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COMPOSING EMBODIED PRESENCE IN A

CHAMBER MUSIC CONTEXT

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A thesis submitted to the University of Huddersfield in partial fulfillment of

the requirements for the degree of Doctor of Philosophy

School of Music, Humanities and Media

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Copyright Statement

Abstract

This thesis comprises a body of works, and a written commentary, which can be anchored within an expanded field of chamber music. This field embraces not only notated music but also electronics, and has a strong focus on physical gesture. The extra-musical aspect of composition with physical gestures in my works pushes my compositional concerns towards interdisciplinarity, thus challenging the ontological boundaries of the musical work. In the commentary, I examine how a process of signification with extra musical elements like physical gestures as explicit material for composition could take place in chamber music. My work necessitates collaboration in order to arrive at an embodied knowledge of technique and practice where I treat physical gestures and performers' bodies as material for composition. Through extensive collaboration I also dislocate the implicit hierarchies within the ontology of the musical work, thus motioning towards a new ontology where performers have autonomy to make creative contributions to the work. This new form of ontology already manifests itself in my music, particularly when presented in an electronic music context with gestural controllers, which I address in Chapter 3 using the metaphor of the cyborg. The interdisciplinary aspect of my compositions with physical gesture amplifies the performer's presence on stage, thus challenging the codes associated with the ritual of Western concert music performance.

Through the portfolio of works, I demonstrate gestural considerations that oscillate between two sensory concerns: the aural and the visual. At the end of my PhD, I embraced processes of listening in order to generate new instances of embodied movement in reaction to sound in an interdisciplinary collaboration with theatre performers. The insight from this project informs my current compositional process in chamber music where emphasis is placed on the perception of sound in a chamber music context. Thus, the ritual of concert performance also undergoes changes in order to satisfy the enquiry for embodiment and movement of sound in space.

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Publications

Sections of 3.3.1 Sound as Movement: From Observing to Listening and Reacting of the following thesis have been published elsewhere as:

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This article was submitted for publication following the original submission of the commentary in September 2019, and was published while the thesis was in the process of re-submission. It follows closely the main argument discussed in section 3.3.1 of the commentary on embodied movement composition as a result of listening and reacting in a collaborative performance with sound and movement. The article was peer reviewed and was published in the proceedings of the RE: SOUND conference (2019) in Aalborg, Denmark.

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Submitted Works

Immaculate Machine of Liveness

For: trumpet and French horn with live electronics

Duration: 9'20

Premiered: 24 February 2016 in St Paul's Hall, Huddersfield, UK by Ensemble Apparat:

Matthew Conley and Samuel Stoll

Note: *Immaculate Machine of Liveness* is about a machine and the struggle of being inside it. In this piece certain forces control others without any visible connection as exemplified by rigidity of movement of the two players and the unclearness of who is controlling whom.

Simulacra Studies

For: performer-pianist with *The Hands* instrument (touch sensors and accelerometers)

Duration: 9'30

Premiered: 25 January 2017 at the Electric Spring Festival, Huddersfield, UK by Marko Ivic

Note: In *Simulacra Studies*, I explored the drama of an absent piano interface through live electronics and video where the pianist embodies physically the act of playing.

On Fragments

For: saxophone quartet and live electronics

Duration: 12'

Premiered: 3 April 2017 in Huddersfield by Quasar Saxophone Quartet; premiere of the revised version in Montreal, Canada, 3 May 2017

Note: *On Fragments* for Quasar Saxophone Quartet engages with *work* and organisation of labour through musical means. I took the idea of automation and organisation as meta topics to reflect on the work that goes into composition and the work of an ensemble.

artefacts of presence

For: violin, live electronics and video

Duration: 9'34

Premiered: 8 October 2017 at Contrasts Festival of Contemporary Music in Lviv, Ukraine by Dejana Sekulic; premiere of the revised version 21 July 2018 in Open Space at Darmstadt International Summer Course for New Music 2018; Canadian premieres 13 and 17 June 2019 at Array Music Space, Toronto and during Suoni per il Popolo Festival, Montreal by Ilana Waniuk

Note: In *artefacts of presence*, I used transcriptions of archival material to adapt to violin writing and techniques. in order to establish a performative presence of the violinist on stage, I simulated a musical dialogue between the violinist and the protagonists of the archival footage.

Music for Speaking Bellows

For: accordion and electronics with dmx lights

Duration: 9'

Premiered: 15 February 2018, St Paul's Hall, Huddersfield, UK by Teodoro Anzellotti Note: *Music for Speaking Bellows* pays homage to multicultural identity of accordion playing and its vernacular roots. In this piece, the identities of the accordion and the accordionist are explored through topics ranging from war to censorship. The text is comprised of excerpts from *notes on god and war* and *notes for censorship* by Cia Rinne.

DNA Problems

For: five piano performers with click tracks and electronic tape

Duration: 8'40

Premiered: 26 July 2018, Darmstadt Ferienkurse as part of composing with archive workshop concert by Victoria Cheah, Gleb Kanasevich, Kuba Krzewinski, Solomiya Moroz and Raimonda Ziukaite

Note: In *DNA Problems*, I engaged in composition with 'found' materials from the IMD archives where no notated or recorded material was composed by me. The notated and recorded material came from Christina Kubisch's *Divertimento for five players* (1974).

Arrows That Remain

For: string quartet and electronics

Duration: 10'

Premiered: 7 September 2018 during Gaudeamus Muziekweek by the Bozzini String Quartet

Note: *Arrows That Remain* is inspired by nineties hip-hop sampling and scratching culture adapted to string quartet playing. The piece gives the illusion of a double string quartet as augmented by sampling, distortions and processing which transform and magnify the playing of the quartet.

Motion Studies

<u>Version 1</u>

For: two musicians and one or two physical actors

Duration: 4'50

Premiered: 9 June 2018 at Symposium on the Audiovisual Body at the University of Huddersfield by Colin Frank, Cristina Fuente, Solomiya Moroz and Ilona Krawczyk

<u>Version 2</u>

For: two musicians and one or two physical actors

Duration: 10'

Premiered: 8 October 2018 at REVERB series at Edge Hill University by Colin Frank, Solomiya Moroz and Ilona Krawczyk

Version 3

For: two musicians and one or two physical actors

Duration: 11'30

Premiered: 1 May 2019 at St.Paul's Hall, Huddersfield, UK by Colin Frank, Cristina Fuente, Solomiya Moroz and Ilona Krawczyk

Note: *Motion Studies* is an interdisciplinary, process-based work with music and theatre performers which develops with each new performance.

Once I Forgot What Distance Sounds Like

For: flute, bass clarinet/B flat clarinet, violin, cello, piano, percussion, 8-channel surround sound diffusion

Duration: 9'

Premiered: 30 March 2019 at the Music Gallery, Toronto by Continuum Ensemble

Note: The piece is about different kinds of distances in time, space and material quality of cityscape recordings from Lviv, Montreal, Toronto and Copenhagen, which become scored for six moving musicians and 8-channel surround sound diffusion.

List of Submitted Materials

Scores

Moroz, S. (2016). *Immaculate Machine of Liveness*

Moroz, S. (2017). *On Fragments*

Moroz, S. (2017). *artefacts of presence*

Moroz, S. (2018). *Music for Speaking Bellows*

Moroz, S. (2018). *Arrows That Remain*

Moroz, S. (2019). *Once I Forgot What Distance Sounds Like*

List of Performance Materials (USB Content)

Most of the pieces include scores, electronic and video components, and some video instructions on the physical gestures to be embodied. These materials are as follows:

Immaculate Machine of Liveness – Max/MSP Patch with sound files

Simulacra Studies – list of instructions, Max/MSP Patch and Resolume Video Patch

On Fragments – Max/MSP Patch and video instructions for embodied gestures

artefacts of presence – Max/MSP patch with video and audio files

Music for Speaking Bellows – Max/MSP patch with audio files

DNA Problems – archival documents on which the piece was based

Arrows That Remain – Max/MSP patch with audio files

Motion Studies – videos of three embodied instances

Once I Forgot What Distance Sounds Like – score and 8-channel audio file

Video Documentation (USB Content)

All the works submitted as documentation are in video format. This is only video documentation and not the artworks themselves, which are meant to be experienced live.

Please note details on the performances, performers and venues are included in Submitted Works.

Moroz, S. (2016). *Immaculate Machine of Liveness*

Moroz, S. (2017). *On Fragments*

Moroz, S. (2017). *Simulacra Studies*

Moroz, S. (2017). *artefacts of presence*

Moroz, S. (2018). *Music for Speaking Bellows*

Moroz, S. (2018). *DNA Problems*

Moroz, S. (2018). *Arrows That Remain*

Moroz, S., Krawczyk, I., Frank, C., & Fuentes, C. (2018–2019). *Motion Studies* (3 versions)

Moroz, S. (2019). *Once I Forgot What Distance Sounds Like*

Chapter 1: Introduction

1.1 Introduction

In the text that follows, I present a commentary on a portfolio of works that feature a variety of approaches to working with performers' physicality and presence on stage. My work consists of notated and electronic music for a chamber music setting, and has a focus on physical gestures. In the categorisation of my works, chamber music includes considerations for performance space as well as the size of the ensemble that performs them. Thus, I favour smaller-size halls and smaller-size ensembles to create an intimate performance in close proximity to the audience where this space is also flexible and could be renegotiated based on the performance needs of the piece.

Through practice as research I aim to contribute to contemporary music practice where performances using physical gestures (instrumental-idiomatic, ancillary, habitual and imagined) extend the chamber music genre towards interdisciplinarity. I do this by examining how a process of signification with extra-musical elements like physical gestures as explicit material for composition could take place in a contemporary chamber music setting. In this commentary, I propose various approaches to composition with different performers' physicality and performance situations, leading to new collaborative working methods.

Given the extra-musical connotations that they imply, physical gestures can push compositional work towards interdisciplinarity. In 'For a Relational Musicology: Music and Interdisciplinarity, Beyond the Practice Turn' (2010, p. 211), the anthropologist and musician Georgina Born discusses three modes of interdisciplinary logic: the integrative mode, the subordination-service mode and the agonistic-antagonistic mode. The last of these is the mode that I embrace the most because it is involved in questioning the political, aesthetic and ethical limits of the established disciplines, which is the key concern in my practice:

> [With] the agonistic-antagonistic mode we highlight how this kind of interdisciplinary practice stems from a commitment or desire to contest or transcend the given epistemological and ontological foundations of historical disciplines a move that makes the new interdiscipline irreducible to its 'antecedent disciplines'. (Born, 2010, p. 211)

In my work, I attempt to use the agonistic-antagonistic mode to move towards a new interdiscipline which involves the visual in addition to oral senses of the audience, thus contributing to the multimediality of the music performance. The multimediality of my works also requires the intimacy of the chamber music setting, in order to make the extra-musical aspects visually accessible to the audience. In addition, through extensive collaborative processes with the performers my work dislocates the ontological boundaries of the musical work where hierarchical relationships within the ontology of the 'musical work assemblage' (Born, 2005) are also challenged.

Within a collaborative process, my work produces new forms of knowledge through embodiment. The definition of embodiment that I use relates directly to Ben Spatz's in *What a Body Can Do* (2015), in which one treats *technique* acquired by any *body* as knowledge and *practice* as research that one engages with in order to gain insight into new *embodied* knowledge. Thus, I reject the notion of *absolute music* because I aim to make connections with extra-musical meaning through physical gestures and embodiment.

The interdisciplinary aspect of my work engages with the bodies of performers using physical gestures that, inevitably, point to the fact that 'musicians have bodies' (Walshe, 2016). This makes some audience members uncomfortable. When I work with the subversion of gestural expectations, I play with the audience's expectations in a chamber music setting. These methods I discuss further in the next section. The reactions of discomfort to my work point back to a nineteenth-century Judeo-Christian bourgeois inheritance that, along with the concept of absolute music that twentieth- and twenty-first-century concert halls have inherited (Barrett, 2016, p. 2, Small, 1998). Whilst the experimental music of the 1960s and Fluxus tried

to challenge these notions, today's institutionalised Western contemporary concert music still lags behind other art disciplines that have been more actively engaged with transgressing the medium-specificity of their genre (Barrett, 2016, p. 2). I address this topic in Chapter 2 where I discuss hierarchies in contemporary chamber music and the ritual of the concert performance with reference to other performing arts disciplines.

In this chapter, I outline the building blocks of my working methods in relation to the submitted portfolio by looking at three approaches to working with musicians' physical gestures as explicit material for composition. I will also present an overview of three compositional approaches central to the works submitted regarding working with performers' physicality and presence on stage in collaborative settings.

1.2 Research Aims

All of the compositional approaches discussed in the commentary aim to answer my main research questions:

− How can I compose with physical gestures, especially with intent to convey extra musical meaning such as exploration of gender performance, organisation of labour, societal struggles or multi-cultural identity? These gestures might be instrumental, abstract, ancillary or imaginary (a concept I develop later in the commentary).

− How can I work with such gestures alongside musical material towards aesthetic subversion via multi-modal gesture mappings of gestural controllers and sensors?

− How can I use the embodied knowledge of the performer, including that of instrumental, performance and acquired techniques as material in a collaborative process of composition?

As the result of working with these questions, in the commentary I examine how I might be challenging the disciplinary boundaries and performance codes of chamber music.

1.3 On Gesture: Working with Performers' Physicality

Musical gesture: the most salient feature of any music in relation to sonic forms of expression is not the primary concern in my work. In the text that follows, whenever I refer to *gesture*, I refer to physical gesture or corporeal articulation as defined by Marc Leman (2008, p. 22). At the beginning of my research, I saw physical gesture as the main vehicle of composition through electronics, via sensors and gestural controllers. As a non-linguistic communicator of music, gesture 'provides descriptions which are based on perceptual as well as sensorimotor mechanisms' (Leman, 2008, p. 20) where 'moving forms have a direct impact on human physiology because they evoke corporeal resonances giving rise to signification' (Leman, 2008, p. 17). Additionally, gesture, as the philosopher Jean-François Lyotard understood it, lies in opposition to linguistic signification. Merleau-Ponty (as cited in Lyotard, 2010, p. 15) suggests that gesture is 'the experience of meaning where the felt and feeling come together in a common rhythm'. 'Nonetheless gesture refers if not to a subject, then to a kind of subjectivity, however anonymous or natural' (Lyotard, 2010, p. 17). The subjective and personal response to sound through gesture and the possibility for varied responses from musicians working with it is what interested me about physical gesture as material for composition. In addition, connecting to audiences through cognitive reactions to gesture is also an important consideration in composition with gestures. In my work, when I compose with gestures focus is placed on three of their main characteristics:

- as an expressive communicator;

- as a tool to subvert audience expectations;

- as a communicator of affects utilising multimodal expression.

1.3.1 The Expressive Possibilities of Gesture

Since my interest in composing with gesture comes from working with controllers in electronic music, my initial concerns for research in this area arise from discussion within this community. The *NIME* (New Interfaces for Musical Expression) conference has been involved in research about the expressive possibilities of gesture in electronic music since 2001. The authors of 'The "E" in NIME: Musical Expression with New Computer Interfaces' consider gestural expressivity to be linked to the enhanced control of parameters through gesture, which leads to virtuosity on hybrid instruments (Dobrian and Kopelman, 2006). The approach of using gestures to develop virtuosity did not interest me as a sole basis for artistic research. *The New Grove's Dictionary of Music and Musicians* defines musical expression as 'those elements of a musical performance that depend on personal response and that vary between different interpretations' (Baker, Paddison and Scruton, 2001). Since I also work with gesture as a corporeal signifier derived from performers' physiology (Leman, 2008, p. 17), I value personal responses to gestural interfaces over instrumental virtuosity when performing with a given sensor or gestural interface. In my work, expressive gestural control takes on a different demand – I also use gesture explicitly as material for composition for extra-musical purposes. I address this topic in Chapter 3, where I talk in detail about the embodiment of live electronics through gestural controllers.

In *Simulacra Studies*, I explore the virtuosity of playing an instrument that is a somewhat poor alternative to the piano – Piano Hands (Figure 1). In this piece, I challenge the performer's ability to react on-the-fly to moments of electronic sound playback while being committed to the interdisciplinary delivery of a performance in which he is also taking on the role of different characters. The performative part of *Simulacra Studies* is more closely related to the notion of interdisciplinary virtuosity, which is an expansion of the performer's skills towards the non-musical where it contributes to the strength of the piece rather than the instrumental virtuosity (Shlomowitz, 2016, p. 3).

Figure 1. The Piano Hands – MINIBEE and touch sensors, front and palm view (S. Moroz)

1.3.2 The Subversion of Performance Expectations

In addition to expressive involvement with gesture, during my PhD I became interested in the subversion of performance expectations when composition with gesture took place. As I went further with compositions for chamber music settings of one, two or more performers using the gestural control of expressive gestures and their subversion, I realised that this type of approach was doing something to unsettle the medium of chamber music that the audience was expecting.

In *Simulacra Studies*, the gestural music performance introduces a 'visual or tactile perception of the body' (Leman, 2008, p. 19) that, as noted by one reviewer,[1] can disturb the accepted codes in chamber music performance. This type of disturbance is further discussed in *Musicking* by Christopher Small, where he discusses physical gesture in the context of expectations within a concert ritual. He examines how any deviation that draws attention back to performers' personality or expressive body gestures can upset the accepted codes of such behaviour for the audience (1998, p. 155). This aspect of disturbance fascinated me because it was something that I had not previously experienced in reaction to my work. Here I was drawing

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[1] One reviewer expressed the feeling of being punched in the groin while watching my piece *Simulacra Studies* during Electric Spring 2017 ('Electric Spring 2017 – 5:4', 2017)

full attention to the performer's semi-naked body on stage, in addition to drawing connections to video and sound associations beyond the piano sound that one might expect.

1.3.3 The Multimodality of Expression with Gesture

Lastly, the possibility of mapping forms or patterns of gesture from one modality of expression to another allows me to associate extra-musical representational ideas with gesture (Leman, 2008, p. 21). This type of mapping, in which gesture is associated with video images for the effect of story building, can be observed in *Simulacra Studies* and *artefacts of presence*. In the opening of *artefacts of presence*, the violinist plays along with the imperfect video fragment of a wedding band. The notes she is playing are an arranged transcription of the damaged audio of the complete wedding band in this video, not only the violin part. However, despite the differences in the two parts a correlation is established between her played and sampled sound and the bowings of the violinist in the wedding band video, creating a strange synchronicity between the two violinists. Thus, the ability of gesture to associate itself with either image or to translate one modality of expression to another expands the theatricality of this performance situation.

1.4 An Overview of Compositional Approaches with Gesture and Interdisciplinarity

1.4.1 Inverting Absolutes: Practice as Research and Collaboration

Most of the chamber music we know today is anchored in the notion of *absolute music*, which presupposes that concert music will be left for the pure contemplation of musical forms in instrumental music only (Hanslick in Barrett, 2016, p. 2). According to the independent researcher and author of *After Sound: Toward a Critical Music* G. Douglas Barrett, absolute music's dominance over the last couple of centuries has kept music from any significant

revisions as to its medium specificity; in contrast to this, visual art has exceeded its medium by incorporating discursive and conceptual strategies (ibid.). Overall, I work with elements that are relevant to a chamber music setting, such as performance hall/audience separation, music notation, and allowance for chamber music communication through breaths and visual cues. The notion of *Inverting Absolutes* refers to the subversion of principles that are typically associated with chamber music such as the medium specificity of its genre in the way my work introduces gestures and performers' bodies as explicit material for composition.

By introducing the *body* as material for composition – this de facto necessary element in the creation of music that has been taken for granted in absolute music for over two centuries (Barrett, 2016, p. 2) – my work embraces the agonistic-antagonistic mode of interdisciplinary thinking (Born, 2010, p. 211). Although some musical practices relevant to experimental music have embraced bodies as a valid presence in the composition of music, others relevant to avant-garde modernist thinking would still consider such material extra-musical because of the visual implications that composing with the performer's physicality would imply. However, it is also relevant to talk about my music as interdisciplinary because, through my work with performers' bodies, I have come to consider political, aesthetic and ethical questions regarding the boundaries of the musical discipline from which the work originates (Born, 2010, p. 211).

