For the beauty of the act

Reflections on the concept of interdisciplinary virtuosity in new music performance

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Abstract

This practice-based research project addresses the concept of interdisciplinary virtuosity within the field of new music performance. It is structured around two key questions:

- How can recent new music practices — diverse, plural, and fluid in nature — challenge existing understanding of virtuosity?
- How do practitioners develop a performance practice which engages with the uniquely interdisciplinary demands of recent experimental work?

To investigate these questions, the research employs a mixed methodology. At the heart of the project is my activity as a musician between 2013 and 2021; this is documented through an artistic portfolio organised around four 'interdisciplinary' themes. Autoethnographic and ethnographic analysis of this practice is guided by historical and theoretical research into the ideas of virtuosity and interdisciplinarity, especially as they relate to the growing epistemic complexity of the twenty-first century.

On the basis of this research process I propose a definition of interdisciplinary virtuosity as a personal methodology of inquiry into new skills drawn from other disciplines, based on knowledge exchange, collaboration and co-creation. Interdisciplinary virtuosity is offered as a productive lens for re-envisaging the forms of creativity characteristic of much new music practice, and as an approach to expert performance fitting for the present-day explosion in knowledge. Additionally, the findings of the research have implications for the rapidly changing professional landscape, suggesting the need to rethink elements of pedagogy and music training, and methods for undertaking project-based acquisition of multidimensional performance skills.

Artistic Portfolio

The list of works is presented here by order of appearance in the text beginning from Chapter 4 and in the accompanying Dropbox folder. The folder is organised according to chapter numbers and lists items numerically. The references to portfolio works will be addressed in-text in brackets, with the identifier 'Dropbox #(chapter number).(work number)'.

The general link to Dropbox folder is

https://www.dropbox.com/sh/7nsvojif2sk6q1s/AAD80O3bl3MjHdlLJDRWDJJRa?dl=0

Links to individual items are provided below, as well as cross referenced throughout the body of the text.

Percussion practice (Dropbox #4)

Hanna Hartman

 - *Message from the Lighthouse* (2009), for solo percussion
   - Performance documentation; recorded at University of Huddersfield, September 2020.
     (Dropbox #4.1) https://www.dropbox.com/s/ca4adk30unmks0z/4.1.mp4?dl=0

 - *BUG* (2020), for two plastic boards, metal washers and plectrums
   - Performance documentation; excerpt from Distractfold's *The New Unusual* streaming concert, May 2021.
     (Dropbox #4.2) https://www.dropbox.com/s/buzlidtxs79q8p0/4.2.mp4?dl=0

Electroacoustic practice (Dropbox #5)

Mauricio Pauly
- *Its fleece electrostatic* (2012), for amplified violin and guitar pedals
   - Performance documentation; recorded live at TEDx Costa Rica, February 2015.
     (Dropbox #5.1) https://www.dropbox.com/s/h5gld5q9hufsr6v/5.1.mp4?dl=0
   - Performance documentation; recorded live at Le Bruit de la Musique Festival, August 2014.

(Dropbox #5.2) https://www.dropbox.com/s/3kzkb8b6a54sppc/5.2.mp4?dl=0

- *Charred Edifice Shining* (2016), for amplified string trio
  - Performance documentation; recorded live by Distractfold (Linda Jankowska, Emma Richards, Alice Purton, Mauricio Pauly) at Cafe OTO, London, October 2016. (Dropbox #5.3) https://www.dropbox.com/s/dw81cc34owgtvpb/5.3.mp4?dl=0

Sam Salem

- *London Triptych* (2015-8), for objects, performative electronics, tape and video
  - *not one can pass away* (2015); performance documentation; recorded live by Distractfold (Linda Jankowska and Daniel Brew) at KLANG Festival, Copenhagen, June 2016. (Dropbox #5.4) https://www.dropbox.com/s/tntwuix15a8xirr/5.4.mp4?dl=0
  - *Untitled Valley of Fear* (2016); performance documentation; recorded live by Distractfold (Linda Jankowska, Emma Richards, Rocío Bolaños) at International Summer Courses for New Music, Darmstadt, August 2016. (Dropbox #5.5) https://www.dropbox.com/s/eocidnsuxjqxjjb/5.5.mp4?dl=0
  - *The Great Inundation* (2017); performance documentation; recorded live by Distractfold (Linda Jankowska, Emma Richards, Rocío Bolaños, Alice Purton) at Bludenzer Tage zeitgemäßer Musik, November 2017. (Dropbox #5.6) https://www.dropbox.com/s/ft0gtlbfuds39x5/5.6.mp4?dl=0

Collaborative co-composition (Dropbox #6)

Linda Jankowska & Katherine Young

- *boundarymind* (2013-21), installation and performance
  - Multimedia output; *boundarymind*'s website - https://www.boundarymind.com/
  - Performance documentation; live-streamed at ESS *Quarantine Concerts* as a part of Emory University CompFest 2021; featuring video by Kera MacKenzie. (Dropbox #6.1) https://www.dropbox.com/s/novjv8udj63hvfc/6.1.mp4?dl=0
  - Video output; work-in-progress exhibition at RomanSusan, Chicago; featuring video by Kera MacKenzie and sculpture by Molly Roth Scranton. (Dropbox #6.2) https://www.dropbox.com/s/pr54tgm17gccsv1/6.2.mp4?dl=0

Elena Rykova

- *Marionette* (2014), for amplified violin and movement, arr. Linda Jankowska

- ● Workshop footage; excerpts from the workshop with Stephen Mottram in Oxford, January 2020.

    - Figure 26. Video excerpt from workshop with Stephen Mottram; discussing basics of human movement.

    (Dropbox #7.1) https://www.dropbox.com/s/x9uc51mycrb2ow6/7.1.mp4?dl=0

    - Figure 27. Video excerpt from workshop with Stephen Mottram; discussing an idea on how to look off balance, specifically sagging the knees.

    (Dropbox #7.2) https://www.dropbox.com/s/vwko33hcqxcbxh6/7.2.mp4?dl=0

    - Figure 28. Video excerpt from workshop with Stephen Mottram; discussing an idea on how to look off balance, specifically rotating the entire body while lifting one leg.

    (Dropbox #7.3) https://www.dropbox.com/s/pfm08s1z6yhkyf7/7.3.mp4?dl=0

    - Figure 29. Video excerpt demonstrating marionette walking as well as bringing the violin up by sliding it up the body.

    (Dropbox #7.4) https://www.dropbox.com/s/o4t02last036k17/7.4.MOV?dl=0

    - Figure 30. Video excerpt demonstrating marionette walking as well as bringing the violin up by sliding it up the body.

    (Dropbox #7.5) https://www.dropbox.com/s/74z2dpp5tv8sfzd/7.5.MOV?dl=0

    - Figure 31. Video excerpt demonstrating string puppet head movements.

    (Dropbox #7.6) https://www.dropbox.com/s/db4ulc1tqwp99jq/7.6.MOV?dl=0

    - Figure 32. Video excerpt demonstrating sympathetic swinging movements of the puppet's arms.

    (Dropbox #7.7) https://www.dropbox.com/s/kocg8q9psd75mke/7.7.MOV?dl=0

    - Figure 33. Video excerpt of a discussion about the marionette gaze and general string puppet stage demeanour.

    (Dropbox #7.8) https://www.dropbox.com/s/j8yb0u8kvzwmqk5/7.8.mp4?dl=0

    - Figure 34. Demonstration of a tentative bowing of a string puppet.

    (Dropbox #7.9) https://www.dropbox.com/s/tpj5ffuba0ohqw8/7.9.MOV?dl=0

- Figure 35. Video excerpt from workshop with Stephen Mottram; discussing arm movements led by the bow and practising letting go of my agency when performing them.
(Dropbox #7.10) https://www.dropbox.com/s/5aa1l6xhbuqwdwi/7.10.mp4?dl=0
- Figure 36. Video excerpt from workshop with Stephen Mottram; discussing pizzicato and bow movement when the bow is held away from the violin.
(Dropbox #7.11) https://www.dropbox.com/s/n6ixku7t7mwcsw1/7.11.MOV?dl=0
- Figure 37. Video excerpt from workshop with Stephen Mottram; early attempts at arranging the opening sequence of *Marionette.*
  (Dropbox #7.12) https://www.dropbox.com/s/9kbivuos2xga9i9/7.12.mp4?dl=0

- Rehearsal footage; documentation of experiments with puppetry movement, recorded at University of Huddersfield, May 2021.
(Dropbox #7.13) https://www.dropbox.com/s/u7so39k8sy0j5hc/7.13.mp4?dl=0

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Acknowledgments

I am indebted to David Pocknee, Braxton Sherouse and Sam Salem, who at various stages of this project were my editors, reviewers and critics, and to Sam Weaver for his help with recording parts of my PhD documentation amid a pandemic.

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Part I

1.

Introduction

1.1.   'Labels are tricky'

Matthew Shlomowitz (2016), writing in the edition of *MusikTexte* devoted to the topic of 'New Discipline', notes that the recent expansion of musician skill sets has led to 'new and spectacular forms of interdisciplinary virtuosity' (para. 6).[1] 'Labels are tricky' (para. 1) begins the author, and with such an opening statement – relevant for all discussions surrounding terminology – he sets ground for thoughtful commentary. Composer and vocalist Jennifer Walshe (2016) coined the term 'New Discipline' in a text written for the 2016 edition of the Borealis Festival in Bergen, Norway, which showcased a range of music practices overlapping sonic, theatrical and multimedia elements. 'The New Discipline is a way of working, both in terms of composing and preparing pieces for performance [... It signifies] the rigour of finding, learning and developing new compositional and performative tools' (para. 3), explains Walshe. Shlomowitz agrees with Walshe's use of the term discipline, and while he gives examples of earlier works utilising non-musical contexts, he also observes this phenomenon in much greater concentration currently in what he calls the mainstream of 'new music'.[2] The author, a composer of 'pieces extending

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[1] The term 'New Discipline' animated a range of debates within the community of new music when it was first coined by Jennifer Walshe in early 2016. Besides a special edition of *MusikTexte 149*, it was discussed in a lecture during International Summer Courses in Darmstadt in 2016 and debated from diverse perspectives throughout podcasts, blog entries and published articles (Graham & Cagney, 2016; Paskvan, 2017; Aszodi, 2017; Groth, 2016; Erwin, 2017; Laws, 2018; Kanga, 2021). For more information and the author's view on the topic please visit Jennifer Walshe's website, where her selection of academic writing is provided; see http://milker.org/the-new-discipline

[2] Commonly, when it comes to issues of terminology, there is no real consensus among scholars and practitioners involved in the field, as to what kind of name would most fittingly encompass the range of its concerns and inputs. Although terms like 'experimental music' or 'contemporary notated music' can be frequently found in texts and overheard in conversations, I decided to adapt the term new music, as suggested by Pàmies (2016) and challenged by both Rebhahn (2012) and Pace (2013). New music is in this

the compositional, aesthetic and performance practice pursuits' himself (Shlomowitz, 2016, para. 2), continues by differentiating such compositions. Shlomowitz notices a strand of works engaging physicality and another of works concerned with textual, interactive and visual elements. Following an examination of Mauricio Kagel's works *Sonant* (1960) and *Atem* (1969/70), he analyses a contrasting approach favoured in some more recent music which he terms 'the automaton approach'. In comparison to the earlier achievements of Kagel's instrumental theatre, Shlomowitz notes:

> (...) in recent performative concert work composers have taken a more cautious approach to extending the skill sets of musicians through building on existing skills, such as the ability to read notation and execute "events" precisely in time. A lot of work has steered away from asking musicians to play character roles and towards a conception of the performer as automaton. (para. 3)

A short, fast, quasi-mechanical and rhythmically precise performance style is, according to the author, meant to allow for a 'dispassionate exploration' and a sublimation of 'Romantic notions of subjectivity and ego that have underpinned the past few centuries of Western culture to reveal new and more modern forms of subjectivity' (para. 5). Shlomowitz concludes by saying that the automaton approach allowed composers to expand the non-musical in their works by utilising musicians' strengths. It is at this point in his article that the author mentions how the expansion of musician skill sets results in 'new and spectacular forms of *interdisciplinary virtuosity*' (para. 6, my emphasis). This phrase, referenced almost in passing, has become a turning point in my research since reading this article, as the term interdisciplinary virtuosity made me both curious and somewhat uncomfortable.

I took my initial discomfort as an opportunity to examine the possible meanings behind the term, and to develop its potential for a twenty-first-century application within my musical practice. Interdisciplinarity and virtuosity do not form a consonant pair. The former tends to be understood as bringing two or more disciplines together, integrating them through adapting methodologies, blurring the boundaries between diverse bodies of knowledge and collaboration, while the latter, a centuries-old convoluted and contentious

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project conceived as a terrain of diverse sonic environments within Western Art Music, where past conventions and norms are challenged, questioned and bypassed in order to envision and create alternatives that extend the understanding of what is possible in musical expression.

concept, is associated with a display of technical mastery, skill, and confidence (Ginsborg, 2018).[3] One is directed towards collectivism, the other fixates on individuals. Although inherently in friction, combining these two terms presents a music practitioner stemming from a Western Art Music tradition like myself with an opportunity to create a modern perspective on what constitutes a virtuosic involvement with one's practice and contemporary music culture, that is dynamic, fluid, and resists the dictionary definition of virtuosity as 'great technical skill' ('Virtuosity', n.d.). I expand on Shlomowitz's suggested understanding of interdisciplinary virtuosity as a new type of virtuosity occurring in performance practices integrating elements from disciplines such as theatre, video art, and performance art, which he calls 'non-musical elements' (M. Shlomowitz, personal communication, August 28, 2019). In my research I am interested in the points of friction between the concepts of virtuosity that have emerged through history, and the assumptions of interdisciplinarity as presented in social and natural sciences research, as well as the history of interdisciplinarity in Western Art Music (see Chapter 3). I propose viewing interdisciplinary virtuosity as an umbrella concept that encompasses the ways music practitioners conduct their engagement with the exponentially growing complexity and volume of modern performance expressions and tools for music-making.

For someone who identifies as a classically trained violinist among other labels, virtuosity is a particularly charged concept – sometimes a stimulus for progress, most of the time a psychological burden. My understanding of being a performer has been undoubtedly shaped by the instrument I chose to learn and has been informed by the historical baggage of context attached to it – historic figures, repertoire, sonic ideals, performance goals and pedagogy. Within the field of classical music, virtuosity is still predominantly regarded through the prism of a performance aesthetic largely shaped by Paganini and Liszt. Harvey Sachs (1982), music historian and author of *Virtuoso,* considers it an inheritance that every performer needs to face at some point in their life (p. 12). In the documentary film *The Art of Violin* (Monsaingeon, 2001) Ivry Gitlis states that 'there is before and after Paganini'. The premise of the movie is clearly guiding the viewer towards considering all the virtuoso

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[3] The range of possible interdisciplinary interactions is extensively discussed in Barry and Born (2013), and Frodeman et al. (2017).

violinists of the twentieth century being in one way or another descendants of Paganini.[4] Paganini, regarded by many as the embodiment of the Romantic concept of virtuosity, transformed not only violin playing but the concept itself for good (Pincherle, 1964; Metzner, 1999; Kawabata, 2004 & 2007). Although he had virtuosity antecedents like Vivaldi, Corelli and Locatelli, and other virtuosity forefathers like Italian castrati, most notably Farinelli, Paganini remains a figure whose virtuosity synonymously linked performing to the public manifestation of spectacle-making, showmanship and effortless overcoming of technical difficulty.[5] Most, if not all of modern classical violin school of playing has been drawing from the dazzling performance style, instrumental technique expectations and sound production aesthetic rooted in the nineteenth century.[6] Throughout the centuries the concept of virtuosity crystallised into its current, most common association – applied to the matters of music performance, meaning a demonstration of an 'exceptional technical accomplishment' (Kennedy & Bourne Kennedy, 2007).

My conflicting feelings about Shlomowitz's statement alerted me to something crucial about my perspective on the performance practice I could no longer easily anchor in my primary instrument. Up until 2013 I only ever played acoustic violin as per the affordances and requirements of a strictly disciplinarian music conservatoire education. Between 2014-16 I incorporated electronics, percussion, theatricality and singing into my work, frequently within the same concert, alongside violin playing. As a member of Distractfold Ensemble I have been presenting hybrid programmes since its inception in 2011. Two concerts in particular come to mind – Distractfold's showcase concerts at the International Summer Courses in Darmstadt in 2016, where I performed as a percussionist in Michael Pisaro's *Concentric Rings in Magnetic Levitation* (2011), objects and electronics operator in

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[4] The movie features Fritz Kreisler, Mischa Elman, Georges Enescu, Zino Francescati, Ivry Gitlis, Bronisław Huberman, Ida Haendel, Jascha Heifetz, Nathan Milstein, Yehudi Menuhin, Ginette Neveu, David Oistrakh, Isaac Stern, Joseph Szigeti, and Itzhak Perlman among others.

[5] Spectacle making through technical difficulty and speed display is mocked by some of the virtuosi themselves. Aleksey Igudesman (2016) in the preface to his book *Fasten Seat Belts: 10 virtuoso pieces for solo violin* jokingly describes a virtuoso as 'a musician with a secret desire to play things faster than anyone else for absolutely no reason'.

[6] Etudes, concerti, and virtuoso pieces authored by the touring violinists active prior to, or overlapping with Paganini's times, such as Henryk Wieniawski, Rodolpho Kreutzer, Jacques Mazas, Pierre Rode, Jacob Dont, Charles Dancla, Henri Vieuxtemps, Giovanni Battista Viotti, Charles de Bériot, form a bulk of modern violin teaching repertory.

Sam Salem's *Untitled Valley of Fear* (2016), violinist attached to several guitar pedals in Mauricio Pauly's *Charred Edifice Shining* (2016), and a string drums performer in Sabrina Schroeder's *Bone Games* (2016); and a Distractfold String Trio appearance at the NeoArte Festival in Gdańsk, Poland in 2015, where we presented Pierluigi Billone's *Mani.Giacometti* (2000) string trio alongside Hanna Hartman's *Borderlines* (2012) for amplified objects, tape and violin, Michelle Lou's *Untitled three-part construction* (2014) for two percussionists and cello, and Katherine Young's *bow breath crow* (2015-7), an amplified string trio with elements of movement and pressure sensors hidden in shoes of performers.

The growing multiplicity of approaches expected of new music performers points to a need for re-examination of performance goals, and recontextualisation of the ideas of technique and expertise. It calls for adapting to a more fluid practice, while still requiring the performer to exhibit exceptional care and invention. Such practice necessitates an idiosyncratic approach when facing the learning and creating of the unprecedented on a regular basis. It can motivate the practitioner to branch out in search of knowledge and methodologies into other disciplines. It can encourage various collaborations that blur the binary division between composers and performers, and challenge the centrality within Western Art Music of the single author and the work-concept. As a result, a performer might experience a destabilising of one's sense of performing self, and a degree of loss of security and control on stage. That in turn leads to questions about one's education, preferred frameworks for preparing and rehearsing, and relevance of the practice in a wider context of the cultural present

The wide-ranging approaches to music-making and performative tools within new music have stimulated discussions about the new ways of working, performing and being rooted in one's practice. The pivotal moment for the community appears to have been the publication of Walshe's (2016) manifesto *The New Discipline*, which has been widely debated in relation to composition. However, two years previously, percussionist Håkon Stene (2014) focused on the idea of post-percussion and post-instrumentality, and foregrounded the idea of the musician as a nomadic gatherer of skills who operates through an inconspicuous, loosely defined affiliation to a central discipline. Subsequently, in response to Walshe, other performers found relevant connections. Vocalist Jessica

Aszodi (2017) observes the need to develop novel tools for instrumentalists' embodied performance, and advocates for idiosyncratic, self-constructed and context-dependent methods of learning, rehearsing and creating. Percussionist Jennifer Torrence (2019) engages with questions around the performing body – the impact of her conditioning as a percussionist; transitioning to the role of a performer; specifics of working with composers writing for her body in mind; and the way forward in regard to creative collaborations. Pianist Zubin Kanga (2021) points to the wide-ranging interdisciplinary tasks that a performer needs to engage with and convincingly master in order to deliver works at the overlap of technology, music theatre and instrumental performance, something that he too deems a manifestation of 'interdisciplinary virtuosity'). My research project adds to the aforementioned performance scholarship, as it both stems from the discussion around Walshe's publication and is a natural manifestation of the zeitgeist of the last decade in new music. It however brings into sharper focus the pertinent questions surrounding the ever more observable shift away from conventional divisions of labour (composer/performer) in contemporary classical music, and its repercussions on traditional value and educational systems, including those that determine what is regarded as virtuosic. As a result, in my study, rather than taking the perspective of extended techniques, I attempted to frame the interdisciplinary virtuosity of musician skill sets' extension as a case of an ever-evolving process of knowledge formation and knowledge exchange between fellow human beings. What has certainly become my life philosophy contributes to knowledge by highlighting the awareness and possibility of self-expansion through acts of auto-didactism and co-creation.

Resolving the tension between a practitioner's point of departure and the multiplicity of the present day, as Borgo (2007) suggests, demands a growing awareness of oneself as a practitioner within a context of increasingly diverse perspectives that form our understanding of music. The concerns of the twentieth century's postwar period, as well as the Romantic notion of absolute music, instilled the importance of composition and notation as the primary impulse for the rise of virtuosity. In the twenty-first century the expanding ideas of what an instrument could be and what a performer's body could do have come to the fore, changing our perspectives on our artistic agency (Fraser, 2019, p. 6). Contemporary music practices, frequently drawing elements from other fields, have encouraged not only a renewed approach to one's instrumentality, but also a re-thinking of

modalities surrounding the creative input of composers and performers in the process of rendering the composition and making music happen. Regardless of whether practitioners are experimenting with new technologies or subtone throat singing, authorial claims as to who inspired whom to be virtuosic, put against our uncertainty with the new musical language of evolving instrumentality, should be treated with caution. Instead, a communion of diverse expertise and the rigour of auto-didactic learning from all those engaging in the contemporary approaches might serve as a more productive perspective.

My research project is one that was born out of my upbringing in a classical music tradition, and the very different practice that ensued in my professional life. It led me to question the existing educational pathways and their future relevance for the next generations of classically trained musicians. *For the beauty of the act* has grown to become an approach to the act of performance, as well as my life's philosophy. Through the repertoire and practices I have been invested in (see Chapters 4-7), I learnt to consider interdisciplinary virtuosity as an open term and a malleable framework for working beyond one's primary discipline. I view it as a perpetual process of learning without an endpoint and without clear boundaries or limits. A dialogue between disciplines dependent on one's engagement with other methodologies and practitioners. A focus on extending existing competences into new terrain and exploring what one's training can bring into these challenges, and how it can lead to new knowledge. An inclusive philosophy for all those who wish to stretch themselves and expand their awareness of self and others.

While challenging the typical understanding of virtuosity as a phenomenon dependent on assessment of observable and recognisable performance skills and their critical evaluation and acclaim, interdisciplinary virtuosity should not be confused with amateurism. It signifies rigour and determination to integrate new methodologies. Interdisciplinary virtuosity in this study does specifically refer to practices required by contemporary classical music and suggests a heightened degree of self-expansion through building upon existing musical training. As such, it differs from other forms of interdisciplinary practice where the heritage of virtuosity is sidestepped rather than actively confronted. As a life philosophy, its aim is to participate in an endless process of becoming comfortable with a beginner's mind attitude, while striving to achieve mastery. Newly acquired skills will

contribute to one's continuously broadening perspective on possible forms of virtuosity. Interdisciplinary virtuosity could be viewed as the new virtuosity of knowledge, where a practitioner's process-oriented mindset must remain in constant flux and transition. It is an approach that tries to move away from the hierarchies embedded in the idea of serving the work, towards a communion of co-creation. In sum, I propose to think of interdisciplinary virtuosity as a personal methodology of inquiry into learning new skills from other disciplines, representing a timely engagement with an omnidirectionally-stretched concept of music-making. I regard interdisciplinary virtuosity as a great skill in knowledge formation, creativity, collaboration and co-creation. The case studies presented throughout this thesis add further substance to this definition.

