last time she saw women over 40 given centre stage in order to tell their stories. (sound symposium website, web resource).

7. CONCLUSION

7.1 Three Intertwining Threads

In the style of working I have developed and refined during the period of this research, I can identify three major intertwining "threads" or dimensions to my approach:

The first is musical experimentation and blending of vocal styles in multiple contemporary music contexts.

The second is a theatrical sense, both for the visual/physical and for an audience-performer relationship that is "cool" in terms of Marshall McLuhan's definition of cool media which encourages reciprocal participation or completion of a work by the audience or receiver of the information/message.

The third is curiosity for work surrounding or integrating various technologies, whether this implication be theoretical/thematic, practical, or both.

The place where the threads cross is another dimension – this concerns a constant questioning of how form and content relate.

In his essay *Long Form*, included in the collection *Utopia is Creepy*, contemporary media theorist Nicolas Carr refers to a cyclical relationship between form and content displayed through the invention of the long form "LP" (long-playing vinyl phonograph record). Introduced by then-Columbia Records president Edward Wallerstein as a medium for audiences to enjoy recordings of classical works at home, the LP "set off a burst of incredible creativity in popular music. Songwriters and bands began to take advantage of the new, extended format, turning the longer medium to their own artistic purposes. The result was a great flowering not only of wonderful singles, sold as 45s, but of carefully constructed sets of songs, sold as LPs." (Carr 45). He goes on to to state that "the long playing album, in sum, not only gave buyers many more products to choose from, it gave artists many more options for expressing themselves" (Carr 45). As one branch of academic music moves forward in the direction of *The New Discipline*, consideration of form becomes as important as consideration of content; the traditional concert-music experience is no longer a given.

I situate the works I have profiled above in this stream; in many of my explorations I have started from content in order to find form, which in turn generated new and unexpected content. I have done this by pursuing interests that seem unrelated and then finding ways to connect them, often unintentionally or despite myself. Allowing enough flexibility and giving oneself the space to ask the question of form is imperative in this sort of work; a fluidity between medium and message must exist. Sometimes I have begun a work with solid ideas of form and content only to become convinced that one of them needs to change in order to serve the other, or the overarching message. This fourth dimension is the place where the threads cross, and is essential to the outcome of my research.

7.2 A Proposed Framework for Performance Design

These threads come together through a process of exploration which feeds performance design:

1 – Idea/inspiration – beginning with an image or a viewpoint to express

2 – Collecting information, discussions – becoming more familiar with the issues surrounding this idea, what is its background, what are the important things to consider?

3 – Materials research – getting in a room with the people and things that are interesting, and trying ways of working together. Working directly with the materials differs from working outward from a score, even if the ultimate version will be remembered or organized through a formal written score.

4 – Grouping materials together - creating "movements" or "building blocks". In this step, material in development is treated like lego bricks, from which a performance is later constructed – here the focus on content in relation to form. Form both serves content and is drawn from it.

5 – The next step is considering the performance setting, and assembling the bricks into an order or a form that makes sense. How do we decide which form? This is part of the methodology – looking at the content to decide the form while always looking outward from the standard concert setting.

6 – Refining and reorganizing – Once the work has been performed, remaining open to adjusting elements when necessary.

7.3 My Body Is Technology

The major recurring theme in the research presented herein on embodiment and the human/technological relationship is the role of the body as a form of technology and an interface for the integration of technological practices. I further that cultivating physical awareness and an embodied practice can help performance designers create original work that respects its performers and preserves their agency as individual creators within an organized system.

"One of the keynotes of technological advance is its tendency, as it refines a tool, to remove real human agency from the tool's workings." ... "in its place we get an abstraction of human agency that represents the general desires of the masses as deciphered, or imposed, by the manufacturer and the marketer" (Carr 77).

At the end of my piece *FutureMoves,* the audience is encouraged to dance and chant repeatedly the words "My body is technology". We are creating together, in a way that is prescribed, towards a collective strength and agility. The work is self-aware, pointing this out as something to be potentially wary of, while simultaneously seeming to encourage it. My hope with this work is to induce a physical experience of this phenomenon as a way of drawing attention to the ease with which we fall into patterns of following.

Whether we are discussing vocal work, dance, performance art, textiles or other forms of embodied performance, an awareness of bodies as integral to the technological process and as a form of technology in itself is key. This can be elaborated to highlight the fact that when we work with human collaborators, these people and their lives are also our creation materials. This must be handled with care and responsibility. A way to remain sensitive to this is to integrate a holistic approach to performance creation, allowing performers agency and space to explore in a working process.

"Any tasks that require caring, whether for people or nature, any tasks that require immediate feedback and adjustment, are best done holistically. Such tasks cannot be planned, coordinated, and controlled the way prescriptive tasks must be" (Franklin 17).

Remembering the body and the whole being as technologies has been an essential factor in my creative and theoretical development. Taking the time to consider how elements interact in technological processes, and specifically holistic technological processes, allows for integrated work and surprising new formations. Asking how the performing and creating body can interact technologically with different materials, and retaining this consideration of the body as both form and content within fluctuating systems is key to facilitating embodied performance practices in education and in professional settings.

Works Cited

Andrew, Nell. "Living Art: Akarova and the Belgian Avant-Garde" *Art Journal* Vol. 68, No. 2, pp. 26-49. Summer 2009. https://www.jstor.org/stable/25676481.

Barnes, Michael. *A New Introduction to Old Norse*. Viking Society for Northern Research/University College London, 1999.