The boundaries of the musical discipline could be said to reside in the philosophical realm of what constitutes a musical work ontology. *Inverting Absolutes* also refers to the inversion of the 'ontology of the musical work's hierarchical assemblage' (Born, 2005) through collaborative practice as research approaches to composition. These approaches challenge authoritative claims that a musical piece originates solely in the imagination of the composer and is rendered perfectly in the score, becoming guarded by the musical-work concept as an ideal condition for its performance (Born, 2005).

In my submitted works, I demonstrate varied degrees of engagement with performers through collaboration, undertaking different conditions for the creation of a work than are

traditionally assumed by the ontology of the musical work. The work ranges from being developed extensively in residencies with performers in pieces like *Simulacra Studies* and *Arrows that Remain*, or through an extensive collaborative exchange in *On Fragments* and/or practice studio in *DNA Problems*, *Motion Studies* and *artefacts of presence* to pieces developed separately and communicated through a score between composer/performer(s). Thus, *Immaculate Machine of Liveness*, *Music for Speaking Bellows* and *Once I Forgot What Distance Sounds Like* observe the traditional composer/performers dynamic. However, the last two pieces have been informed by previous work approaches with performers and carry elements of those into their creation.

In Chapter 2, I discuss further the ontological boundaries that my works challenge through specific instances of collaboration and devised practice.

1.4.2 Cyborg Theatre in My Work

In Chapter 3, I discuss the control of live electronics through gestural controllers and sensors where I focus on composition with idiomatic gestures or sound producing gestures typically associated with a certain musical instrument (Miranda, Wanderley and Kirk, 2006). Here I explain the process of composition with idiomatic gestures that setup initial expectations of the genre of music, and that may be subverted or multimodally linked to other significations. I also explain techniques for the dislocation of sound using both 'sound producing' gestures and 'mimed' gestures which can still control sound processes on the instrument. These dislocations play with coherent associations of timbre versus ones that are ambiguous in relation to their original sound sources. The technique of creating ambiguous source bonding (Smalley, 1997) to acoustic instruments is part of the subversion of expected gestural behaviour that I explore in several of my pieces, including *Simulacra Studies* and *Arrows That Remain*.

In this chapter I also discuss the control of electronics through physical embodiment, which expands the disciplinary boundaries of chamber music and relates to Donna Haraway's

Cyborg Manifesto (1985) and to Jennifer Parker-Starback's *Cyborg Theatre* (2011). My interest in hybrid identities and the way I embrace multiple manifestations of performers on stage points to the 'performer as a cyborg' feature of my work with electronics, which extends the musical performance towards theatre through the manifestation of extra musical content via gestural controllers and sensors.

1.4.3 The Body as Material for Composition

As already stated, in my work I embrace Ben Spatz's ideas on embodiment in *What a Body Can Do* (2015). However, before I read that book, I came across Deniz Peters' article on 'Haptic Illusions and Imagined Agency: Felt Resistance in Sonic Experiences' (2013). In this article, Peters talks about the imagined resistance in sound that dancers felt while improvising within a sonic sphere environment in the EGM (Embodied Generative Music) research laboratory in Graz, Austria. Peters explains how this type of resistance could not have been an illusion or vibrations created through sound but rather an imagined resistance from cross-modal sensorimotor sensations that the dancers felt (Peters, 2013, p. 156). This showed that sounds happening to participants undergo a kind of sensorimotor body expectancy sensation, in which one's mind draws on previous experience of hearing such sounds and responds as if feeling or making that sound (Peters, p. 157). In my work, I propose the concept of *imaginary gestures*, based on Peters' cross-modal association of gestures to sound and Spatz's limitless possibility for embodiment through *practice*, which I discuss in more detail in Chapter 3 in relation to *On Fragments* for saxophone quartet.

My work is concerned with performers' ability to embody sound through gesture, which in some cases comes from instances of *imaginary gestures* and extensive collaborative work. In addition, I became interested in each specific performer's presence on stage as an inspiration that could guide the compositional process and communicate some form of knowledge to the audience. Thus, my research with performers became an important source of exchange of

knowledge as it created a feedback loop between us. Following this, I started to treat performers' embodied knowledge as a repertoire of memories and possibilities where through collaborative work, different qualities and associations could become material for composition. My work with repertoires of performers' embodied practice can be observed in *Simulacra Studies*, *On Fragments*, *artefacts of presence* and *Music for Speaking Bellows.*

As I was thinking about composition with gestures during my PhD, Jennifer Walshe's editorial in *MusikTexte* on the subject of the 'New Discipline' (2016) was published. One of its statements resonated strongly with my work:

> Perhaps we are finally willing to accept that the bodies playing 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, that performers have bodies! (Walshe, 2016, p. 2)

This statement is important to my compositional thinking because it is true of the kind of experience I wanted to create for the listener – anchored in perceiving a subjective performance experience on stage and manifested through performers' embodiment. Thus, in several of my pieces, including *Simulacra Studies*, *On Fragments*, *artefacts of presence* and *Music for Speaking Bellows*, I wanted to situate the performer in the piece in order for the listening experience to be informed by a particular performer or performers' subjective embodied knowledge and presence on stage.

1.4.4 Sensing in the Moment of Composition

In the latter part of my PhD, I started to include my own embodied response in the research with theatre and music performers. This happened throughout 2017–2019 at the University of Huddersfield. The notion of sensing builds on all my previous work with embodiment and is anchored in *listening*, which provokes gestural reactions to sound though *imaginary gestures*.

My work with theatre and music researchers focuses on how practitioners from both disciplines respond to, influence and react to each other's sound or movement through listening. The collaborative nature of this work necessitated new workflow methods supported by video documentation, improvisation and re-interpretation of our shared lab materials, and these became the boundary objects of the embodied score of *Motion Studies*. This work revealed further dislocation of the boundaries of the ontology of the musical work in a collaboration that resulted in a shared ownership of the work. In Chapter 3, I also discuss the influences of this research on the composition of *Once I Forgot What Distance Sounds Like* for Continuum Ensemble, which became grounded in the perception of sound through listening as an activity that takes place in a concert space, exploring relationships between performers, sound sources and the audience.

1.4.5 On Gestures, Musical Material and the Rehearsal Process

In Chapter 4, I present in more detail composition with physical gestures and the musical material of two of my pieces *Immaculate Machine of Liveness* and *Arrows That Remain*. I discuss how the musical and gestural material in these pieces came to signify the extra-musical content of the works. Here, I make distinctions between two types of gesture: non-idiomatic and idiomatic, which act differently within the musical context of each piece. I also compare my approaches for expressing the extra-musical topics related to social constructs in *Immaculate Machine of Liveness* with those of work and the organisation of labour in *On Fragments*, where I challenge the role of an ensemble in a collaboration. In addition, I discuss the rehearsal process for these works and what conclusions I derived from each process and how they guided my aesthetic and compositional decisions in future works.

1.5 Conclusion

The work included in the portfolio examines three characteristics of gesture as explicit material for composition with performers' physicality and presence on stage. In addition, I also demonstrate three different compositional approaches for working collaboratively through interdisciplinary methods that could take place and expand the disciplinary boundaries of chamber music. Such approaches focus on working with performers' embodiment both as explicit material for composition and as a means for controlling live electronics. My research results and methods will be thoroughly discussed in Chapter 3, but in the next chapter I will situate my interdisciplinary approaches to chamber music within Western Contemporary Art Music. In that chapter I will address the inherent hierarchies within the ontology of production of the musical work and the ritual of the concert performance with references to the works and artists of the past and present.

Chapter 2: Inverting the Absolutes from the Postmodernism of the 1960s to Today

As the result of an interdisciplinary mode of thinking, my work has come to challenge the disciplinary boundaries of the musical work. The focus of this chapter is the major influences from the past and present which reflect similar concerns about challenging hierarchical relationships within the creation of a musical work, and which thus critically challenge political, ethical and social boundaries. My influences arise from both instrumental avant-garde/experimental music traditions and electronic music that uses gestural controllers in performance. I also discuss the potential of composition with gestures and live electronics to create an antagonistic tension in relation to the chamber music context in which the work is created, which can expand the music specific boundaries of the work.

Here, I consider chamber music practice by rethinking the hierarchical roles within the ontology of the musical work and the codes of the ritual of concert performance. Following that I look at similar challenges to the hierarchical order of work production as well as aesthetic considerations in the work of artists involved with early gestural controller developments at STEIM, Amsterdam. I contextualise my work in reference to experimental music and artists of the 1960s such as John Cage, Merce Cunningham and the Fluxus movement, as well as discussions of research undertaken in the archives of the IMD (International Musikinstitut Darmstadt) concerning experimental music theatre. Then, I discuss approaches relevant to an interdisciplinary mode of thinking in works of experimental new music theatre from between 1955 and 1975. I compare the qualities of the multimedial music theatre of the 1960s to that by today's composers active within the 'New Discipline' and Relational Music (Walshe, Aszodi/Lyle, Takasugi, Schubert) which place an importance on the performers' presence on stage.

2.1. Rethinking the Codes of Chamber Music Practice

The codes of the concert music ritual in Western Art Music that I challenge in my music still contribute to aesthetic boundaries in relation to most music heard in concert halls today. These aesthetic boundaries emerged alongside the industrialised nineteenth-century musical work-concept that is associated with absolute music. According to the musicologist Harry Lehmann, contemporary classical music as well as the broader classical music tradition before it followed the idea of absolute music, thus, the nineteenth-century model of concert music also brought nineteenth-century ideals into the new music of the twentieth- and twenty-first centuries (Lehmann, 2016; Barrett, 2016). These ideals are associated with hierarchies in composer/performer relationships, with a high priority placed on performances that use the musical score. The latter is supposed to guarantee the work ideals in relation to its presentation through the ritual of a concert performance (Born, 2005; Goehr, 1992; p. 162; Small, 1998, p. 8).

Since my work with gesture and performers' embodiment places performers' experience at the centre of the work it dislocates the boundaries of the music-specific medium from which the work originates. This interdisciplinary aspect places the work outside the ideals of absolute music that are typically associated with chamber music. In addition, working with gesture as an explicit material for composition disturbs the accepted gestures which are part of the ritual of the concert performance (Small, 1998, p. 106).

In the following sections, I discuss the codes of chamber music practice by examining:

– the roles in the production of a musical work

– the musical work concept

– the ritual of a concert performance

2.1.1 Rethinking the Roles in the Production of a Musical Work

> The ontology of the musical work envisions a hierarchical assemblage: the composer-hero stands over the interpreter, conductor over instrumentalist, interpreter over listener, just as the work ideal authorizes and supervises the score, which supervises performance, which supervises reception. (Born, 2005)

Here, the musicologist Georgina Born outlines how the conventional classical system in which a musical work is created functions within the ontology of the musical work-concept. In contrast to the above system, I was seeking an expanded idea of how a musical work could be composed through collaborative work approaches with musicians. These approaches to making work are closer to how the sociologist Howard Becker describes art making as 'socially distributed and of cooperative nature' (Becker, 1989, p. 282). As a sociologist, Becker was not interested in the ideas of individuals but rather in viewing art making from the perspective of a social activity and the journey of such a collaborative endeavour (Becker, 1989, p. 282). For myself, such a journey takes place where some elements of collaboration are formed through distributive creativity. The term 'distributive creativity' comes from the processes recognised in science that contribute to distributed cognition (Sawyer and de Zutter, 2009). It has been tested in theatre group settings where no individual has control of the creative situation, but rather all members are equally involved and rely on the moment of a collaborative emergence through interaction (Sawyer and de Zutter, 2009). In this process, the outcome is not scripted, thus resulting in spontaneity and contingencies in the outcomes of a creative situation.

Similarly, 'devised practice' is used in music composition to describe a process of collective creation. Examples of composer/performer collectives currently working within devised practice are the Chicago-based Mocrep and the London-based Bastard Assignments. Both groups perform collaboratively devised works by their members as well as works devised in collaboration with other composers. The percussionist-researcher Jennifer Torrence

describes devised practice as the most radical role a performer can be engaged with in contemporary music because of the range of possibilities and engagement levels a performer can assume within it (Torrence, 2018). This is also relevant to the dislocation of hierarchies that exist in the 'hierarchical assemblage' of contemporary music described by Born (2005). Further to this, a devised practice can connect to art as a social activity that dislocates the boundaries of a musical work. Such a process can challenge the location of the ontology of the musical work against conventional composer/performer models.

The roots of devised practice in music originate from devised theatre and can be observed also in the choreography of dance where actors and dancers are trained as co-creators of a collective work ('Devised Theatre', n.d.). The creative methods of devised theatre practice support theatre improvisation through collaborative emergence, among many other collaborative methods (Sawyer and de Zutter, 2009). Very often devised theatre practice is aligned with physical theatre, where actors and mimes are also trained to become creators of the work through physical improvisations within a group (Syssoyeva, p. 8, 2013). An explosion of collective work creation in theatre occurred in 1968–1970 and could be witnessed in the physical theatre of Jerzy Grotowski in Poland, Jacques Lecoq in France, Odin Theatre in Denmark and the Wooster group in the US among others (Syssoyeva & Proudfit, 2013). A devised process was also a central mode of creation in the work of the American choreographer William Forsythe, active as director of Ballet Frankfurt from 1984–2004 and then with his own company, the William Forsythe Company, from 2005–2015 in Frankfurt, Germany (Forsythe, n.d.).

Approaches to treating art as a social activity by devising roles that contribute to a collaborative process may be observed in the works of Heiner Goebbels, where 'the political challenge begins with the ways of production of a work' (Goebbels and Gourgouris, 2004). Goebbels is a composer who is best known today as a director of postdramatic theatre which uses musical approaches in theatre making. A lot of Goebbels' ideas on collaboration are

derived from his work with Ensemble Moderne. *Black on White* has been developed collaboratively with Ensemble Moderne whereby every detail of the performance and materials for inspiration has been conceived by the ensemble as well as the creative team behind the scenes (such as lighting technicians) in addition to Goebbels himself: 'This piece is musically designed to be a portrait of a collective, not based on special solo protagonists. I hope that an audience is able to conceive this respectful, decentralized perspective as a political quality, a gesture that liberates the senses' (Goebbels and Gourgouris, 2004).

Similarly to the work of Goebbels and other composers working within the devised practice where musicians are also the work's co-creators, my works observe initial elements of distributive creativity where materials emerge from a collaborative process, for instance discussion of specific instrumental techniques or workshopping embodied responses to audio or video materials (Sawyer and de Zutter, 2009). In some of my works, I devise the activities to be shared between members of the ensemble in which new material is generated for the piece through collaborative emergence. Such modes of engagement with an ensemble may be observed in *On Fragments* with the Quasar Saxophone Quartet, which I discuss in detail in the following section and in Chapter 3. However, like those of Goebbels, my works do not manifest a full 'death of the author' (Barthes, 1967) but rather displace the authoritative claims that the work resides solely with the creator of the piece. In almost all my work apart from *Motion Studies*, I retain final control of the work, which is not a pure product of spontaneity with equal contribution from all the participants. Such a collaborative environment may be observed in the creation of *Simulacra Studies*, *On Fragments*, *artefacts of presence* and *DNA Problems*.

2.1.2 The Musical Work Concept

Once the work is created, traditionally it assumes ideals related to the conditions of its reproduction and presentation. In *Beyond the Score* the musicologist Nicolas Cook terms this the 'paradigm of reproduction' (2015). The concept of work ideal or *Werktreue* has been

addressed by the philosopher Lydia Goehr in *The Imaginary Museum of Musical Works* (1992),
in which she equates the emergence of the work concept with the emergence of composers'
increased social status and their financial independence from courts within the Western Europe
of the nineteenth century. Thus, composers found it beneficial that their musical scores were
treated like *works* or objects regulated by ideals as to the conditions for their reproduction:

> In its regulative capacity the work-concept suggests to us, because of some quite
> peculiar aesthetic and musical reasons offered at a particular time, that we should talk of
> each individual musical work as if it were an object, as if it were a construction that
> existed over and above its performances and score. In a projectivist view, indicated by
> the 'as if' clause, works do not exist other than in projected form; what exists is the
> regulative work-concept. (Goehr, 1992, p. 107)

In addition, Goehr argues that while the concepts of symphonic works, cantatas and sonatas
existed prior to the 1800s, these works also became viewed as musical work-concepts after the
1800s, thus superficially creating regulative paradigms as to their concert presentation. Prior to
that composers lacked an elevated status among musicians and in no way owned complete
rights to their works as they had during and after the French and Industrial Revolutions.

A call for practical engagement with the ontology of the work concept is made by the
musicologist Nicolas Cook proposing to view scores from the point of view of a performance:

> I suggest that it is only once you think of music as performance that you can start to
> make sense of scores. Seen in the context of performance culture, scores are much
> more like theatrical scripts than the literary text as which musicology has traditionally
> understood (or misunderstood) them, and that is just one of several ways in which
> thinking of music as performance means rethinking basic assumptions of the music-as-
> writing approach. (Cook, 2013, pp. 2–3)

Here, Cook is referring specifically to the study of performance analysis as part of musicological
studies, which he finds is often missing in music (Groth, 2019). Cook also points to how

assumptions about the score have been present in the typical modernists' views of this medium. He argues that modernists assume the traditional authoritative principles on how scores should be interpreted. In this model the music is communicated through written notation and the performers mediate the composer's ideas to listeners who are expecting an adequate reproduction of the score in which the composer's intentions are located (Cook, 2013 in Groth, 2019, p. 6). The modernists' voice in this section is exemplified by Arnold Schoenberg's complaint about of the 'Sodom and Gomorrah of false interpreters' (ibid.).

In contrast to the severe policing of the score exemplified by Schoenberg's statement, my work opposes the work ideal and I embrace openness of the work concept as discussed by Goehr (Goehr, 1992, p. 104). I am open to the idea that a work can be interpreted differently given a set of instructions, and it could even undergo 'radical shifts in function and meaning' (Goehr, 1992, p. 105). The openness of the score that functions like a script with performance instructions rather than a document of authority could be observed in *On Fragments*. In this piece, I devised the score with nine scenes indicating changing setup configurations, and instructions for playing and movement. In *On Fragments,* I introduce sections which are based on field recordings from construction sites in a southwestern neighbourhood of Montreal. In this piece I wanted to experiment with approaches of deriving new gestures by engaging in a collaborative exchange with musicians of the Quasar Saxophone Quartet. Thus, I asked the saxophone players to imitate these field recordings both sonically on saxophones and physically with movements of their bodies. Later, I used their interpretation of the field recordings both as audio and gestural material to be included in different open scenes of the score which follow on from the notated sections. The embodied field recording sections would be different if the field recordings were interpreted by a different saxophone quartet because both sonic and gestural material would be based on responses from different musicians. Moreover, the final section of the piece is graphically notated and gives players the freedom to replace it with their own improvisation in response to the piece. The graphic score gives suggestions in terms of

interacting in a quartet format between players, the field recordings used in the piece and the processing effects included in the electronic patch of the piece.

When it comes to engaging with the concept of the work's ephemerality, an approach that I find inspiring yet explicitly different to my work is the work of the German-British artist Tino Sehgal. In Sehgal's work, 'constructed situations' come in contact with 'players' or 'participants' to execute prescribed actions in a museum or a gallery setting (Lescaze, 2018). The actions in Sehgal's works do not involve any traces in notation or documentation, nor even details of the transactions between the purchaser of the piece and the artist (Lescaze, 2018). Everything has to be mediated through personal engagement with the artist or an assistant from his studio. Since there are no traces of the work, it is transmitted through embodied memory of the performers as guided by training from the artist himself or previous performers of his works (Lescaze, 2018). Sehgal's works are interdisciplinary in nature: although they function within the visual art context through being staged in museums and galleries, they are often performed by dancers or actors as well as museum employees.