1.2.   Methodology

My creative practice plays a central role in this research project and determined the type of methodologies that structured it. Based on my experience as a performer and observation of fellow practitioners in my field, I adapted a blended methodology, incorporating elements of ethnography, autoethnography and auto-ethnomethodology. This allowed me not only to question virtuosity's convention but also to imagine virtuosity's reconceptualisation as a result of actively engaging with diverse creative practices and practitioners.

Following the understanding of practice-based research proposed by Skains (2018) and Candy and Edmonds (2018, pp. 63-6), the core of this study lies in broadening the perspective on existing and alternative approaches within interdisciplinary performance practice, as seen by myself and others featured in this study. This research consists of performances of works across four different practices – percussion; hybrid systems combining violin and electronics, and objects and electronics; collaborative co-composition; instrumental performance with elements of theatricality and movement. These are presented through a portfolio of video recordings, as well as a supplementary list of live performances featuring the researched practices. The contents of my artistic portfolio represent the driving force of this research and ought to be prioritised as the primary outcome of my study.

I identified the following research questions with an intention to develop knowledge and insights that can inform the progression of my individual artistic practice, as well as the wider practice and theory within the field of new music:

1. How can recent new music practices — diverse, plural, and fluid in nature — challenge existing understanding of virtuosity?

2. How do practitioners develop a performance practice which engages with the uniquely interdisciplinary demands of recent experimental work?

Sullivan (2009 as cited in Skains, 2018, p. 85) proposes a framework of four key areas of inquiry stimulating practice-based methodology – theoretical, conceptual, dialectical and contextual. These four areas are visible in my methodology through the following outcomes:

- Theoretical

My study includes literature reviews of scholarship pertaining to the topics of *virtuosity* and *interdisciplinarity*, providing a basis for enquiry into a new definition of *virtuosity* within the field of new music performance practice. It is thanks to the theoretical research that I was able to critically address and unpack the concept of interdisciplinary virtuosity, effectively elaborating upon and developing Shlomowitz's claim.

- Conceptual

I developed a performance practice and methodology of work that strives to answer my research questions and supports my proposed definition of interdisciplinary virtuosity, as demonstrated throughout chapters 4-7.

- Dialectical

I engaged in longitudinal thought exchanges with practitioners occupying different disciplinary spaces than myself. I was able to gain new insights and skills through conducting interviews, workshops, rehearsals and recordings. My case studies represent both research into performance practice of compositions such as Hanna Hartman's *Message from the Lighthouse* (Chapter 4) and Mauricio Pauly's *Charred Edifice Shining*

(Chapter 5), and collaborations such as *boundarymind* co-authored with Katherine Young (Chapter 6). A primary reason for including the pieces listed in my Artistic Portfolio was my admiration for these practitioners' aesthetics, and the opportunity their practices presented for experimentation with the boundaries of my musicianship and skill set.

- Contextual

I have been disseminating knowledge about the researched practices through live performances and academic presentations. I hope that my presentations encourage a wider understanding of the researched practices and their complexity, leading to a new perspective on interdisciplinary musicianship.

Both auto-ethnomethodology and autoethnographic strategy rely on a researcher's self-observation, self-analysis and self-reflection to produce sufficient levels of enquiry into the study's aims and objectives. However, they differ in the scope of their focus. According to Skains (2018), auto-ethnomethodology delineates a pragmatic approach to acquiring insight into the subject of the research by making sense of one's own creative processes (p. 87) and manifests itself through producing any kind of observable documentation that can be later used by the researcher themselves for evaluation of the decision-making processes. In the case of my research those are:

- Recordings of rehearsals

In the case of *Message from the Lighthouse, BUG* (Chapter 4) and *Its fleece electrostatic* (Chapter 5) I recorded run-throughs in preparation for live performance and evaluated the recordings both against the score and without it to assess my current perspective and get new ideas. In case of *boundarymind* (Chapter 6) our entire email and text message exchange spanning eight years became critical to making sense of how we developed the work. In the case of *Marionette* (Chapter 7)*,* evaluating the video recording of my home practice became the only viable way to develop the arrangement.

- Recordings of work sessions with composers

I took both audio and video recordings of demonstrations of sounds and techniques, as well as any relevant excerpts of conversations that could later remind me about an important detail pertaining to the composition or collaboration. In the case of

boundarymind our entire process has been based on exchanging various kinds of documentation.

- Access to individual composers' auto-ethnomethodological data (composition drafts, visual and sonic influences)

I am keen to learn what kind of creative process accompanied the development of the composition from the composers themselves. If I am granted access, I benefit from additional information such as book titles, sound files or photographs that could enrich my interpretative decision-making process. In the case of *boundarymind* parts of our auto-methodological data have been made public on the project's website.

- Journaling

In the case of *Marionette,* I started writing notes and questions pertaining to the techniques in the score as soon as I began working on the piece. This helped me at first to understand what kind of skills were needed to make the arrangement and what issues I needed to solve, which resulted in me attending a workshop with a puppetry artist and various movement classes. Later, thanks to journaling I was able to keep track of how I have been creating the arrangement day-to-day, since I chose not to make a score for myself.

- Recordings of live performance

Where possible I organised video recordings of my concerts, which I evaluated when preparing repeated performances and while writing my case studies in order to refresh my memory. I do not however immediately assess any recordings of live performances due to a belief that an intellectual and emotional distance is needed in order to be able to draw critical conclusions from documentation devoid of the most important component of liveness, namely the atmosphere of communion with the audience in the concert hall. However, these recordings serve an important role in tracking one's creative process and their analysis is a great aid in keeping one's perspective fresh overtime.

- Photographs of set-ups and settings

In the case of presenting interdisciplinary concert programmes consisting of multiple set-ups I rely on photographs to help me speed up the process of building them anew on stage.

Although the electronic settings tend to vary, I benefit from having some visual prompts to start with.

These different types of documentation are included in all my cases studies, either directly or indirectly. They form the core of my work's methodology. As demonstrated in greater detail in later chapters, I document regularly as a part of my learning process. This approach is particularly useful when I am engaged with multiple diverse practices at the same time and when I am on the road, travelling between teaching, rehearsals, workshops and concerts. It has proven invaluable to be able to return to my notes and recordings in the case of repeated performances, particularly after a long period of time. I learnt that even with a great deal of intention to remember, the important details can be lost or sidelined. Avid documenting also helps me track my creative process and observe its evolution and transformation, which greatly helps to academically scrutinise embodied knowledge.

Autoethnography in Reed-Danahay's (1997) terms is as simple as a study of self. Ellis, Adams and Bochner (2011, cited in Skains, 2018) see it as a method that seeks to describe and analyse personal experience in order to extrapolate understandings about wider cultural experience. The subjective process of evaluating one's creative practice, despite obvious difficulties related to pitfalls of memory and perception coloured by emotions, presents a researcher with a rich and interesting transformative potential. Autoethnography motivated me to be intently and critically self-reflective. I observed a significant change to the assessment of my practice i.e., what constitutes failure and difficulty. I began investigating my process with greater curiosity and patience, more scientifically and less emotionally. What I would normally consider a mishap, more frequently became an enriching moment of discovery. Moreover, this study of self allowed me to reflect upon the ways I wish to evolve as a musician, leading to a change in my artistic priorities e.g., developing co-compositions and interdisciplinary modes of learning. Self-reflexivity became not only a research method, but most importantly an intellectual and spiritual activity – a work on self.

Agreeing with Reed-Danahay (1997), Chang (2008) underlines that expressive self-reflexivity and self-focus in autoethnography need to relate the individual to the social (p.

46). Chang notes that 'autoethnography benefits greatly from the thought that self is an extension of a community rather than that it is an independent, self-sufficient being, because the possibility of cultural self-analysis rests on an understanding that self is a part of a cultural community' (p. 26). The autoethnographic strategy I have adopted is related to how I view my research within the dialectical and contextual areas, as proposed by Sullivan (2009). I organised semi-structured direct interviews and instigated email exchanges with fellow practitioners to link myself to the understanding of interdisciplinary performance practice amongst the wider new music community. This method of data collection, which forms one of the pillars of my case studies, allowed me to compare my experience with that of others, leading to a greater understanding of self, and a new perspective on the researched practices and the community. As Chang suggests 'Self-discovery in a cultural sense is intimately related to understanding others. (...)Values and standards upheld by the community are likely shared between self and others' (p. 36). Additionally, I have engaged in investigating work methodologies from disciplines such as film, dance and performance art through listening to relevant podcasts, watching documentaries and interviews (e.g., Film at Lincoln Centre, n.d.; Heymann, 2015; Akers & Dupre, 2012). I was curious to learn whether different ways of developing creative work in other fields could influence or be adopted onto my own practice.

Being fully aware that this methodology embeds other people's self-narratives into my own, I ensured that the following ethical standards are met:
- Informed consent as to the nature of the study.
- Participant's right to privacy and withdrawal from the study.
- Right to oversee the text and right to correct and edit quotations and information pertaining to the participant.
My interviewees were asked to proof-read the quotations from the interviews, which ended up in my final text. I respected the wishes of those who did not want me to upload their auto-ethnomethodological data collected during my research onto the Internet.

1.3.   Review of structure

This thesis attempts to address both the conceptual and the practical. As such its wide-ranging nature covers areas of history of music, musicology, critical theory, and performance studies. These are illustrated by four case studies demonstrating elements of

my own musical practice that are relevant to answering the research questions proposed in this study.

Part I starts off with an introduction, where I state the incentives behind my interest in the concept of interdisciplinary virtuosity, followed by an overview of my practice-based research methodology. I list my own creative practice, the observation of a broader new music community, as well as Matthew Shlomowitz's (2016) article 'The Automaton Approach' as the key reasons for undertaking this research project. The overview of my methodology is divided between delineating the auto-ethnomethodological and autoethnographic strategies of my research. I observe that auto-ethnomethodology is what I do – the practical side of it, while autoethnography is how I think about what I do – an analysis of my subjective experience. The combination of these complementary strategies provided a fruitful and rich artistic and research process for my thesis, as documented throughout the case studies. In Chapter 2 I follow up with a literature review of what I consider three dominant understandings of virtuosity in Western Art Music – virtuosity understood as a display of ego, subjectivity, and overt expressivity, rooted in the aesthetic of Romanticism; virtuosity as historically in conflict with the work-concept, leading to new types of virtuosity arising as a result of composition; virtuosity as a display of observable and recognisable technical skill. I explore the role of Franz Liszt as the symbol of Romantic virtuosity and the formation of the work-concept in the nineteenth century, followed by a discussion about postwar composition's subjugation of virtuosity in favour of composers' ideas and notation. I continue presenting modern conceptual models of virtuosity – critical, phenomenological and socially-constructed – based on Howard's (2008), Deaville's (2014) and VanderHamm's (2017) scholarship. In Chapter 2 I provide an overview of the concept of interdisciplinarity in the sciences and in the arts based on Barry and Born's (2013) argument that interdisciplinarity is a plural concept necessitating a range of analytical approaches. I discuss interdisciplinary performances of the postwar avant-garde era from the perspective of their challenges to the concept of nineteenth and twentieth century virtuosity. Combining Spatz's (2015) theory of technique as knowledge and de Assis's (2014) claim that musical works are complex epistemic systems, I formulate a definition of interdisciplinary virtuosity as a great skill in knowledge formation, creativity, collaboration and co-creation.

At the beginning of Part II, I revisit and expand on the earlier proposed understanding of interdisciplinary virtuosity. I begin by explaining why I drew my thesis's title from Leos Carax's 2012 movie *Holy Motors*, and suggest there is a similarity between the film's absurd plot and the context of twenty-first new music performance. I continue my examination by considering how questions pertaining to new methodologies of learning, rehearsing and performing occupy an array of fellow practitioners. I suggest that while new music cannot compete against the powerful resources of more commercial genres, it could continue to play a philosophical role, and in doing so provide an alternative model of engagement with the multidimensional contemporary culture.

In chapters 4-7 I present four case studies exploring different practices, such as percussion, electroacoustic performance, collaborative co-composition, and instrumental performance with elements of theatricality and movement. These practices are not only representative of my wider practice in recent years but also reflect broader trends in Western Art Music, such as the return of the composer-performer, combining household objects, electronics and acoustic instruments into performative set-ups, and the focus on embodiment and movement in music performance. These case studies stem from my research that aims to depict the continuous progression towards a broader understanding of what music can be, how it can be made and what kinds of labels can practitioners use to define their work. In Chapter 4 I discuss percussion practice as the precursor of music-led interdisciplinarity and present key concepts pertaining to it such as work-specific techniques, virtuosity of adaptability and post-instrumentality. Based on my experience presenting works written for percussionists such as Michael Pisaro's *Concentric Rings in Magnetic Levitation* (2011), Michelle Lou's *Untitled three-part construction* (2014), and Øyvind Torvund's *Neon Forest Space* (2009), as a part of this study I decided to focus on Hanna Hartman's *Message from the Lighthouse* (2009) and *BUG* (2020). Through their example I arrive at a conclusion that foregrounds idiosyncratic approach to sonic potential of materials and tactility as my most important research findings. Chapter 5 is dedicated to performing with electronics, which I view as an interdiscipline. In this chapter I review the scholarship pertaining to electroacoustic performance, notably Sebastian Berweck's (2012) doctoral thesis, and complement it with quotations from interviews conducted with colleagues who specialise in working with electronics. These interviews help me obtain a broader and updated perspective on this practice and act as insights from the

field. The goal of this chapter is to demonstrate that virtuosity in electroacoustic performance, due to its inherently interdisciplinary nature, differs from the concept's conventional understanding. I conduct my investigation through an analysis of my performance practice of works by Mauricio Pauly – *Its fleece electrostatic* (2012) and *Charred Edifice Shining* (2016), and Sam Salem's *London Triptych* (2015-18), which I put against three critical reviews that either appreciate or dismiss these performances. I conduct a comparison of hybrid virtuosity and interdisciplinary virtuosity and arrive at a conclusion that the latter has a greater potential of including the collective spirit of electroacoustic interdisciplinarity, as well as the notion of constant learning and friction necessary for operating new tools. In Chapter 6 I discuss *boundarymind* – a performative installation that Katherine Young and I have been collaboratively developing and co-composing over the course of eight years. I make an argument that co-authorship could be considered a feminist methodology and present examples of female- and minority genders-led work, alongside the work of composer-performer collectives. I begin my discussion with a brief literature review about collaboration and authorship, demonstrating that the convention of the single author has been shaped by patriarchal ideas of ownership. To propose alternatives to the way collaboration is conceptualised I use concepts from the writings of Donna Haraway, Anna Lowenhaupt Tsing, Elizabeth Grosz and Marcia Citron. Following a detailed investigation of *boundarymind*'s creative process, I conclude with a discussion about Cat Hope and Louise Devenish's (2020) *The New Virtuosity: A Manifesto for Contemporary Sonic Practice.* I suggest that while I consider *boundarymind*'s process a form of interdisciplinary virtuosity, due to exchange between different skill sets among the collaborating experts, 'The New Virtuosity' is an awaited contemporary perspective on the concept of virtuosity. Virtuosity in both mine and Hope and Devenish's view foregrounds social, collective, collaborative, and relational aspects. Finally, Chapter 7 is an analysis of my attempt to arrange Elena Rykova's solo violin piece *Marionette* for string puppet movement. In order to do that I first travelled to Oxford to learn from puppetry artist Stephen Mottram about basic rules of string puppetry. I showcase the details of this workshop through analysis of video excerpts, which are a crucial part of this case study. I distil the essence of my research in the form of short descriptions of the excerpts' content, and follow up with a discussion about my arranging decisions. In discussing other music practitioner's approach to working with the body, I hope to make a contribution to academic scholarship pertaining to embodied

performance. I conclude my thesis with a suggestion that interdisciplinary virtuosity, as a personal methodology of knowledge formation, is open to pursuit by all music practitioners regardless of their disciplinarian affiliation, and express my hope that this research contributes to the evolution of the concept of virtuosity.

2.

Virtuosity – an anachronism?

From the moment I read Shlomowitz's 'The Automaton Approach', and as my research into interdisciplinary virtuosity progressed, I realised that I was quite possibly chasing an elusive and ever-shifting set of notions. Virtuosity's history is complex, and the concept, despite over four centuries of deliberations, as Deaville (2014) contends 'still resists clear definition' (p. 292). It is a phenomenon paradoxical in character that lends itself to a multitude of meanings, depending on its collective context (ibid.).[7] Commonly understood as 'a quality of being extremely skilled at something' ('Virtuosity', n.d.), virtuosity and its noun virtuoso can be found in modern colloquial speech in a range of fields, from business through sports and religion, to cooking. Regardless of its aesthetic provenance, virtuosity is inextricably related to the matters of performance because it connects human efforts in action with the perception of those who observe them.[8] Recognised and utilised by the general public as a rather positive symbol and term of evaluation, nowhere has virtuosity been as highly debated and contested as in the context of Western Art Music and its instrumental performance. These arguments arise from the challenge that the phenomenon has historically posed to aesthetic concepts of value and social appropriateness (Deaville, 2014, p. 286). It also continues to be, as Stachó and Deliège (2018) point out, 'an issue which seriously confronts us not only with the role of the performer in music-making but also with our limits and limitations with respect to the perception and understanding of music' (pp. 449-50). Finally, the controversies around virtuosity spotlight the paradox of performance and the performer. On one hand the cult of the virtuoso was fuelled by music critics and journalists. On the other hand, performance has been traditionally sidelined and undervalued in music history and musicology, which mostly focused on musical works. Samson (2007) suggests that the phenomenon of

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[7] For an extensive bibliography pertaining to the topic of virtuosity beyond the field of Western Art Music see VanderHamm, D. (2018).

[8] Conversely, VanderHamm (2017) argues for a reframing of virtuosity as a phenomenon primarily linked to the reception of live music in a context, where most of current music experiences are mediated by recordings and broadcasting media.

virtuosity 'brings into focus key questions about the relation of performance to text, and therefore about the limits of what we can usefully say about musical works without reference to their performance—to the act of performance' (p. 4).

The polarity of virtuosity, and its reception emerged from a series of cultural contradictions based on binary oppositions such as high and low, or representation of spirit and mind through composition, and matter and body through performance (Deaville, 2014, p. 286). The evaluation of its complex perceptual, intellectual and socio-cultural nature tended for a while to focus on virtuosity's most observable feature – skill, which perhaps could have been most easily written about through the monographic examinations of lives, careers and particular musical (technical and performative) abilities of individual virtuosi. The term's rather narrow sedimentation in language – a 'great technical skill' ('Virtuosity', n.d.) – inadequately simplified the issue. As both Deaville and Heiste and Küpper (2016) note, explanations centring around skill are insufficient to account for either the diversity or complexity of the term. Deaville summarises Hennion's (2012) claims by asking 'If we consider it from a perspective of performativity, we must ask, what is the real site of virtuosity? In music we must ask, is it a quality that a performer possesses, is it a feature of music, or does virtuosity inhabit the act of exercising it? In other words, is it ontological or phenomenological? Or something else again?' (p. 277). This performer-work-execution nexus gets further complicated by the value judgement that the term inherently carries (Stachó & Deliège, 2018), and as a result virtuosity's features further shift depending on the perspective of those who evaluate them. Similarly to beauty (for instance, see Eco, 2004), virtuosity has been subjected to the waves of aesthetic transformations within culture and an array of critics' commentary on its nature. A term originating in the Renaissance to account for virtue and learnedness, became associated with aesthetic shallowness and excess in Romanticism, creating a stigma that 'persisted in academic circles through to the end of the twentieth century' (Deaville, 2014, p. 277).[9] Shlomowitz's (2016) suggestion that the automaton approach sublimates 'Romantic notions of subjectivity and ego' (para. 5) responds to some extent to this stigma. It also directly relates to another problem underpinning the evaluation of the term, which lies in the art of demonstrating the virtuosic skill. What are the characteristics of a

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[9] See Bernstein (1998) for an account of the relationship between the rise of the number of printed newspapers, the number of critical reviews issued and the rise of the controversy surrounding virtuosity.

virtuosic performance? Is it mastery of control and expression, 'charm and speed' (Pincherle, 1964; Howard, 2008), or something else.

2.1.   Existing understanding of virtuosity

The controversy that virtuosity has gathered across centuries (Pincherle, 1964, pp. 15-40) renders the critical examination of the concept particularly fraught with possible omissions. Therefore, I felt it was necessary to focus my attention on areas of inquiry that corresponded with sentiments of fellow practitioners in my field, as well as my own discord with the representation of the term internalised through my upbringing in the classical music tradition. Following this logic, in order to answer my first research question (How can recent new music practices challenge existing understanding of virtuosity?) I look closer into the conceptualisations of virtuosity which I consider most pervasive in Western Art Music:

1. Virtuosity understood as a display of ego, subjectivity, and overt expressivity, rooted in the aesthetic of Romanticism (e.g., Shlomowitz, 2016).
2. Virtuosity as historically in conflict with the work-concept, therefore new types of virtuosity inherently arise as a result of composition (e.g., Stene, 2014; Shlomowitz, 2016; Berio et al., 1985; Craenen, 2014; Couroux, 2002).
3. Virtuosity as a display of observable and recognisable technical skill (e.g., VanderHamm, 2017).

In this chapter I explore the role of Franz Liszt as the symbol of Romantic virtuosity, followed by a brief overview of the formation of the work-concept in the nineteenth century. Liszt, being a multifaceted figure provoking controversy during their lifetime, exemplifies the conflict between physical manifestation of virtuoso artistry, and the epoch's ideals of absolute music, pure and intellectual, whose meaning residing within the compositions is prioritised over the performer's individuality. I suggest that instead of seeing Romantic virtuosity as a highly complex, nuanced and certainly exceptionally successful performance practice, its simplified narrative got taken over by the criticism it received, resulting in further scorn across the twentieth century. Following a review of the work-concept I point to postwar composition's subjugation of virtuosity in favour of

composers' ideas and notation. I present different types of twentieth-century virtuosity relating to compositional aesthetics. Conversely, I challenge this understanding by highlighting ongoing research on the involvement of virtuoso soloists in the creation of postwar avant-garde works, which reveals a substantially more enmeshed way of creating music. These historic examinations serve as an important cultural background for the modern conceptualisations of virtuosity, which I present through a review of three prominent models of virtuosity in Western Art Music – critical, phenomenological and socially-constructed, exemplifying them with Howard's (2008), Deaville's (2014) and VanderHamm's (2017) scholarship. I follow up by bringing these perspectives together in a discussion about the role of subjectivity, diverse cultural value systems and liveness in the formation of the contemporary understanding of virtuosity. Through these examinations, I aim to show how the dispersed nature of contemporary performance practices could influence a novel understanding of the term, effectively leading to an investigation of the potential of interdisciplinary virtuosity.