Berry, Cicely. *Voice and the Actor.* Wiley Publishing Inc., 1973.

Bhatia, Richa. "Understanding the Difference between Symbolic AI and Non-Symbolic AI." *Analytics India Magazine,* December 27, 2017. https://analyticsindiamag.com/understanding-difference-symbolic-ai-non-symbolic-ai/.

Blak, Kristian with Andreassen, Eyðuni Andreassen, Marianne Clausen, Séan Galvin, Helga Jacobsen and Sharon Weiss. *Traditional Music in the Faroe Islands.* Faroese text: Ann Ellefsen. English translation: Sheila Arnskov. Føroya Skúlabókagrunnur, 1996.

Burke, Kathryn. "The Sami Yoik." *University of Texas: Sami Culture and Music.* https://www.laits.utexas.edu/sami/diehtu/giella/music/yoiksunna.htm.

Carr, Nicholas. *Utopia is Creepy: and Other Provocations.* W.W. Norton & Company, 2016.

"Dance your PhD | John Bohannon & Black Label Movement | TEDxBrussels." *YouTube*, uploaded by TEDxTalks, Nov 23 2011. https://www.youtube.com/watch?v=UlDWRZ7IYqw.

"Faroe singing." *YouTube*, uploaded by Under Dutch Skies, August 11 2017, https://www.youtube.com/watch?v=oJuHt_emMNM.

Franklin, Dr. Ursula M. *The Real World of Technology.*1992. Revised 1999. House of Anansi Press, 2004.

Globse Online Faroese-English Dictionary. https://glosbe.com/en/fo/.

Grotowski, Jerzy. *Towards a Poor Theatre.* Edited by Eugenio Barba, Routledge, 2002.

McNerney, Samuel. "A Brief Guide to Embodied Cognition: Why You Are Not Your Brain." *Scientific American,* November 4 2011, https://blogs.scientificamerican.com/guest-blog/a-brief-guide-to-embodied-cognition-why-you-are-not-your-brain/.

Iida, Fumiya and Pfeifer, Rolf. *Embodied Artificial Intelligence: Trends and Approaches.* Artificial Intelligence Laboratory, Department of Informatics, University of Zurich, 2003, https://people.csail.mit.edu/iida/papers/PfeiferIidaEAIDags.pdf.

Johnson, Mark and Lakoff, George. *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought.* Basic Books, 1999.

Kaplan, Ben. "Cultural Studies: 'People want to do stuff' and that's why Darren O'Donnell is blowing up traditional theatre." *The National Post*, June 7, 2014, https://nationalpost.com/entertainment/cultural-studies-people-want-to-do-stuff-and-thats-why-darren-odonnell-is-blowing-up-traditional-theatre.

Lakoff, George and Núñez, Rafael E. *Where Mathematics Comes From: How the Embodied Mind Brings Mathematics into Being.* Basic Books, 2000.

"Landscape." *The Oxford English Dictionary.* https://en.oxforddictionaries.com/definition/landscape.

Lieberman, Henry. *Symbolic vs. Subsymbolic AI.* MIT CSAIL and MIT Media Lab, 2016. http://futureai.media.mit.edu/wp-content/uploads/sites/40/2016/02/Symbolic-vs.-Subsymbolic.pptx_.pdf.

"Loom History Moving To Computer" *YouTube,* uploaded by Hughes Math, May 17, 2013, https://www.youtube.com/watch?v=itd-4lMoXgI

McLuhan, Marshall. *Understanding Media: The Extensions of Man.* Ginko Press, 1973, 3rd ed. 2013.

Merleau-Ponty, Maurice. Trans: Colin Smith. *Phenomenology of Perception.* London: Routledge & Kegan Paul, 1965.

O'Donnell, Darren. *Social Acupuncture.* Coach House Books, 2006.

Old Norse Dictionary. http://www.vikingsofbjornstad.com/Old_Norse_Dictionary_N2E.shtm

Oliveros, Pauline. *Software for People: 1963-80.* Smith Publications, 1984. Reprinted 2015.

Robinson, Howard. *"Dualism", The Stanford Encyclopedia of Philosophy (Fall 2003 Edition),* ed. Edward N. Zalta, http://plato.stanford.edu/archives/fall2003/entries/dualism/.

Rodenburg, Patsy. *The Right To Speak.* Methuen Drama/Coach House Books, 1992.

Schafer, R. Murray. "Theatre of Confluence 1." *Patria: The Complete Cycle.* Coach House Books, 2002.

Service, Tom. "A Guide to Meredith Monk's Music." *The Guardian,* November 19 2012, https://www.theguardian.com/music/tomserviceblog/2012/nov/19/contemporary-music-guide-meredith-monk.

Smilde, Rineke. *Musicians as Lifelong Learners: Discovery Through Biography.* Eburon Delft, 2009.

Stanislavski, Constantin. Trans: Elizabeth Reynolds Hapgood. *An Actor Prepares.* Routledge/Theatre Arts Books, 1989.

Tippett, Krista. Becoming Wise: An Inquiry into the Mystery and Art of Living. Penguin Press, 2016.

Walshe, Jennifer. "The New Discipline." *Borealis,* January 2016, http://www.borealisfestival.no/2016/the-new-discipline-4/.

Wang, Pei. *Embodiment: Does a Laptop Have a Body?* Temple University, Philadelphia, USA, June 2009, https://cis.temple.edu/~pwang/Publication/embodiment.pdf.