As *On Fragments* indicates, most of my works are incomplete when delineated through the musical notation only because they are composed through collaboration with performers where embodied sound and movement is retained in the memory of the performers, and act as living scores (Nickel, 2017). In those cases where the score is to be performed by a different performer, there are also additional forms of mediation that will need to be carried out, such as a new performer creating their own responses to audio or video. In addition, I do not have a single ideal reproduction because some of my works are ephemeral because they are based on specific performers and situations. Thus, I embrace openness instead of the canonic certainty of the musical work concept. Some of my works, such as *Simulacra Studies* and *Motion Studies*, do not use traditionally notated scores but might use a set of instructions devised between myself and the performer(s). For instance, in the first section of *Simulacra Studies*, I devised a sequence of choreographed gestures based on input from the pianist-performer, Marko Ivic. In

the second section of the piece where the images of the male pianist are substituted with female ones, the choreographic material becomes completely open to the pianist reacting in real-time to the piano samples he chooses to manipulate at random. If the piece was performed again by a different performer, I would need to collaborate on input for the questions related to gender that I was investigating originally in this piece. In addition, the video material would need to be remade. Currently, I am working on a remediated score for a new performer of *Simulacra Studies* which will include new instances of his response through gesture choreography, sound and video to questions related to gender and piano performance.

2.1.3 The Ritual of the Concert Performance

In Western classical music, the work ideal demands a performance whose reception is mediated by the ritual of the concert performance. My work and the works of other composers discussed in this chapter fall within some limitations of the concert ritual, which seemingly invites the audience to participate in a communal celebration of the 'concepts of ideal relationship' (Small, 1998, p. 106), as described here:

> Ritual is a form of organized behaviour in which humans use the language of gesture or paralanguage to affirm, to explore and to celebrate their ideas of how a cosmos (or a part of it), operate, and thus of how they themselves should relate to it and to one another. Through their gestures, those taking part in the ritual act to articulate relationships among themselves that model relationships of their world as they imagine them to be and as they think (or feel) that they ought to be. (Small, 1998, p. 95)

The ritual of the concert performance ensures that the work receives its proper presentation according to the expectations built into its presentation. This, according to Small, denies any expressive use of the musician's body, and is where 'The art of representation has completely alienated itself from the human body and its gestures in which it originated' (1998, p. 106).

As it pertains to chamber music, I focus on how the ritual of the concert performance traditionally unfolds for the audience. The audience faces the stage where the performance will take place. Lights shine when the musician walks on stage wearing formal black and white clothing. The audience claps. The musician takes a bow, adjusts the music or makes themselves comfortable in their performance space. There is a collective silence in anticipation of the musical work beginning. The musician begins playing with familiar instrumental gestures. The performance proceeds with a work that some may know, thus, they might anticipate certain of its features. Later, the work might be compared and discussed by some audience members at an interval, comparing its implicit concepts, values or features.

In most of my work, the beginning of the ritual can be observed as outlined above: lights shine, the musician(s) walks on stage, there may be bows, silence with anticipation preceding the first sound. However, this 'sound' might be a physical gesture that does not produce sound or the first gesture that produces sound could then introduce gestures that are ancillary to producing sound, like the embodied physical movement of saxophone players in *On Fragments* or the continuous bowing and pointing gestures of the horn and trumpet players in *Immaculate Machine of Liveness*, or the string bowing gestures associated with scratching sounds in *artefacts of presence* and *Arrows That Remain*. The musician is already present in *Simulacra Studies*, not dressed but sitting bare chested while the audience enters, while in *Motion Studies* the performers are walking on stage in an open collaborative piece while making percussive sounds. In *Once I Forgot what Distance Sounds Like*, the musicians surround the audience and begin in the dark, thus placing attention on sounds heard before later they are seen moving around the audience with the shifting sounds of the spatialised soundtrack.

In contrast to concert music, the ritual of a performance and performing in different spaces is more frequently challenged in contemporary dance. Different experimental approaches to working with gesture while performing in unusual spaces is exemplified in the work of the French choreographer Boris Charmatz. From 2008–2018, Charmatz led a company

called Musée de la Danse, the name of which already hints at the interdisciplinary idea of where he considers dance to be performed – which in Charmatz's case could be anywhere, from industrial rooftop spaces in the south of France, to museums, lofts and parking lots (Charmatz, 2015). Subverting space as a performance medium is one of the characteristics of Charmatz's works, in which audiences can become implicated in the same performance with the dancers. Charmatz presented a *Public Warm Up* with ninety audience participants in Tate Modern's Turbine Hall in 2015 before embarking on the tour throughout the halls of the gallery, in which Charmatz dancers presented performances in different rooms with twentieth-century art (Charmatz, 2015). In addition, Charmatz works with gesture, often with an emphasis on endurance and experimentation. In his piece *10,000 Gestures* that was presented as part of Manchester International Festival 2017, in a span of an hour, dancers had to execute 10,000 gestures without repeating a single movement (Charmatz, 2017). These gestures are drawn from different contexts ranging from choreographic to everyday gestures like practical, political or pornographic and executed by dancers of various age categories. The performance of *10,000 Gestures* took place at Mayfield Depot, a former train station in Manchester, where the audience was seated in mobile theatre risers because it is not normally a designated performance space. At one point in the piece, the dancers traversed the two-dimensional space between performers and the audience, crawling over the audience and performing gestures within the personal spaces of the seated audience.

In a much less radical way, I also work with a concert hall as a space which could accommodate other interdisciplinary approaches outside the ritual of the concert performance where space and proximity to audience can be renegotiated. However, as I experienced in *Once I Forgot What Distance Sounds Like,* I ran into problems when I included different lighting considerations or placement of performers than traditionally assumed. This was not because the concert halls were unequipped to accommodate my requests but rather because the technicians working in such places were mostly expecting the ritual of the Western Art music. For instance,

most likely, they did not expect lighting considerations to be an important part of the piece, although this was communicated in advance by myself and the music director of the ensemble. (The piece is meant to begin in complete darkness, immersing the audience in the sounds from the outskirts of the cities as performed on instruments of musicians surrounding the audience.) As a result, the technicians were resistant to accommodating a request focused on creating an experience outside of the considerations of what typically constitutes a chamber music experience that they were used to.

The continued practice of the ritual of the concert performance as presented by Christopher Small can, in my opinion, only lead to aesthetic stagnation. The concert ritual has been mostly unchanged for more than two centuries. Over that time symphony halls and concert halls have been built to reaffirm the social and cultural values of members of the middle class to themselves and anyone else who may be looking (Small, 1998, p. 109). The practice of presenting a work through the expected ritual of a concert brings heavy assumptions and hierarchical implications. As pointed out by the director of London Contemporary Music Festival when talking about orchestras in his manifesto-like piece in the *Guardian*: 'They know something's wrong. But they prefer to spend time talking about things that don't matter and deliberately avoiding things that do. Instead of addressing aesthetic stagnation, they obsess over clothes, coughing and clapping' (Toronyi-Lalic, 2018). Thus, it seems like it would be beneficial for all (music creators, orchestras and institutions) to embrace new aesthetic experiences within the concert ritual instead of serving an already tested formula that has existed already for more than two centuries.

2.2 The Expansion of Ontological Boundaries of STEIM

The above-argued ontological boundaries in the production of the musical work are different from those in improvised electronic music, from where my entry into my PhD began. Questioning the hierarchical relationships within the ontology of the musical work and the

concert ritual comes from my interest in composition with physical gestures, which was influenced by live electronics, aesthetic choices and gestural instruments coming from STEIM (Studio for Electro Instrumental Music) in Amsterdam. STEIM challenges hierarchies in composer/performer/technician dynamics and in doing so promotes composers who are also performers and gestural instrument inventors. Thus, STEIM does not support rigid distinctions between musicians and technicians as observed in other institutions invested in live electronic research like IRCAM, with its support for modernist aesthetics and hierarchical divisions (Born, 1997). In addition, STEIM's aesthetic of touch (Norman, Waisvisz and Ryan, 1998) and criticism of multimedia performances that lack a stage presence reflects my own views on performance with electronics, which was the subject of my master's thesis, *Live Electronics, Embodiment and Physicality* (Moroz, 2015). There, I discussed the possibility of sensors and gestural controllers to communicate performers' physicality in order to make meaningful connections with the audience.

In the case of STEIM's former artistic director Michel Waisvisz, the idea of bodies merging with technology is exemplified through his instrument *The Hands*, which was inspired by experiments in playing with open circuits in his previous instrument *Cracklebox*, where the body of the performer became part of the musical electronic circuit itself. Waisvisz's work became closely linked with the aesthetic of touch performance with gestural controllers, which has been described as the most important aspect of communicating with the new electronic performance art technologies (Norman, Waisvisz and Ryan, 1998). 'At STEIM we have come to the conclusion that the resultant streamlined aesthetics, purged of the seamy residues of physical exertion, is totally artless: unfelt execution has given rise to unfelt and unfeeling work' (Norman, Waisvisz and Ryan, 1998). In STEIM's manifestation of touch, the authors also mention that too much media art at the time posited itself as a *performance* without any grounding in performance practice, which they found also problematic and related to technology fetishism.

The idea of taking back expression in performances with electronics is what inspired me in the work of STEIM and provoked me to consider the use of physical gestures in electronic music for other purposes than to control electronics. As already stated, I use the interdisciplinary potential of gestures in electronic music to point to other significations when included in a chamber music context. This has the potential to disturb the discipline-specific medium of chamber music because of the theatrical implications of gesture, which subvert the normal concert ritual as discussed in the previous section. Waisvisz merging with his instrument to become 'the prostheticized, computationally augmented or data-formed body' (Salter, 2010, p. 221) contributes to his cyborg identity, which turned my attention towards the cyborg ontology of Donna Haraway (Haraway, p. 7, 2016). This image contributes to an aesthetic and philosophical angle in my music where the performer's embodiment of electronic and musical processes becomes of central concern. I discuss this further in Chapter 3.

2.3 The Expansion of Ontological Boundaries and the Concert Ritual in the Avant-Garde

2.3.1 Postmodern Experiments in Music, Dance, Art and Fluxus

The 1960s was a rich period for artists experimenting with the social and ontological boundaries of their works and going beyond the mediality of their art practice while also involving the body. It is in this period that the interdisciplinary aspects of my work find their resonance and inspiration. The collapse of hierarchies within the modern dance discipline that are relevant to my compositional process can be traced back to the collaborative work of John Cage and Merce Cunningham. Cage's first experiments with chance music parallel his first electronic works for the Cunningham Dance Company (Holmes, 2012, p. 412). Having experimented with electronic tape music, which he found less satisfactory (ibid.), Cage wanted to collaborate with Cunningham as he also found dance groups easier to work with: 'I soon learned that if you were

writing music that orchestras weren't interested in – or string quartets, I made several attempts, I didn't give up immediately – that you could get things done very easily by modern dance groups' (Cage in ibid.). Postmodern dance was more open to his experiments than the concert music of the time.

As my work is concerned with performers' bodies and technology, I find *Variations V* (1965) to be very relevant to my work because it features one of the first uses of sensor technology reacting to moving bodies of dancers (ibid.). In this work, Cage experimented with several new approaches both to composition and live electronics. The series of *Variations* pieces allowed performers to make 'immediate but disciplined decisions, and within specific structural boundaries', as Christian Wolf remarked: '[they] really pushed the notion of what constituted a piece of music, because nothing was said about anything except you had to make yourself something out of these lines and dots and things that were on plastic sheets of paper' (Wolf in Holmes, 2012, p. 413). In my work, I also push the idea of what constitutes a musical work; however, in contrast to Cage's *Variations V*, decisions can spontaneously emerge within a group through embodied instances during an open score work, as exemplified in *Motion Studies*. Also, unlike Cage and his preference for disciplined actions with no room for improvisation, *Motion Studies* was not notated but stored as part of the embodied memories of the four participants and came to be like an embodied score shared between us where new instances of embodiment could emerge through improvisation within a fixed experimental structure.

The use of new techniques in a multidisciplinary setting of dance and music, in addition to novel ways of controlling and performing with live electronics, was very influential in the 1960s and produced significant effects on many other genres and art forms. The ripple effect of Cage's influence could be observed in the work of postmodern dancers and choreographers of the Judson Church Theatre Group. As the theatre researcher Nick Kaye observes, experiments in indeterminacy and in pushing the disciplinary boundaries of a work resulted in several events

such as 'The Concert of Dance' (1962) where: 'In their publicity, the group stressed the importance of choreographic process that could include "indeterminacy", rules specifying situations, improvisations and spontaneous determinations' (Kaye, 1994, p. 91). The range of interdisciplinarity in contemporary dance as discussed by Ramsay Burt in *The Specter of Interdisciplinarity* signaled a break with modernism as well as the coming of postmodernist practices well across many arts, turning them towards theatre where The Judson Dance Theater drew the spectator's attention to the object-like, embodied materiality of their dancing in ways that, in this sense, were also theatrical' (Burt, 2006). Thus, the experimental side of the Judson Dance Theatre (JDT) happily embraced the experiments associated with pushing the boundaries of what constituted dance at the time.

I find the experiments and interdisciplinarity of postmodern dance very useful in considerations of interdisciplinary collaborations in my work where I aim to expand the mediality of my practice and dislocate the implicit hierarchical relationships. As already mentioned, my work hopes to contribute to the agonistic-antagonist interdisciplinary mode of thinking which, according to Georgina Born, challenges discipline-specific boundaries towards the creation of new knowledge regarding those disciplines (Born, 2010, p. 211). In *Simulacra Studies*, *On Fragments*, *DNA Problems* and *Motion Studies*, new instances of embodiment have arisen through the interdisciplinary collaborative process that challenge the medium-specific boundary of the music discipline, turning the viewer's attention to theatre within the frame of a musical performance.

Further experiments in suspending the formal expectations of a musical work by confronting the implicit hierarchies of the genre through the ritual of the concert performance could be witnessed in the works of Fluxus artists. In the piece *For a Drummer, Fluxversion 3* by George Brecht: 'Performer drums over drum with 2 ends of slightly leaky water hose (Fluxus Performance Workbook, 1966, p. 28). One can only imagine the consequences of such a performance for the audience. In *Fluxus Instant Theatre* (1966) by Ken Friedman, performers

are asked to confront the audience by asking them to perform pieces from Fluxus workbook facilitated by a conductor. Here the ritual of the concert performance normally observed is reversed by a Fluxus performance, which was non-hierarchical as it opposed the dualism of Judeo-Christian culture rooted in its binary logic (Lushetich, 2014, p. 2). There is no doubt that Fluxus also had strong influences on the collapse of hierarchies in contemporary dance and helped to push the boundaries of what constitutes a musical work in experimental music of the 1960s.

At the same time, multimedia artists like Carolee Schneemann were exploring social taboos on the topics of individual bodies in relation to the social. Schneemann participated in some JCT events and happenings organised by Fluxus artists like George Brecht, knew many experimental composers of the 1960s and was married to the composer James Tenney. Her early work explored the sexualised narratives of the female body in relation to her own perception of it, which she often staged through elaborate filming events in pieces such as *Eye Body* ('Carolee Schneemann', n.d.). In the 1950 and 60s she often staged performance pieces in galleries that challenged the patriarchal presence of male artists in those spaces which were 'both sensual and sexual, while simultaneously breaking gallery space taboos of nude performances beginning in the 1960s' ('Carolee Schneemann', n.d.).

Many years later and in a chamber music context, I still think questions of sensuality through bared body presence would be of shocking value. I tested this idea in *Simulacra Studies* by introducing a bare-chested performer five minutes before the start of the piece and before mapped projections of the concert pianist appeared on his body. This element played a role in confronting the social norms of the typical piano performance, contributing further to other unexpected situations of the performance such as the absence of the piano and unexpected video mappings. The audience's reactions to this piece ranged from 'where is the piano?' to one critic feeling like he was being punched in the groin ('Electric Spring 2017 – 5:4',

2017). Thus, in this piece I feel validated in provoking such strong bodily sensations through the choice of placing attention on the performer's body.

2.3.2 Rediscovering Experimental Musical Theatre of 1955–1973

The development of disciplined action with the use of aleatory techniques as well as the desire to re-engage with the body is argued to have contributed to the emergence of instrumental and new music theatre from around 1955 (Beard, 2019; Adlington, 2005; Salzman and Desi, 2008). The multimedial musical theatre of the 1960s addressed multiple senses of the audience, and in doing so addressed questions relevant to the codes of the concert ritual. Robert Adlington defines multimedial music performances as 'those that take place in the physical presence of performers who were seen as well as heard. The public context and the characteristics of particular performance spaces added further to the multimedia spectacle' (Adlington 2018). While the existence of multimedial music theatre of the 1960s cannot be denied, its documentation is underrepresented when compared with serial modernist avant-garde music of the time.

Personally, I have come to discover experimental music theatre of the 1960s quite late, making close contact with it when researching as part of the *Composing with the Archive* course at the Darmstadt International Summer Course 2018 led by composer Kirsten Reese. Prior to that, I suffered a gap in my knowledge of experimental music theatre of the 1960s and I attribute this to the fact that I came to composition later in life since I was trained as a performer. In my earlier career strong emphasis was placed on the modernist concert music repertoire, and experimental music theatre was not something I engaged with as a professional or as a student performer. Despite this, I think there is still a bigger problem concerning the documentation and literature of experimental music theatre. For example, one can trace numerous published biographies of Stockhausen but only a couple of Mauricio Kagel. As the musicologist Björn Heile points out, there is a lack of an overarching definition of what constituted the experimental music

of the 1960s (also known sometimes as the new music theatre) as well as documentation regarding overarching practices, tendencies and processes which would definitively draw the line between those works that were new music theatre and those that were not (Heile, 2010, p. 131).

Similarly, disproportionate accounts of composers who engaged with theatre and composition with performers' bodies could be noticed in the public documentation of Darmstadt's history. I experienced difficulty in finding information on composers who were involved in new music theatre in the 1960s at Darmstadt when researching in preparation for the course. Through prior research, I came across Martin Iddon's *New Music in Darmstadt* (2013); however, I found very little information about female composers and other non-serial composers, making me think that perhaps all music of the golden age of the avant-garde at Darmstadt was male and deeply invested in the polemics of serial composition.

A more insightful view of these activities, as they related to my research, proved to be the collection of audio recordings made from Darmstadt forums between 1960–1987, accessible with special permission from the IMD's website. There I could see several seminars and forums addressing such questions as 'New Music – New Stage' led by composers Mauricio Kagel and Dieter Schnebel, addressing the theatrical means of composition (Adlington, 2019, p. 5). Also, since I decided to focus on *Divertimento for five players* (1974) by Christina Kubisch, I came across interviews with Kubisch in German, in which she shared her recollection of partaking in the course addressing the body of the performer in 1974 at Darmstadt (Kubisch, 2014). In addition to that, in Darmstadt's physical archives I found many pieces by female composers like Moya Henderson, Annea Lockwood and Gillian Bibby, who used graphic scores and elaborate descriptions for music theatre pieces which used costumes and different performer/audience configurations.

Through individual articles in *New Music Theatre in Europe: Transformations between 1955–1975*, edited by Robert Adlington, I found that there was a strong emphasis on

performers' embodiment using gestures that served as compositional material. However, the documentation of such embodied compositional practices is often missing today (Beard, 2019). In addition to Cage's 'disciplined actions', there were methods such as description of sound which allowed performers to find their own embodied approaches to interpreting and acting techniques (Beard, 2019). This approach is difficult to pinpoint as it was enacted between different musicians in a collaborative setting, developing through distributive creativity (Sawyer and De Zutter, 2009). It was noticed that often musicians working in music theatre showed an interest in 'avant-garde theatre techniques, the notion of embodiment, and a desire to combine expertise from different aesthetics and artistic disciplines' (Beard, 2019). This observation is very valuable to me because I also work with similar methods in wanting to combine different aesthetic concerns as I often work with different artistic disciplines and media. This approach is also very close to that of the composers working within 'The New Discipline' of which I will speak in the following section.

As the musicologist Francesca Placanica has noticed in her research often composers like Berio and Stockhausen worked with performers who were drawing on many disciplines and although their works were thoroughly notated, the final execution of them had other elements of performers' characteristics which manifested themselves through embodied actions (Placanica, 2019). There were also numerous incidents where research into embodied mime technique with musicians in pieces by composers such as Stockhausen and Peter Maxwell Davies often was not credited to the original mime performer who helped to develop them (Beard, 2019).