2.1.1. 'Liszt' as a symbol of the Romantic myth of virtuosity

Yuval Noah Harari (2018) suggests that 'humans think in stories' (the simpler the better) (p. 3), and that the evolution of mankind is structured around a scaffolding of well-functioning myths, which we ritualise, perform and uphold to make sense of our existence (pp. 269-308). These myths inform social norms and values, and drive the economic and political systems (pp. 9-18). Christianity, communism or the idea of romantic love are all creations which endure by the sheer power of their narrative (Harari, 2017 & 2018). Myths we are born and socialised into create the reality and narratives of our lives, and the words we use to describe various abstract phenomena in the world are charged with the historic, aesthetic, political and utilitarian context of how the reference came about and how it is used symbolically in interactions between people. As Natasha Lushetich (2016) contends, 'Our conception of reality depends on the socio-culturally valid practices, transmitted through institutionalised forms of behaviour as well as through language, which, too, is a technology for communicating lived experiences to the next generation' (p. 2). It is therefore important to consider virtuosity, among other perspectives, as a complex linguistic notion which needs further explaining, and constant re-evaluation and repositioning in the context it is used to describe.

In the Western Art Music tradition, the attachment of the concept of virtuosity to certain figures is particularly noticeable. Most notably, a vast amount of scholarship has been dedicated to investigating the life and music of Franz Liszt, perhaps the most familiar of virtuosity's symbols. Legendary both during his lifetime and posthumously, equally idolised as dismissed and scorned, Liszt became 'Liszt' in the collective imagination, Bernstein (1998) suggests, a symbol of the paradox of virtuosity, 'a legend to no particular rigour' – a myth, whose examination is drawn from an aggregate of associations and impressions, found in imagery, journalism and musical works (p. 109).[10] Despite being a complex, inconsistent and multifaceted figure – besides a great virtuoso pianist who gave up performing at the age of thirty five, also a composer, conductor, teacher, philanthropist, writer, scandalous and handsome dandy, a Romantic hero decorated with multiple medals, and a resident of five countries during his lifetime (ibid., p. 114; Gooley, 2004; Walker, 1983; Searle, 2020) – 'Liszt' until today primarily acts as a symbol and manifestation of a highly affective and subjective Romantic virtuosic performance aesthetic that focuses on the physicality of instrumental difficulty, showmanship and bravado. Contemporary pianists aiming to shift the understanding of the diverse difficulties present in modern piano performance tend to reposition their concerns primarily in regard to the above-mentioned aesthetic (e.g., Kanga, 2014; Thomas, 2016).

Although Bernstein (1998, p. 116) warns against assigning Liszt's idiosyncrasies to a generalised understanding of Romanticism, what remains certain is that the nexus of aesthetic and philosophical concerns, and the socio-economic transformations of the nineteenth century, made the assessment of anyone's virtuosity at that time a highly contentious notion. According to Goehr (2007) the relations within music practice started substantially changing from around 1800 (p. 204). The rise of the free market and liberation of art and music from the court system propelled a proliferation of public concerts and changed the politics of entertainment (Metzner, 1999). Until then virtuoso musicians usually toured playing their own showpieces or were employed at various courts and churches. They wrote and performed for the occasion and their patrons, who frequently employed them to demonstrate their social status and wealth (Bukofzer, 1948,

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[10] Liszt's myth demonstrates an example of the power of narrative, which the pianist himself manipulated over the course of his career. See Gooley (2004) for a geohistorical investigation of the life and phenomenon of Liszt during his virtuoso years of 1830-40s.

pp. 394-411). In brief, the concept of independent musical works and their interpretation didn't really exist. From the nineteenth century onwards, musicians gradually became the beneficiaries of the general public. As a result, both composers and performers found themselves dependent on self-promotion and self-organization. Virtuosity had therefore a particular connection to nineteenth century journalism, for it was the sensationalised accounts of virtuosos which helped to elicit public interest in their performances and push the sales of the printed journals and magazines (Bernstein, 1998, pp. 11-35). The narrated impression of virtuosity as 'the very extension of the virtuoso himself' (p. 110), according to Bernstein, was 'obstinately grounded in materiality and singularity' and focused on aspects of physical appearance, stage presence and money (p. 11). And while this in and of itself was not a particularly new observation, since thus far virtuosity as an entertainment practice functioned precisely on the basis of creating a spectacle of music-making, certain philosophical ideas which arose in Romanticism rendered it debasing, superficial, and self-interested. Music started being regarded as an absolute, pure and transcendental art form, conceived independently of its functional application in society (Goehr, 2007, pp. 148-9 & 153-5). The products of music, earlier thought of as existing in service of occasions, became individual, standalone musical works infused with an internal meaning and aesthetic value attributed by the composers. According to Goehr, this emancipation of music from the 'extra-musical' saw music's new ideology attaching itself to the fine arts, such as painting and sculpture, where the production of art results in objects of art (p. 151). Music as a skilled performance and process could no longer match the new criteria, since it 'did not result in lasting or concrete products' (ibid.). Just as the new, romanticised separation between aesthetic value and functional utility created hierarchical divisions between fine arts and crafts, so did composition and performance start being recognised as separate, giving composers a new status of 'independent masters and creators of their art' (p. 206). As a result, the concept of musical works, which have an intrinsic meaning embedded in a score, and value regardless of their performance, gained momentum (p. 229), transforming the way we think, evaluate and talk about the production of music until today.

The concept of *Werktreue* – being true to the work – emerged in support of the realisation of compositions, encapsulating the changing relations between composers and performers in the production of music. 'Performances and their performers were respectively

subservient to works and their composers', adds Goehr (p. 231). Such attitudes were however already in progress throughout the eighteenth century, and subject to critical evaluations by theorists (Ferraguto, 2019, pp. 47-60), who argued that a true virtuoso prioritises representation of music over individuality that 'must be suppressed in order to allow another composer's idiom to emerge' (p. 51). The formation of the conception of works, *Werktreue*, and evolving practice of notation posited virtuosity in a starker opposition to composition than ever before. Goehr (2007) makes a claim that virtuosity in the Romantic era was also a performance practice of liberation from the constraints imposed upon musicians by the idea of being true to the work, giving the performers a chance for a free and spontaneous expression, as well to showcase their talent and skills (p. 233). Palmer (1998) suggests that virtuosi were viewed as emerging 'icons of a new order of emancipation' (p. 346), individuals in charge of their own fate. Accounts of Liszt's and Paganini's idolatry (Walker, 1983; Gooley, 2004; Palmer, 1998) certainly suggest that the public seemed to have been swayed by the expressivity and theatricality of virtuosity, vicariously experiencing a transgression of the limits of self through the virtuoso's spectacle (Brandstetter, 2007, pp. 178-9). Yet the attitudes towards virtuosity as something shallow, subjective and egomaniacal dominated its criticism, which persisted well into the twentieth century (e.g., Burk, 1918).

While Liszt became the most extensively researched historical figure in recent efforts to unpack the complexity of virtuosity, Deaville (2014, p. 292) suggests that such a focus created 'a Liszt problem' for academia and wonders how else virtuosity could be understood if it hadn't been perpetually framed against a Lisztian background. Conversely this concerted research into Liszt could be interpreted as a necessary dispelling of his myth as the underpinning of the concept of virtuosity in the collective imagination of Western Art Music's practitioners. If we are ready to consider the limitations and biases of our understanding of the framework within which we operate, we can more readily accept the fact that history consists of many alternative narratives. As Harari (2017) observes 'Whenever we choose to tell one, we are also choosing to silence the others' (p. 176). By treating Liszt as the concept's symbol, most worthy of attention and investigation, by defining virtuosity through the lens of his practice, and by upholding institutionalised conditioning through a conservative classical music pedagogy, based primarily on an aesthetic belonging to a distant socio-economic context, we are closing off our imagination

and excluding other forms of expression. However, symbols and concepts, even if largely creations of the mind, serve as humanity's points of orientation and as Stone Zander and Zander (2000) suggest 'permit us to traffic with the future and the past' (p. 106). The Romantic virtuosic aesthetic, in all its dazzle and excess, informed both composition and performance throughout the twentieth century. It served as a counterpoint and a point of contention adding to a drastic rejection of its conventions through a number of aesthetic turns, as well as a secret inspiration. It expanded the capacity of human expression through high-intensity instrumental action. Even in its reduced and simplified historic understanding, virtuosity as an exceptional and observable command of one's instrument, speed, difficulty and charismatic stage presence, offers a framework for an evaluation of performance that is unlikely to ever fully disappear. Jane Ginsborg (2018) asked 102 international respondents - students and professionals, primarily but not exclusively trained in the Western classical music tradition - such questions as 'how would you define virtuosity in music performance?' and 'what does virtuosity mean to you?' (pp. 454-473); most frequently respondents associated virtuosity with technique, ease, mastery and showmanship.

2.1.2.   Composition subjugates virtuosity

'So the greatest merit of the performing artist, the virtuoso, must consist in the pure reproduction of the thought of the composer' writes Richard Wagner in 1840 (Wagner, cited in Bernstein, 1998, p. 86). A virtuoso according to Wagner, as Bernstein interprets it, would ideally be 'a musical instrument, that is, the kind of instrument that is thoroughly effaced in the presence of the ends it serves' (p. 86). But in this conflict between work and its representation, Wagner does accept the composer's dependency on the virtuoso, who according to him are themselves to blame for making the translation of musical ideas difficult, and 'must relegate this labor of execution to one who devotes his whole life to this: to be the other half of your work' (pp. 85-6). Tensions such as these combined with negative attitudes towards the display of ego associated with virtuosity, resulted in the twentieth-century's subjugation of virtuosity by composition. Craenen (2014) observes that composers of the postwar period rejected Romantic virtuosic tropes of showmanship and display of individuality:

> The postwar experiment styles itself, in its most political form, as an act of unmasking, an exposure of the machinations and illusory practices of music performance that were experienced in the postwar climate not only as disingenuous, but also as dangerous and manipulative from that time onwards. The cult of the virtuoso was degraded to a culture of blinding special effects. (p. 126)

Nonetheless the idea that a subjugated virtuoso would act as the other half of the composer, intensified. Despite the bad press virtuosity has acquired for being considered technique for technique's sake, serial composers like Boulez, Maderna and Stockhausen needed highly skilled 'trained virtuosos' who, as Halfyard (2007) describes it, in a cold-headed and hearted manner could attain an optimal physical realisation of their compositions (p. 115). However, at the same time, new demands on performers, beyond what a conventional instrumental technique entailed, proliferated.

The second half of the twentieth century brought a burgeoning of movements and performance concepts: serialism, John Cage's indeterminacy and the American experimental music of the 1950s and 1960s, Fluxus, new complexity, instrumental theatre of Mauricio Kagel, Helmut Lachenmann's *musique concrète instrumentale* – each challenging established ideals of composition, performance and their public presentation in diverse ways .

Broadly, these investigations can be divided into three main areas – notation, role of the instrument, and stage performativity. Questions pertaining to notation, whether highly prescribed (e.g., Couroux, 2002, Ferneyhough et al., 1995) or open and indeterminate (Nyman, 1999), as an interface between composer and performer, resulted in some shifts to the conventionally understood limits of performers' creative decision-making capacity. The idea of instrument and instrumentalist working in tandem as a site for experimentation preoccupied composers such as Luciano Berio (Halfyard, 2007; Berio et al., 1985) and Helmut Lachenmann (Lachenmann, 1980; Lachenmann & Ryan, 1999). A renewed interest in performativity and theatricality came to the fore when practitioners such as Fluxus artists (Lushetich, 2016) and Mauricio Kagel (Heile, 2006) played with the traditions of the concert format and appropriate stage behaviour.

Performing became a matter of specialisation dedicated to in-depth realisations of the aforementioned aesthetics. From there on, new aesthetic movements and compositional

styles, questioning and challenging conventional modes of instrumentality and public display of performativity had a potential for stimulating the rise of new kinds of virtuosity.[11] Although, as Craenen (2014) remarks, postwar composers 'rarely fell back on the nineteenth-century culture of virtuosity' (p. 126), Berio (Berio et al., 1985) explicitly referred to the Romantic aesthetic and reinstated virtuosity as a legitimate and respectable concept by noticing that it

> (...) often arises out of a conflict, a tension between the musical idea and the instrument, between concept and musical substance (...) virtuosity can come to the fore when a concern for technique and stereotyped instrumental gestures get the better of the idea (...) Another instance where tension arises is when the novelty and complexity of musical thought - with its equally complex and diverse expressive dimensions - imposes changes in the relationship with the instrument, often necessitating a novel technical solution (...) where the interpreter is required to perform at an extremely high level of technical and intellectual virtuosity. (pp. 90-1)

In an interview with Rosanna Dalmonte, Berio situated a virtuoso of the late twentieth century as someone 'capable of moving within a broad historical perspective and of resolving the tension between the creativity of yesterday and today', whose instrument is a 'piece of musical language' existing within and dependent on the socio-economic context of the historical period (ibid., p. 91). For Berio it was the 'virtuosity of knowledge' – an expansion of the scope, not only of technical possibilities, but also of the register of musical expression, that the composer desired to complement the interpretation of his works. An intellectual kind of virtuosity, which constantly reflects and challenges the idiom of the individual instruments, their technical capacity, and the historical roots of that idiom (Thelin, n.d.). Berio's virtuoso is 'a performer with the same technical abilities but without the suggested ego of their historical counterpart' (Halfyard, 2007, p. 115), who will prioritise the needs of the work and refrain from the spectacle of mere entertainment. Virtuosity thus far, as Craenen (2014) remarks, grew out of the visible and personalised rapport with the instrument (p. 129). In the twentieth century, the growing gap between composers and performers, and the complexity of music notation, skewed the rapport between instrumentalists and their instruments towards an instrumental mediation with

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[11] See e.g., Nyman (1999), who referring to experimental scores of the 1950s and 1960s, suggests that 'routine tasks may have an alarming tendency to breed random variables which call for a heroic (unsung, unnoticed) virtuosity on the part of the performer' (p. 15).

music notation, and a certain power struggle between composers and performers (p. 130). Still however, virtuosity of the postwar period, controlled by the primacy of the score, demanded an exceptional level of instrumental proficiency from performers, stemming from the knowledge of their disciplinarian traditions. For Ferneyhough (1995, cited in Craenen, 2014) the hyper virtuosity of his scores instigates more agency and personal invention on the part of the performer:

> Performers are no longer expected to function solely as optimally efficient reproducers of imagined sounds; they are also themselves 'resonators' in and through which the initial impetus provided by the score is amplified and modulated in the most varied ways imaginable. (p. 130)

Nyman (1999), on the other hand, suspects that 'perhaps to protect their scores from the misunderstandings their very openness may encourage' (p. 22), composers of the experimental music of the 1950s and 1960s turned to performing themselves. Regardless of whether musical scores were painfully detailed or ambiguously open, their central role in Western Art Music throughout the twentieth century is unquestionable.

When I interviewed Matthew Shlomowitz in August 2019 he referred to three main types of virtuosity that he considers prominent in new music: experimentalism à la Cage, which is (in his view) anti-virtuosity but not anti-rigour; 'how many notes can you play Ferneyhough-type virtuosity'; and interdisciplinary virtuosity, stemming from Mauricio Kagel's instrumental theatre, in which non-musical elements are brought into the performance (M.Shlomowitz, personal communication, August 29, 2019). Additionally, the term virtuosity has been applied by other scholars and critics to a range of compositional practices. Couroux's (2002) 'Critical virtuosity', Nonnenmann's (2018) 'Microvirtuosity', and Erwin's 'Cyborg virtuosity' (2016) all point to specific skills related to compositional concerns. Critical virtuosity is used by Couroux (2002) to inform the particularities of a performance practice, which stems from a deliberate composition aesthetic, attempting to reinvent music directly from musical notation, such as Xenakis's *Evryali*. A solo piano piece notated on four and five staves, *Evryali* is impossible to render exactly note-by-note by design. As a result, the pianist needs to make a personal reduction and critically address which aspects of the composition to omit (Couroux, 2002). Triggering new rapport between body and the instrument, and against conventional physical paradigms of

instrumentality, composition leads the performer onto new areas of virtuosic interface, as viewed by Couroux. Microvirtuosity, according to Nonnenmann (2018) demands a maximum of body control, precision in the millimeter range as well as an extreme accuracy regarding perception and fine motor skills. Composers interested in such performance practice, such as Timothy McCormack, e.g., *your body is a volume* (2016-19) and Charlie Sdraulig, e.g., *binary* (2013-17) do not routinely use the common extended repertoire of playing techniques and sounds but subject the few selected materials to the highest possible level of observation. Cyborg virtuosity is a term Erwin (2016) explicitly used when describing 'a certain group of composers whose works incorporate elaborate and seemingly invasive technological elements whilst retaining the gestural qualities and performative affect of the Western art music tradition' (p. 5). These composers are Leopold Hurt, Stefan Prins, Simon Løffler and Celeste Oram, among others. Judging by these examples, speaking of virtuosity in the context of new music compositional aesthetics might be aimed at reinforcing the idea of the work's difficulty and the performer's high achievement in its execution. Following such logic, the range of possible virtuosities could be infinite, or at least as numerous as there are composition styles.

At the same time virtuosity, unlike in previous eras, is no longer considered an ability that solely belongs to the body of the performer (Craenen, 2014, p. 129). Although Craenen argues that since the postwar period composers and performers have been gradually coming together again, and longitudinal collaborations became a vital part of developing new musical materials and idiosyncratic performance techniques (p. 127), what remains to be questioned is the narrative of ownership of these ideas, and their impact on the occurrence of virtuosity. The case of John Cage and David Tudor (Iddon, 2015) poignantly illustrates how collaborations are primarily based upon relationships between people and their singular dynamic of thought exchanges. The pieces that are conceived as a result, such as Luciano Berio's *Sequenza III* (1965), often mirror the extraordinary and unique talents of the work's dedicatee (in this case Cathy Berberian) and provoke questions regarding the nature of authorship. Lucas Vaes (2014) has similarly demonstrated the scope of musicians' involvement in creating the score and performance of Mauricio Kagel's *Acustica* (1968-70). In instances where the musical score poses a significant challenge to the performer, the solutions and intellectual strategies of the score's instrumental translation may belong solely to the percussionist, as Schick (2006) argues is the case for

Ferneyhough's *Bone Alphabet* (1992). The interviewees and contributors to Sharon Kanach's (2010) *Performing Xenakis* give testimony to the need to find their own way among Xenakis's idiosyncratic compositions and arduous scores.

In recent years the increased attention granted by musicologists to performers from all periods, now called the 'performative turn' (Cook, 2001), brought a significant change to the way the compositional process, and effectively the music-making context is perceived. The musicological narrative focusing on composers, their techniques and works, which echoes long-standing hierarchies in music, is gradually being rewritten. Thanks to the research on such prominent artists as Cathy Berberian (e.g., Karantonis et al., 2014) and David Tudor (e.g., Iddon, 2015) a much more nuanced and complex picture of the postwar avant-garde period is being revealed. However, as Kate Meehan (2011, p. 6) observes, 'Similar research needs to be carried out on a great variety of virtuoso performers from the 1950s and 60's'.[12] The yet-to-be unravelled stories will undoubtedly not only further support the inseparability of composition and performance, but also highlight the acute involvement of performers in the compositional process, further questioning the notion of single authorship.

2.1.3.   Virtuosity as a display of an observable and recognisable technical skill

VanderHamm (2017) notices that modern academic scholarship on virtuosity encompasses a range of fields, such as musicology, ethnomusicology, literature, philosophy, anthropology, sociology, history and performance studies, and topics such as embodiment, technology, power, economics, ethics, identity (p. 30). Western Art Music's context privileges threads of inquiry such as phenomenology, domain-dependent critical evaluation of skill, virtuosity's impact on society, culture and politics within a particular historic time, monographic biographical publications, and composer-performer-work relations. Although, like with any abstraction, there undoubtedly are as many ways to

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[12] Meehan (2011) lists a number of prominent performers of the postwar period: 'Yvonne Loriod (1924-2010), who worked closely with Olivier Messiaen, mezzo-soprano Jan DeGaetani (b. 1933), who premiered many of George Crumb's vocal works, (…) flutist Severino Gazzelloni (1919-92), oboists Lothar Faber (b. 1922) and Heinz Holliger (b. 1939), trombonists Vinko Globokar (b. 1934) and Stuart Dempster (b. 1936), recorder player Franz Brüggen (b. 1934), vocalists Bethany Beardslee (b. 1927), William Pearson (1934-95), and Dorothy Dorow (b. 1930), pianists Bruno Canino (b. 1935) and Antonio Ballista (b. 1936), and the piano duo of Aloys (b. 1931) and Alfons Kontarsky (1932-2010)' (pp. 6-7).

think about virtuosity as there are practitioners, perhaps some distinct general explanatory models do emerge. In my view, although risking an oversimplification, there are three dominant models: critical, which depends on there being a critic's or expert's evaluation of a demonstration of skill; phenomenological, which focuses on the experience of virtuosity as something occurring between the performer and public and tends to err on the side of mystery; socially-constructed, privileging a socio-cultural and geohistorical understanding of what constitutes a performance skill.

The critical model is well represented in Howard's (2008) vision of virtuosity. Howard suggests that virtuosity arises between an artist or groups of artists, their performance domain, and a critically informed audience able to assess the skill and performance quality. He proposes a model, where the eye of the beholder must have critical means to determine the value of what it is observing. Recognition of the performance standards and context inform 'a judgement of merit over results achieved' (p. 12). Howard's claim directly links *'critical recognition by a field of experts'* to the existence of virtuosity (ibid.). According to him, as a term of merit, it relates to 'the highest levels of musicianship *and* the highest level of technical proficiency in which vision and execution are joined' (p. 11), where one could deserve such merit based on 'consistent performance excellence usually across a range of performance demands' (p. 10). Additionally, virtuosity in his view 'exceeds normal expectations and standards' therefore cannot be taught (p. 11). Howard posits virtuosity as 'closer to the ground than creativity' due to its obvious observable physical manifestations, as he considers the process of acquisition of virtuosic skills 'task-specific', and its judgement focused on 'observables of execution' (p. 17), marking a distinction between end-products such as paintings which cannot be virtuosic, and performative work. To Howard charisma, physicality, and a stage persona are deemed necessary for a performance to be evaluated as virtuosic. Scholarship which falls under Howard's model frequently deals with the expert evaluation of skill through analysis of performance practices in regard to musical works.

Deaville (2014) presents a phenomenological view suggesting that 'Virtuosity is a product of performance, bringing one or more exceptional interpreting bodies into communication with an audience that undergoes an extraordinary experience through that mediation' (pp. 291-2), and suggests that the mystery of virtuosity lies in the experiential, momentary and

hard-to-grasp exchange between the performer and audience. His views follow in the footsteps of Hamera (2000), who compares virtuosity to a love affair between a performer and a spectator 'in which each remakes the other' (p. 151). Writing about her personal experience of observing Naoyuki Oguri dance, whose performances stimulated her inquiry into the issues of representing bodies and transient art through language, Hamera suggests considering virtuosity as

> (...)metaphor or technology that transposes the relationship between the extraordinary dancing body and the critic's body into an interpretive occasion. Virtuosity is this relation, this technology, and this occasion. Virtuosity - that critical container curiously hyperdisciplined, hyperlaboring thus hypervisible—yet somehow, ineffably, elusively more. You "know it when you see it." (p. 147)

In this model the focus is on immaterial qualities of the phenomenon, rather than on the hard, observable features of live performance such as physical gestures or performativity. The phenomenological approach highlights experiential subjectivity and the emotion involved in the reception of a performance. Unlike in Howard's model, it positions the audience not as a critic and judge, but as a partner in the formation of an energetic, sensory exchange, which transforms all parties involved during the act of performance.

VanderHamm (2017) posits virtuosity as 'a socially constructed phenomenon' and argues:

> It does not reside solely in the bodies of performers, nor in the opinions of listeners (whether lay listeners or professional critics), nor the works of composers. Instead, virtuosity occurs within the relationships that connect these various entities and is shaped by the cultural and subcultural contexts in which they take place. (pp. 1-2)

His perspective foregrounds socio-economic factors affecting our perception of the value of work and production of meaning. What strikes in this model is its spotlight on the issue of assessing the value of music, and the act of using virtuosity as a tool of its elevation for market use. VanderHamm directs attention to the interrelations of culturally accepted value judgments that condition what is considered as labour and skill in music, and other factors involved in their determination:

> Virtuosity is collectively produced through actual sound, bodies in motion, instrumental technologies, deeply held values, and social and economic factors. Social construction occurs within

these embodied practices of production, promotion, and perception, and it is through these practices that people produce and experience meaning. Furthermore, these meanings shape the materials and phenomena that they interpret, and the socially constructed "real states of affairs" do indeed affect the sort of meanings that are available. Thus, while discourse and narrative are important aspects of virtuosity, it is not reducible to those aspects. (p. 2)

Focusing in his research on the reception of virtuosity in divergent areas of music, such as bluegrass, Hindustani music, music mediated through electronic media, and music performed by artists with exceptional, non-universal abilities such as Tony Meléndez – an artist born without arms performing on guitar with his legs – he suggests that 'different modes of interpretation, different models, and an attention to the basic questions of virtuosity' are required (p. 7).

The critical model and the socially-constructed model come together in the role that competitions play in the upbringing of classical musicians, who to this day form the overwhelming majority of new music practitioners. As Wagner (2015) observes, competitions serve different purposes at different stages of education and socialisation into a professional career (pp. 65-9). Initially providing a motivation for practice and an initiation into the profession, over time success at competitions is regarded as critically important to increasing one's market value. Competition outcomes however are rarely impartial, the evaluation process is highly subjective, and the chance of meeting the expectations of jury members in technique, interpretation and stage presence, Wagner deems 'virtually impossible' (pp. 66-8). Even within the classical music field, where arguably the performance convention is well-established, understood and documented, judgement of virtuosity solely based on measurable technical features proves flawed and limiting.

The issue of skill evaluation gets further complicated in new and experimental performance practices. After all, one of their main purposes is to be novel and exploratory, hence perhaps more difficult to comprehend and relate to at first. The quality of their presentation, devoid at times of precedence, can hardly be evaluated by the performers' alone, never mind their fellows, the audience or music critics. Lüneburg (2013), in her doctoral research on the phenomenon of charisma among other things, suggests that value and meaning, even if socially-constructed, are highly individual matters:

Yet, although there are cultural and societal agreements that peer groups share certain values, a common ground cannot be guaranteed even for a group as small as two individual people. Instead, we operate in a varying, individually and socio-culturally determined landscape of open or hidden meanings and values which unfold in communication between individuals and groups. (p. 47)

This complex contemporary situation is echoed in VanderHamm's (2017) attempt at redefining virtuosity as a 'skill made apparent and socially meaningful' (p. 16). While investigating the reception of virtuosity within diverse cultural value systems, which do not necessarily promote showmanship and individualism, the author could not however avoid the issue of demonstration of skill. He remarks that 'different ends and values - some easily measurable, some not - exist alongside one another' (p. 15), posing a difficulty in understanding virtuosity. His research into evaluation of musical labour in electronic media proposes a necessary counterpoint to the aforementioned phenomenological model of virtuosity, and opens up a necessary debate in the age of digital music consumption – is liveness a necessary condition for the experience of virtuosity? VanderHamm argues that the admiration for someone's skill can be experienced even if lacking visual, live display and that virtuosity could equally be 'mediated, spread out over time and space, and placed in new contexts' (p. 11). He notices however that absence of aspects associated with virtuosic performance such as display of risk-taking or observable means of music production, hinders the reception of different types of virtuosity (ibid.).

To conclude, virtuosity is a term that might feel somewhat inadequate when discussing recent multifarious developments within the field of new music performance practice. Its symbolic meaning, within the context of Western Art Music, was established most prominently in Romanticism, through the impact and evaluation of the achievements of the famous virtuosi of the era, such as Franz Liszt and Nicolo Paganini. The concept is both frequently looked down on or even considered archaic in the twenty-first century, as well as upheld through classical music pedagogy, competitions and the marketing of the music industry. The skill that provides the basis for a virtuosic performance has always been at the centre of the reception of virtuosity and held great value for composers in the twentieth century, who having outsourced the manifestation of their complex concepts, needed highly skilled instrumentalists to perform their works. And while Howard (2008) argues that virtuosity 'is seldom directly examined, giving rise to inconsistent vague and ambiguous claims ranging from high praise to fierce condemnation' (p. x), recent

scholarship reveals its rather complex, ambiguous and socially-determined nature, which isn't necessarily universally dependent on exceptionalism, individualism and physicality. As a result, one would expect understanding of the concept of virtuosity to continue to evolve in the twenty-first century, which is characterised, among other things, by digital and disembodied mediation of music that changes the rapport between performers and audiences.

2.2. How can recent new music practices — diverse, plural, and fluid in nature — challenge existing understanding of virtuosity?

In the previous subsections of this chapter, I took a closer look at what I consider virtuosity's prevailing associations in Western Art Music. As I demonstrated earlier, on one hand the common understanding of Romantic virtuosity and its huge popularity is lacking nuance. On the other the rise of the work-concept in the nineteenth century privileged composition over performance, which resulted in simultaneous negative reception and commentary on virtuosity. Additionally, the aspect of physicality as an essential component in the formation of the phenomenon of virtuosity is nowadays arguable due to a transforming landscape of connecting with the audiences. All of the above suggest that the concept might require a fresh approach for use in the context of new music performance. As practitioners whose lineage stems from the classical music tradition, new music performers are a product of its conditioning and education, and have to learn to grapple with the stories they were told about career, success and what it means to be a virtuosic player. Therefore, maybe the most important thought provocation needs to be applied to the understanding of virtuosity as a great technical skill. In *What a Body Can Do*, Ben Spatz (2015), a theatre practitioner and researcher, offers a novel approach to the concept of performance technique, proposing to consider embodied technique as a field of knowledge acquisition. Spatz argues that 'embodied practice is structured by knowledge in the form of technique, which is made up of countless specific answers to the question: What can a body do?' (p. 1). If we consider that any type of instrumental practice involves, similarly to theatrical or movement practices, a high degree of physicality, bodily training and control, an analogy with his understanding of technique as training, research and experimentation can be drawn. In my view it offers an applicable and relatable perspective for the porous, dispersed and multifarious nature of twenty-first century new music

performance. Spatz challenges not only the idea of exceptionalism and comparison that is embedded in our thinking about performance, upheld by infrastructure of competitions and generic assessment criteria, but also the 'bias in theatre and performance studies that privileges the phenomena of (public) spectatorship as a site for social intervention' (p. 7), an argument that could be applied analogically to the concept of modern virtuosity. If 'Technique is knowledge that structures practice' (p. 1), and according to Spatz, 'individual ability is less important than the continuous creation and transmission of knowledge' (p. 4), some pressing questions need to be asked about the understanding of the concept of great technical skill in the formation of the understanding of virtuosity.

Learnedness and cultivation of curiosity have been associated with virtuosity in the sixteenth and seventeenth century. While the Western part of humanity was trying to comprehend the world and itself through unscrupulous colonial discovery escapades by collecting (buying and stealing) and categorising minerals, rocks, fauna, flora and man-made objects, in music the developments of compositional and instrumental practices, embedded in the general socio-cultural knowledge, required codification in the form of treatises and studies. And while every historic period had its own knowledge culture, the impact of the Romantic instrumental practice embedded in the work-concept has been thus far the strongest and is still determining the transmission of knowledge two centuries later. The frequently found argument that a practitioner's education has not prepared them for contemporary demands of the profession (Ugelvik, 2017; Torrence, 2019; Stene, 2014; Berweck, 2012; Nicolls, 2010), which I have also palpably felt when I first started performing new music, demonstrates perhaps human need for certainty when grappling with the unknowns of this course of evolution, whether personal or global. This could partially be blamed on the narratives we create in order to organise knowledge, find meaning and achieve a sense of security of existence. Can we realistically have such far-reaching expectations from an education system, which is primarily structured upon existing past knowledge, and doesn't necessarily privilege future thinking and complex problem solving? Aren't we all increasingly lost in the accelerating speed of progress and accumulation of forms of expression and tools with which to make music? Conversely, such feelings of dismay for the education received are vital in deconstructing and reimagining systems potentially more open to providing skills for adaptable transformation within a constantly changing context. If our training is meant to offer us

performance technique, it should rather be understood in Spatz's terms as 'embodied knowledge', which consequently needs to remain subject to constant individual explorations and discoveries – a methodology of experimentation, transformation and evolution.

With that in mind, I suggest three main areas where new music practices actively challenge the aforementioned understanding of virtuosity within the field of Western Art Music, as well as its general dictionary understanding. I explore these areas at greater length and detail within the case studies in Part II. Firstly, as the abundance of practices makes unified instrumental or performance techniques a methodology of the past, work-specific techniques come to the fore. As a result, technique and technical skill undoubtedly need to be approached as a personal process of knowledge formation that cannot and should not be systematised. Virtuosity understood this way might neither be flashy nor noticeable and might not yet have a community of experts to assess its value. Secondly, the moment composers outsourced live presentation of their ideas to other bodies, music became a team effort. Collaborations, from the Latin 'collaborare' – to work together – are a staple, even if at times unlabelled methodology of music-making in the twenty-first century. Can we really privilege a single author model in a context where transmission of knowledge and ideas happen in workshops, rehearsals and beyond the score? Or do we need to find new formats for documenting the process of rendering music? Collaborations and more inclusive, fair and satisfying models of creating emerge, prompting us to question exceptionalism and individualism in favour of the community of music-making practice (see Chapter 6). As a result, how does collaboration alter our understanding of virtuosity? Lastly, our human lives succumb to the omnipresence of technology, notwithstanding music performance. Fast-paced developments turn technologies obsolete, and regular software upgrades create a need for a different approach to working with electronic media. Moreover, the dominant mode of experiencing and consuming music happens through digital and often disembodied mediation. That in turn inspires a need for a novel approach to music presentation and raises questions about the phenomenological component of virtuosity, as described earlier in the review of Deaville's model.

In the following chapter I will take a closer look at the scholarship pertaining to interdisciplinarity, both in sciences and in arts. Elaborating on Barry and Born (2013), I choose to consider interdisciplinarity as a site of multiplicity, where the formation of new

technique, skill and knowledge happens through the exchange of diverse bodies of knowledge and methodologies pertaining to specific disciplines and practitioners, otherwise called collaborations and work-specific techniques. Through a brief review of interdisciplinary performance in the twentieth century, I will demonstrate that interdisciplinarity is as time-and-context specific as is virtuosity, and that interdisciplinary performance has a long tradition of challenging conventions of music presentation. Furthermore, I support my claim that the understanding of virtuosity in new music is transformed by the dispersed and idiosyncratic nature of its practices by centring the epistemic complexity arising from musical works' cross-pollination of practices and methodologies. I will attempt to juxtapose these examinations against my rereading of the concept of virtuosity to determine the contour of a possible definition of interdisciplinary virtuosity in the field of new music performance.

3.

Interdisciplinarity and epistemic complexity

In this chapter I begin by providing a brief overview of the concept of interdisciplinarity in sciences. Although interdisciplinarity has frequently been associated with the merger and synthesis of diverse disciplinary expertise and methodologies, recent research portrays it more as a site of plurality and difference related to approaches and conceptualisation. In the arts interdisciplinarity is still awaiting greater attention from academia. However, throughout the twentieth century interdisciplinary performance has proven a particularly fertile ground for experimentation with media and established conventions, creating an alternative to societal norms and limitations. Fluxus, intermedia collaborations and happenings, among other movements, could be considered for their radical and disruptive spirit of challenging the concept of virtuosity through providing alternatives to the work-concept, concert performance conventions, specialisation, exclusiveness of materials to make art with and the role of a composer in the process of creation. And while there is a multiplicity of interdisciplinary methodologies, among others hybridity and the concept of collision of disciplines, interdisciplinary virtuosity could be especially applicable for the field of new music, particularly since it combines the ideas of experimentation with scientific knowledge formation. Following Spatz's (2015) theory of technique as knowledge and de Assis's (2014) claim that musical works are complex epistemic systems, I form a definition of interdisciplinary virtuosity as a great skill in knowledge formation, creativity, collaboration and co-creation. I conclude with a short review of the emerging concept of transdisciplinarity, suggesting how it may fall into an unnecessary trap of individualism. I compare my understanding of interdisciplinary virtuosity with Craenen's (2016) vision of transdisciplinarity in sound art, which the author views as a methodology not necessarily dependent on collaboration between practitioners from different disciplines. I argue that what Craenen perceives as an individual's artistic transgression of established boundaries of a discipline should be regarded as inseparable from knowledge exchange with other people's bodies of knowledge. As a result, the distinction between inter- and transdisciplinarity is particularly hard to delineate in the field of new music.

3.1. Labels are tricky once again

Academic research and policy discourse have been focusing on issues surrounding interdisciplinarity since the 1960s (Huutoniemi et al., 2010), and although many have tried, as pointed out by Nissani (1995), its labelling 'has been inconsistent and there is no clear-cut agreement on the meaning of interdisciplinarity' (Lau & Pasquini, 2008, p. 553). Robinson (2008, p. 70) notes that much of the discussion around terminology has to do with prefixes attached to the root of the term 'disciplinary' or 'disciplinarity' (e.g., multi-, cross-, inter-, pluri-, trans-, meta-), and suggests that the argument reflects how 'universities and scholarship in the modern world have for a long time been organized in strongly disciplinary ways.' Nissani (1997) attempts to simplify what interdisciplinary could mean by stating that bringing together two or more distinctive elements of two or more disciplines constitutes interdisciplinary practice. For Stemberg (1991), who works within the field of social sciences, 'interdisciplinarity (...) is a complex endeavor that seeks to explicate relationships, processes, values, and context using the diversity and unity possible only through collaborative approaches' (p. 5), while Alvargonzález (2011) adds to what Choi and Pak (2006, cited in Alvargonzález, ibid.), as well as Klein (2010, cited in Alvargonzález, ibid.) have all seemed to agree on – 'True interdisciplinarity is integrating, interacting, linking, and focusing' (p. 388).

Barry and Born (2013) suggest however to view interdisciplinarity 'less as a unity and more as a field of differences, a multiplicity' (p. 5), which 'must be traced through a series of strikingly distinctive vectors across an array of practices, institutions and events – vectors that are local and specific to the fields at issue' (p. 6). As a result, they propose three distinct modes of interdisciplinarity – integrative-synthesis, subordination-service, agonistic-antagonistic. In the integrative-synthesis mode an assumption of a parity between diverse bodies of knowledge is made, where their blending contributes towards novel understanding unachievable by the individual disciplines alone (p. 10). The subordination-service type of interdisciplinarity can be located when one or more disciplines play a supporting role by 'making up for, or filling in for, an absence or lack in the other, (master) discipline(s)' (p. 11). The third mode, agonistic-antagonistic, is characterised by the criticism towards the established boundaries of a discipline, and a need for reconfiguring the assumptions of its epistemology and ontology, which result in

an interdiscipline not resembling the disciplines from which it originated (p. 12). Barry and Born observe that the debates surrounding interdisciplinarity stem 'from the existence of polarised judgements about the creative or repressive status of disciplinary knowledge' (p. 7). Disciplines can be both enabling and limiting, 'repositories of a responsible kind of epistemological reflexivity' (p. 7) as well as containers for increasingly unrelatable conventions. As scaffolding, disciplines organise infrastructure of teaching and learning, forming a body of knowledge and skills that can be mastered and passed on (Alvargonzález, 2011, p. 387). Consequently, disciplinary knowledge has its unique community of experts and comes with related 'paraphernalia (journals, canons, theoretical foundations, language, etc.)' (Robinson, 2008, p. 71).

Humanity's preoccupation with knowledge organisation dates back to the roots of our civilisation. In Ancient Greece and throughout the Middle Ages philosophy and science were regarded as one – philosophical systems like Aristotelianism, Neoplatonism, the scholastic Summa were taken as references for all fields of enquiry. Between the sixteenth and nineteenth century science gradually fragmented into more specialized domains. As Stemberg (1991) writes, 'what are now called disciplines and specialties are products of the nineteenth and twentieth centuries when the empirical disciplines one by one exerted their independence. Increasing specialization and segregation of disciplines affected all intellectual life' (p. 3).[13] However, as Born and Barry (2013) point out, interdisciplinarity has always underpinned scientific advancement:

> Without doubt, knowledge production has always occurred in a variety of institutional sites and geographically dispersed assemblages (...). Moreover, the evolution of disciplines has often occurred in the form of what would now be identified as interdisciplinary phases. Even an apparently 'pure' discipline such as astronomy has been transformed historically through the development of practices and methods that might now be considered interdisciplinary. (pp. 3-4)

While in their view interdisciplinarity is 'a historical constant' (p. 4), what its modern iteration necessitates is an integration of research with the socio-economic complexity of contemporary life. 'Interdisciplinarity has come to be at once a governmental demand, a

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[13] See Alvargonzález (2011) for a more detailed account on the history of the development of disciplines.

reflexive orientation within the academy and an object of knowledge' observe Barry and Born (p. 4). In recent years the discourse surrounding interdisciplinarity has been tied to the growing understanding of interconnectedness and inseparability of many complex world problems such as poverty in the developing countries, environmental crisis and sustainability. Barry and Born suggest that interdisciplinarity 'has come to be seen as a solution to a series of current problems, in particular the relations between science and society, the development of accountability, and the need to foster innovation in the knowledge economy' (p. 1). Positioned between 'politics, democracy, and technocracy', as Frodeman (2007) points out, 'interdisciplinarity is fundamentally rhetorical in nature' (p. 7). Its role remains that of questioning, transcending, and imagining alternatives to the limits of knowledge in relation to its application in society. In Frodeman's view interdisciplinarity, as a philosophy of knowledge, is a 'contemporary expression of a very old question' about the impact of the acquisition of knowledge on our quality of life (pp. 7-8).

While interdisciplinarity has been receiving much academic attention in a range of scholarly fields for decades now, it remains a relatively undeveloped research area in the arts according to Augsburg (2017, p. 131). On one hand art generally resists potentially restrictive definitions in the name of artistic liberty. On the other hand, if a definition of interdisciplinary arts is needed for the purpose of promotion of university degree programmes, it tends to be used to signify inclusivity and openness, without giving any more information regarding its academic research formulation (pp. 131-2). Although Augsburg concedes that interdisciplinarity in the arts is broadly valued for its reflective nature – 'Outwardly and continually inclusive, expanding, evolving(...)', characterised by 'openness to continuous change and innovation' (p. 132) – she points out that literature on interdisciplinarity mirrors the prevalence of art-science research, while overshadowing the concerns and impact interdisciplinary arts potentially has on large networks of social investigations and activism. Academic research consequently 'is out of sync with much of the thriving interdisciplinary developments evident in theatre, film, music, performance art, dance, feminist art, disability arts, contemporary art, social practice art, and more' (p. 141). Lushetich (2016) has attempted to redress this neglect in her historical overview of the concept of interdisciplinary performance in her book *Interdisciplinary Performance. Reformatting Reality*. The author positions interdisciplinary performance as 'a method of

enquiry', which as a result of challenging the conventional modus operandi of society 'suggests a reality different from the hitherto existent one' (p. 1). Lushetich privileges a broad range of different performance types, claiming them as 'a form of thinking by doing as well as a form of emergence, not an enactment of a pre-existing idea' (ibid.). As a result, her perspective is both aesthetic and political, and foregrounds the impact of live performing upon modes of social transformation.

3.2.   Music works as complex epistemic systems

Lushetich's (2016) and Augsburg's (2017) work guides us through an impressive array of possibilities that combining disciplines have opened for artists in the twentieth century, in line with Barry and Born's (2013) aforementioned perspective on interdisciplinarity as a field of diversity and multiplicity. Many of the interdisciplinary experiments questioned and challenged pre-existing conventions, proposed alternative modes of social structuring, and contributed to a development of an exponentially growing body of performance practices, namely – juxtaposition of media of the prewar avant-garde movements (Futurism, Surrealism, Dada, Constructivism), multidisciplinary collaborations at Black Mountain College, Allan Kaprow's happenings, Fluxus artists freely moving in-between media, while considering existing phenomena and materials as sources and tools of expression, and the experiments in incorporating electronic devices, moving image and electronic sound of the 1960s and 1970s. Moreover, as Western societies learn to reckon with their colonial history and inherited narrow cultural horizons, they begin to account for the rich and numerous music communities and practices that have developed in parallel to Western Art Music. As a result, we find ourselves in a music culture of enormous epistemic complexity. Or as Borgo (2007) poetically frames it following Small's (1998) concept of musicking, we are 'musicking on the shores of multiplicity and complexity', where 'the multi-dimensionality of musicking behavior introduces untold complexities and uncertainties into musicological study' (p. 103).[14] It is no wonder then

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[14] Musicking is a concept coined by Christopher Small (1998) which highlights the inherently social and practical nature of music. 'Music is not a thing at all but an activity, something that people do' argues Small (p. 2). In the author's view we should rather use the word music not as a description of an abstract concept but as a verb 'to music'. Musicking therefore means 'to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing' (p. 9). David Borgo (2007) proposes a four-way distinction between different types of musicking: musicking-any-which-way, musicking-in-the-small, musicking-in-the-

that music scholars, in an effort to broaden scientific understanding, turned to researching the act of performance as well as performing bodies, both psychologically and neurobiologically, offering a counterpoint to the previous predominant focus on scores, notation and music's absolutism hidden among them. According to Borgo (2007) however, 'music notation, and the ideology that it engenders, continues to be the "elephant" of academic music scholarship and pedagogy. In fact, the conventional distinction made between those activities deemed "composition", "interpretation" or "improvisation" is based solely on a compliance or non-compliance with a musical score' (p. 103). In his contribution to Gilmore and Crispin's (2014) *Artistic Experimentation in Music. An Anthology*, de Assis (2014) attempts therefore to conceptualize works and scores through a scientific lens, drawing analogies from research in biology and technology (pp. 41-54). His claim is that musical works are 'highly elaborated semiotic artefacts' and that the elements that contribute towards their production inform music's 'epistemic complexity' (p. 41):

> In a process that was particularly enhanced in the twentieth century, the performance of musical "works'' became a complex articulation of different data, information, and knowledge, retraceable in diverse material sources (including sketches, instruments, editions, recordings), in reflective discourses (*in*, *on*, and *about* music), and in multifarious performance "styles". The continuous accumulation and sedimentation of such kinds of knowledge represents an exponential growth of complexity that involves technical, artistic, aesthetic, and epistemic components. (p. 41)

According to de Assis, new musical works, through their accumulation of prior knowledge, also 'aim at producing unprecedented events and embodying new knowledge' (p. 45) and have a considerable role in designing future possibilities. Using Rheinberger's (1997a, cited in de Assis, 2014) theory of experimental systems, he attempts to reconceptualize music performance as a field of experimental research and new knowledge formation, marking a turn from viewing it previously predominantly as reproduction and interpretation (pp. 49-50).[15] De Assis's theory of epistemic complexity embedded in music

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large and musicking-in-the-world. In his view this approach can bypass conventional thinking about what constitutes music e.g., dividing it in terms of performance and composition, musical styles or forms. 'How we choose to discuss and categorize musicking behaviours has ramifications that extend well beyond the immediate realm of musical practice into the institutional and infrastructural systems that support, condemn or simply ignore those activities.' argues Borgo (p. 96).