Multimedial music theatre engaged with different art forms and by doing so addressed the ritual of the concert performance, sometimes as the implicit subject matter of a composition. It embraced working with performers' bodies, thus also pushing the work outside of the music specific genre and challenging performers to expand their music roles through interests and training in avant-garde theatre and other art forms (Beard, 2019). However, as noticed by Beard, Adlington, Placanica and Heile such collaborative work was most of the time uncredited

when emerging from specific performers, and the embodied practices that arrived at such interdisciplinary aspects of the work were not documented well enough to ensure the continuity of the compositional technique. While researching in Darmstadt, I wanted to connect to the practices of collaborative work performance and composition that I witnessed in the IMD archives of the 1970s. Thus, I worked on embodiment of gender and its representations in which gestures and movements came from a collaborative approach of workshopping together to expand musical roles in the composition of *DNA Problems*.

2.3.3 DNA Problems

In *DNA Problems*, I worked with elements of a musical collage based on the music theatre piece *Divertimento for five players* (1974) by Christina Kubisch. My work was created and premiered at the Darmstadt summer courses in 2018. Here I engaged in composition with 'found' material where no notated or recorded material was composed by me. The score came from Darmstadt's archives; however, it was only a partial score which included instructions without the music notation which was missing. I recovered part of the notated score through private correspondence with Kubisch (personal communication, 18 July 2018). The soundtrack of the piece was a combination of the original recording of *Divertimento for five players* and a discussion from the Darmstadt forums on the notion of *female aesthetic* as introduced by composer Mia Schmidt in which one hears Morton Feldman's voice interject in the discussion with his opinion on the low female participation in composition.

Since I wanted to focus on female composers' participation at the Darmstadt summer courses between 1955 and 1990, I searched extensively for any signs of their participation and engagement in the forum recordings. Through my research, I came across very few discussions in the forums about female participation in the earlier part of the summer courses (1955–1980). However, there were more discussions in the 1980s. I used forum recordings in addition to concert performance recordings, with the forum discussions coming from 1987 and the original

premiere of Kubisch's piece from 1974. *DNA Problems* is a performance in which there is an emphasis on the absurdity that I found in the notion of the *female aesthetic* as discussed by composers Mia Schmidt and Morton Feldman.

The original *Divertimento* had very different significations to my version of the piece because it addressed the notion of pianistic virtuosity in the execution of difficult 1960s serial music, perhaps with nods to such avant-garde pieces as Boulez's Piano Sonatas. The original part was split between five pianists who were guided by different click tracks which accelerated with different rates of change. In the performance of *DNA Problems*, we played a shorter introduction than the original and when the music was at its fastest, relied on the playback of a recording of the original performance, thus encapsulating the archival performance material in the live performance while embodying theatrical interactions with different costumes and wigs. The theatricality of the original *Divertimento* lay in the ridiculousness of its execution where five pianists were sharing the piano while wearing oversized headphones, attached to cassette players while playing to a click track (Figure 2). This seemed very difficult, just like the type of virtuosic piano music that Kubisch's *Divertimento* was critiquing.

Figure 2. Performance of *Divertimento* at Musica Nova, Bremen 1976 (C. Kubisch)

In *DNA Problems* (Figure 3), the performance turns into a theatrical 're-enactment' of the absurdity of the arguments heard in the forums by objectifying the female image through physical interaction with the two wigs. Such interactions were developed collaboratively in a dance studio with the help of the choreographer Lisa Biscaro Balle, who encouraged us to search for embodied techniques that could serve to represent gender. Because of the multiplicity of ways to represent gender, we arrived at playing with an object such as a wig as a main representation of this embodiment in addition to changing clothes to represent different genders. Thus, female form was not tied to only one representation but changed between performers within our group. *DNA Problems* could be performed again if it was notated in such a way that the search for new embodied interactions was suggested through a description in the score. However, there is no score for this piece. *DNA Problems* was performed alongside a collage of recordings, including a version of Kubisch's original piano intro in the *Divertimento* that was played live and accompanied by the click track instructions from the original score. Such a performance would always be unique to the group of people performing it.

Figure 3. From performance of *Composing with the Archive* at Darmstadt Intl New Music Course, 28 July 2018 (IMD photo archive)

2.4 Current Manifestations of Multimediality in Music: The 'New Discipline' and Relational Music

I would like to point to multimediality implied in the works of composers associated with the 'New Discipline', which is not an aesthetic but a way of working for Jennifer Walshe, the author of its manifesto (2016). The 'New Discipline' draws composers together of whom, 'No-one can quite agree – is it music? music theatre? composed theatre? performance? music with visual elements? visual music? opera? musical? instrumental theatre? live art? performance art? performative actions? physical actions?' (Walshe, 2016). The works of the 'New Discipline' usually involve extensive collaboration with performers as well as composition with samples and new media. In the 'New Discipline', the physical presence of performers is amplified on stage, which challenges the accepted dynamic of the ritual of the concert performance where performers are relatively motionless actors in prescribed performance clothing going through the symbolic gestures of such a ritual (Small, 1998, p. 155). In addition, the recent re-emergence of works that embrace the multimediality of the music performance could be also described as Relational Music, a term proposed by the German musicologist Harry Lehmann to describe music that is tied to digital approaches to composition and that seeks new ways of associating music material with ideas from 'the real world' (Lehmann, 2016).

Lehmann establishes a clear break from absolute music with the advent of technology and the digitisation of sound, in which samples are used in place of musical notation (Lehmann, 2019). Composers now create with digital samples as their primary compositional material, as digital material to be embodied or imitated by the performers, and use video capture routinely to document their pieces for preservation and future performance reproduction. The link to the digital revolution is supported also by the musicologist Nicholas Cook, who argues that since the 1980s, because of the dominant presence of video and digital technology, audiences have accepted music as a form which addresses multiple senses – the multimedial aspects of music

(Cook, 2015, p. 189). The 'New Discipline' may use strategies of Relational Music, however not all Relational Music belongs to the 'New Discipline'. There is a commitment related to the physical presence of the performer that influences the way the work is perceived in the 'New Discipline' that is not always necessary in Relational Music.

Walshe does not identify the 'New Discipline' as the reemergence of the 'new music theatre', even though the traditions that it may draw on resemble the multimedial approaches of the new music theatre of the 1960s which address the multiple senses of the performers and viewers (Adlington, 2019, p. 4). To Walshe, 'the physical, theatrical and visual are just properties of music' (Walshe, 2016). She attributes the refusal of a clear association with the new music theatre of the past to cultural changes that brought about her re-examined view of the genre that she calls the 'New Discipline'. These cultural changes could be attributed to the emergence of MTV, the internet, the Black Lives Matter movement, our current life in the Anthropocene: in short, many cultural shifts which influence composers working today who are also interested in the question of which bodies could and should be present on stage:

> Different people, with their different bodies, mean vastly different things, are read in vastly different ways. In the last year or two in particular, as movements such as Black Lives Matter gained traction, as discussions around non-binary gender and trans rights pushed to the fore, as elite composers discussed their BDSM lifestyle openly, it seemed that perhaps it might be possible for new music to dive into *people*. (Walshe, 2016)

Thus, it seems that the 'New Discipline' for Walshe is relevant to 'post-humanism, which critiques the anthropocentrism, eurocentrism, and heteropatriarchy of humanism' (Spatz, 2017a) with which the hierarchies of Western performing arts are thoroughly enmeshed. For me, this relates to Donna Haraway's cyborg ontology, where the cyborg is the 'abject' body that is added to the discussion of which bodies should and could be included. In addition to addressing multiple senses, the music of Jennifer Walshe and other composers active in the 'New Discipline' also uses methods which became only relevant with digitisation such as visualisation

and sonification, which bring in material from the real world that Lehmann discusses in his lecture on *Experiments in Relational Music* (Lehmann, 2016)*.*

When discussing 'New Discipline' approaches to work, Jessica Aszodi highlights what makes this work interesting and exciting by focusing on the subjective experiences of the performers and the flexibility of the approaches (Aszodi, 2017):

> This is a music that can create situations for performers and audiences that utilize both immediate experience and signification in ways absolute music cannot. Through it we can explore new corners of the interior experience of music making, community kinetics, directionality, interpersonal relationships, sexual hierarchies, the specifics of site, or references to any cultural artifact you can tie down. (Aszodi, 2017)

In Chapter 3, I discuss situations which create compositional material from performers' experiences. However, I find it is important to point out that musical works which explore performances with extra-musical material such as the body can engage in a process of subjective meaning making, thus making them relevant to other cultural artefacts as pointed out by Aszodi.

2.4.1 Examining Works from the 'New Discipline'

Here I examine works by the artists who embrace the 'New Discipline' ways of working with some who focus on 'subjective meaning making' (Aszodi, 2017) and methods relevant to devised practice, in which performers devise the work between each other. I will also examine works by Jennifer Walshe, Steven Takasugi and Alexander Schubert, and compare them to my own work. These works amplify the performers' presence on stage by drawing attention to musicians in other extra-musical roles as well as musical roles with exaggerated instrumental gestures. All of these works could also be called Relational Music as they work with strategies such as visualisation, sonification and theatricalisation, as well as using digital material such as sound and video samples for their composition. Similarly to these composers, I also work with

performers' physical presence on stage, where extra-musical material derived from collaborative research with the performers informs the listening experience of the piece. In addition, most of my works are composed through digital means where computer processes of sample composition and manipulation take place before composition of notated material and point to extra-musical significations.

Jessica Aszodi embraces a devised music practice through collaborations in which subjective meaning making can occur. In *Grafter,* a piece Aszodi developed with composer Jenna Lyle, the focus is placed on the material qualities of sounds and the quality of many different levels of both physical and sonic embodiment. *Grafter* is a process-based work that evolves with each new performance with the aim of intentionally embodying the other participant through tools and knowledge exchange (Aszodi, 2017a). Thus Lyle, who has a background in dance, would teach Aszodi movements associated with cheerleading and Aszodi with her operatic background would introduce Lyle to different vocal formants one can make in order to control electronic feedback with a microphone (Aszodi, 2017a). The performance features voice, movement and electronics and is usually performed in a gallery or a theatre environment (Aszodi, 2017a). Similar devised instances of collaborative exchange happened in *Motion Studies*, a work I developed with theatre and music participants. In *Motion Studies*, through embodiment of movement and sound, knowledge between music and theatre disciplines was exchanged between the participants. It is also a process-based work that evolves with each new performance and uses approaches from both disciplines.

Jennifer Walshe returns attention to the performers and their bodies in her works without necessarily devising those works with a performer. In *SELF-CARE,* for the solo accordionist Andreas Borregarde, the performer undertakes a series of tasks which expand his prescribed role as a musician. In the piece, he executes tasks such as balancing yoga poses, method-acting roles of rage, jumping, reciting text on various topics (some associated with self-care, banking, bitcoin), and other unfamiliar tasks such as improvisation to pre-composed tape

material. The musical role of the performer in the piece is extended with extra-musical actions and has been composed with the physicality of this performer in mind (Borregaard, 2019). Also, Borregaard is asked to come up with some material, including a disciplined routine such as could be observed in the military but is closely associated with his specific accordion-playing routine, which can be recalled obsessively during the performance. Thus, the piece combines various methods which challenge the performer by extending his musical role through other disciplines and practices.

A similar work to Walshe's *SELF-CARE*, is my *Music for Speaking Bellows* for the accordion player, Teodoro Anzellotti. I initially sought to situate the performer through approaches to cross-modal associations of gestures to sound files and other cultural references to do with the multicultural identity of the accordion. Due to a lack of collaborative time together, the devising aspect of the piece that would be informed by Anzellotti's personal input and physicality was not possible. Thus, I worked with disciplined actions where I asked the accordionist to insert his own text based on the languages he knew in response to the voice in the electronic part of the piece. Similarly to Walshe's approach, I prescribed the cultural gestures needed from the performer through photos submitted in the explanation of the score. In short, I tried a few methods of making his physical presence felt on stage that subverted a typical chamber music accordion performance. At one point, Anzellotti plays accordion music from the vernacular tradition while walking on stage. The accompanying multilingual text based on *notes for soloists* by Cia Rinne framed Anzellotti's presence in the piece, in which he is asked to insert his personal answers, informing the audience of his own experiences of war and censorship.

Another seminal work that puts a critical focus on performers' presence on stage is Steven Takasugi's *Sideshow.* In this piece the performers are dispersed in a single line while facing the audience as if put on display, sometimes demonstrating a state of hysteria associated with being on stage. This state of unease and hysteria comes across with uncontrollable

laughter mixed in with electro-acoustic samples of difficult instrumental passages which are sometimes mimicked or executed by instrumental playing. In the programme notes to the piece, Takasugi says that: 'Sideshow is a meditation on virtuosity, freak shows, entertainment, spectacle, business, and the sacrifices one makes to survive in the world' (Taleaensemble.org, 2018). Similarly, he does not shy away from the fact that Sideshow is a very dark piece of music theatre: 'there is nothing funny about this theater; on the contrary, something fatalistic or absurdly tragic' (Taleaensemble.org, 2018). If one is to take the metaphor of Coney Island performers literally, then it becomes clear that in Sideshow the display of the performers and their uncanny doublings function as a type of critique of the medium of music performance, which becomes a theatrically manifested spectacle much like the Coney Island sideshows from the earlier part of the twentieth century.

Another piece that mocks the concept of ensemble virtuosity through the use of technology with emphasis on instrumental gesture is Alexander Schubert's Serious Smile. The piece draws attention to performers' presence on stage through exaggerated instrumental gestures used to shape the electronic sound and could be related to Relational Music concerns such as theatricalisation of the performance situation and the use of electronic samples. In a programme note on Serious Smile, Schubert says that the piece plays with the mechanical and digital forms of representation while extending the instrumental behaviour of the musicians through the use of sensors (Schubert, 2014). In this piece, four musicians are equipped with motion sensors which allow them to shape the electronic parts of the piece through movements resembling instrumental playing. Although the configuration of the ensembles as a trio would remind one of a chamber music setting, sonically the piece is closer related to the hardcore or free jazz aesthetic already pursued in several of Schubert's pieces (Schubert, 2014). The interactions with technology are grossly exaggerated through the theatricalised and somewhat hysterical instrumental movements of the musicians, 'drawing attention to the artificial and inhuman qualities of electronics and technical interaction' (Schubert, 2014).

Similarly, in most of my pieces I am intrinsically drawn to the narratives associated with performance with technology and prescribed performance roles. This perhaps has to do with my own performance background and close investigations into the performance practice of the performers that I'm collaborating with. It also relates to my treatment of embodied knowledge as material for composition that I will discuss in more detail in Chapter 3. Like Takasugi and Schubert, I also critique and draw on darker images of the performer(s). In some of my works like *Simulacra Studies*, the performer is a black-costumed executor of pianistic gestures on simulated copies of himself projected onto the screens beside him. In this piece, a hysterical state of the performer could be observed through images of a forced smile on the copies of the pianist projected on screens. There is also irony and darkness in the disheveled copies of the pianist as a female character. The perfect pianistic images are replaced with images of the performer impersonating a female character who goes through stages of images from female to male and back to the original image of the performer. Just as Takasugi points to a programmed idea of Coney Island performers through the classically trained performers we see on stage, and Schubert points to inhuman and technological function of the performers with nods to the virtuoso technical professionalism that is demanded more and more of musicians today, I point to other gender presentations of the pianist-performer that hide behind the perfect image of the male pianist on stage as augmented by media and technology.

2.5 Conclusion

As discussed in this chapter, the spirit of interdisciplinarity of avant-garde music and postmodern dance is important to my compositional concerns regarding extending the disciplinary boundaries of the musical work. In addition, I share concerns of the 'New Discipline' composers and performers who engage with devised practice where a work can share authorship and where the materials of the work emerge through spontaneous interaction with performers. I also share concerns for amplifying performers' presence on stage and subverting

the ritual of the performance present in the works of the 'New Discipline' composers. An emphasis on the performer's presence on stage, highlighted through gestures and movement, is in all of my pieces and will all be discussed in more detail in Chapters 3 and 4.

Chapter 3: My Works' Ontology: On Compositional Approaches

In this chapter, I discuss my works which engage with digital processes involving live electronics and the gestural control of performers. In these works, musicians become co-creators of musical input through their interactions with gestural interfaces and exchanges in a collaborative process, thus expanding their performer autonomy. I will also discuss details of my work with concern for gesture, the body of the performer and the devising process in an interdisciplinary collaboration where listening becomes of central importance. Thus, I show three aspects of my compositional approaches by discussing examples from submitted works portfolio:

1. gestural composition with media and live electronics – focusing on the role of technology in relation to the embodiment of electronic sound and media processes and its ability to create cyborg theatre;

2. the body as repertoire and material for composition – working collaboratively with performers to compose with their embodied knowledge of instrumental, performance and acquired techniques; and

3. sensing in the moment of composition – listening, perceiving and reacting in an interdisciplinary work with theatre practitioners, informing the composition of a chamber music work for Continuum Ensemble.

3.1 Gestural Composition with Media and Live Electronics

In my pieces the performers' gestures control the electronic processes using data mapping to influence perception and multimodal gestural signification with and without other media such as video. I use strategies of composing with gesture as explicit compositional material according to three approaches: as an expressive communicator of the performer's physiology, as a tool to

subvert audience's expectations and as a communicator of affects utilising multimodal expression. Here, I address these approaches by discussing works that might use idiomatic instrumental gestures to create what I will refer to as cyborg theatre.

The use of video and live electronics in my portfolio of works relates to aspects of living in a mediatised culture, thus relating to what the theatre researcher Jennifer Parker-Starbuck refers to when describing cyborg theatre in her research: '[cyborg theatre] proposes an ongoing re-examination of corporeal-technological identity. By incorporating technological language alongside psychoanalytic, cultural, and personal stories that comprise the "abject", a cultural cyborg identity might emerge' (Parker-Starbuck, 2011, p. 91). Abject bodies in Parker-Starbuck's view are those that disrupt symbolic structures of language and find the agency to do so inside the space of the performance (p. 91). They are also bodies that are often 'disabled, disembodied or mechanical'; 'bodies that are excluded in the process of subject formation' (Butler in Parker-Starbuck, 2011, p. 52). I propose to view some of my work as cyborg theatre because it investigates the interdisciplinary aspect of composition with physical gesture where personal responses from the performer, automaton and machine gestures, and hybridity of sound/media can disrupt the traditional structures of the musical performance.

3.1.1 Cyborg Theatre: From Idiomatic Gestures to Disruption

I use idiomatic instrumental gestures because of their clear teleological purpose before any further composition/subversion of gestures takes place. In *Simulacra Studies*, *artefacts of presence* and *Arrows That Remain*, there is a clear connection of gestures to the genre of music that the pieces signify: exaggerated pianistic gestures in *Simulacra Studies* – solo piano music; fast fiddle bowing gestures in *artefacts of presence* – fiddle folk music; string bowing gestures in *Arrows that Remain* – string quartet music. Therefore, emphasising expected instrumental gestures in these pieces plays a key role in establishing the relationship of gestures to the

instruments they represent. Starting with idiomatic instrumental gesture correlations also allows for a teleology in which gestural correlations gradually change when electronic sound processing is introduced in the piece through a dislocation of sound to gesture. This allows for the further composition of a cyborg theatre as the gestures start to disrupt the genre in which they were originally created and become associated with extra-musical significations.

In *Simulacra Studies*, I used the Piano Hands (Figure 1, p. 17) as a gestural interface that allowed for control of the computer interface to make the invisible piano possible. The gestural interactions with the missing piano interface served the theatricality of the situation which I then mapped to different video characters of the pianist. The piece opens with restrained gestures in mid-air as if playing on an absent piano keyboard. In this section, I devised a sequence of choreographed gestures whereby the choreography of movement by the physical performer is replicated for the two filmed characters appearing on the screens: first for the pianist and later for the feminine version of his character (see Figures 4 and 5).