[15] For a related perspective on epistemic complexity, see Benjamin (2019), pp. 51-3.

performance supports Spatz's (2015) rigorous change of perspective on technique as knowledge that structures practice. By combining these two assertions with Lushetich's (2016) claim that interdisciplinarity is a site where newly emerging ideas can inspire social transformation, questions pertaining to the evaluation of interdisciplinary virtuosity follow.

3.3.   Interdisciplinary performance and virtuosity

But before these can be asked, I will return to the examples of the twentieth century's interdisciplinary performance practices, which could be considered from a perspective of challenging the earlier demonstrated understandings of virtuosity. A number of characteristics come to the fore: a critical attitude to the Romantic work-concept; a focus on collaboration; a de-specialisation of the performer and the instability of traditional performance practices; and challenges to the conventions of the concert hall. The early experiments with authorial control over performance were at the forefront of John Cage's concerns from the late 1940s. Through indeterminate notation and chance procedures, Cage aimed to challenge the control that a composer was assumed to have over the representation of their work, although at the same time, according to Goehr (2007), these ideas didn't exactly manage to uproot the work-concept (p. 262-3). The emergence of a Cage 'house style', for instance, suggests that the composer had specific aesthetic leanings, expressed in his own performances and the performers he chose to work with most closely. However, through some of his early collaborations with fellow students at Black Mountain College, Cage engaged in simultaneous, non-hierarchical multidisciplinary performance activities, coordinated across time, but open to multiple possible manifestations and interpretations; well-known examples include an *Untitled Event* in 1948, with painter Robert Rauschenberg, choreographer Merce Cunningham, poets Charles Olson and Mary Richards, and musician Jay Watt (Augsburg, 2017, p. 135), or *Theater Piece No. 1* in 1952, with Cunningham, Rauschenberg and pianist David Tudor (Lushetich, 2016, p. 69). Events such as these altered the dimension of permissible stage behaviour, as well as the disciplinarian boundaries of interaction and integration of media. Most importantly these collaborations offered a kaleidoscope of meanings, depending on

one's position in the room, perception and shifting focus, as observed in the varying historic accounts by the attendees of these events (ibid., p. 71).

Intermedial Fluxus artists of the 1960s, such as George Maciunas, Nam June Paik, Alison Knowles, Yoko Ono, Ay-O and Dick Higgins among others, engaged in a wide range of performative practices focusing on process and participation. Their artistic provocations could be achieved by using real life situations, sites and phenomena as contexts for asking questions about the nature and role of music performance in society. Their practices, in-between art and life media (Higgins, 2001, p. 49), allowed them to put emphasis on everyday objects and everyday actions, which turned into performative events which could be undertaken in unique and diverse ways by anyone, anytime and anywhere, as in Ken Friedman's *Fruit Sonata* (1963): 'Play baseball with a fruit'. By playfully approaching elements of life and physical reality, Fluxus artists were able to bypass the conventions of art categories such as music composition, and means of artistic production such as assumed specialisation needed for music performance. Elsewhere in the United States, between 1959 and 1964 Allan Kaprow re-formatted ordinary, everyday places and daily human actions into sites of unusual happenings (Lushetich, 2016, p. 99). Happenings for Kaprow were singular, improvisatory events highlighting the value of the ordinary action within a framework that offered a different perspective on an individual's expression and 'a different relation between the private and the communal' (p. 102). By blurring the idea of spectacle towards an integration of time, space, action and participants, where everyone was at once a performer and audience member, Kaprow was able to create a situation where the work becomes the performance that critically challenges the existing distinction between the two.

Challenging absolute music performance conventions and stage behaviours became a critical impetus for Mauricio Kagel as well. Influenced by Cage's experiments in indeterminacy, Fluxus happenings and event-scores, and theatrical developments of the pre- and postwar avant-garde movements (Heile, 2006, p. 34), Kagel developed several works across the 1960s and 1970s, now called instrumental theatre, which presented his unique perspective on performativity in Western Art Music (pp. 33-68). According to Heile, Kagel's approach to the visual, theatrical and embodied nature of music performance was something of a rediscovery in a tradition that thus far foregrounded

absolute music of pure sound and disembodied conceptualisation (p. 37). Interestingly, as Craenen (2014) remarks, 'the emancipation of gesture, sign, and facial expression' (p. 126) present in Kagel's work, echoes the expressive performativity associated with Romantic virtuosity. However, the celebration of the theatricality and physicality of music performance, which became the source of Kagel's compositional ideas, as seen in works such as *Sur scène* (1959-60), *Sonant* (1960), *Match* (1964) and *Pas de Cinq* (1965), placed a particular focus on transforming the convention of concert music, where stage behaviour become integral part of the sonic fabric of the work, and couldn't be, as in the case of Romantic virtuosity, criticised for its subjectivity or mannerism.

3.4.   Interdisciplinary methodologies

The wide-ranging concerns, alternatives to conventions and emerging possibilities, which interdisciplinarity in the arts has entailed throughout the twentieth century, highlight a new pace of artistic evolution and a new importance for context-dependency. Brought to even greater degree of complexity in recent decades, the discourse surrounding interdisciplinary work methodologies, which interdisciplinary virtuosity could be a part of, inherently necessitates a plurality of concepts. One of them is the concept of hybridity, adapted from natural sciences for the purpose of media that present a 'seamless, if not organic, integration of two or more different forms or materials' (Augsburg, 2017, p. 138). Used frequently but not exclusively to describe a synthesis of art and technology, hybridity is a concept that scholars such as Shaw-Miller (2002) and Davis (2007) have conceded informs the nature of the arts in general. Augsburg (2017), however, notes that although hybridity is a primary methodological concept in recent interdisciplinary arts scholarship, it is underdeveloped and requires further theoretical scrutiny (p. 139). Contrary to hybridity, the concept of collision proposes a more disruptive and frictive exchange between art forms and disciplines. According to Cecchetto et al. (2008, cited in Augsburg, 2017), collision suggests 'continual movement while resisting any final unity or acceptance of one form's dominance over another' and 'a potentially productive learning from differences' (p. 139). The concept echoes some of the earlier-mentioned characteristics of what Barry and Born (2013) called an agonistic-antagonistic mode of interdisciplinarity.

As suggested earlier by Barry and Born (2013), interdisciplinarity is not a unity and must be 'traced through a series of strikingly distinctive vectors' (p. 6). One of these vectors within Western Art Music, which runs with varying degrees of intensity throughout different historical periods, is built upon a separation of music into composition and performance, and the idea that one type of creativity and knowledge has greater social value than the other. For this division to be upheld, the entire infrastructure of knowledge transmission such as disciplinary pedagogy, performance traditions and conventions, or even the economic machinery of festival commissions must be safeguarded. Interdisciplinarity in music performance has therefore not only artistic potential, allowing for an interaction of practices and new combinations of media, but also plays a role in transforming our preconceptions about how creativity happens, where ideas come from, and who owns them. It opens up methodologies of experimentation and research, rather than divisive and hierarchical means of creation and reproduction, and joins practitioners in a shared effort at knowledge formation and evolution of musical practice. Hence interdisciplinary virtuosity, a term stemming from a tradition of creating and performing musical works, could be considered as embracing both Spatz's (2015) perspective on performance technique as knowledge, and de Assis's (2014) view of works as complex epistemic entities. It can neither be a unified methodology nor one that is always observable, and it will undoubtedly come up against a shortage of applicable value systems.

3.5. Auto-didactism

In *21 Lessons for the 21st Century* Harari (2018) remarks that 'Humankind is facing unprecedented revolutions, all our old stories are crumbling, and no new story has so far emerged to replace them' (p. 259), and adds that 'Much of what kids learn today will likely be irrelevant by 2050' (p. 260). It is hard to grapple with such uncertain vision. To come to terms with the fact that change is the only constant we must also change the way we think of the boundaries around disciplines we have been educated into. Surviving in the modern world forces us to learn how to make sense of the information we receive, rather than believe it or repeat it. The range of options necessitates deciding on what's important and what's irrelevant (p. 261). As new music auto-didacts, constantly facing learning new modes of expressions, we are continuously in training, gathering new knowledge, forming

its new frameworks and adding to the epistemic complexity of musical thought, effectively offering a contrasting model of music education. Pedagogical experts argue that modern pedagogy should be based upon critical thinking, communication, collaboration and creativity.[16] Harari suggests:

> More broadly, schools should downplay technical skills and emphasise general-purpose life skills. Most important of all will be the ability to deal with change, to learn new things, and to preserve your mental balance in unfamiliar situations. In order to keep up with the world of 2050, you will need not merely to invent new ideas and products – you will above all need to reinvent yourself again and again. (p. 262)

These claims of perpetual self-reinvention sound familiar and bring me back to the earlier mentioned claims that music education hasn't prepared its disciples for the contemporary demands of the field. Although in many cases the pedagogy has striven to make us good at our discipline, by privileging reproduction of works, without necessarily inspiring broader interpretational research, we might have been educated into an assumption that what we know and how we learn has been well organised, rather than a non-linear, self-driven and relentless process. Making an analogy with Harari's general view of the modern discontinuity of life stages (period of learning and period of working), which he claims stems from a lost sense of reliance upon a thing once learnt during one's youth (ibid., pp. 259-66), I consider new music performance a site of crossings between many vectors of knowledge and socio-economic factors, where the identity of a practitioner bound to one discipline is disintegrating. Therefore, as music practitioners we must find new models of moving between bodies of knowledge, and tools for learning and integration. Whether we synthesise and create hybrid forms, or have disciplines collide, we might also need either more accurate semantic expressions describing the creativity and labour that goes into creating new works, or an approach to music making that is based upon shared research,

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[16] The IPTS (Institute for Prospective Technological Studies), commissioned by the European Council, issued a report in 2011 - *The Future of Learning: Preparing for Change* (Institute for Prospective Technological Studies (Joint Research Centre) et al., 2011), which states that 'personalisation, collaboration and informalisation (informal learning) will be at the core of learning in the future. (…) The central learning paradigm is thus characterised by lifelong and life-wide learning and shaped by the ubiquity of Information and Communication Technologies (ICT). At the same time, due to fast advances in technology and structural changes to European labour markets related to demographic change, globalisation and immigration, **generic and transversal** skills are becoming more important. These skills should help citizens to become lifelong learners who flexibly respond to change, are able to proactively develop their competences and thrive in collaborative learning and working environments' (pp. 9-10).

experimentation and knowledge transmission.[17] Interdisciplinary virtuosity, a concept intrinsically linked to assessing the value of a skill, could in my view signify the centrality of knowledge formation, collaboration, and co-creation for all practitioners involved in building a new epistemology of contemporary musicianship. Interdisciplinary virtuosity viewed this way suggests a broad yet rigorous approach to music-making that should be undertaken by practitioners in the act of co-creation, simultaneously moving the focal point of the rating of value of skill away from the quality of performativity alone. I revisit and expand this claim in Part II, where I present four case studies exploring different practices – percussion, collaborative co-composition, electroacoustic performance and instrumental performance with elements of theatricality and movement – and the methodologies I gathered from specific practitioners, academic literature and the Internet.

3.6.   Inter- or transdisciplinarity – a necessary debate?

Although in my view interdisciplinarity is a particularly relevant framework for the field of new music, I would like to consider another emerging concept in the arts – transdisciplinarity. There is much debate and tension surrounding the theory of knowledge integration, and scholarly attempts at determining the borders between disciplinarity and every other methodology that circumvents it (Osborne, 2015). As Osborne suggests, the term transdisciplinarity, alongside anti-disciplinarity, post-disciplinarity, meta-disciplinarity, supra-disciplinarity, as well as indisciplines, antidisciplines, postdisciplines and de-disciplinarization, have been used as the emerging modes of conceptualising scientific and academic research, policy discourse and the organisation of educational structures (p. 5). However, it is transdisciplinarity that seems to have gained most prominence, as it strives to move beyond disciplinary separation and interdisciplinary collaboration towards a synthesis that unites within one's body of

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[17] In the United States, *Transforming Music Study from its Foundations: A Manifesto for Progressive Change in the Undergraduate Preparation of Music Majors* (Task Force on the Undergraduate Music Major et al., 2016), a report commissioned by the College Music Society, stated that in order to ensure relevance of music education outside of the academy creativity, diversity, and integration must inform the curriculum more than the pedagogy of reproduction of works from the music canon. The group of researchers asserted that 'improvisation and composition provide a stronger basis for educating musicians today than the prevailing model of training performers in the interpretation of older works. This position does not suggest that there is no longer a place for interpretive performance in the emergent vision, but that when this important practice is reintegrated within a foundation of systematic improvisation and composition, new levels of vitality and excellence are possible in the interpretive performance domain.' (pp. 2-3).

knowledge while remaining in perpetual flux. Leeker, Schipper and Beyes (2017) propose therefore to think of transdisciplinarity as 'an orientation towards and alongside phenomena or spheres of phenomena that require the reflexive mobilization of different and diverse theoretical contexts and methodical practices' (p. 13). After Osborne (2015) they suggest that it 'harbors the potential of unexpected twists and of the problematization of established concepts and methods' (p. 13). In their view performance and performativity studies exemplify such conceptualisation.

In the arts the differentiation between inter- and transdisciplinarity continues to offer some confusion and much opportunity for debate. Augsburg (2017) cites Davis (2005), who places the distinction on identity and transvergence. She suggests that 'In interdisciplinary pursuits, disciplines collaborate. (...) However, these interacting disciplines ultimately retain their identities as isolated from each other', while transdisciplinary methodologies show a 'more holistic approach' (p. 140). In her view transdisciplinarity bridges disciplines through innovation, transvergence and experimentation, 'by transcending conventional notions of what appropriate activities within a discipline are' (ibid.). A similar sentiment can be observed in Craenen's (2016) *Notes on transdisciplinary sounding art*:

> Interdisciplinarity is a more horizontal collaboration between disciplines, where you have real dialogue and exchange of knowledge, experience and method. In the performing arts, we often see that interdisciplinarity relies on all kinds of translations, where the propositions coming from one discipline have to be translated and adapted before they can be used and get a response in another. Interdisciplinarity is therefore inherently labour-intensive and slow unless the translation is an automated process, something we see happening in many interdisciplinary artworks where mapping strategies are used, mostly at a digital level. (multi – inter – trans, para. 2)

For Craenen, transdisciplinary artistic practice 'presupposes an attitude of openness and curiosity, combined with a willingness to accept the possibility of other dimensions or levels of reality entering practice' (characteristics, para. 1). It results from a sense of the constraints that conventional disciplines ultimately entail. In Craenen's view, the need to bypass disciplinary methodologies doesn't require collaboration or prior background in the fields that a practitioner is trying to integrate:

Transdisciplinarity, then, is what happens when we move from an application within a discipline (for instance the use of data from space mapped and applied to music) to an exploration beyond disciplinary borders (where the musician does something that cannot be called music anymore). Another possible viewpoint is to make a subtle distinction between the design of mapping (defining the relationship between coordinates in connected fields), which in essence is a transdisciplinary act, and the actual application and interaction with these translations within the music itself, which I would call in essence interdisciplinary. (multi – inter – trans, para. 3)

If we accept the proposed difference and assume that interdisciplinarity does in fact rely on collaboration and translation, Western Art Music, predominantly dependent upon the translation of notation onto a live act, might be considered as one of the earliest examples of interdisciplinarity, even preceding the days of incorporating electronics, movement and theatrical elements. However, steady expansion of new music practices by means of integration of elements traditionally considered 'non-musical' directs the field towards a gradual disintegration of disciplinarian boundaries – effectively, towards transdisciplinarity. Conversely, the same boundaries retain their importance primarily within infrastructures of funding and the job market. We tend to hold on to them so that our process and knowledge can be evaluated for something that is recognised and has an organised value and remuneration system.

Craenen (2016) concludes with a few poignant questions about the nature of transdisciplinarity, among others – 'How far can we go with the integration of other perspectives?' (hope & doubt, para. 6), effectively asking how do we form another kind of awareness beyond what we already know. This is precisely what I have tried to understand through investigating the development of my interdisciplinary performance practice and that of others. Craenen rightly remarks that his idea of openness and curiosity, which in his view conditions transdisciplinarity, is based upon countless decisions and 'well-chosen limitations stimulating focus and creativity' (hope & doubt, para. 5). The question that undoubtedly arises however is that of awareness formation – how much of what we come up with is based on a uniquely individual process?

As much as I agree with Craenen (2016) and Osborne (2015) that transdisciplinary thinking should be fostered as contingent to creativity and experimentation, in my research I deliberately privileged learning from other practitioners through interviews,

workshops and collaboration. Hence, the philosophy of interdisciplinarity, understood as working together, felt more accurate for describing my process. Interested in understanding the particularities of disciplines such as puppetry, gesture performance or percussion, I gathered discipline-specific knowledge which in turn informed my performances. In Western Art Music we continue to struggle with the historically established separation between performance and composition. In my mind, even if only for the sake of foregrounding the inherent collectivism of music-making, interdisciplinarity virtuosity holds a particular potential for closing this historic loop, and for moving away from narrating this practice through concepts of work, composer as genius and virtuoso as athlete, hero and entertainer.

The increasingly more dispersed and personalised nature of individual knowledge offers some justification for Craenen's consideration of transdisciplinarity as an internal process of knowledge integration – 'a move that only a musician can make' (Craenen, 2016, characteristic, para. 5). He and I would agree that the need for meaningful synthesis of diverse perspectives is most certainly the leading issue of our times. I choose interdisciplinarity over transdisciplinarity as a better way to grasp and practice a form of knowledge acquisition fitting for twenty-first century life. As individuals existing in a context of perpetual epistemic evolution, we are constantly coming up against the limits of how much knowledge and specialism we can realistically gain. From this perspective, we will presumably endlessly need to seek out intellectual exchanges and form successful partnerships with other practitioners, who hold other kinds of knowledge than ourselves. In an effort to make sense of the epistemic complexity of modern day and to highlight the intellectual interconnectedness of human endeavour in the field of music, I think the concept of interdisciplinary virtuosity allows openness and curiosity, as well as stimulates the ability to cooperate and co-create – qualities necessary for cultural advancement and flourishing.

Part II

Towards an interdisciplinary virtuosity: insights from the field

The case of Monsieur Oscar

I spent New Year's Eve of 2015 giving into a movie marathon, watching among others a 2012 film by Leos Carax, *Holy Motors*. I did indeed 'slip into a warm bath of unreason', as Bradshaw (2012, para. 1) describes the experience in *The Guardian*, and since then, fascinated by the boldness of Carax's non-linear narrativelessness, I rewatched the movie a few times more. Over the course of the film one follows the protagonist Monsieur Oscar, played by Denis Lavant, who is an enigmatic businessman working for an organisation with an unclear purpose. Cruising around Paris in a white stretch limo, Monsieur Oscar is on a tight schedule of 'appointments', for each of which he changes disguise (which as a result makes Denis Lavant believably impersonate thirteen different characters). It remains nebulous what purpose these appointments serve (Bradshaw, 2012) but they are observed by the company he is working for. During a brief visit paid by his boss, Monsieur Oscar reminisces about the changes to his performance over the years, remarking that once the cameras became unnoticeable, he lost track of his work's purpose. When asked by his boss 'What makes you carry on, Oscar?', he replies 'What made me start – the beauty of the act' (Carax, 2012). The title of my thesis 'for the beauty of the act' is derived from this conversation.

While obviously entertained and impressed by the sheer mastery of Carax's and Lavant's collaboration, I also recognised a shared thread of multiplicity and confusion running through the modern culture of performance practices, whether music or other, that *Holy Motors*, perhaps not even intentionally, depicted. In my mind there was a connection between the disguise-changing job Monsieur Oscar carried out and the confused yet hyperactive, superficial yet fast-learning, anxious yet entrepreneurial state of modern performance culture. Monsieur Oscar's pensive confession to his boss resonated with my

own feelings about the performance practice I was developing. In a period short of two years I became exhausted, both mentally and physically, from meeting the demands of so many new performance challenges within a very limited period of time, and I did indeed start asking myself a similar question – what makes you carry on? Why bother striving so much to become good at all these different ways of performing, usually applicable to a handful of concerts attended by a small group of people? *For the beauty of the act* therefore became a project of reconciliation between the conflicting feelings of insignificance of my work, with my passion for it. Whether it is appreciated or goes unnoticed, I wanted the act of music performance to remain filled with passion, curiosity, human striving and countless trials and errors which drive its evolution. At the same time, *For the beauty of the act* reflects on my point of departure into new music and conceptualises the idea of interdisciplinary virtuosity, in an attempt to capture twenty-first century performance practices that are searching and experimenting, without clearly knowing where this process is going.

Having been researching virtuosity for a while, reading about the fame, adulation and fortune brought upon virtuosos throughout history, I knew that nowadays the stakes in Western Art Music were in no way similar and that the drastically changed socio-economic landscape also must have inevitably changed virtuosity. I continued my investigation under the premise that the concept of virtuosity embraces and arises in the nexus of ideas, practitioners and audiences. My problematising of new music performance as a field in need of interdisciplinary virtuosity is based upon the following observations. Firstly, the ever-growing volume of practices and human perspectives, their interconnected influences and entangled chronologies, experienced largely in the digital realm by an invisible audience, transform the aforementioned virtuosity-nexus. If it is assumed that in the current global-village situation audiences connected to the Internet have potentially seen a substantial range of different media and have a greater understanding of divergent contexts, what should be the approach to music performance which no longer clearly attaches itself to a narrow discipline, but rather, under the influence of many other disciplines and art forms, transitions towards a general, broadly framed practice of sound? Secondly, if we accept that we have limited mental and physical capacity for processing the volume of information to which we are subjected daily, and that no one can possibly be

highly knowledgeable about everything, how else can we approach virtuosity – which historically has presupposed complete mastery in a particular field – in our practice?

A toolbox of one's own

As mentioned in the Introduction, new music practitioners find themselves challenged and perplexed by the range of contemporary approaches and have been debating the implications that this plurality has for their skill set and their ability to perform and compose. From the voices in the discussion, a general question about the ways of learning can be perceived. Jennifer Walshe (2016) places the art of constructing one's creative 'toolbox' at the centre of her approach to music performance and composition, framing it as discipline:

> This is the discipline – the rigour of finding, learning and developing new compositional and performative tools. How to locate a psychological/physiological node which produces a very specific sound; how to notate tiny head movements alongside complex bow manoeuvres; how to train your body so that you can run 10 circuits of the performance space before the piece begins; how to make and maintain sexualised eye contact with audience members whilst manipulating electronics; how to dissolve the concept of a single author and work collectively; how to dissolve the normal concept of what a composition is. (para. 3)

Vocalist Jessica Aszodi (2017) questions performers' training and methodology of preparation, as well as the vocabulary used to communicate about the transforming practices, asking colleagues to spend more time evaluating new criteria:

> For those of us making forays into music that requires so much beyond what we were trained to do, shouldn't we be getting more serious about how to get good at it (whatever that might mean)? Shouldn't this discussion be at least as urgent as debates around the nuances of our interpretations of conventional music (which we're presumably reasonably good at already)? As more music identified practitioners take up residence in the interdisciplinary space between theater, dance, and sonic arts, and as the inclusion of embodied and theatrical elements become more normalized in new music, musicians must develop new criteria for evaluating our methodologies and performances. Can we faithfully execute this music using only our musical training/thinking? Should we seek to integrate learning or methods from outside of music? Do we even have the words to accurately communicate what we're doing here? (para. 5)

Percussionist Håkon Stene (2014) notes that the shifting, unstable and perpetually transforming experimental practice requires a change of mindset. His concept of a musician as a 'nomadic gatherer' implies 'an attitude directed towards re-thinking and invention, illuminating the paradoxical situation that the only specialization and expertise left to us, is that of being specialized in being non-specialized' (p. 86). This also requires, according to Stene, a confrontation with classical music's understanding of the ideal of virtuosity. From combining the above perspectives, an open conceptual terrain for modern virtuosity is unravelled, where we realise it can no longer be either generic or systematised into a transferable pedagogical system. Virtuosity becomes rather a subject of individual and idiosyncratic quests for new modes of learning and thinking. In my view Walshe's, Aszodi's and Stene's problematisation supports my earlier proposed framing of interdisciplinary virtuosity as a personal methodology of knowledge formation.