Figure 4. Simulacra Studies, performance 25 January 2017, Phipps Hall, University of Huddersfield (S.

Moroz)

Figure 5. Simulacra Studies, performance 25 January 2017, Phipps Hall, University of Huddersfield (S. Moroz)

To begin with, the choreographed movements are limited to the close proximity with the pianist's body, contributing to the restrained look of his gestures. Almost immediately, there is a variation in the idiomatic gestures as the pianist gradually starts to use his body as the playing interface. In this way, he introduces the idea that this piece is also about his bodily presence as he plays with images of himself on himself. Here, I wanted the visual gestural interactions with the invisible piano interface to be simple and direct, later becoming more varied, expanded and subverted. Thus, the repetitive sequence of gestures allowed the viewer to understand the correlation between the mediatised versions of the pianist on screen and his physical self on stage. In section 1 (Figure 4), the initial idiomatic gestures coming from the physical performer were mapped to the acceleration of arm movements, sounding like they were produced with the

intention of playing piano chords, showing a believable one-to-one mapping of movement to sound.

The overarching trajectory of the gestural development of the piece is one of moving from controlled choreography to more expressive gestures to openly improvised gestures using touch sensors. As the piece progresses towards its second section (video documentation 2:20–3:30), the teleology of gestural interactions becomes dislocated from choreographed movement to open gestural movement controlled by the performer. This part is dependent on the video appearances of the right and left screens. From here, the prepared piano samples replace the synthesised sound of the physical pianist as he reacts to the prepared piano sounds coming from the video characters on screen. In this section, the performer's response could be referred to as gestural interface virtuosity in addition to interdisciplinary virtuosity (Shlomowitz, 2016), since the expressive response in a musical situation is controlled by reacting on the fly to timing and sampling manipulations (to do with speed, stutter, reversal and sample choice), in response to sound samples coming from the video projections (Dobrian and Koppelman, 2006, p. 279). In the third section (video documentation 7:25–8:40), the complex development through gesture and image subversion dissolves into one-to-one mappings of touch to synthesised sound. This part features the semi-naked presence of the pianist without visual projections, engaging in improvised pianistic gestures on the surface of his body.

Similar composition with gesture, where idiomatic gestural control is used for live electronic processing that becomes disrupted to reveal other significations, occurs in two of my pieces for string instruments, *artefacts of presence* and *Arrows That Remain*. *artefacts of presence* uses archival material from the Bohdan Medwidsky Ukrainian folk music archive and was part of the larger project Docu_presence. Overall, I wanted the theatre of *artefacts of presence* to be initially anchored in idiomatic violin playing gestures reminiscent of the fiddle playing tradition of Ukrainian folk musicians featured in the video archive.

artefacts of presence is based on three archival video recordings and one audio recording of a famous Ukrainian diaspora fiddle player, Pavlo Humeniuk: 'Hraj, abo hrozshi widdaj' ('Play or give back the money'; Humeniuk, 2015). The composition with idiomatic bowing gestures starts at m. 105 (video documentation 5:37) and can be observed as the violinist air-bows before resuming traditional playing on the strings. The air-bowed movement manipulates the looped sample of the opening of 'Hraj, abo hrozshi widdaj' by processing the audio, which speeds up and slows down the sample much like the sample manipulations in *Simulacra Studies.* This gesturally mapped audio processing is possible because the bow is attached to an accelerometer sensor.

In *artefacts of presence*, not much gestural movement is used to process the audio; however, the small manipulations of the audio sample play a central role in the theatre of the gestural composition of the piece. Here, I was playing with the imperfect materiality of the video material, which may be seen as glitchy and disintegrating. Through the presence of the violinist, I was also concerned with setting up an embodiment of the fiddle playing tradition heard and seen in the archival materials of the piece. Thus, after establishing the role of the violinist through conventional playing with idiomatic gestures, a subversion of bowing gestures occurs when the sample becomes manipulated by the violinist's air-bowed movements. In this moment, bowing with gestural control processes to affect the samples heard could signify a variety of meanings. To me, the play with temporality of the archival audio signified playing with memory and its imperfections. In this piece, gestural sample manipulations challenged the fixed nature of archival recordings by re-examining, juxtaposing and composing with them, perhaps as one does with memories that cannot be recalled accurately.

In my work, composition with idiomatic instrumental gestures allows for composition from one-to-one relationships of gesture to sound to interactions that become more complex. As the pieces progress, the initial gestural correlations become subverted and multimodally linked to other significations, disrupting the idea of the musical genre where they were originally created.

3.1.2 Machine and Automation of Cyborg Theatre

In some of my works, when I am using sensor attachments like in *Immaculate Machine of Liveness*, *Simulacra Studies*, *artefacts of presence* and *Arrows That Remain*, I explore the body in relation to mechanistic and automated procedures. In this section, 'mechanistic' refers to rigidity of movement and 'automaton' to the repetition of movement. In other works that use fixed media and/or no sensor attachments, such as *On Fragments* and *DNA Problems*, I also explore the themes of automaton and machine-like movement by composing with physical movement when fixed electronic sound is heard. In this instance, movement represents sound but does not create it. For example, from mm. 35–48 in *On Fragments* (video documentation 3:40–4:12), the saxophone players repeat their movements after looping short instances of their playing. The repetitive movements in this instance embody digital looping and gestural repetition that visually accompany the heard sound, thus re-contextualising what is heard through gestural movements.

My first use of automaton-like gestures was in *Immaculate Machine of Liveness*, where I used the non-idiomatic gestures of the players with various speeds of bowing and turning left and right with their instruments. Since this was the first piece in my research with gestures, I was not yet aware of the collaborative time I would need in order to develop such a piece through gestural interactions. Thus, I chose a simple solution – a repetitive pattern of gestures that could be easily learnt by the musicians. Despite the relative simplicity of the automaton-like gestures, the use of non-idiomatic gestures to control sound processes produced gestures somewhere between the expressive and the automatic – a poietic gestural response to technology being used as 'electronic forces impinging on the body' (Masumi in Salter, 2010, p. 252) (see video documentation). In Chapter 4, I discuss the compositional process of *Immaculate Machine of Liveness* in more detail.

As in *Immaculate Machine of Liveness*, several of my works with live electronics and sensors are preoccupied with problems that may arise from merging natural and artificial behaviours and the emergence of the poetic gestures due to the presence of digital technology. I am interested in situations where gestures acquire embodied behaviour in the relationship between human and technology when extended through sensor-based prosthetics. Since I mostly work collaboratively with musicians and technology, this poietic and personal reactive behaviour becomes material for composition that I explore further in my pieces.

Another instance of repetitive movement when performing choreographed gestures can be observed in *Simulacra Studies*. At the beginning of this piece, the performer performs somewhat rigid pianistic gestures which trigger synthesised sound through the movements of his arms. This continues until he breaks out of this pattern with the introduction of more expressive improvised gestures. The restricted repetitive movement we see at the beginning contributes to the sense of generic pianistic execution and an absence of the performer's presence when absorbed by the ritual of the concert performance. *Simulacra Studies* and most of the pieces that use sensors for gesture control visibly show the technology used. Thus, the implicit appearance of the Piano Hands gestural instrument (see Figure 1, p. 17) that triggers piano-like sounds in *Simulacra Studies* contributes to the manifestation of 'the prostheticized, computationally augmented or data-formed body' that Chris Salter says frames the twenty-first century (Salter, 2010, p. 221).

In *Arrows That Remain*, the automaton-like reaction to sensors occurs when the musical materials are repetitive and glitchy. This can be observed in the repetition of fragmented samples as enacted by whipping bowing gestures by the Bozzini String Quartet in mm. 62, 98 and 102 (video documentation 3:49–3:52, 5:43–5:50 and 9:22–9:48). In this piece the mimetic response to technology creates automaton-like gestures that control skipping and stuttering instances of sample playback. This constantly calls our attention to significations outside of the string quartet genre and towards the mixing and scratching culture of a DJ. Thus, the

alternations between expressive and automatic control of bowing gestures by the musicians contributed to the programmatic idea of the piece. In my work, the mechanistic and automaton-like gestural response to sensor prosthetics in alternation with expressive gestures contributes to the disruptive extra-musical content of cyborg theatre.

3.1.3 Hybridity of Sound and Media

In *Simulacra Studies*, *artefacts of presence* and *Immaculate Machine of Liveness*, I explored the hybridity of sound and media processing through gestural control manipulations to create gestural cyborg theatre, addressing the visual and aural senses of the audience. In these works, hybridity refers to augmentation or replacement of acoustic instrumental sound with processed sound, or the use of video to augment or replace the physical presence of the performer. The interdisciplinary practice of performance with electronics that I am engaged with could be called hybrid, since I engage the virtual, instrumental and physical in the same performance space (Bernier, 2013, p. 31).

In *Immaculate Machine of Liveness*, hybridity of sound is achieved by the presence of electronic sound processing that acts to augment the natural sound of the trumpet and horn and that sometimes overpowers the natural sound of the musicians. Variations in hybridity of sound are controlled through the accelerometer sensor attachments. The parameters of pitch shift and delay are continuously controlled by the movements of the instruments with accelerometer sensors, resulting in an invisible system of co-dependence in which the players are part of an unstable hybrid system of sounds. The sensors on each player sometimes control the sound processing of their own sound and sometimes controls the sound processing of the other player. This was meant to create a drama of being stuck in a machine as part of an unstable system of struggle. However, the contribution of the sensors to the instability of the processed sound effects might have not been interpreted as such by the audience. Regardless of this, the physical gestural behaviour of the brass players' repetitive movements to trigger sensor data

and the presence of electronic sound processing of brass instruments contributes to the hybrid identity of the performance.

The hybrid performance of *Simulacra Studies* embraces the possibility of performers' multiple identities, in which the pianist-performer is also a gender-performer, pointing to the cyborg nature of our lives as originally manifested in Donna Haraway's *Cyborg Manifesto* (1985). In *Simulacra Studies*, to represent fluidity of gender I linked different heterogeneous piano sounds (MIDI, prepared and synthesised) to mediatised video versions of the pianist. I decided to link the three main characters to different sounds of the piano: the female video version of the pianist with prepared piano samples, the concert pianist with MIDI piano samples and the pianist's physical self present on stage with synthesised piano sounds. The decision to link various 'hyperreal' (Baudrillard, 1994, p. 1) characters to different piano sounds played an important part in the development of the piece as a hybrid performance. As the various versions of the pianists start to make their appearance, they also start to interact with each other as represented by various sounds coming from the videos and the gestures of the physical performer. These interactions present a battle of identities, in which a hybridity of sound and media is manifested when different piano sounds and hyperreal versions of the pianist are combined. This continues until all characters/identities collapse and the audience is left with the bare presence of the pianist-performer playing synthesised piano sounds. This part is meant to bring the audience back to considerations of the human presence involved in the performance and away from the augmented hybrid presentation. Here, the fragility and presence of the performer becomes exposed, in contrast to typical solo piano performances which often focus on virtuosity.

3.1.4 Mediatised Processes with Video

In my work, I use video to augment the live performer's presence on stage, that video often interacting with, contrasting with or mediating the presence of the performer. In these situations,

the fixed materiality of the video becomes exposed and challenged by the dynamic presence of the performer, and vice versa as the performer's presence becomes challenged by the presence of the video. For instance, the visual component in *Simulacra Studies* is rooted in the idea of hyperreality as manifested by multiple mediatised versions of the performer as a pianist and his gender variations. In *Simulacra Studies*, the pianist-performer interacts with and confronts his hyperreal versions as he interacts with them in the context of a live performance. Mediatisation in this case refers to 'when traditional fine arts come to consciousness of themselves as various media within a mediatic system' (James, 1991, p. 162).

The physical performer-pianist is placed between two screens. This arrangement forms a triptych on stage between screen, performer and screen. The variations on the three different images in a triptych disrupt the linear narrative development of the piece. Through such placement, discord is created between the real performer and his video versions, although pianistic behaviour is common to all three. Similar explorations of a person's character in a triptych may be seen in the works of Francis Bacon. When setting up the video component of *Simulacra Studies*, I thought of Bacon's paintings, which physically break up the narrative aspect of painting away from linear interpretation (Deleuze, 1981). Similarly to Bacon, the characters of the pianist in *Simulacra Studies* reveal themselves in a series of images where there is no single narrative that can be prescribed through the multiplicity of unfolding images. The idea of gender becomes evident when the female character makes her first appearance, later transforming into various disheveled images of the same character, moving towards the gender fluidity of the original performer. The idea of a triptych seemed suitable because I was working with complex issues of gender as revealed through a series of images of the same person where sometimes I wanted each column of images on the screen to unfold independently.

In contrast to the performer's interactions with his mediatised hyperreal images in *Simulacra Studies*, in *artefacts of presence* I worked by juxtaposing the live presence of the

violinist with the archival presence of video footage from the folk archives mentioned above. In doing so, I created situations where the violinist appears to interact with the fixed video material on stage. In this piece, I wanted the archival material to come alive through the interactions with the instrumental material of the piece, thus gaining a renewed presence on stage alongside the presence of the violinist. The first video sample does not technically interact with the violinist, although due to the presence of a violinist in the wedding band video sample (video documentation 0:58–1:10), it still creates a strange synchronicity of images, where the violinist playing and her live sampling material become multimodally associated with the image of the violinist in the video.

The second video sample of the piece in m. 63 (video documentation from 3:06), features a man making a hammered dulcimer instrument (Bandera, 1984). In this section, I composed sonically and visually by assigning very similar noisy sounds to the violin part as those we hear from the video, creating an apparent confusion about which sound is coming from which source. The harsh noise of building an instrument on screen is juxtaposed with long scratch tones, circular bowings and occasional knocking on the body of the violin that mimics the hammering of nails and noises in the video. Eventually, the violinist enters into a duet-like interaction with the video when the dulcimer player begins to play his instrument. Through strategies of multimodal associations between image and sound, over-layering and apparent interactions in sound and image, the presence of the video and its artefacts are made interactive with the violinist present on stage.

These two examples of my work with video contribute to the virtual expansion of the performer's presence through mediatisation. Here, the video components also contribute to the expansion of the medium specificity of the work. In these works, I created situations which created new relationships between the instrumental and video materials complementing, challenging or extending each other's presence. In both pieces, the 'non-organic companion of

technology' (Heidegger, 1977) is present to augment the performer's experience on stage for both the performer and the audience.

3.1.5 The Post-digital Aesthetic

In addition to working with automaton, hybrid and mediatic influences, my work is preoccupied with sampling and sound manipulation. These processes are associated with the post-digital aesthetic where glitches, skipping, and errors occur – a term coined by Kim Cascone (Salter, 2010, p. 216). Like the artists of the post-digital wave, I was inspired by the history of sampling and its early developments through the Fairlight CMI Sampler[2] and its manifestation in STEIM's sampling software such as LiSa[3] and later RoSa (Salter, 2010, p. 216). When I was a master's student in live electronics on a joint programme with STEIM and the Conservatory of Amsterdam, I was introduced to LiSa/RoSa software which I found very robust and multifaceted for sampling processes. My experiments with LiSa/RoSa led me to seek equivalents for programming in Max/MSP such as Rodrigo Costanzo's *karma~* external.[4] This object suited the sampling techniques that I was seeking such as looping, skipping, fragmentation, stutter, track reversal, speeding up and slowing down, as well as swapping samples on the fly. I used this object in *Simulacra Studies*, *artefacts of presence* and *Arrows That Remain*, which I will explain in more detail when I discuss composition with idiomatic instrumental gestures.

The sampling processes in my work relates to the hybridity of live electronic sounds as discussed above when they are enacted live by performers, thus creating sonic material from

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[2] The Fairlight CMI sampler is an instrument that can hold many samples in one memory block so one could point anywhere on the keyboard of the sampler in order to come across any desirable sample.

[3] LiSa is a live sampling software ultimately designed for live sonic performance, whose functionality is centred around creating a sound field in the computer where the performer can record and manipulate multiple sound streams on the fly.

[4] karma~ is a looper/sampler external for Max. It is a dynamic length, variable speed looper with some complex features (Constanzo, 2015).

gestural movement. The programmed sampling interactions are function-based where the resultant musical material is sometimes chosen at random and where the subsequent decision to enact a function through gestural movement could be based on the previously heard material. This kind of gestural interaction can be observed in *Simulacra Studies.* The sampling interactions in the moment of improvisation echo early gestural control performances as exemplified by Michel Waisvisz with his Hands instrument, Laetitia Sonami with her Lady's Glove and artists active within STEIM in Amsterdam in the late 1990s. (Dobrian and Koppelman, 2006, p. 281). In these performances, performers composed and improvised on the fly live electronic music which was based on sampling software such as LiSa (Salter, 2010, p. 216). By programming similar live sampling interactions for performers other than myself in *Simulacra Studies*, *artefacts of presence* and *Arrows That Remain*, I gave control over to the performers to produce musical material, thus distorting the boundaries of the musical ontology and motioning towards a new ontology which favours performers' autonomy.

3.1.6 From Transcription to Signification

In many of my pieces, I derive the instrumental parts from transcriptions of field recordings. This process of transcription brings ideas from the outside world to my music and could be associated with processes that take place in Relational Music. In addition, in some of my works, composition with digital samples takes place before any written material is notated, which is another attribute of Relational Music (Lehmann, 2019). I use transcription of the sonic material, where I select the frequencies that I would like to work with in software like Spear, which become converted to MIDI information in Open Music and Ableton Live. Such transcription and compositional processes can be observed in pieces like *Immaculate Machine of Liveness*, *artefacts of presence*, *On Fragments*, *Music for Speaking Bellows* and *Once I Forgot What Distance Sounds Like.*

My work embraces working with materials that are sometimes faulty or damaged because of their abjectness and undesirability in today's high-tech digital economy. Like Parker-Starbuck (2011, p. 52), I assign central importance to such 'abject' material within the structure of a piece. Thus, I transcribed VHS tape audio in *artefacts of presence* where the transcribed material contained errors from the sonic frequencies of the original VHS audio material, which was damaged and contained video glitches that were also visible to the audience during the performance. I then selected three layers of frequency bands from 'Ochka chorni yak teren', a song played by the wedding band in the first archival video, to transcribe as sonic material to be played by the violinist (Anonymous, 1994). There are three violin entrances with the transcribed material, from the first starting from m. 9 (Figures 6 and 7) from the lower frequency bands of the video sample to the third violin entrance chosen from the higher frequency bands and transcribed as measure 30 (Figures 8 and 9). In addition, each utterance of the frequency layer was sampled live, thus stacking on top of the performed violin melody and the video audio. At the end of this section, all the sampled sonic material is manipulated in an interactive exchange between the violinist and the person manipulating the Max patch.
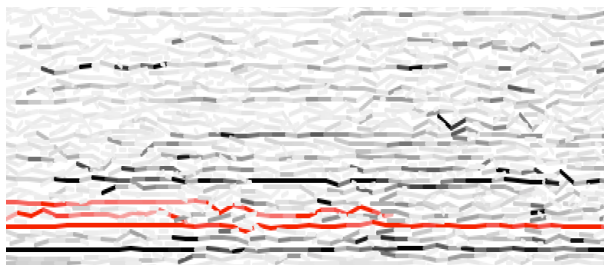

Figure 6. Spear example – selective transcription of lower frequency bands of the 1st refrain of 'Ochka chorni yak teren' (S. Moroz)

In Figure 7, I transcribe the most prominent parts from the MIDI transcription that I received from Open Music, which also follows the melodic content of the original song more closely:

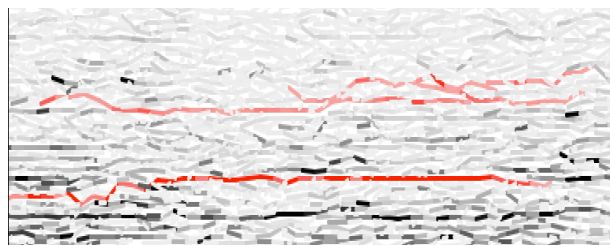*Figure 7.* Violin transcription starting in m. 9., adapted from score (S. Moroz)

Figure 8. Spear example – selective transcription of higher frequency bands of the 3rd refrain of 'Ochka chorni yak teren' (S. Moroz)

Figure 9. Violin transcription starting in m. 30 with stacked samples from previous entrances in Tape 1 and 2, adapted from score (S. Moroz)

Not all the sonic material in *artefacts of presence* came from selecting frequency bands for transcription. I relied on manual transcription by ear for the second part of the second video sample where a man plays a dulcimer instrument at m. 87 (video documentation 4:33–5:08) and after gestural bow interactions from m. 118 (video documentation from 7:23). I also composed

using strategies discussed in *Mediatised Processes with Video*, focusing on integrating the violin part in relation to the rest of the audio and video archival material.