Returning to the case of Monsieur Oscar, baffled by the impressive acting skills of Denis Lavant, I searched through interviews on YouTube trying to find out how such a tour de force of acting was possible. I did not find much, perhaps because acting is a job of wearing many hats, perhaps because speaking of one's non-linear process is bound to be an oversimplification and a case of many omissions. I realised therefore that every performer has their unique, internal and non-scripted responsibility for embodying a work or a practice in a way that connects meaningfully to both the receivers and a particular cultural context. This responsibility could be understood as a secret daily practice, an ongoing process of learning how to channel and express ideas through performance, bearing in mind that it is as much about the works and ideas as it is about their live or digital presentation. In a conceptually stretching field of new music, as Aszodi puts it, this might require DIY-ing one's own extra-musical skills by utilising 'existing non-musical knowledge bases' or working with expert collaborators. Therefore, defining interdisciplinary virtuosity as a great skill in collaboration and readiness to enquire into methodologies from other disciplines could prove a timely and much needed transition of the concept of virtuosity from the traditional understanding of extraordinary technical skill. It is how I approached the methodology of this research project.

Interdisciplinary virtuosity and audience connection

There is one final argument supporting my problematising of contemporary performance as a field in need of interdisciplinary virtuosity. It connects back to my earlier remark about performing for audiences in a world of unbridled access to information, who more often than not experience music through digital mediation. In earlier centuries, as Pincherle (1964) suggests, virtuosity was one of the main cornerstones of musical practice, and virtuosos themselves have been a key force in the development of instruments, as well as musical forms (p. 40). In the Romantic period virtuosity, aside from its fundamental musical importance, also played a revolutionary role, both politically, as seen by the military tropes embedded in Paganini's performance (Kawabata, 2004) or Liszt's associations with political leaders of his time (Gooley, 2004), as well as socially and spiritually through the individualisation and idealisation of greater human possibilities in the persona of a virtuoso (Palmer, 1997). Two centuries later it is very hard to imagine such a wide-reaching influence of Western Art Music over its contemporaries. In the 21st century Western Art Music is neither a field of fame nor fortune. Subsidised worldwide by states and patrons, it is a cultural niche that balances honing the spirit of non-commercial experimentation within the rules of the capitalist market system, while trying to stay relevant amidst other sound cultures such as pop and electronica. Brandstaetter (2007) restates a commonly repeated concern that virtuosity, in its common understanding, exited the stage with the rise of various types of new media, whilst at the same time suggesting that the transgressive nature of the concept just needs a change of perspective, and that 'on the edges of cultural space and the performing arts ... an undermining of the virtuoso, as a (nevertheless virtuoso) play with the risk and as well with the failure as performance' is taking place (p. 192). This is an important argument because, as divergent musics compete globally for audience attention on streaming platforms and YouTube, new music cannot usually access the capital available to pop artists for innovative worldwide presentation. The typical digital presentation of new music performances showcases humans with instruments sitting behind music stands and reading music notation.[18] While

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[18] It must be noted however that the increasing importance of digital presentation has motivated some new music practitioners to seek out a more cinematic approach e.g., Anne Cleare & Crash Ensemble's *fiáin* (Crash Ensemble, 2019), Julian Sartorius & ET|ET's *RLLRLRLLRRLRLRLRLLRLRLR* (Zatter, 2020); Marianthi Papalexandri & Yarn/Wire's *Quartet for Motors and Resonant Bodies* (Yarn Wire, 2016).

it is an important archiving and documentation practice, it is not quite as entertaining or convincing to watch as other types of digital performances. During the COVID-19 pandemic many musicians turned to streaming pre-recorded concerts, learning at the same time how much effort and capital, as well as skill is required to make an interesting video presentation. For the field at large to catch up with the more cinematic approach to documenting performances, a lot of investment of time and resources, as well as auto-didactism and collaboration is needed.

Conversely, if we consider that Western Art Music's role has historically been less that of entertainment, and more that of opposing societal trends in thought, concept and philosophical questioning, Brandstaetter's conception of virtuosity as a practice of non-conforming experimentation in live situations is precisely what should be of paramount importance to new music practitioners, given the non-commercial nature of the field. We not only sensitise audiences to alternative ways of listening, but also remain human bodies demonstrating the possibility or impossibility of performing highly complex tasks that put a question mark over our culture's default modes of performativity. Performers are the carriers of embodied knowledge about this music culture, which in order to stay in flux needs further experimentation in all sorts of directions. The act of performance remains one of the most important ways of giving Western Art Music a continuity. Despite its cultural focus on scores as art works, live performances are the primary way of establishing a connection and dialogue with the public, to whom this practice could be made relevant. As a result, the culture that produced the composer - notation - performer dynamic is receiving its own philosophical challenge in the era of audiences exposed to social media, pop stars and celebrity culture.

With the unprecedented access to information, Western Art Music sways, disperses and fractures, and must find its way in the twenty-first century – the century of interdisciplinarity. Nowadays each artist, simply by watching YouTube videos and using software such as Ableton and Final Cut, can 'DIY' every aspect of their music practice, making it a unique merger of diverse influences and presentation formats. It is therefore important to consider how we experience, refer to and combine knowledge. In my mind interdisciplinary virtuosity offers an approach that is both experimental and collaborative,

driven yet process-oriented, and cultivates the passion for dissemination of ideas with audiences who are as important as the ideas themselves.

4.

Percussion practice as a precursor for music-led interdisciplinarity

Around 2013 I started improvising with various materials, like a prepared snare drum, friction surfaces, microphones, and pedals, and quickly discovered that by focusing on tactility and listening, I was able to express myself musically in a new and exciting way, something that was lost on me during the years of my classical violin training (Jankowska & Young, 2020, p. 157). This coincided with the kind of repertoire Distractfold started undertaking more frequently from 2013 – hybrid pieces using amplified acoustic instruments and analogue electronics e.g., Mauricio Pauly's *Charred Edifice Shining* (2016); amplified objects e.g., Hanna Hartman's *Dust Devil* (2017), and Sam Salem's *London Triptych* (2015-18); percussion set-ups e.g., Michael Pisaro's *Concentric Rings in Magnetic Levitation* (2011), Michelle Lou's *Untitled three-part construction* (2014), and Øyvind Torvund's *Neon Forest Space* (2009). For both artistic and economic reasons, I soon became more than the ensemble's violinist, alternating non-violin part duties with other members of the ensemble and combining all these performance approaches in a single concert. The economic reasons were as simple as there being insufficient resources to pay a fair fee and cover expenses of a guest percussionist. As a self-produced, independent ensemble consisting of a violinist, violist, cellist, clarinettist and electric guitarist, we frequently had to make risky decisions in order to follow our artistic vision of performing hybrid repertoire. This meant programming works without certainty of having sufficient space and all the necessary equipment to rehearse with, as well as transgressing our learnt instrumental identities by taking on repertoire which necessitated skills not expected of us before.

The broadening of the skill sets of contemporary instrumentalists and moving away from a disciplinarity related to a single instrument and its more historic and conventional tradition of playing, has been an ongoing process throughout the twentieth and twenty-first century. The rapid development of technologies and innovations, the access to information, and increased industrialization creating an endless amount of new man-made

products, made it all the more possible for musicians to look for new sounds and forms of expressions with a multitude of new available tools. Percussion practice, despite being one of the oldest instrumental forms of expression, is also the one with the least Western Art Music convention and the shortest span of creation of solo repertoire (Schick, 2006, pp. 1-5). 'A child of the twentieth century' (ibid., p. 1), and a melting pot of cultural influences from around the world, percussion practice became an ambiguous, unstructured, non-systematised, ever-growing container for any object and material, including the human body, to make sounds with (ibid.; J. Axelsson, personal communication, November 19, 2019; Stene, 2014; Bierstone, 2020; Torrence, 2019). The difficulty in establishing technical coherence, stability and predictability in percussion practice worked to percussionists' advantage, stimulating a growth of possibly the most versatile and adaptable group of instrumentalists, and a type of approach that has had an enormous influence over other instrumental disciplines in the twentieth and twenty-first century (J. Axelsson, personal communication, November 19, 2019). Encouraged by the possibility of seemingly endless sonic, conceptual and technological additions, many composers have been challenging performers with ideas, for which conventional performance methodologies, identities and approaches have had to be re-imagined. Axelsson remarks that it is important to see the loosening of the disciplinarian approach from its socio-historic perspective:

> Now we have new musical directions (...). It is about discoveries, and in order to do discoveries one can use knowledge of multiple things. Again, we see more composers performing their own music, and writing pieces that do not necessarily require a highly trained violinist or cellist. There are new demands. Instead, you need to understand how other means of sound production work in order to be able to create them. (J. Axelsson, personal communication, November 19, 2019).

The new demands of recent experimental work, which I earlier described as diverse, plural, and fluid in nature, are certainly more easily met by practitioners whose instrumental identity is not steadily fixed around a convention or a single instrument. While percussionists are more accustomed to such thinking (Schick, 2006; Stene, 2014; J. Axelsson, personal communication, November 19, 2019), versatility is however not exclusive to percussionists. Observing and learning from percussionists can inspire other instrumentalists to follow their example.

Reliable instrumental technique, an outcome of a tradition of using an instrument as taught through specialist classical music education, represents a culturally conditioned desire for expert performers. However, when the performance technique, as in the case of contemporary percussion practice, can no longer be reliably systematised due to the sheer volume of materials and personalised ways of handling them, this desire for expertise (as typically understood) and virtuosity needs to be re-considered.[19] Described by Schick (2006) as a 'floating raft rather than a firmly anchored platform' (pp. 78-9), and by Stene (2014) as a 'periphery without a centre' (p. 10), expertise in percussion practice became more an attitude towards learning and adapting to the demands of performing, rather than an established background of tested technical practices to draw from. There follows an altered understanding of what constitutes technique. If understood as work-specific, individualised and unique sets of multi-directional skills, technique requires 'a constant re-orientation on behalf of the practitioner' (Stene, 2015, General and work-specific techniques, para. 4).

Consequently, Stene (2014) proposes the umbrella term 'post-percussion' to acknowledge the contemporary hybrid percussion practices, which move away from the tradition of percussion playing, meaning hitting and striking. These new approaches cover a wide spectrum of forms of expression, inclusive of all kinds of cultural influences and materials used as instruments, as well as inputs from other disciplines such as theatre, performance art, and video art. Such new demands strengthen the importance of the already existing core percussionist skills – versatility and adaptability. Even before the proliferation of interdisciplinary influences and methodologies, postwar avant-garde multi-percussion set-ups such as Xenakis's *Rebonds* (1987-9), and Lachenmann's *Interieur I* (1967), now considered standard percussion repertoire, demanded great attention to sonic properties of materials, and choreographing one's movements to achieve a confident performance within a spatially spread-out instrumentarium. This is why perhaps not all percussionists are so readily accepting of an end-to-the-instrument, discipline and specialisation idea. Torrence's (2019) approach to the broadening of performance technique emphasizes an

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[19] Expertise, as derived from a state of being an expert, meaning 'a person who has gained skill from experience' and 'a person regarded or consulted as an authority on account of special skill, training, or knowledge; a specialist' ('expert', 2021).

expanding physical and mental awareness, rather than a move away from one's point of departure and education:

> That which we of late have been calling "post-instrumental" (Stene, 2014) behaves less like the end of the instrument in the performer's practice, and more like an increased awareness of the instrument and its influence over the performer's body and sensibility. This so-called "rupture" of the instrument in musical thinking, that which we call "post", mustn't be understood as music without an instrument where the rupture equates a kind of death meaning that we are "finished" with instruments and their historical weight. This "post" mustn't be understood as an "end-point". It is simply an experience of "after" that arises when one has been made aware of something that was once taken for granted and taken as "given". This experience of "after" is what happens when we remember that we have bodies, that they are imprinted with the instruments we have individually bent ourselves towards for years and collectively over centuries. And through this renewed consciousness, the realisation comes that these ideas were, in fact, never given, and that we must rethink the *relation* to the instrument. (A reconsideration of the term "post-instrumental", para. 1)

The relation to the instrument is also a relation to the cultural concepts, such as the concept of virtuosity and technical skill, that in Western Art Music have served as the underpinning for music education, music criticism and journalism, and economic structures of music production, such as marketing and promotion. The concept of work-specific techniques alters the concept of virtuosity (Stene, 2014, p. 40). In a field of non-unified performance techniques such as the field of percussion, types of virtuosity have multiplied accordingly. Stene recognises different kinds of virtuosities present in contemporary percussion practice, which resulted out of the performer's engagement with the demands of the compositions, such as physical virtuosity related to choreographing movement around large multi-percussion set-ups, the timbral virtuosity connected to narrowing down the performance focus to shaping sounds with different materials through tactility and friction, the micro-virtuosity of creating tiny sound variations with minimal movement, or the anti-virtuosity of repetition present in works of James Tenney and Alvin Lucier. Contemporary virtuosity through the lens of percussion practice therefore not only requires localised, work-specific skills, but also an informed perspective of the audience and critics in order to be able to recognise and appreciate it.

With each new work, new tools and performance skills to creatively conjure, it is perhaps the 'virtuosity of adaptability' (ibid., p. 42) that best reflects the diverse demands within

percussion practice. An umbrella term, similar to post-percussion, 'virtuosity of adaptability' offers an open-ended approach to the idea of virtuosity as a great technical skill. By challenging one's rapport with the instrument, it prompts us to ask whether mastery can ever be achieved, and what are the contours of one's identity within the context of contemporary music performance. 'Virtuosity of adaptability' assumes acceptance of the fluidity of one's performance practice, a resilience and openness, and the forging of ideas and solutions in the face of instability of technique. As a result, 'virtuosity of adaptability' can certainly include the process of acquiring knowledge and methodologies from other disciplines for a creatively empowered performance, and therefore shares similarities with how I propose to redefine virtuosity. However, it could be argued that 'virtuosity of adaptability' might be simultaneously upholding the convention of the work-concept, where the performer subjects oneself to the demands of a composition, rather than considering the creative process of rendering music as an exchange of equally relevant ideas and bodies of knowledge – as co-creation.

Jennifer Torrence (2019) proposes a somewhat different perspective on adapting to the demands of new music performance practices by suggesting it is important to recognise the difference between training and preparation. Training, a structured and often institutionalised form of building relevant skill sets, be it at the conservatoire or through masterclasses and workshops, usually leads towards a mastery of a specific field or type of performance, within a defined system of rules and codes (IV. Preparation & Training; or, What becomes of "practicing"?, para. 3). Preparation, however, is a way of thinking and developing one's approach and skills for a particular work that is open-ended and not clearly defined. According to Torrence, it can involve anything from 'reading texts, seeing artistic work, attending lectures, and holding discussions' to 'workshops, classes, and lessons, that provide specific knowledge, approaches, and skills for a particular work', as well as 'meditation practices, lifestyle habits, and group formation activities including administrative and logistical tasks, as well as sharing meals and other socializing' (para. 4). As a result, shifting one's focus from a pursuit of mastery towards discoveries and process becomes the methodology for building the most relevant dispositions, such as creativity, flexibility and openness, needed for engaging with experimental music practices. The author acknowledges that in her practice learning about other methodologies didn't necessarily lead to her developing a coherent system of new performance skills, but rather

acted as a perspective for forging her own, unique approaches. In Torrence's perspective there is much less striving for adaptation or the 'virtuosity of adaptability' but rather a visibly holistic approach to the process of music-making, which foregrounds patient experimentation, collaboration and co-creation.

Virtuosity of adaptability and interdisciplinary virtuosity, although overlapping to a large extent, have perhaps a different focal point. I consider virtuosity of adaptability as having a mildly passive ring to it, and therefore once again privileging the composition as the main stimulus for virtuosity. I prefer to think of interdisciplinary virtuosity as an individual process of artistic growth, motivating an exploration of other fields as a result of creative curiosity, and in the search for transferable knowledge. Hence, I choose to think of virtuosity in my practice as a result of knowledge and perspective acquisition intended to input into the means of music production on equal par with the composition. Interdisciplinary virtuosity positions a performer and a composer at the same level in terms of creativity and the generation of ideas for music production. Both venturing out, both looking for new perspectives, sharing a process of discovery, and building a shared toolbox of work-related skills, composers and performers can also share interdisciplinary virtuosity as a way of closing the historic loop of composer-performer hierarchies, where virtuosity was regarded as debasing and shallow, neither serving the composer nor the work.

As contemporary artistic practice became more collaborative, not only in nature, but also in the way it is portrayed culturally, hence overtime collaborations have become a part of the new music academic and funding jargon (Fraser, 2019, pp. 1-2). Yet, given the impossibility of becoming an expert in the multitude of available tools for music-making, it is perhaps also not desirable to systematise a practice governed by flux, rapid adjustments to innovations and experimenting with the merger of different practices. Composers and performers, shedding classical music tradition and hierarchies, and conventional understanding of virtuosity and expertise, must remain curious partners when starting off from various more or less under-informed and even amateurish points in the discovery process of new possibilities. It is then that we start considering the creation of new works, and work-specific techniques, as a collaborative process of shared experiments, mutual knowledge acquisition and a creative partnership (Torrence, 2019).

The following case studies aim to give an account of my involvement with a type of practice which more frequently would be assigned to percussionists yet remains open to performers from other backgrounds. Through the description of two works by the Swedish, Berlin-based composer and sound artist Hanna Hartman, *Message from the Lighthouse* and *BUG*, I aim to showcase the forging of my work-specific approach towards a performance practice, which does not involve any violin playing.

4.1.   'The key to the score is in the materials' – an insight into performance practice of Hanna Hartman's *Message from the Lighthouse* and *BUG*

I first met Hanna Hartman in March 2014 at the Electric Spring Festival at the University of Huddersfield. At the time I was looking for new repertoire for my ensemble Distractfold and took interest in Hartman's *Borderlines* (2012) – a piece for violin, two object operators, and tape, written for the Swedish ensemble Curious Chamber Players. We agreed to work on the piece together at the International Summer Courses in Darmstadt that year. That meant that Hartman had to assemble and provide us with the *Borderlines* set-up consisting of clay pots, 1.5-metre-long brass and steel rods, washers, ball bearings, a chimney star and tiles, as well as let us rehearse with a set of contact microphones (Schertler B-DYN), with which she developed the piece. Coming from an electroacoustic, theatre and sound art background, Hartman seeks to amplify the pure sound properties of objects and materials, taken outside of their context of usage. As such, this was my first encounter with a performance practice rooted in sound art, understood as a prioritising of sound and the phenomenology of its production. My work on *Borderlines* marked the beginning of my involvement with a percussion practice based on friction and tactile involvement with the materiality of sound-producing objects. Over the next few years, together with Distractfold, I performed *Borderlines* and *Dust Devil* – an ensemble piece for violin, bass clarinet, two object operators and tape, which the ensemble commissioned – in multiple concerts, having the opportunity to deepen my understanding of Hartman's practice. Eventually, after three years of performing with various objects and friction materials, I decided to learn Hartman's solo percussion piece *Message from the Lighthouse* (2009), written for Swedish percussionist Jonny Axelsson, using a set-up consisting of clay flower pots, knives, chamotte bricks, bass drum, congas, temple blocks, and double-sided

tape. To conclude my engagement with her practice for the purpose of this research, I have worked on her solo piece written for me, and commissioned by Distractfold – *BUG* (2020), for two plastic sheets on cardboard, plastic plectrums and metallic washers.

The following piece of writing addresses Hartman's *Message from the Lighthouse* and *BUG* as primarily a sound practice. These two works differ not only in the materials used to produce their sounds, but also in the intention of who they were written for. *Message from the Lighthouse* is a percussion piece, using instruments such as bass drum and congas, and requiring some idiomatic percussion-playing technique, such as coordinated yet differentiated, simultaneous movement of both hands, and quick mallet roll on bass drum; while *BUG* uses a non-idiomatic set-up of two plastic boards, making it a piece for a performer, suitable to any background. In the process of working on *Message from the Lighthouse* I have interviewed both Hartman (2018 & 2020) and Axelsson (2019), who contributed ideas during the development of the set-up, as well as Canadian percussionist Noam Bierstone (2018 & 2020), who has also performed and recorded *Message from the Lighthouse*. These interviews were conducted virtually, apart from Axelsson whom I interviewed in person during the Huddersfield Contemporary Music Festival in 2019, where he performed this piece on November 15 (hcmf, 2019). These interviews helped me gain insight into the development and performance practice of the piece, as well as stimulated my critical considerations related to the extended instrumentality and interdisciplinary virtuosity of a new music performer. Additionally, through this case study, I hope to demonstrate my involvement with a percussion practice, where the demands on me as a performer with a background in violin playing, challenged my ability to listen, and react to the materiality of objects as sound sources, fuelling a questioning of the extent to which an instrumental non-specialisation can render a convincing and commendable performance.

4.1.1.   *Message from the Lighthouse*

The set-up for *Message from the Lighthouse* consists of instruments, objects and materials, which all carry a unique story of how the decision of bringing them into the composition came about (please refer to my Artistic Portfolio (Dropbox #4.1) https://www.dropbox.com/s/ca4adk30unmks0z/4.1.mp4?dl=0). I account for these

stories, as per the information collected through interviewing Hartman and Axelsson, treating it as an ethnographic duty of documenting an orally transmitted knowledge of the piece. Discussing materials in the case of Hartman's practice is crucial. Those are the objects and their sonic properties that determine the character of the piece and the performance technique. Following the set-up breakdown, I provide my research findings related to specific challenges encountered when creating my version of this work. These challenges were analysed and addressed in discussions with Hartman, Axelsson, and Bierstone. Some of the quotes were edited for clarity and approved by the original speaker as per my research ethics statement (see Chapter 1).

4.1.1.1. Set-up breakdown

1. Two clay flower pots

Hanna Hartman likes gardening, and cares for a range of plants in her Berlin apartment. Planning annual Spring repotting, she tried taking out two big clay pots which got stuck into one another:

> (…) they were stuck in one another so I couldn't really get them out. To get them out I used different things, for example a knife; and by doing that the knife started sounding. It sounded really nice! (H. Hartman, personal communication, December 8, 2018)

Hartman was given an opportunity to write for Axelsson, and the fluttering sound of the knives stuck between the pots became the basis for the piece.

It turned out however that finding two perfectly fitting pots, which would get stuck, wasn't easy. The fit must be tight and able to sustain the movement of the knives stuck between them. Pots should be medium to large in size, as they act as resonators. When pots are handmade, they tend to be uneven, hence it is a matter of finding a pair that could function across all these parameters. They couldn't find them in Sweden; therefore, Hartman transported a few sets of pots all the way from Berlin to Stockholm to work with Axelsson.

2. Thin stainless-steel knives

Knives, which are bowed and plucked, should have a very thin, long blade and be made of stainless steel. Originally Hartman and Axelsson found them in second-hand shops and flea

markets in Sweden. Hartman guesses that the knives the piece was developed with were very old, used canteen knives. The placement of the knives around the rim of the pots depends entirely on the fit of the pots. The number of knives used in the piece is not indicated; however, Axelsson advised at least five, each with a differentiated sonic character (Fig. 1).

Figure 1: Jonny Axelsson's set-up at hcmf 2019.