On Fragments is a hybrid piece comprised of layers of transcriptions and embodied sonic and physical material. In *On Fragments*, I composed directly with digital audio and video samples before notation took place. In this piece, I juxtaposed the digital materials side by side, which informed me where the compositional process needed to take place. Instead of transcribing the instrumental part directly from the field recording frequency spectrum, I worked with the sonic material of field recordings interpreted by the saxophone players. In this way, I could transcribe the field recording samples into idiomatic saxophone music more easily than if I was transcribing from field recordings directly; this is another way in which the collaborative process of *On Fragments* has informed my compositional process, which I will describe in more detail in section 3.2.

In *Music for Speaking Bellows*, I had several artistic aims amongst which, musically, I wanted to link the spoken part of the fixed electronic part to accordion playing. I worked directly with samples of a female voice reading selected text from Cia Rinne's *notes for soloists* (Rinne, 2017). These samples were processed to provide the electronic material of the piece. I used Rodrigo Costanzo's *c-c-combine* (Costanzo, 2017–2018), which is a concatenative synthesis Max/MSP plug-in that analyses short samples of recorded sound to match specific characteristics of a different sound ('Concatenative Synthesis', n.d.). Since it is one of the techniques used in computer generated speech synthesis analysis, it works well on speech, giving accordion samples speech-like qualities. I used *c-c-combine* on different samples of a female voice to match the bank of accordion sounds that was included in the plug-in. Parts of the sonic transcription of the voice were also transcribed into music notation, which sometimes appears in an otherwise percussive accordion part at the beginning of the piece. In this part, I wanted to blend text of readings from *notes for soloists* with the accordion playing to suggest the idea of playing speech through the accordion. Obviously, the accordion cannot make these

sounds and one can still hear the accordion player's tactile struggle moving the bellows while depressing the air button. However, the illusion is created that the moving accordion bellows are linked to the electronic part played, however naively. This relationship to vocal embodiment through accordion playing changes when the accordionist starts to speak in response to the voice heard in the electronic part of the piece.

In *Once I Forgot What Distance Sounds Like*, I also used frequency spectrum analysis to selectively transcribe frequencies from field recording samples, in addition to creating a framework within which composition develops. In this piece, the recordings of ten different cityscapes came from my personal archives and the website http://aporee.org/maps. Here, I aimed for an orchestration of frequencies that was close to the cityscape recordings because both sometimes needed to overlap seamlessly during the piece. The overlapping was relevant to the orchestration of the piece, which treated instrumental sounds like cityscape sounds that could replace, blend or contrast each other within the total soundscape.

The use of electronic processes to transcribe samples and field recordings in my work creates explicit relationships to other representational ideas. Thus, most of the time the sonic material is juxtaposed alongside gestural interactions. Moreover, the sound material that I use is almost always hybrid and heterogeneous. The sonic material that I transcribe usually comes from found materials from personal, public and online archives, processed digitally and transcribed selectively, and presented along with electronic processes, samples, gestures and performed actions. Thus, I give sound material that is thought of as insignificant and abject an important place in the creation of pitched material for the instrumental parts of my pieces.

3.2 The Body as Repertoire and Material for Composition

After my work with live electronics and gestural control, I became interested in more abstract, subjective and open propositions for gestures from performers themselves. Since it was evident

that I was working with gesture as *material* for composition, I wanted to expand my vocabulary of approaches to how I derived such gestures. Thus, I came to an approach to treat performers' bodies as a repertoire of accumulated embodied knowledge, where gestures could be derived through *practice* or the ability to generate new embodied knowledge as demonstrated by Ben Spatz in *What a Body Can Do* (2015). By working collaboratively with performers and their embodiment, I gained an understanding that embodiment can also contain epistemological value because it involves the creation and transmission of new knowledge or techniques that can be reproduced (Spatz, 2017b). Composing with personal 'artefacts' of collaborations and embodied knowledge challenges traditional chamber music practice, which is associated primarily with the notion of absolute music and the ritual of concert performance. It pushes the boundaries of the musical work and proposes new experiences for performers as well as for the audience.

In this section, I discuss the use of *imaginary gestures* in my work, which is based on Deniz Peters' ideas of cross-modal association of gestures to sound and Spatz's idea of the limitless possibilities for embodiment through *practice* (Peters, 2013; Spatz, 2015). My later work with theatre practitioners in *Motion Studies* is informed by the insight into imaginary gestures gathered by working on other pieces in my portfolio. In addition, my work with embodied knowledge started a feedback process in which performers' responses form an important part of the compositional process. Working on *On Fragments* with the Quasar Saxophone Quartet raised interesting possibilities for composition through a devising process, that allowed me to review my workflow and composer–performer relationship, which constitutes my revised idea of the ontology of the musical work.

3.2.1 Imaginary Gestures as Material for Composition

Reading about Peters' study on movement in the EGM Laboratories in Graz, Austria (Peters, 2013), stimulated me to experiment in composition with body movements and gestures as a

response to sound samples heard when working with performers. These experiments took shape by engaging performers to embody sound by imagining their movement in response to sound. The possibility for varied responses from different performers to sound samples of abstract or simple quality seemed an especially interesting way to generate varied responses as compositional material. Peters' study also encouraged me to challenge the musicians I was working with to become movers and 'actors' with their bodies, contrary to the many stereotypes that one often hears about musicians not having the agency to go beyond what the ritual of the concert performance dictates – what Alex Ross calls 'the aggressive affectlessness of the average professional musician' (Ross, in Cook, 2015, p. 195).

The result of cross-modal embodiment experiments with imaginary gestures can be observed in *On Fragments* for saxophone quartet and electronics. Initially, I sent Quasar field recordings that were of construction work from a Griffintown neighbourhood in Montreal which was badly hit by post-industrialisation in the 1950s. The field recordings were made in 2012 during Griffintown's period of rapid housing redevelopment for an audiovisual installation, some of them made on remnants of historical sites, ruined mills and settlements. I was interested to see how saxophone players could reproduce these sounds and orchestrate them within the ensemble. Thus, the idea of self-organisation is present at the level of interpretation of the original recorded material. Since field recordings of construction work, sounds of industrial fans and trains are non-idiomatic to saxophone playing, it was fascinating to hear their reproduction on saxophones. After receiving the recordings, I decided at first to work with them as transcriptions. However, I later realised that essentially the players became embodied carriers of these sounds, thus, I could compose directly by asking them to reproduce their interpretation of certain recordings in some places in the score.

I also asked the players to interpret these sounds physically with the movement of their bodies. Altogether, I sent Quasar nine recordings from different locations in Griffintown. In my research into the cross-modal embodiment of sounds, I was interested in the poietic physical

responses to abstract sounds for the varied visual possibilities of composing with them. Thus, it was important to present the players with both complex and simpler sounds which could be embodied. For this reason, two of the recordings were processed through a max patch with an FFT filter where the amplitudes of certain bands were exaggerated, so that regular fan sounds became hybrid sound versions of industrial turbines (in mm. 63–64 and 75–76; video documentation 5:45–6:15 and 7:01–7:27). For tracks 1, 2, 4, 6, 7 and 8, I asked the players to react physically by embodying the kind of movements that they imagined were associated with different tracks without playing their saxophones. I also asked them not to imitate each other and to avoid similarity between themselves. For tracks 3, 5, 9 I asked them to choose one movement that they could all agree on to perform together. The aspect of self-organisation here also helped with the overall ethos of the piece where I was leading the performers to contribute to compositional process by devising the response amongst themselves without me telling them exactly how to execute each step. As the piece was collaborated on over distance (myself in the UK and Quasar in Montreal), I wanted the gestural response to be as natural as possible for the players without my external involvement in rehearsals.

After I received the video recordings, I was satisfied to find that the results of cross-modal embodiment could be observed producing very interesting non-idiomatic, ancillary movements from the saxophone players (see video included with performance materials). Above all, the movements, however abstract or direct, added many different layers of interpretation to each recording. They became compositional material and part of the extra-musical content in the piece. I developed the piece by layering composed sections, original field recordings, their physical and sonic embodiment, and text about the state of labour economy from Paul Mason's *Postcapitalism: A Guide to Our Future* (2015).

On Fragments for the Quasar Saxophone Quartet is linked to my interest to present musically the topic of work and the organisation of labour, thus pushing the political boundaries of the musical work concept within a chamber music context. With regards to Mason's

Postcapitalism, in *On Fragments* I became interested in interpreting the topic of automation from a positive perspective. Mason's book is strongly supportive of automation and the use of machines that store and reproduce knowledge and various mechanical operations at zero costs as one of many prescriptions to regulate the imminent crisis that are brewing in our societies. The book draws inspiration from Karl Marx's *Fragment on Machines*, in which human beings become liberated by the use of machines. Marx saw this as a positive point, and if society was set up and managed fairly, then humanity could benefit from such machine knowledge in order to support and better itself (Mason, 2015).

In *On Fragments,* I took the idea of automation and organisation as meta topics by which to reflect on the work that goes into composition and the work of an ensemble itself. As mentioned above, I closely collaborated with the Quasar Saxophone Quartet in the creation of compositional materials such as physical and audio embodiment of field recordings. In this way, I gained from the musicians' ability to organise themselves in order to imitate the field recordings. Musically, I represented automation through the instances of looped saxophone sampling within the ensemble, which permits the musicians to perform various gestures and change playing positions. After the quartet goes through a sequence of four different fragments which are a mix of score interpretation, sonically embodied field recordings, gesturally embodied sounds and looped repetitions of phrases, they come to the end of the piece where they are free to improvise or compose in real time upon the four field recordings that they have been interacting with. The graphic score at this point is a loose suggestion of the possible textures that could be used in order to shape each section of the improvisation. By making this work through a devised process where I received feedback on field recording materials, I extended the process of composition to include artefacts of the collaboration. In doing so, I disrupted the boundaries of this musical work where the materials in the work's creation also contain the ensemble's input, motioning towards a new type of ontology also relevant to the increased autonomy of the musicians in my work with gestural control of live electronics.

3.2.2 Performers' Embodied Knowledge as Material for Composition

There are many ways in which I draw on the performer's accumulated embodied knowledge in the composition of a new piece. According to the performance arts researcher Diana Taylor, this accumulated embodied knowledge could be referred to as a repertoire. Taylor also makes a distinction between archive and repertoire, where archive refers to textural sources and repertoire to embodied performances. 'The archive includes, but is not limited to, written texts. The repertoire contains verbal performances – songs, prayers, speeches – as well as nonverbal practices' (Taylor, 2003, p. 24). Here, Taylor makes this distinction because archives have historically attempted to counter the disappearance of certain embodied traditions, thus ironically motioning towards their disappearance. 'Writing has served as a strategy for repudiating and foreclosing the very embodiedness it claims to describe' (Taylor, 2003, p. 36). Thus, in order to avoid confusing archive with textural information, I would like to use 'repertoire' of embodied knowledge as material for composition to describe my approach in some of my works.

In all my works that utilise this approach, I begin to situate the performer by getting to know them by email and personal exchanges. This allowed the listening experience to be informed by a particular performer(s)' subjective presence on stage, both for myself as material for composition, and also for the audience, who I hoped would engage with the extra-musical meaning and representation that the performance would propose. I have undertaken such work in *On Fragments*, *Simulacra Studies* and *Music for Speaking Bellows*. In these pieces, I relied on the specific 'repertoire' of knowledge that performers could share in the creative process. This repertoire sometimes included their knowledge of playing a particular instrument as is traditionally explored in music composition. It also included their abilities to improvise or mimic recorded sounds, as in the case of the Quasar saxophonists sonically mimicking various industrial and construction sounds in *On Fragments*. It extends not only to instrumental

technique but also to knowledge of being on stage and having a certain stage experience and presence.

Moreover, for some performers that I worked with, I could draw on their interdisciplinary performance skills because of my previous collaboration with them as impersonators of different theatrical characters and/or situations. This could be said for Marko Ivic in *Simulacra Studies*, with whom I had previously collaborated in *Shortwave Apocalypse or the Box* (2015–2016), a music theatre production in which Marko played a hybrid gender-bending character. Whenever intimate collaboration was not possible, I could still rely on other repertoire of knowledge that could be shared, such as inserting personal characteristics of a performer into the piece. For instance, in *Music for Speaking Bellows*, Teodoro Anzellotti responds to a set of questions in the score in multiple languages that I knew he was capable of speaking. When I was writing *artefacts of presence*, the performer's ability to play Ukrainian fiddle music seemed important; thus, my initial research was with a performer who knew both classical violin and Ukrainian folk fiddle playing traditions. However, I later realised that the knowledge of how to imitate fiddle playing could occur through the practice of playing along with the track of 'Hraj, abo hrozshi widdaj'*.* Thus, *artefacts of presence* could be performed by any violinist open to expanding their traditional violin playing technique. Two violinists, Dejana Sekulic and Ilana Waniuk, who are not familiar with the Ukrainian fiddle playing tradition, have successfully performed this piece by practising along to the fiddle track.

The repertoire of performers' embodied knowledge as material for composition could encompass all kinds of skills that the performer has accumulated and could serve the purposes of interdisciplinary performance with music. This knowledge includes both instrumental technique and the ability to imitate and improvise, as in the case of the Quasar Saxophone Quartet in *On Fragments.* It also includes an interdisciplinary repertoire of knowledge such as Marko Ivic's ability to embody different characters in a musical composition. In the following section, I look at how research on imaginary gestures has contributed to my work with theatre

practitioners, where composition takes place in real-time without an intermediary of notation or composer/performer divisions.

3.3 Sensing in the Moment of Composition

Through my portfolio of work, one can trace three stages in the development of my practice that expand my vision of chamber music towards interdisciplinarity. The first is rooted in composition with gesture to gather data for mapping in electronic processes which introduces the extra-musical significations of gesture. The second focuses on involving the musicians in a devising process to compose visual and performative implications of gestural behaviour, thus inviting an expansion of the composer/performer roles through collaboration. The final stage is focused further on the devising process, which for myself is anchored in *listening* that provokes physical reactions to sound and can be used to build interdisciplinary connections across disciplines that share an interest in embodiment. One of my latest projects in sound embodiment, *Motion Studies*, was primarily focused on listening to create connections with theatre researchers where listening is followed by perceiving and reacting sonically and physically.

In this section, I will talk about two closely related responses to the concept of *listening*. The first is anchored in the type of listening that takes place within a collaborative practice-as-research environment, whereas the second immerses the audience in the experience of listening based on the insight gained from the previous response. Thus, *Motion Studies* marks the beginning of new explorations into the concept of *listening* and perception in the composition of my works.

3.3.1 Sound as Movement: From Observing to Listening and Reacting

These reflections on *listening* follow lab sessions which happened throughout 2017–2019 at the University of Huddersfield where I started to re-insert myself in performative situations in a

project with artists-researchers from the departments of music and theatre.[5] Together we were two musicians, Colin Frank and myself, and two actors, Ilona Krawczyk and Cristina Fuentes. These lab sessions focused on how practitioners from both disciplines respond, influence and react to each other's sound and movement in space. Throughout the lab sessions we looked at the possibility of recalling initially improvised movements and sounds in order to generate new instances of an open score work. The following aims emerged from these sessions:

- Could we create a repeatable experimental open work through an embodied improvised process, allowing new embodied instances of sound and movement at each performance?

- Can we easily perform in a new venue, without fixing it in scores, plans?

- Could this embodied knowledge serve a wider experimental need to be used in other experiments/art works?

My previous research on imaginary gestures, in which embodied movement was derived from listening and reacting to different sound files with musicians of the Quasar Saxophone Quartet, served as an impetus for this research in combination with theatre researchers for whom embodiment as theatrical practice comes from a post-Grotowski lineage of physical theatre. In the post-Grotowski acting method, the actor can be engaged in listening while uncovering, through the unconscious, new instances of embodiment, while using their voice as a vehicle for composition of movement with the body (9 Feb 2018, in an interview with Ilona Krawczyk).

While most of the works in my portfolio motion towards an expansion of the disciplinary boundaries of chamber music towards interdisciplinarity, *Motion Studies* has fully embraced such a possibility from the beginning of its inception as it started as an interdisciplinary

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[5] Portions of the text in this section have been published verbatim in "Confronting Embodied Knowledge: from Observing to Listening and Reacting", S. Moroz, 2020, *Seismograf, Fokus: Silent Agencies,* (https://seismograf.org/node/19365).

collaboration. Through this practice as a research project, I was able to engage further with the agonistic-antagonistic aspect of interdisciplinarity as referred to by Born (2010) The connection to Born's statement on interdisciplinarity could be observed in our work, which could not be reduced to physical theatre or a piece of music. The theatre researchers helped in the dislocation of discipline-specific boundaries, since their techniques and practices were used in devising the workflow of our lab sessions thus extending the boundaries of the open musical work. Similarly, the musicians' instrumental improvisations were influencing and helping to devise theatre participants vocal response as the melodic and textural materials of sound were becoming embodied in their vocal response.

In this research project, I also became a performer myself, thus having to experience the entanglement of personal reflections, perceptions and reactions to sound and movement from myself and other participants, both as a composer and performer. This meant that I could not guide the process as an outside observer or a composer as I had done in *On Fragments* and all my other submitted pieces. Thus, I was engaging with my own phenomenological reflections as a performer while reacting in an improvisation, as described by Susan Kozel in 'The Virtual and the Physical: A Phenomenological Approach to Performance Research':

> I touch the world, certainly I do when I handle materials in the creative process, and these materials touch me back, challenging my autonomous role as creator of knowledge and bestower of meaning. I am quite literally caught up in the flesh of the world. (Kozel, 2011, p. 206)

From the beginning, we chose the initial structure to be an open session, as in the post-Grotowski practice where the emphasis is on embodied research as part of a lab environment (Grotowski, 2012, p. 15). New instances of embodiment that we learnt in the lab sessions were discovered through improvisation in pairs. These moments became 'boundary objects', flexible yet recognisable features that allowed our performance to recur without being entirely fixed. Dance scholar Freya Vass-Rhee defines boundary objects as 'objects or concepts, which,

although jointly deployed by members of a community, are utilised differently by different participants' (Vass-Rhee, p. 91, 2015). In our open score work, the boundary objects were movements and sounds that could be easily recognised by each participant. Each individual could interpret them differently, and we could jointly refer to them in discussion and improvise within them in rehearsals and performances. The openness of the boundary objects allowed for instances of new improvisations to emerge within a collectively remembered framework. Thus, the three main instances of embodied technique where one member of the pair leads the other through sound (leading movement) or through movement (leading sound) became the boundary objects of our collective work:

- Linear movement: accompanied by percussive sounds with linear square-like movements in space where pairings of performers are initially observed;

- Stretched out vocal section with high leaps, accompanied by slow movement, and where cymbal is usually used somewhere in the performance space;

- Circular movements: which could be carried out in pairs in which members alternate leadership roles between pairs where sound leads movement and vice versa.

A useful tool in our lab sessions became video documentation with a camera in a fixed position. In contemporary chamber music, documentation is typically used as the last element to record the final performance as documentation material. In *Motion Studies* video documentation became a supplement for reflection and further composition. Another useful tool was reflection on the phenomenological presence of oneself during the improvisation in discussion with the other participants, during which we recorded our affects and feelings and analysed the relationships between each other during the improvisation to uncover which sensations and affects were important and interesting to explore further. Thus, we shared our reflections on each other's actions within the group and how we perceived they affected our sound and

movement. The technical language in these exchanges became less important than the language concerning our personal multi-sensory experiences in relation to each other.