3. Sandpaper p400

This friction material is used to imitate the sound of the tape part on page 2. The choice of the grain of sandpaper is suggested by Hartman but remains dependent on its interaction with the pot.

4. Bass bow (or any string bow of one's choice)

5. Tape part

Ambiguity surrounding the interaction between the sonic properties of the objects and the tape part plays a decisive role in a number of Hartman's works. It allows the composer to avoid a simplistic narrative that would undoubtedly be triggered by referential listening. Hartman is reluctant to reveal sound sources used for the tape parts (Jankowska & Hartman, 2020), but agreed to share an example from *Message from the Lighthouse* to illustrate her thinking process and intention:

> Another very important part of the piece is the sound of the tape. I thought about the sound that could be emerging from the fluttering sound of the knives. A friend of mine has an uncle who breeds pigeons in Marienfelde. I went with her to visit her uncle and recorded his pigeons moving in cages. The very important thing, and I think that's super important for the piece, is that the sound of the tape is merging with the sound of the knives so that you don't really hear the birds. If it's too loud, and you hear some fluttering birds, you are missing the point. It should be coalescing in a way that you're not really sure – "I thought I heard a bird, hm, but maybe not?" (H. Hartman, personal communication, December 8, 2018)

6. Chamotte bricks

The bricks should have a high, brittle pitch, and be chosen for their ability to merge with the sound introduced in the tape part at min 14:12. Axelsson advised me to try both 2cm and 3cm thick bricks to find the perfect blend. Additionally, Hartman recommended I find bricks which could be played against one another with a circular, stable and continuous motion, not too fast. That meant that their surface needed to have a relatively grainy, yet not too uneven surface.

7. Bass drum

8. Congas   9. Temple blocks   10. Double-sided tape

These three elements form a sound combination, as indicated in the score (blue part on page 2 and 3, see Fig. 2 and 3) and need to be discussed as such. Hartman explains:

> I went to work together with Jonny Axelsson in his studio, and we tried out different things. We found this sound, with a tape on the congo, and continued to experiment with different kinds of drums and materials, eventually finding a sticky sound with the tape on the drum, and the temple block; that's also a very important sound in the piece. You can't really control it entirely, and that's the interesting thing about it. (H. Hartman, personal communication, December 8, 2018)

For his hcmf 2019 performance, Axelsson travelled with a few pairs of temple blocks to test them on the available congas in search for the desired blend with the tape part.

9. Six cardioid microphones (e.g., Neumann Km184)

Understanding the role of amplification in Hartman's practice and its impact on her sonic decisions, as a preparation methodology for a performer, happens in parallel with the careful selection of materials, even perhaps preceding it. Hartman's practice heavily relies on high-quality amplification technology in order to bring out the sonic characteristics of the materials, as well as simply to make many of the sound phenomena audible in a context of a live performance. Needless to say, a high-quality pairing of microphones and speakers greatly supports the reception of her music. A pair of cardioid overhead microphones is used to amplify the chamotte brick in order to create a spatialised, moving sound effect. Furthermore, every next element or combination of elements in the set-up receives its own overhead amplification.

10. Two Schertler contact microphones, preferably DYN-B-P48 or DYN-C-P48

This brand of Swiss dynamic contact microphones is one that Hartman developed the piece with, therefore the frequencies of the resonating flower pot, which is amplified with a set of these, are more easily brought out with Schertlers rather than with any other type of contact microphones available on the market in 2021. Bierstone (2020) elaborates:

> As I was preparing the work, I quickly realized that it would be useless to attempt to construct and test the flowerpot contraption without the required amplification. The manner in which one constructs the object—choosing the appropriate flowerpots and knives—is fully reliant on being able to hear the sounds in their totality. I also realized that using a lower quality contact microphone hindered my progress, as I was searching for sounds that could not actually be produced without the

correct amplification system. The electronic system of the contact microphone and loudspeaker, as well as careful frequency equalization on the mixer, is thus a fundamental component of the instrumental object. (p. 208)
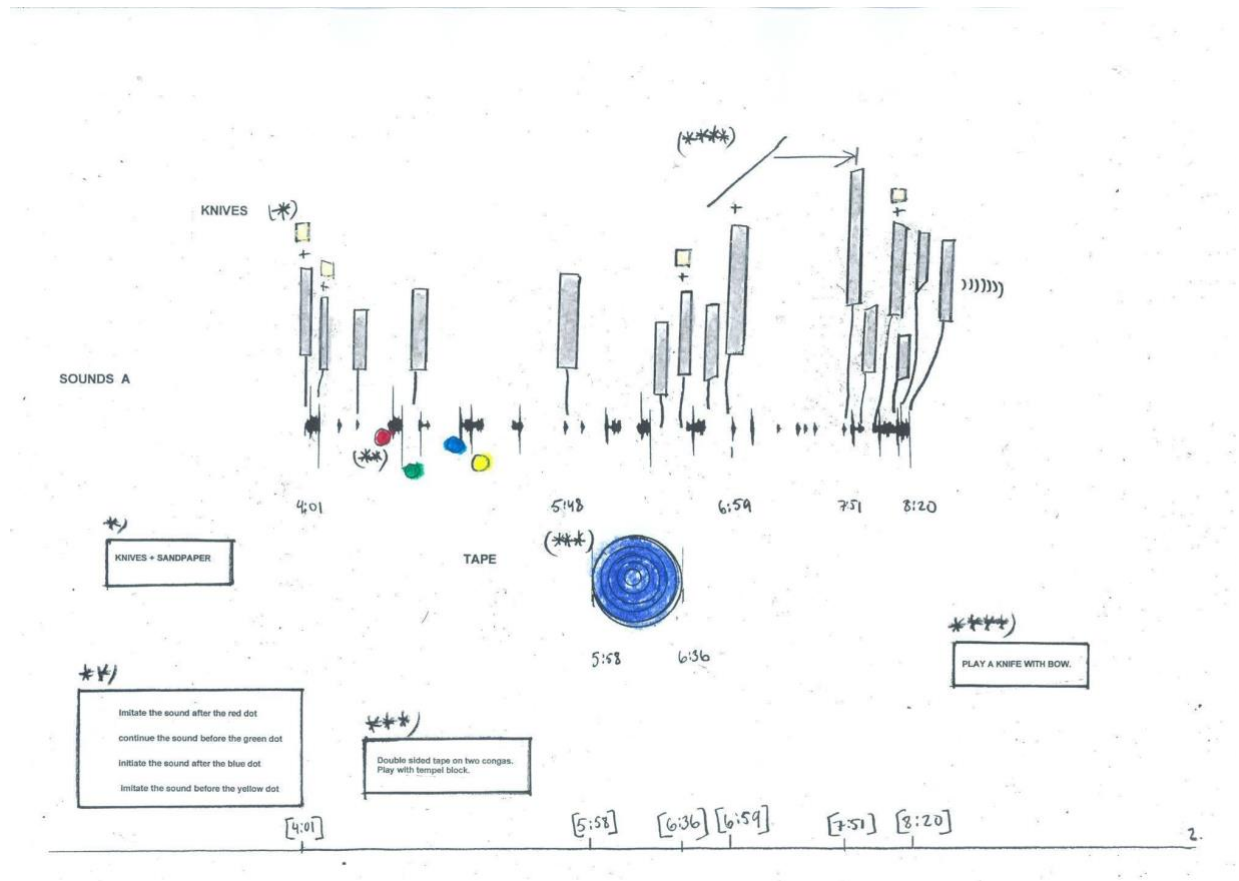
Figure 2: Hanna Hartman, *Message from the Lighthouse,* blue dot signifying the combination of sounds created with congas, double-sided tape and temple blocks, page 2.

4.1.1.2.   Score

'The key to the score is in the materials' (H. Hartman, personal communication, August 2, 2020)

'I am there to share the listening' (J. Axelsson, personal communication, November 19, 2019)

The score for *Message from the Lighthouse* is graphic and time-based. Precisely notated timings of events coordinate the fixed tape part with other performative layers. The actions of the performer on the designated objects are understood as sonic material and notated as descriptions of action using red and blue areas, and yellow and green dots. Such notation practice, without any further indications, is nebulous and unspecific, and required

an investigation on my part (hence multiple conversations with Hartman, Axelsson and Bierstone). When questioned about the sound qualities I was meant to look for, Hartman knew very precisely what they were, despite the lack of precise notation:

> I think the most important thing is that the performer knows what I'm looking for – the essential part of the piece. For me it was really obvious – of course it should be like that! And then I realised it's not for everyone. The piece is ten years old now, and it was written for Jonny Axelsson. Now I would be more precise about writing things down. (H. Hartman, personal communication, December 8, 2018)
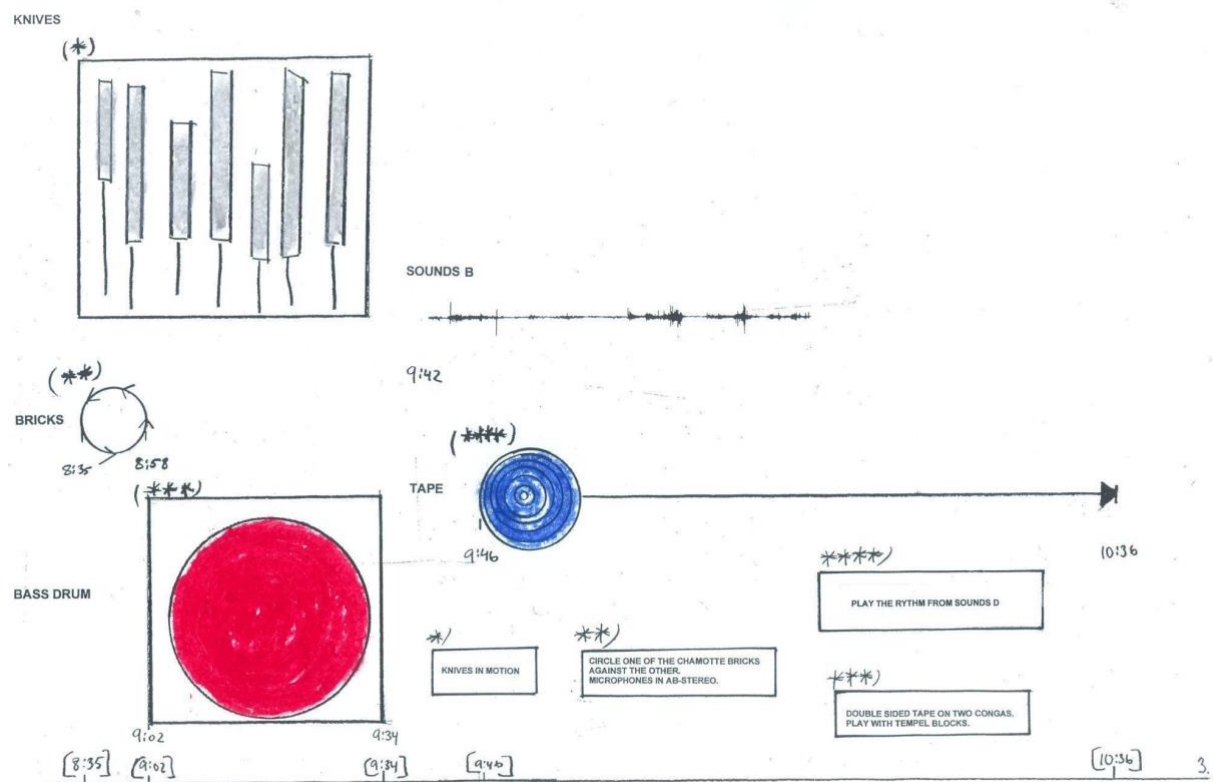
Figure 3: Hanna Hartman, *Message from the Lighthouse,* red dot signifying the fast mallet on bass drum roll, page 3.

But how does a performer know what Hartman is looking for? For Axelsson the knowledge of the sonic landscape of this piece is perhaps almost as exact as it is for the composer. As a collaborator, Axelsson participated in the initial search for sound qualities and materials, adding his experience as a percussionist to help create the sound world Hartman was

looking for. Bierstone on the other hand initiated a remote process of enquiry, where they would have frequent virtual contact with Hartman talking about materials, sending recordings to verify if he found the object and the sound Hartman had in mind. In absence of more exact notation, this is perhaps the desired methodology of interpreting this music. The quest for understanding embraces multiple, concurrently interacting layers with a range of variability, turning the process of preparation and learning into experimentation and discovery determined by very intent listening. 'The key to the score is in the materials', Hartman adds (personal communication, August 2, 2020). As an example, Hartman mentions the placement of the contact microphone on the flower pot, which is crucial for the fluttering sound of plucked and bowed knives:

> It's really important to know how to get the pots sounding good. The placement of the microphones is important, you need to experiment, but you might also need to isolate the pot from the table so that you obtain the resonance in the pot only by itself. Jonny and I used a thick cement block, perhaps a pavement block underneath the pot. I think at the premiere we used something that DJs are using to stabilise the table and the turntable. (H. Hartman, personal communication, December 8, 2018)

Hartman's music encourages a performer to engage with an art of listening to hidden sonorities and vibrations, brought to light by amplification, in which an integral part of the learning process (and interpretation of the score) involves a conversation about how to listen, and what to listen for. Axelsson suggests:

> The concept (of the piece) is archaic in a way. You have very fundamental sounds: stone, friction. Being so basic speaks by itself – helps one relax into it and influences the entire conception of the performance. In a way you should just be in it, not deliver it, but be there. You are producing the sound, but you are also the listener. The tension in the performance is rooted in the experience of energy of the sound – its tension and resistance. It is similar to the energy found in nature – it is the same, yet never the same, static yet always changing. It never is a complete repetition. To perform *Message from the Lighthouse* is to let it in, and to just experience it – experience the sensations of the small variations because it's something that you cannot completely control. When I play the brick at the beginning of the piece for three minutes, I focus primarily on how the sound changes with my movement. As a performer I am there to share the listening. (J. Axelsson, personal communication, November 19, 2019)

4.1.1.3.   Amplification

'You need to direct the sound engineer towards what you want to hear.' (H. Hartman, personal communication, April 28, 2020)

The knowledge of how to approach amplification for rehearsing and soundchecking for performance is embedded into the performance practice of *Message from the Lighthouse*. Resulting from an intimate contact with the materials and their sonic properties, a performer needs to learn to balance different layers of the piece through EQ-ing, both in terms of volume as well as character. Both Hartman and Axelsson stress the importance of working with a sound engineer during the learning process rather than only on the day of the performance. Such an approach would facilitate the listening to and meticulous engagement with the momentary revelation of sounds. Ideally a sound engineer becomes a partner in the process of rehearsing and performing, taking on a role of another listening witness, balancing the levels and shaping the sounds as music unravels. The chamotte brick part is a good example of this cooperation, as bass frequencies should be filtered out by the engineer (or performer) in the process of highlighting the desired high, brittle and clear pitch of the bricks. However, as the realities of the new music field prove time and time again, this is an ideal scenario that is unlikely to happen to most performers, demanding therefore greater independence, integrity, knowledge and care on the part of the performer to arrive at a satisfying level of such complex and diffused tone production. This integrity cannot however be intellectualised, but rather developed through a long-term rapport-building with the materials and listening, ideally while working with a fully amplified set-up. Unless amplified, one is risking producing merely hollow gestures, and not engaging in what is the essence of the music – the listening to the revelations of sounds. As the objects themselves have performative limitations, which perhaps initially could indicate a technical simplicity to performing *Message from the Lighthouse*, there is a danger of underestimating and under-rehearsing Hartman's music. During research, when I finally heard myself fully amplified through a good monitor, at last I could hear the sound I was making. It dawned on me how much I have not been interpreting (meaning listening and reacting to variations in the fabric of sound), but rather performing gestures in time, treating the sounds as a by-product of the gestures.

4.1.1.4.　Listening and adapting

'You need to work with tools and the background that you have.' (N. Bierstone, personal communication, April 3, 2020)

'With every change in the set up comes a change of interpretation.' (J. Axelsson, personal communication, November 19, 2019)

During the time I spent working on the piece, I had to acquire a degree of adaptability and flexibility in relation to materials and performance circumstances with which I was unfamiliar as a violinist. My entire violin education, until I stepped into the realms of contemporary music performance, involved learning a set of performance techniques through numerous etudes and exercises, mostly developed and written down in the nineteenth and first half of the twentieth century, which were intended to create an embodied, almost automatic physical response to challenges of operating the instrument. Violin performance, due to the centuries of tradition dating back to Renaissance times, means an engagement, and to some degree acceptance and following, of an established aesthetic of sound and performance practice. It also means constructing a set of physical gestures and patterns one can fall back onto without a great degree of reflection. Perhaps in the case of practices where a singular instrument is involved like the piano or violin, the mainstream understanding of virtuosity as great technical skill can continue to hold true, and as we see in the modern representation of classical music, is unlikely to change anytime soon. The mastery of an instrument like the violin is not only observable via agility and security, but also comparable within a tradition. I argue that even within the field of contemporary music, the concept of virtuosity from a perspective of a violinist has not been substantially challenged. The solo violin repertoire in the twentieth and twenty-first century has primarily expanded by a number of pieces including a tape part (B. Parmegiani *Violostries* (1964); L. Nono *La lontananza nostalgica utopica futura* (1989)), and other forms of live electronics, such as computer software (P. Boulez *Anthèmes 2* (1997)), ambisonics (N. Barrett *Sagittarius A** (2017)), sensors (M. Kimura *Kaze (The Wind)* (2019); A. Schubert *Weapon of Choice* (2009)) or analogue electronics (M. van der Aa *Memo* (2003); M. Pauly *Its fleece electrostatic* (2012)). Additional sound-producing objects, which could challenge the violinist out of their comfort zone and inspire multiple nodes of reflection like spatialised choreographic thinking and listening resulting from tactile and sensory rapport with various materials, only very infrequently and in a rather

limited way became a part of a violinist set-up, as in the case of e.g., Marianthi Papalexandri-Alexandri *Solo for Motors and Strings* (2016). Largely due to the violin having a sufficiently broad spectrum of timbral possibilities, there isn't a need to combine sounds from multiple sources. Moreover, the instrument itself has a rather awkward hold (I discuss the physicality of violin playing in context of movement and theatre-oriented performance in Chapter 7), which limits the scope of one's movement when holding it. As a result of these particularities, violin technique, even in the new music context, remains a rather secure and contained concept, where one can develop a sense of certainty that a gesture will produce a desired sonic outcome.

Such certainty was not entirely transferable onto the multi-object set-up of *Message from the Lighthouse*, despite practicing with the materials. Its soundworld results from and is dependent on sounds of materials and objects, which can wear off (e.g., the chamotte bricks), or need to be repositioned (e.g., the knives), making the means of sound production volatile and requiring an approach to one's technical thinking that is necessarily flexible. Here the opposite is required – the skill of adaptability means that not only is one able to quickly relate to a new material in a creative and performative way, but also that, as materials within a set-up vary depending on circumstances, so unavoidably does the interpretation. Hence, rarely can one rely on a preconceived way of performing a given piece (J. Axelsson, personal communication, November 19, 2019).

Hartman frequently reminded me that her practice is 'all about the sound' (personal communication, December 8, 2018 & April 28, 2020). I dedicated substantial effort to understanding the nature of the sounds she had in mind, yet I had to stay mindful of the fact that her ideas were phenomenological and timbral, rather than reductive to the noise-free or 'beautiful' tone prevalent in classical music tradition (Havas, 1998, p. 4). Hartman, Axelsson and Bierstone, among all their essential tips described earlier, encouraged me to pursue my own creative approach to finding materials and ways of performing with them, stressing the fact that as objects might differ (different pots, positioning of knives, types of congas or bass drum), so will my real-time approach to performing with them.

Rather than prescribing ways of playing, Hartman encourages kinds of zoomed-in listening to timbral qualities, rarely answering exactly how a sound should be made, but leaving it up to the performer to determine themselves. Bierstone (2020) suggests:

This approach highlights the idea that it is precisely through the narrowing of material that the experience of differentiation can be expanded. This can be considered as a focusing in—or zooming in—on an object's sound to discover variations in sound that may not be perceived otherwise. In addition to requiring the performer to develop the technical capacities to produce these subtle variations in sound, it also requires the performer to develop more acute and sensitive listening in distinguishing sonic parameters such as timbre, texture, and grain that one may not typically encounter in conventional classical music performance. (p. 199)

To learn a percussion piece where adaptability to materials and circumstances is intertwined with idiomatic, typically percussive technique like coordinated playing of different objects with both hands, and the fast bass drum-roll on page 5 (Fig. 4), I conducted a series of attempts to address these challenges with my violinist means. While coordinating hands to scrape the bricks and bow the knives felt both doable and rather efficient, rolling a mallet on a bass drum for a total of 101 seconds did not.
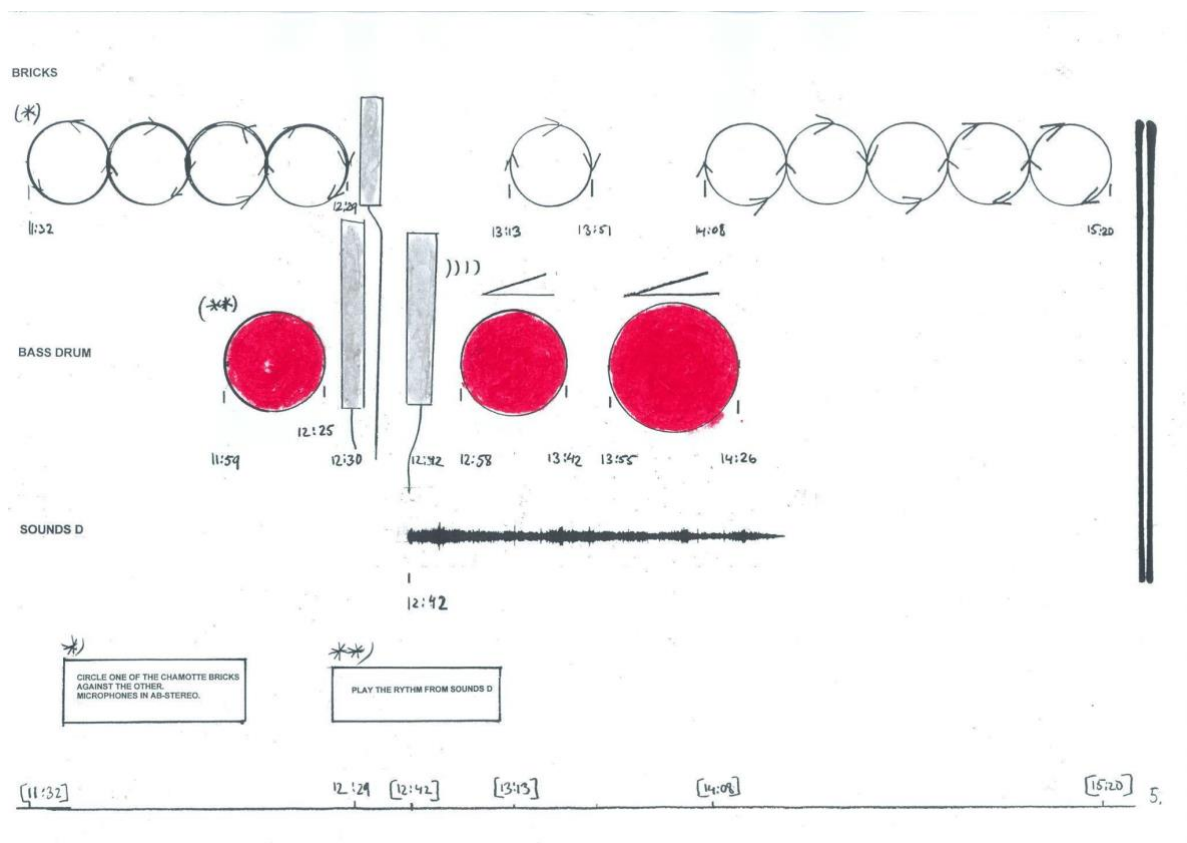
Figure 4: Hanna Hartman, *Message from the Lighthouse,* 101 seconds of a fast mallet roll on bass drum, page 5.