Our interdisciplinary improvisation became a ground for knowledge exchange amongst the group to do with spatial awareness, movement and sound composition in real time. This knowledge started to spill from one discipline to another as our responses became quickly entangled, as Kozel describes above. Thinking conceptually in terms of Deleuze's 'packets of sensation' as personal sensations in the moment of the improvisation helped us place the embodied actions within a larger structure of aesthetic considerations to do with the performance aspect of the work:

> Percepts aren't perceptions. They're packets of sensations and relations that live independently of whoever experiences them. Affects aren't feelings, they are becomings that spill over beyond whoever lives through them (thereby becoming someone else) ... Affects, percepts, and concepts are three inseparable forces, running from art into philosophy and from philosophy into art. (Deleuze, 1995, p.137)

Thus, 'packets of sensations' is what the phenomenological sensation of the boundary objects in an improvisation became in our collective work. These are not concrete knowledge but rather one's reaction on the physical actions in the moment of improvisation, what they are and what they could be in a future reproduction. In this context, physical actions come first followed by conceptual responses.

In our work, we reflect conceptually when it comes to the aesthetic decisions of how to present the work. Here I present the lighting considerations as demonstrated in this diagram for a performance at the REVERB series in Ormskirk. However, these conceptual considerations based on boundary objects of our work could be made in reference to other features of a new performance space and not only for the lights.

Figure 10 shows lighting considerations for the first scene where linear movements informed a lighting scene composed of spotlights on stands projected in three straight lines from sides of the stage.
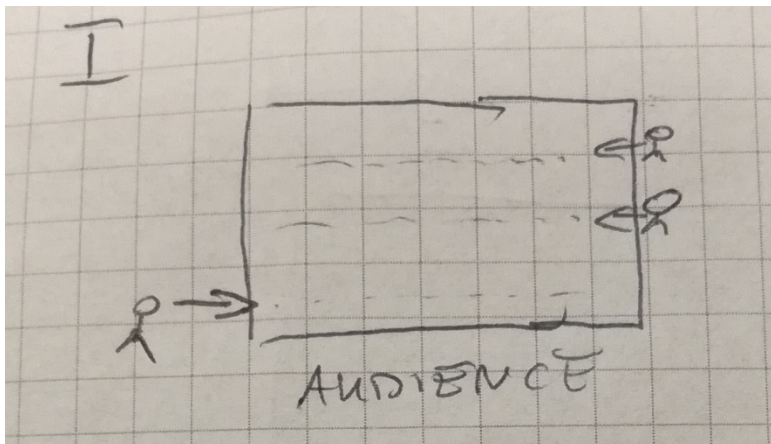

Figure 10. Scene I, linear movements (I. Krawczyk)

Figure 11 shows Scene II, where circular movements grow with more encounters between the pairs and slower interaction that could happen at the centre of the stage. These movements suggested spot lighting from above forming a larger circle
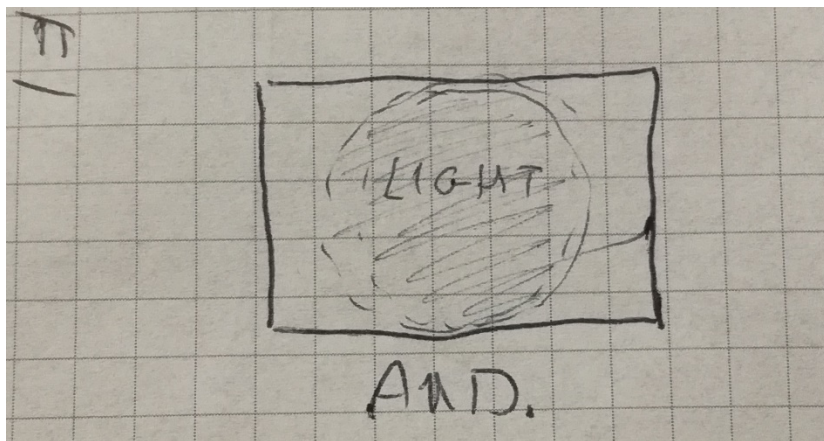

Figure 11. Scene II, circular movements (I. Krawczyk)

The third lighting scene (Figure 12) is more experimental in our structure as it relates to the kinetic energy that our embodied interactions generate. Our interactions in the third scene were

represented through high energy leaps both in sound and movement where bodies were coming in and out of the vertical corridor of light projected from the back and front of the stage.
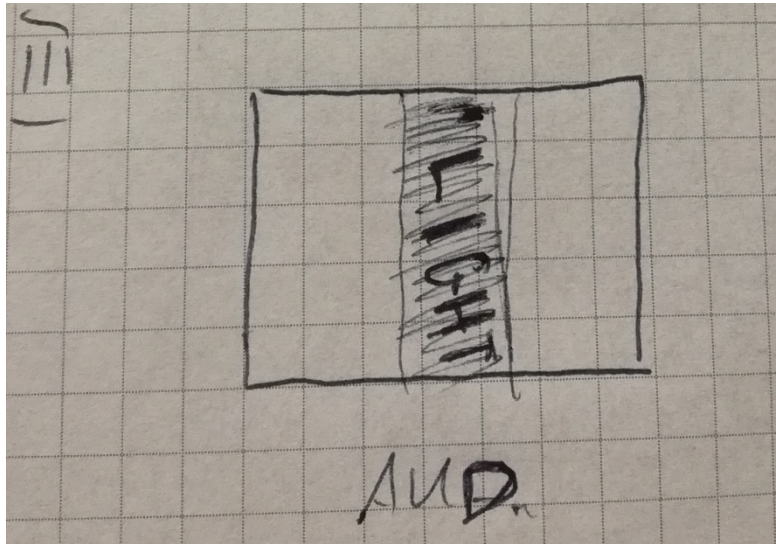

Figure 12. Scene III, vertical corridor (I. Krawczyk)

Thus, to answer our initial aims, *Motion Studies* helped to confirm the retainability of embodied knowledge whereby we became carriers of this knowledge in relation to each other, from which an embodied score based on the three boundary objects emerged. It also became evident that even when repeating remembered moments of embodiment, new instances of embodiment through sound and movement can still occur. *Motion Studies* is a process-based work that develops with each performance, and one with a flexible structure, where 'affects, percepts and concepts' (Deleuze, 1995) can flow in and out of each other within a conceptual framework chosen regarding a new venue.

The work has been presented three times: at the *Audiovisual Embodiment Symposium* in June 2018; at the *REVERB* interdisciplinary poetry series at Edge Hill University in October 2018; and at St Paul's Hall, Huddersfield, on 1 May 2019. All three presentations are submitted as part of the portfolio, and variations on the embodied materials of sound and movement based on our conceptual reflective thinking and reacting can be observed between them.

3.3.2 Listening and Guiding Perception

Following my work with theatre researchers on embodiment and listening in *Motion Studies*, I became interested in exploring further how emphasising listening both for the audience and performers could change the experience of the concert ritual. In *Once I Forgot What Distance Sounds Like* for Continuum Ensemble, I decided to treat the concert hall beyond the stage as the performance space. In this piece, the sound *and* movement of musicians and sound sources play equal parts in the composition.

The inspiration for using the perception of the listening experience to localise the sounding experience for the audience came from participating in a soundwalk with Hildegard Westerkamp during a *Sound Forms* symposium in on 11–13 October 2018 in Copenhagen, Denmark. Westerkamp's guidance on how to listen to a soundscape by tuning in and out of listening whilst sometimes talking, thinking or being fully immersed in the soundscape is what interested me compositionally. While I was walking, I felt as if I was already composing with the sounds that were coming to my attention. In order to translate this listening experience of perceived soundscapes into a concert hall space I took inspiration from one of Westerkamp's exercises. Westerkamp describes such an exercise where composition takes place during a soundwalk:

> So far you have isolated sounds from each other in your listening and gotten to know them as individual entities. But each one of them is part of a bigger environmental composition. Therefore, reassemble them all and listen to them as if to a piece of music played by many different instruments. (Westerkamp, 2001)

Once I Forgot What Distance Sounds Like is based on field recordings of cityscapes from Lviv, Montreal, Copenhagen and Toronto, which range from post-industrial abandoned city lots to busy intersections where sounds from bicycles, cars and people talking, selling, arguing and discussing while passing by could be heard. There are many kinds of distances between the

recordings, in time, space and the materiality of recording quality. In the space of the concert hall, there are six musicians who through the course of the piece move in order from Position 1 through to 4 (Figure 13), and 8.1 channel-sound surrounding the audience over which the cityscape recordings are spatialised.

Here, the title of the work is explained in a programme note:

Distance is implied in the piece through sounds that are far and near: when instrumentalists move in and out of their original positions in relation to each other and the audience; when the soundscape of the recordings change their proximity to one's ear; when sounds one thinks to have heard reveal something else. Distance is there when I think about the various cityscape recordings and their representation through composed sounds to the memories of the day I took them or when I imagine the day someone else took them. Distance is in the recordings themselves as they are of cities sometimes listening to themselves, dreaming of the past from post-industrial rubble, or of the future as cranes pull the weight of slates up into the sky. (Moroz, 2019, p. 7)

Most field recordings originate from my own collections from soundwalks and other occasions, as I have done several projects in the past revolving around field recordings. As already discussed in section 3.1.6, for the instrumental part of the piece I transcribed selected cityscape frequency bands from four different cities based on four categories: post-industrial outskirts of the city which I described as 'sounds of cities listening to themselves', busy intersections of traffic with human activity, markets – where people interact and speak – and a mix of natural and human activity. I composed using the structure of these transcriptions, sometimes taking liberty in composing with the materials and otherwise simulating certain frequencies heard in the sound files. I devised the piece in sections that move geographically from the outskirts of the city towards city intersections and markets with human activity, receding back to lesser activity soundscapes of nature and the outskirts. The changes in soundscape activity correspond with movements of musicians changing their playing positions, thus changing the overall

soundscape of the concert hall. The spatialised sound also moves with the musicians changing their positions in the hall, thus changing the listening experience for the audience. I was fortunate to compose in the mockup environment of the simulated space of the Music Gallery in Toronto where the concert took place. The spatial mockup was simulated by Dr Kristina Wolfe, whose areas of research include simulation of concert spaces for compositional purposes. Originally, I included lighting considerations in the dramaturgy of the piece, and I wanted the piece to start in absolute darkness. For various safety considerations and other issues related to the ritual of the concert performance discussed in Chapter 2, this was not observed in the performance.
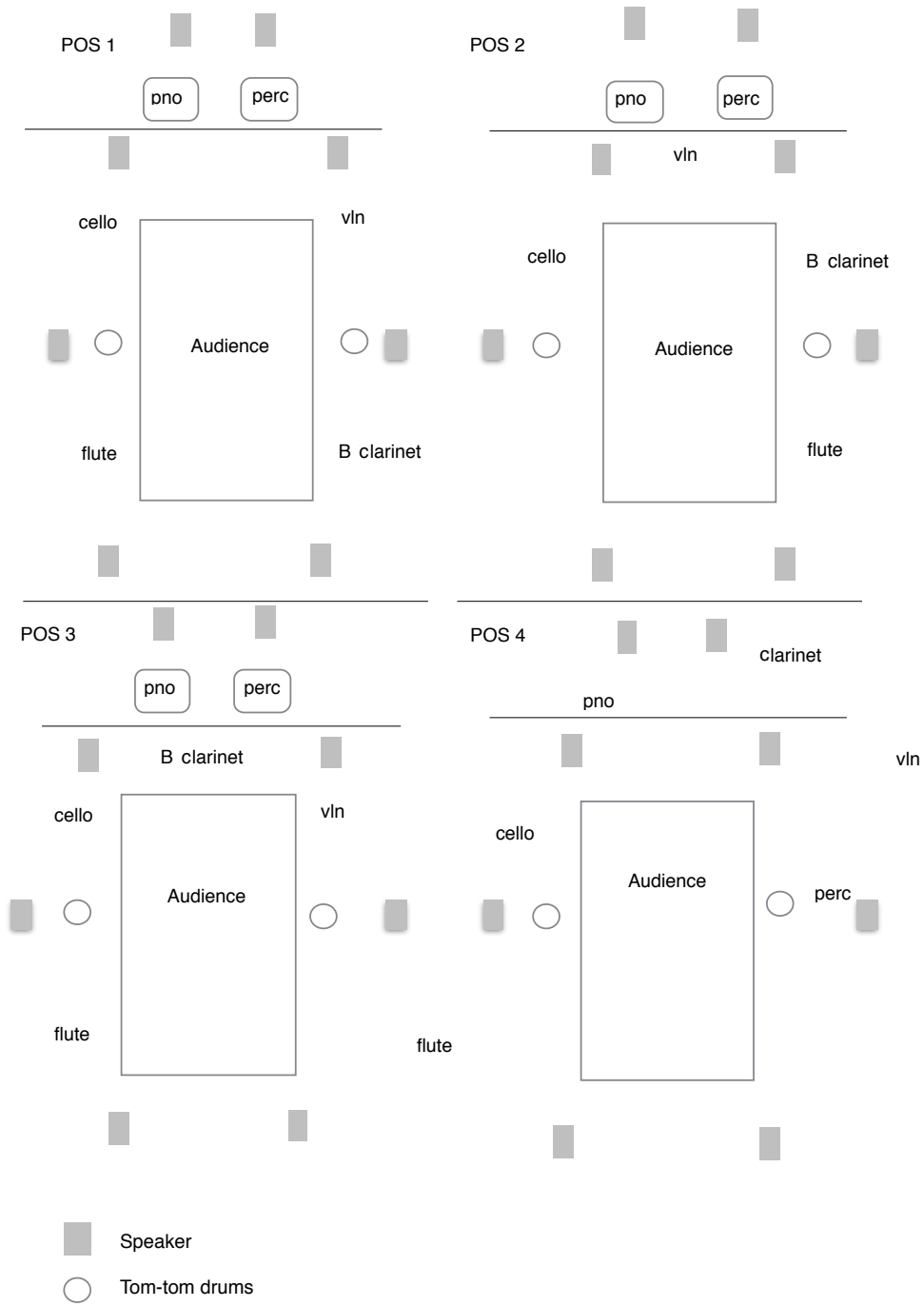
Figure 13. Stage plan and moving instructions for positions 1 through 4 in *Once I Forgot What Distance Sounds Like* (S. Moroz)
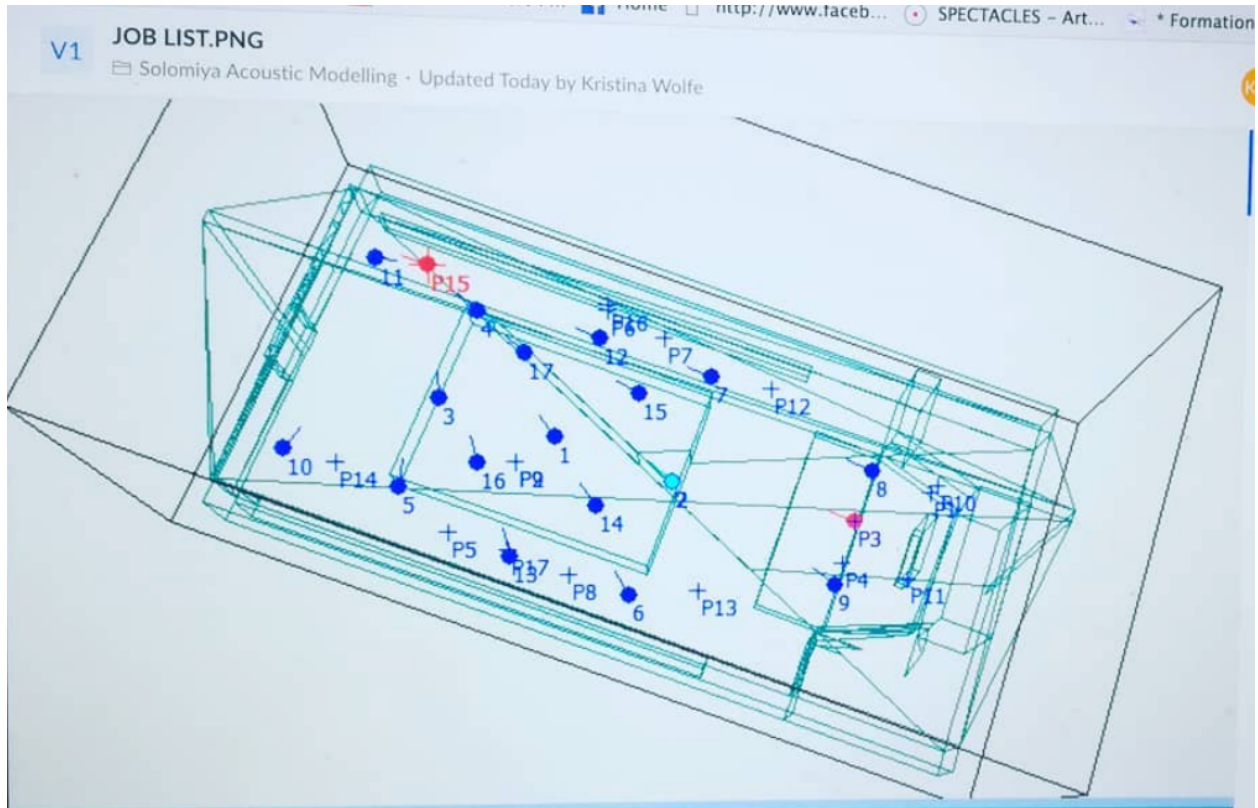
Figure 14. Mockup diagram of speaker placement and target points of Music Gallery, 918 Bathurst St.

Toronto (S. Moroz)

In *Once I Forgot What Distance Sounds Like*, the listening experience was created specifically with the audience in mind, thus augmenting the usual two-dimensional sound projecting setup of the concert hall that one comes to expect in chamber music. It is perhaps the first piece in which I paid so much attention to the audible experience in a 3D sound environment, where the movement of musicians and sound recordings in space influenced this experience. The return to listening has been instrumental for my compositional output as demonstrated by my recent projects. It is important to note that the experience of listening became acute once I had gone through various iterations of embodiment through sound and returned to the body – in this case to my own body – in order to make work which explores my perceptions of sound through different media and compositional approaches.

Chapter 4: On Gestures, Musical Material and the Rehearsal Process

From the beginning of my PhD, I knew that using gesture in my music introduced extra musical content which sometimes had a potential to signify the non-musical ideas and expand the disciplinary boundaries of chamber music. Thus, in my research, I was seeking approaches to show how the gestural content could relate to the extra-musical in combination with the musical material. Here, I will trace the evolution in my aesthetic concerns towards physical gesture while examining the changing relationship of gestures to the musical material of my pieces. For this reason, I will primarily focus on *Immaculate Machine of Liveness* and *Arrows That Remain*, the former chosen from the beginning of my PhD and the latter towards the end. As diversity of approaches to composition with physical gestures is at the centre of the commentary, in discussing the context and the rehearsal process I will also discuss *On Fragments.* This piece invites an expansion of the composer/performers roles in collaboration, which is important to the development of my compositional approaches.

4.1 Context and the Rehearsal Process

Most of the pieces in the portfolio were created through a special workshopping context that allowed the creation period to unfold in a more collaborative manner. This workshopping ethos could be applied to *Simulacra Studies*, *On Fragments*, *artefacts of presence*, *Arrows That Remain*, and *Motion Studies.* This context is important to my works because as I learnt during the creation of the portfolio of my PhD, my pieces need a longer rehearsal period for their successful realisation than normally provided in contemporary chamber music. This has to do with the gestural interactions taking longer to become natural for musicians to execute in a performance. Also, the process of composing musical and gestural material often needs

adjustments after the initial composition period. In addition, the collaborative aspect of the devising process in some of my works also assumes a more extended period of exchange and rehearsal time. From the first piece with physical gestures to the last, my working approaches have evolved, which I attribute to gaining experience and knowledge in working with the extra musical aspects of gestural composition through workshops and rehearsal periods before and after the premieres of my pieces.

4.1.1 Immaculate Machine of Liveness

While most of the pieces in my portfolio hope to challenge the disciplinary boundaries of chamber music, the agonistic–antagonistic dynamic of challenging these boundaries is not composed into the creation of *Immaculate Machine of Liveness* – the piece exhibits traditional dynamics of composer/performer hierarchies. In the rehearsal process with Ensemble Apparat, I had only two rehearsals before the concert to check the musical and physical content of the piece as well as the interactions with the accelerometer sensors. Through these rehearsals, a few elements of physical execution naturally added to the machine-like quality of the piece. In *Immaculate Machine of Liveness*, the gestural material does not build or change in response to the sonic material; however, as I found out in the rehearsals, the tempo and dynamics of the notated sections influenced the speed and size of the gestural movements.

The intended repetitive gestural movements created a sense of alienation, with no attempts to create a connection with the musical material or the audience. The alienation effect was inspired by a theatre technique of the same name practised in Brecht's Epic Theatre and discussed in *Brecht On Theatre: The Development of an Aesthetic* (Brecht, 1992, p. 139). In *Immaculate Machine of Liveness*, alienating players from direct interaction with each other and limiting them to limited movements created the effect of rigidity and movement for the sake of movement, with no expressive gestures that could create an empathic connection between the players or with the audience. In addition, the intended element of alienation was elevated

through the use of headphones which were receiving click tracks of tempo changes. This element separated the players from interactions with each other further, creating a visually perceivable separation on stage. In the score, there were more instructions for gestural or choreographic movement (from mm. 93–103) which I thought were easy to execute; however, they proved impossible to include in the performance. I attribute this to a lack of time in the rehearsal process in which to address the physical aspects of the score that would contribute to a fuller realisation of the piece.

4.1.2 On Fragments

The alienation technique and automaton gestures were also used in *On Fragments*, where the non-idiomatic gestures came from the musicians themselves through a devised process and collaborative exchange: gestures were generated by the musicians and assembled by me as material for composition. As already discussed in the previous chapter, engaging with the musicians through a devised practice translates directly into pushing the boundaries of the musical work by questioning its social, ethical and political boundaries through collaboration (Born, 2010, p. 211) and by politically challenging the composer/performer dynamic. Thus, the work does not solely reside in my imagination as the composer of the piece but is shared with the musicians of *On Fragments*. As a result, the topic of work and organisation of labour was translated musically to how the musicians organised themselves both in responding to the materials I sent them and interpreting the musical score during the performance. In contrast to *Immaculate Machine of Liveness* where I was also concerned with societal constructs, I was able to engage the musicians of the Quasar Saxophone Quartet directly to express these extra-musical topics in a collaboration.

In *On Fragments*, I also benefitted from longer periods of exchange with the players of the Quasar Saxophone Quartet, before and after the first performance. After the premiere, I was able to adjust sections of the piece for a performance a month later in Montreal. Some of the

changes I made were to extend the introduction and the first embodied section with physical gestures in response to the field recordings played in mm. 30–33. Other changes that were made were numerous adjustments to physical cues that took place with gestures such as a dramatic gestural cue from soprano saxophonist in m. 64 (5:43 in video documentation) and longer 'windmill' gestures in the graphic part of the piece before the end (10:44–11:05 in video documentation). Since the gestural material was part of the saxophonists' embodied memory devised by the players themselves, it proved easier to rehearse than gestures that had been pre-choreographed by myself. The rehearsals that I had with Quasar Saxophone Quartet were mostly focused on their stage presence, and related to changes between sections of the piece. We focused on the cueing of the electronics and ways in which the musicians exited scenes in order that the gestural movements appeared in sync with the field recordings of the electronic part.

4.1.3 Arrows That Remain

Arrows That Remain was inspired by and created through a collaboration with the Bozzini String Quartet in a workshopping residency, *Composer's Kitchen*, which extended over a period of four months. The residency period allowed for collaboration on string writing techniques, digital sampling of the string quartet and testing the technical aspects of gestural response and its effect in the overall structure of the piece. Initially, I composed the off-the-string gestural interactions more gradually, very slowly revealing the effect of audio samples being manipulated by the gestural movements. I had changed this after the first rehearsal period and performance by introducing the first gestural interaction from the cellist of the string quartet already in mm. 32–33 in the second version of the piece. I also replaced some mimicking off-the-string playing with scratch sounds and whipping bow movements in m. 62, foreshadowing processed sounds and movements that would be happening later in the piece. The small change of moving the processed sound interactions forwards in the piece brought the effect of mixing the two string

quartets closer together in the work's overall structure. As more composition with the musical material occurred between the two rehearsal periods, I also wanted to compose more with gestural material in order to preempt and support the effect of surprise and revelation of gestural composition that occurs from m. 138.

While *Arrows That Remain* was not developed through a devising process like *On Fragments*, I was relying on the quartet's cohesion as an ensemble to come up with the best strategies of playing together with the pre-recorded samples and gestural interactions because there was no click track to control the digital samples and the acoustic playing of the ensemble. This was the reason behind prescribing the cellist of the quartet to execute all the trigger changes in the electronic part of the piece. The cellist became a conductor of these changes on whose cue players would sync their gestural playing on and off-the-string with the notated parts of the score. While overall I was satisfied having a longer period of time to develop *Arrows That Remain*, I was more satisfied with my approaches to devising the working process in *On Fragments* with the Quasar Saxophone Quartet because in this process imaginary gestures became part of the players' embodied memory of the piece and thus proved easier to work with in the rehearsals.

4.2 The Compositional Process with Gesture and Musical Material

When working with physical gesture and musical material in my compositions, I wanted to create a variety of approaches where I could compose explicitly with both as material. Thus, as outlined in the commentary, gestural material can also undergo composition where it could be subverted or multi-modally linked to other significations outside of the formal considerations of the musical material. Both musical and gestural material in my work can signify musical and extra-musical ideas. Gestural composition is a priority in my pieces as it subverts the expected flow of the chamber music performance and appeals to the visual senses of the audience in an attempt to expand the boundaries of chamber music. Here, I will compare and discuss in detail

my approaches to composition with gestural and musical material in *Immaculate Machine of Liveness* and *Arrows That Remain*, showing a development in the relationship of gestures to the musical materials of these pieces.

4.2.1 The Compositional Process: Immaculate Machine of Liveness

In this piece, I wanted to experiment with physical gestures and so I chose secondary body gestures of the French horn and trumpet that are non-idiomatic or ancillary (i.e. gestures which are secondary to sound production such as accompanying body movements that occur during the performance; Miranda, Wanderley and Kirk, 2006). In contrast to idiomatic gestures in my other pieces, the treatment of non-idiomatic gesture in *Immaculate Machine of Liveness* is different as it does not control the development of the piece through variations in gestural composition but rather proposes repetitive automaton-like gestures with no variation. The repetitive bowing and turning gestures worked out to my advantage because they came to represent a feeling of being stuck in a machine. This relates to the societal construct of class distinction, where struggle is implied when class structures control individuals' lives without a direct connection ('Social class', n.d.). Thus, the rigidity of movement associated with the machine-like behaviour of automaton gestures became part of the narrative that signified the programmatic idea of being stuck inside a machine.

Similarly to the rigidity of repetitive gestural movement, the musical material was also set up through sections of repetitive rhythmic textures. There are two sections, which I call 'machine-like', which use transcribed audio of the French horn and trumpet playing a version of Brecht and Weill's 'Mack the Knife' melody (mm. 33–67 and mm. 166–178) in which I used transcriptions of selected frequency bands from the audio of the recording. The motifs of the transcription of 'Mack the Knife' in the musicians' parts are interacting with a layered brass MIDI version of the same melody in the electronic parts (Speaker 1 and Speaker 2 parts in the score).

These motifs were processed through Spear and Open Music and simulated in Ableton Live (video documentation 1:40–2:40 and from 7:50).

In *Immaculate Machine of Liveness*, I use Brecht and Weill's 'Mack the Knife' transcription to represent class struggle musically. 'Mack the Knife' appears originally in Brecht and Weill's *The Threepenny Opera*, which offers a socialist critique of capitalism by telling the story of the life conditions of London's poor underclass ('The Threepenny Opera', n.d.). I also use 'dollar, dollar' and 'bills' samples from Wu-Tang Clan's 'C.R.E.A.M' (Cash Rules Everything Around Me), which interject into the transcribed brass MIDI samples in the electronic parts of the piece. The use of these samples signifies the struggle of poor inner-city black youths in the 1990s; the original lyrics recount the poignant story of Raekwon, one of the members of Wu-Tang, growing up in Staten Island and moving to New York City where his life changes from '…delinquent teen to juvenile offender to would-be-mentor' ('C.R.E.A.M' n.d.). By using the musical materials from Brecht and Weill's 1920s and Wu-Tang's 1990s, I wanted to represent musically the struggle of the poor and under-privileged youths from different historical contexts.

In addition to having two sections in the electronic parts which repeat with some variation in the instrumental parts, the overall structure of the piece is a combination of varying and repeating motifs (theme and variation) and some through-composed sections. For instance, I introduced some motifs from the transcribed parts of 'Mack the Knife' both in the instrumental and electronic parts in mm. 33–34 and in the trumpet part with its accompanying part in m. 33 for the French horn (Figure 15) but in a different rhythmic configuration. While these motifs are there, the motifs from the introduction also continue from m. 35 in the trumpet part (Figure 16) while mm. 40–41 returns to display 'Mack the Knife' motifs (Figure 17).

Figure 15. 'Mack the Knife' motif in trumpet and horn parts

Figure 16. Motifs from the introduction

Figure 17. 'Mack the Knife' in the trumpet part

Figure 18. German march motif

Besides the two sections which use a partial transcription of 'Mack the Knife', there are short motifs and transcribed samples of a populist German march embedded in the musical material of the piece that occur throughout (mm. 74, 80, 82, 87, 110–113 in the trumpet part; Figure 18). The use of these materials created dense textures between samples and processed instrumental parts – all creating a hybrid sonic context. The use of the German march was a nod to the French horn and trumpet instrumentation of the piece typically found in German

marching bands, signifying the populist nature of marches that some parts of this piece aspire to capture.

Some sections of the piece are composed in contrast to the dense hybrid sections. For instance, the introduction from the beginning to m. 33 functions as a slower presentation of the physical gestures along with the melodic material, which is also processed with pitch shift and sound delay effects. This section acts as an introduction of both sonic and gestural material before the machine-like section of m. 33. There are two more contrasting sections, such as the louder and more boisterous chromatic section from m. 93, and the slower pastoral-like horn solo in m. 130. Both of these sections are through-composed and do not contain material from previous sections.

Overall, while using repetitive gestures that had no direct effect on the musical material, I was hoping to establish a relationship of rigidity and machine-like estrangement through the alienation effect which would bring attention to the musical material implying significations between Brecht and Weil's 'Mack the Knife', Wu-Tang's 'C.R.E.A.M', materials of the sampled German march and the electronic processing that created the environment of co-dependence between French horn and trumpet instruments. However, as I understood from the performance and the audience's reaction to this piece, a lot of factors, such as the shortness of musical samples of Wu-Tang's *C.R.E.A.M* as well as the difficulty in hearing 'Mack the Knife' melody, contributed to a lack of understanding of the topic of class struggle that this piece was portraying. Thus, for my other pieces in the portfolio, I tried to create more explicit relationships between the gestural and musical material as well as integrating musical and extra-musical references more clearly within the structures of these pieces.

4.2.1 The Compositional Process: Arrows That Remain

Arrows That Remain exhibits a different approach to composition with gesture than *Immaculate Machine of Liveness. Arrows That Remain* was inspired by 1990s hip-hop sampling and scratching DJ culture, adapted to string quartet playing through accelerometer sensors attached to the musicians' bows*.* In addition, the gestural and musical materials are more closely related to each other in this piece than they are in *Immaculate Machine of Liveness*. In the composition of *Arrows That Remain*, I used both idiomatic and closely related gestures to bowing to set up and subvert expectations between sounding, air-bowed and audio processed gestures, as well as gestures controlling samples from hip-hop music. Thus, I used both multimodal associations of gesture as well as gesture subversion in order to set up and disturb the established relationships of gestures in a string quartet, gradually unravelling the form of the piece through surprise and the unexpected development of the musical and gestural materials.

Arrows That Remain begins as a string quartet without any sound processing, eventually introducing the first processed sound sample through the air-bowed gesture from the cellist of the string quartet in mm. 32–33 (Figure 19). The cellist's gestures introduce similar speeding up and slowing down manipulations of the sample that was used in *artefacts of presence*, which in this instance acts as a DJ scratch sound and disturbs the assumed string quartet flow of the composition.

Figure 19. First processed air-bowed gesture in the cello part (S.Moroz)

Eventually, the other players of the quartet begin to have similar gestural sound processing of air-bowed events. There are three idiomatic gestural behaviours from the string players in addition to conventional string playing: first (mm. 59–60; video documentation 3:28–3:40), when gestures mimicking sound samples are heard coming from each player from air-bowing written material in the score without sound processing; second (mm. 82–85; video documentation 4:55–5:02), when the mimicking of sound also acts on the sensor to speed the sample up or down, thus creating a scratch sound reminiscent of scratching on a record; and third (mm. 86–88; video documentation 5:05–5:17), ricochet air-bowing, a movement that affects sample playback like the rapid volume fader movement on a mixing table. There is a fourth movement which is closer to extended string playing than to idiomatic string bowing; this is when the bow is used in a whipping manner to affect skipping of the sample. Thus, by using an accelerometer sensor on the players' bows, with air bowing, ricochet and whipping

movements affecting the sound, the piece becomes linked to sound processes associated with DJ manipulations.

The musical material of the string quartet is varied and comes from different sources such as a transcription of the 'Funky Drummer' beat pattern distributed between instruments of the string quartet which appears throughout the piece (mm. 25–26, Figure 20). Originally 'Funky Drummer' was a jam session recorded by James Brown featuring a drum break improvised by Clyde Stubblefield, and later became the most frequently sampled drum break in hip-hop music ('Funky Drummer' n.d.).

Figure 20. 'Funky Drummer' beat pattern distributed between string quartet parts (S. Moroz)

The other sections and motifs, which I call 'tunes', are all composed by me. They are an accumulation of different melodic sections which pass by with or without some repetition and variation. Conceptually, I conceived of the string quartet as a type of a jukebox which introduces different 'tunes', sound effects (scratch sounds on the string and off-the-string DJ

manipulations), mixes (two string quartet materials) and samples (string quartet and 'clap' samples). Similarly to *Immaculate Machine of Liveness*, there is a degree of combination between variation on the previous material and introduction of new material like in a through-composed musical structure.

The next section following the 'Funky Drummer' motif is mixed with glissando-like material which becomes rhythmically varied before there is another pause and the piece resumes with the first 'tune' of the quartet at m. 46 (Figure 21).

Figure 21. First 'tune' of the string quartet (S. Moroz)

The glissando-like material is inverted in mm. 25–26 but it is present throughout the piece; its full iteration can be heard from mm. 71–85 (Figure 22), however in a dislocated form – violin II and viola are mimicking the samples heard while violin I and cello are playing on the string.

Figure 22. Glissando-like motif in its first full iteration (S.Moroz)

In addition to the 'Funky Drummer' transcription, references to 90s hip-hop culture become more evident when a sampled 'clap' sound, traditionally used in Roland SP-808 samplers, is used towards the middle (video documentation 4:41–4:54) and the end of the piece. Overall, musically, the effect of 'mixing' – as it is done in popular DJ culture – occurs because a string quartet playing normally on the strings becomes layered with heard and processed string samples. These string samples were recorded separately and are mostly separate musical material, with the exception of a couple of samples that also appear in the played string quartet (see *Recorded Samples* for *Arrows That Remain* in the score). Towards the end of the piece, from m. 138 (video documentation 8:00–8:25), there is an open section for the cello player, who also controls all the preset changes for the electronic part of the piece. In this section, the cellist can manipulate the 'clap' sample with less-idiomatic movements of the bow. These movements look more exaggerated than before, reversing, speeding up and slowing down the sample out of time (Figure 23). The course of the piece resumes when the cellist returns to triggering the pedal that changes the presets for all the quartet players.

Figure 23. Open cello section for gestural control before trigger number 36 (S.Moroz)

Musically in both *Immaculate Machine of Liveness* and *Arrows That Remain*, I use layering of textures with live and sampled sounds in addition to gestural content that sometimes affects the electronic manipulations. In *Arrows That Remain*, composition with idiomatic instrumental gestures allows for composition from one-to-one relationships of gesture to sound to interactions that become more complex. In *Immaculate Machine of Liveness*, the gestural relationship does not evolve or change throughout the piece to influence gestural signification, it stays automaton-like and creates an alienating effect in the context of the piece. As *Arrows That Remain* progresses, the initial gestural correlations become subverted and multimodally linked to other significations. Thus, in this piece, techniques relevant to the dislocation of sound from its source and associations with the extra musical significations subvert the expectations of a string quartet genre while revealing other significations along the way such as the relationship to hip-hop music or players' expressive gestural behaviour.

While pieces such as *Immaculate Machine of Liveness* and *Arrows That Remain* aim to introduces the extra-musical topics through mapping of gestures to electronic processes, the integration of gestural with musical material was different in each case. This shows a

development in my understanding of how gestures can work within the chamber music context, which became possible through insights gained from extensive rehearsal periods in other pieces following *Immaculate Machine of Liveness*. It is also evident that the rehearsal process of *On Fragments* had an influence on subsequent compositions and rehearsal processes of pieces such as *Arrows That Remain* and had a significant influence on the development of the concept of imaginary gestures and the devising process of *Motion Studies*. Thus in my PhD portfolio, my initial interest in composition with physical gesture and its significations developed through different experiments in gestural and musical composition. These experiments were sometimes explored in collaborative rehearsal periods with performers, influencing future work and compositional approaches.

Chapter 5. Conclusion

In my work, I have presented three approaches to working with extra-musical material such as physical gestures in a chamber music context. These approaches are anchored in extensive collaborations that treat performers' bodies as material for composition, embodying live electronics through gestural control and listening in the moment of composition. As a result of the interdisciplinary concerns of my research, I encountered obstacles as well as solutions that might be of benefit to the larger practice of contemporary chamber music. These propose various revisions of the chamber music practice by addressing aesthetic concerns as relevant to challenging the boundaries of the ontology of the musical work as well as the ritual of the concert performance. In the commentary, I examined similar concerns to revising the work concept and hierarchical relationships in experimental music and art practices of the 1960s. Then, I discussed current reprisal of the revisions in the hierarchies of concert chamber music and the ritual of the concert performance in the music of today's composers associated with the New Discipline. Finally, I discussed in detail how I addressed these concerns in my work, in addition to my key approaches to composition.

Building from this research, I am now in a stronger position to address working more openly with performers in collaborative environments. My approach to openness in composition has evolved constantly since I started opening the boundaries of the musical work to include input from the performers. Thus, I am interested in continuing exploring the performers' autonomy in a collaborative setting that could include aspects of distributive creativity and devised practice where hierarchical relationships do not have to exist.

I am also interested in continuing to work in an expanded field of chamber music practice. Thus, I am currently revising one of the pieces discussed in the portfolio, *Simulacra Studies.* Since the submission of my PhD, I have revised *Music for Speaking Bellows*, with new

performers. In *Simulacra Studies*, I am remaking the media sections of the piece such as video and audio to focus on a different pianist's response to gender, as I have described it in Chapter 2. I am also collaborating closely with the performer to devise a different choreography of gesture in relation to his pianistic behaviour. In a revised version of *Music for Speaking Bellows II* for two microtonal accordions, I reused my previous approaches of creating a visual illusion by associating spoken text processed electronically to accordion playing. I also composed with the visual aspect of two accordions playing near each other, thus, the visual as well as the aural aspect of their close instrumental associations was explored.

For the more distant future, considering the explorations of sensing through listening in the last pieces of the portfolio, I would like to continue investigations in sound with an emphasis on audiences' perception of sound. These investigations will be translated into a larger chamber opera experience for nine instrumentalists and four vocalists in a surround sound environment. I hope the physical presence of the performers will remain important here in addition to my own perception of sound and movement that I aim to continue exploring.

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