Despite acquiring an appropriate mallet suggested by Bierstone, I simply was unable to sustain the intensity and regularity of the roll for the required duration without palpably

hurting my arm. Looking for tips, I approached Bierstone, who with a degree of fair criticism reminded me that perhaps I could not expect to master essential percussion technique within the short time that I had to learn the piece, stating that even within the non-idiomatic, non-specialist experimental practice, there are certain elements that require more specialised background and respect towards the practice (personal communication, April 3, 2020). Advised to search for a way that felt manageable within my violinist background, I found a lighter, foam stress ball in the shape of a lightbulb (Fig. 5), with which I was then able to mimic a mallet roll, thinking of the movement as if it was a bow tremolo. I was therefore able to re-apply my learnt gestural violinist's habits onto a different set of materials.
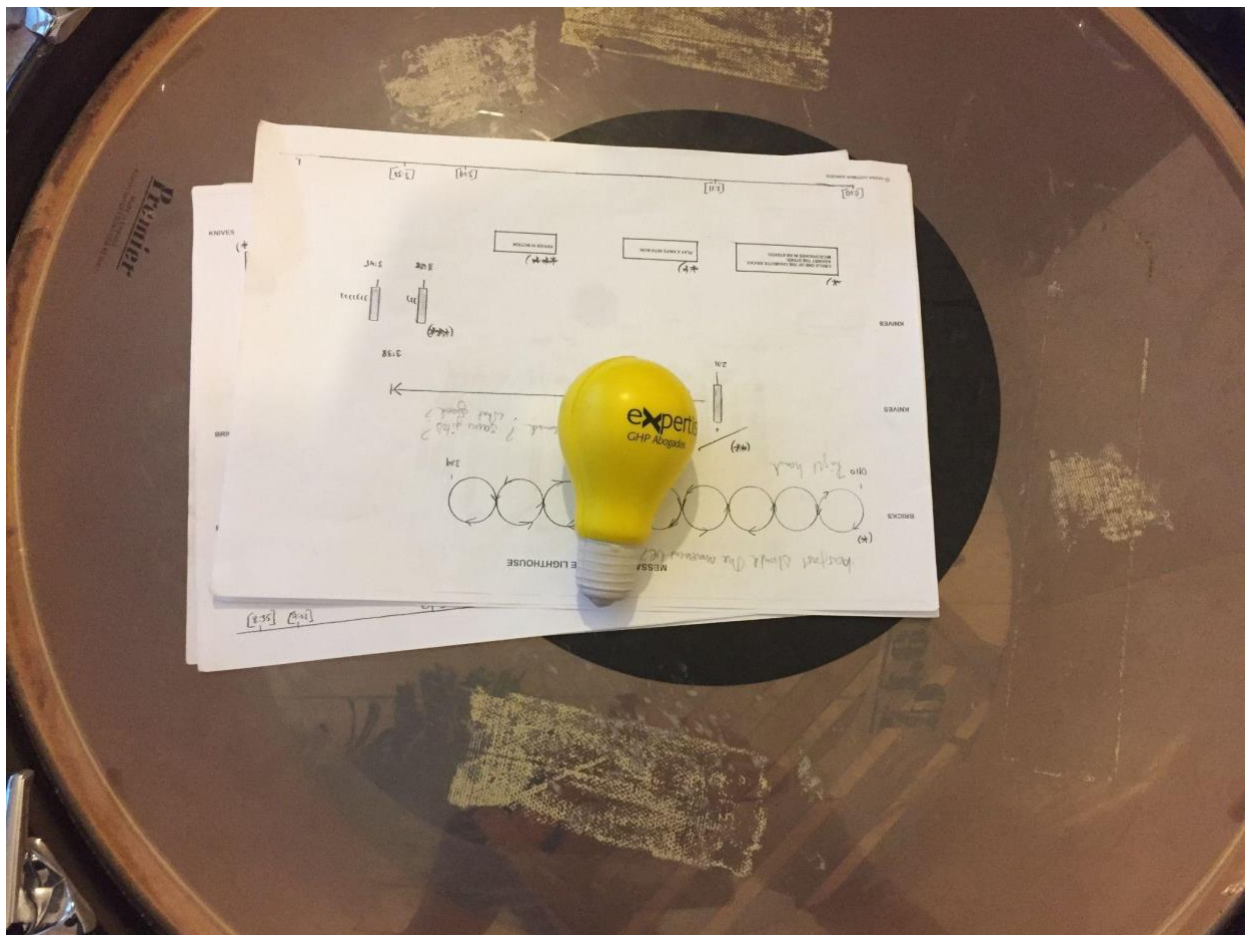
Figure 5: The foamy lightbulb-shaped stress ball I used instead of a mallet.

This experience chimes with Torrence's idea of considering post-instrumentality as an awareness-broadening process, transforming the boundaries that the imprint and impact made by the instrument we started off with has had on our mentality and physicality. When asked whether seeing other instrumentalists take on percussion parts bothered

him, percussionist Victor Barceló answered that on the contrary, to see so many sensibilities taking different approaches also helps to challenge him (personal communication, August 27, 2018).

4.1.2.   *BUG* – a return to tactility

In the process of learning the violin to the extent expected in classical music tradition, I formed a set of performance habits related to a particular approach to sound aesthetic and musical expression. Namely the concept of 'beautiful tone' felt like a particularly strong underpinning. Any form of challenging myself out of this conditioning turned out beneficial for my creativity and artistry. I realised that my habits have limited my listening and tactile connection with music-making, and perhaps shut me off from a moment-to-moment awareness of the purely phenomenological aspects of sound. After all, playing any instrument involves regulating sound production through physical pressure, speed and weight. However, opening to other objects and materials renewed my experience of sound production as the tracing of vibrations with the sense of touch. In *BUG*, a piece for a performer exploring the sonic potential of two plastic boards with plastic plectrums and metal washers (Fig. 6), I had no preconceived idea of sound to relate to. This piece, which has a graphic, open notation, was written for me, hence I could face an entirely new and personal terrain of discoveries. Hartman, besides a suggestion of a performance alternative, gave me all the liberty of developing my own approach to the materials and the score. Unlike her earlier pieces, where she tried to avoid narrative, this piece has a hidden one in the form of a dialogue between a human entity represented by one hand, and a bug entity realised by the other (H. Hartman, personal communication, November 4, 2020). The bug hand asks questions indicated in the score, while the human hand answers them and creates stories, both hands mimicking the intonation and sound of a human language of one's choice (Fig. 7). What follows is a creation of an interpretation that is spontaneous, improvisatory and explorative, reactive to the performer's tactile rapport with materials (please refer to my Artistic Portfolio (Dropbox #4.2) https://www.dropbox.com/s/buzlidtxs79q8p0/4.2.mp4?dl=0).

Tactility, so integral to human lives, both in the forms of actions as well as symbols (Classen, 2005, p. 1), has been gradually and insistently removed from the way we relate to and understand the world around us by the culture of image and written

communication (p. 2). Sense of touch as a form of knowledge has not only a longstanding tradition in various indigenous cultures around the world, both past and present, but has also perplexed Western philosophers since Antiquity (Howes, 2005, p. 27).
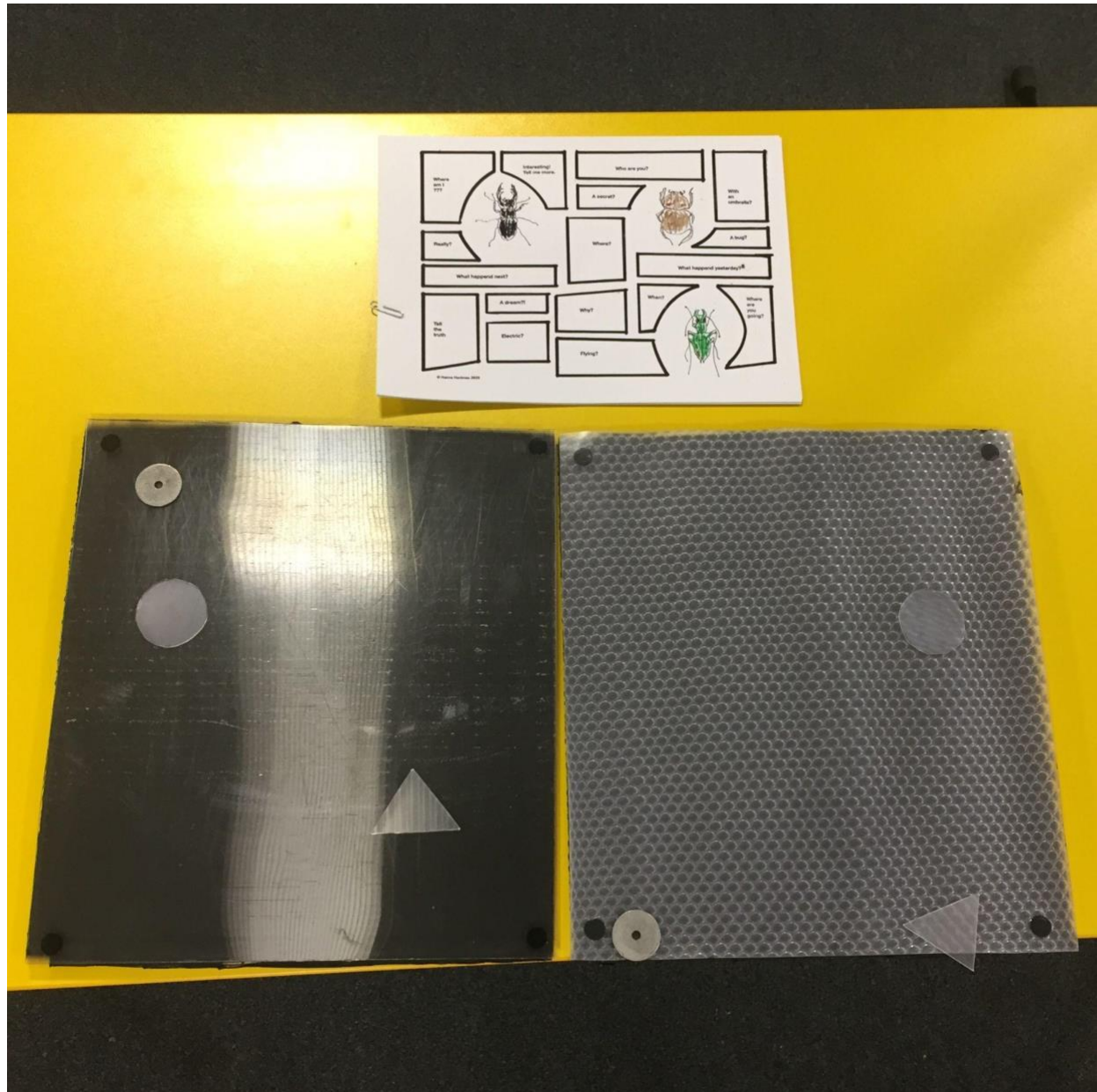
Figure 6: Hanna Hartman, *BUG,* score and instrument.

Considered by scholars as rooted in the Cartesian concept of mind-body dualism, the progressive loss of intelligence attributed to the body, as well as the marginalisation of tactility from the knowledge-acquisition process, contributed towards modern culture's discombobulated rapport with touch (ibid.). On the one hand we observe a zero 'tactile gratification' approach related to our interaction with the visual imagery of advertising, social media and modern communication technologies; on the other, a pampered approach

of 'cocooning' and comfort as seen in e.g., design (Classen, 2005, pp. 2-3). We can neither touch what we see, nor get uncomfortable or hurt by it. In Western Art Music the ability to notate sound and read sheet music is its defining characteristic, therefore the main form of documenting and passing on information about instrumental sound production has been procedural and technical, at least until the advent of recording. As an example, one can consider the ample modern publications about instrumental techniques with which some composers supported their compositional methodologies. Codifying knowledge about operating instruments, in the case of the violin dating back to Philibert Jambe de Fer's *Épitome Musciale* published in 1556 (Boyden, 1965, pp. 31-3), historically also played an important role in passing on knowledge about the sound culture and music of the time, while notation of compositions was partial, with plenty of gaps to be filled by the performing musicians. Over time, with fewer and eventually almost no gaps to fill, in the twentieth century the writing of manuals was overtaken by the making of and listening to recordings. It is now much more common to be told to listen to multiple recordings of the same piece when one is learning an instrument, rather than read a manual on the basics of the instrument's technique. Recording technology also facilitated an expansion of the idea of the score and its accompanying legend, with composers sharing sound files, alongside or even instead of verbally explaining the production of sounds and techniques.

As beneficial as these various forms of knowledge are, performing music remains a physical act. In the process of learning to play any instrument, the hand is seeking, the ear is verifying, the eye is trying to guide. It is a constant stream of sensations and an influx of information from multiple sources, whose process of analysis and interpretation remains at all times only partially understood by ourselves. While relying heavily on visual communication in the process of learning music, we seem to have forgotten that we were born with our primary learning tool – touch – and we didn't need to be educated into using it (Tuan, 2005, p. 75). In my violin training, an education so preoccupied with the concept of 'beautiful tone', I do not recall ever being told to pay attention to the changes in friction of the bow hair being drawn on a string in order to achieve smoothness of tone. Tactility seems to have been excluded from the syllabus, perhaps for one simple reason – how does one explain and codify sensory sensations from a source as complex and individual as the sense of touch?
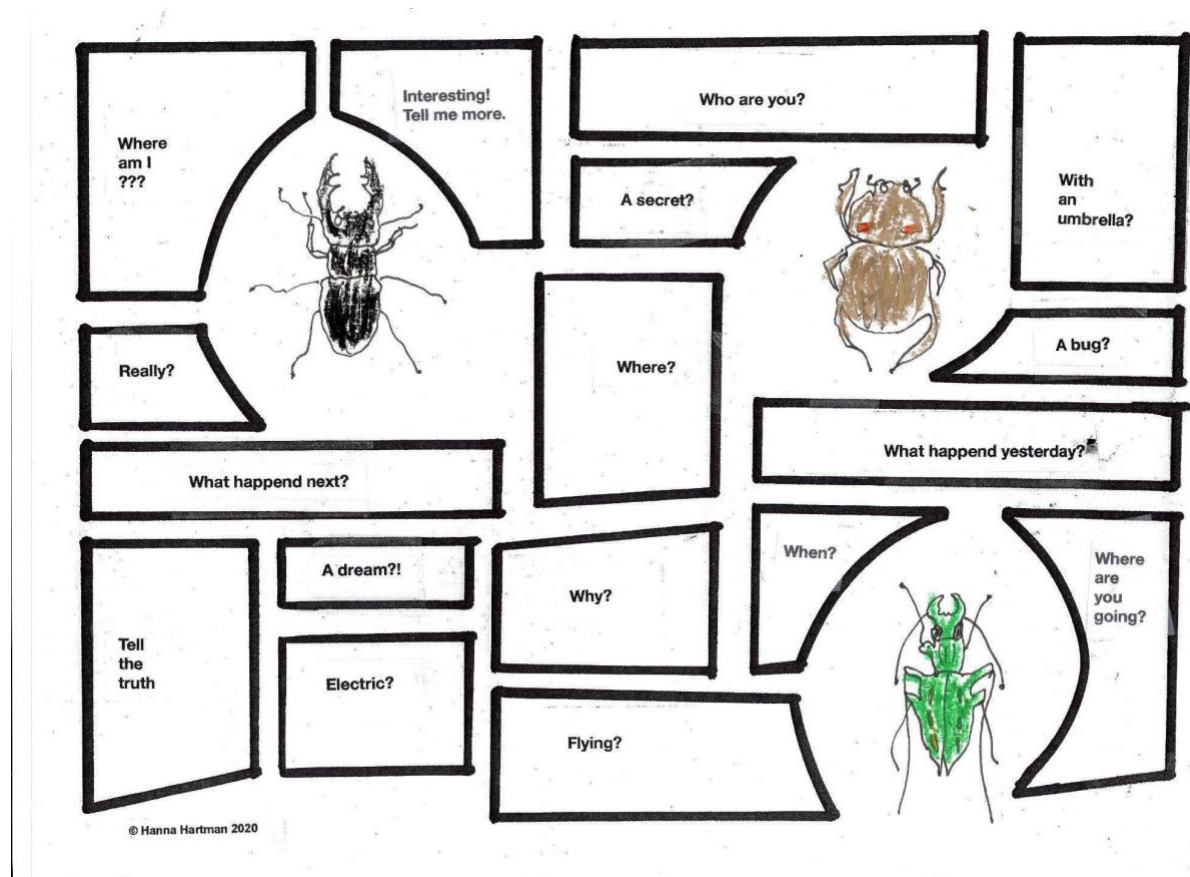
We can try to shift how we consider an instrument's performance tradition. After all, any systematisation and codification of technique resulted from somebody's intimate relationship with the instrument within a historic context, sound culture and performance aesthetic of their time. Effectively, all instrumental knowledge was once an experiment, and similarly to other evolutionary processes, was never a given. It has forever been a territory of personal discoveries within a complex set of human interactions with various matters. In the socio-economic nexus of interdependencies, classical music education has imposed a historic knowledge of its sound culture, asking students to mould their bodies and sensibilities to someone else's discoveries. This process has become institutionalised, structured and socially validated as valuable, hence a skill worthy of financial remuneration. Similarly, the understanding of virtuosity within this tradition has been shaped by physical particularities of people like Liszt or Paganini, among others. Judging by the kind of repertoire that these two figures created for themselves and the historic

accounts of their performances, they both had physical properties, like large hands or long, flexible fingers, that are not universal.

For practices seeking relevance in the present and a way forward, the concept of technical precision surrounding reproduction of standard classical repertoire, and taught within a master-student framework, necessarily needs to transition towards a shared process of investigating uncertainties, experimenting, and facilitating. Individual discoveries happen simply when one spends time with the materials and explores them with curiosity. That is all that is required. The work-specific skills described above needed time, effort at experimenting and curiosity, but I do not consider them available for systematisation. Despite receiving guidance from Hartman, Axelsson and Bierstone, the process of learning resembled rather a friendly sharing of tips. Axelsson described his percussionist identity as 'being an amateur, quite good at many things' (personal communication, November 19, 2019). Inviting percussion pieces into my performance practice helped me reframe not only my perspective on virtuosity, but most importantly expanded the scope of my possibilities when musically interacting with matter. I started seeing my primary instrument, the violin, as a material, and a sonic tool, rather than a historic object heavy with tradition. My performance practice returned to the most basic, innate and personal instrument for discovering the world – the sense of touch.

5.

Performing with electronics as an interdiscipline

Music pairing performers with electronic technology is a vast and perpetually growing field, which evolved throughout the twentieth century and into the twenty-first, multiplied and divided into diverse and specific branches, at the same time cross-pollinating and porous (Tanaka, 2012). Focusing only on work of the past decade or so, a provisional typology of approaches would include:

- practices including performer-controlled analogue electronics such as guitar pedals e.g., Mauricio Pauly's *Charred Edifice Shining* (2016), Simon Loeffler's *b* (2012); controllers e.g., Hannes Seidl's *Mixtape* (2013), Sam Salem's *London Triptych* (2015-18); cassette players e.g., Michelle Lou *Untitled three-part construction* (2014), Katherine Young's *Master of Disguises* (2014); synthesizers e.g., Bernhard Lang's *Cheap Opera #1 'Répétitions'* (2019), Brigitta Muntendorf's *Public Privacy #2 Piano Cover* (2013); no-input mixers e.g., Katherine Young's *Camilles* (2019), Kelley Sheehan's *Talk Circus* (2018); MIDI-keyboards e.g., Sarah Nemtsov's *Seven Thoughts - Her Kind* (2018), Stefan Prins's *Piano Hero #1* (2012).
- multimedia performance understood as music practices incorporating video art and computer-based technologies e.g., Alexander Schubert's *F1* (2016), *Convergence* (2020-1), Michael Beil's *caravan* (2017), Natacha Diels's *Sad Music for Lonely People* (2019), Stefan Prins's *Generation Kill* (2012).
- digital performance focusing on the use of softwares e.g., Kaj Duncan David's *Computer Music* (2014-16), Gilles Doneux+Dejana Sekulic's *what hides in grains of sound* (2019); mobile technologies such as iPhones and iPads e.g., Michael Brailey's *. locator)* ` ª *- ddel,. . 0º¢',4|î(& 3d : .jpg "'`> -__ env<3 He‡A\R §[**`* no on-e 6 .] .* (2017), and live coding e.g., Sam Pluta's *hydra* (2015).
- interactive performance with sensors and other biometric data measurement tools e.g., Solomiya Moroz's *Simulacra Studies* (2017), Atau Tanaka's *Suspensions* (2009), as well as immersive technology such as VR sets e.g., Michel van der Aa's *Eight* (2019), Alexander Schubert's *Control* (2018), *A Perfect Circle* (2019).

- performance with fixed media such as tape e.g., Malin Bång's *purfling* (2012), Arturas Bumšteinas's *vvalking along* (2019), and music where the control of the electronic sound processing is delivered by another person working the computer or desk e.g., Hunjoo Jung's *refLEction refRAction difFRAction* (2016/ rev.2019), Natasha Barrett's *Allure and Hoodwink* (2014).
- performance focused on altering the physical parameters of amplification through manipulating the relationship between speakers, microphones, space, objects and body e.g., Cathy van Eck's *Wings* (2007-8), Ute Wasserman's *Mutual Dependencies* (2019). [20]

From the above list, which is certainly incomplete, it is immediately clear that no single set of performance skills for working with electronics can be conceived, but rather that work-specific techniques remain the only viable approach. In this case study I propose to look at the problematisation of this field of performance from the perspective of interdisciplinarity; specifically, I suggest that there are dispositions and areas of epistemic integration between disciplines that could enhance a performer's creative liberties when working with electronics in general. In doing so, I will propose ways in which a performer's involvement with electronics comprises a kind of interdisciplinary virtuosity. The vast scope of this area necessitates a rigorous narrowing of focus; hence, for the purpose of my argument I will only refer to two works by Mauricio Pauly (*Charred Edifice Shining* (2016), *Its fleece electrostatic* (2012)) and three works by Sam Salem (*not one can pass away* (2015), *Untitled Valley of Fear* (2016) and *The Great Inundation* (2017), also called *London Triptych* (2015-18)), which form a part of my artistic portfolio submission. My aim is not to provide an in-depth analysis of these works but rather, based on their examples, to demonstrate how the challenges that they offer question and alter the understanding of the concept of virtuosity. As a background for this study, I will be referring to my personal communication and interviews with the aforementioned composers, members of Distractfold Ensemble (Rocío Bolaños, Daniel Brew, Alice Purton, Emma Richards), and other performers who frequently work with electronics (Victor Barceló) and who have previously played some of the above listed works (Noam Bierstone, Weston Olencki). Additionally, I will foreground three critical reviews of Distractfold's

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[20] It is important to emphasize that this is a taxonomy of the music that surrounds me, not a general-purpose taxonomy.

performances of Pauly's and Salem's works (in which I performed), which draw explicit attention to the idea of virtuosity, in sometimes problematic ways.

Performers' perspectives

There is a growing body of performer-led studies pertaining to the topic of working with electronics. Some scholarship, such as Mari Kimura's (1995) 'Performance Practice in Computer Music', which delineates performance considerations when working with tape and interactive computer systems, could be considered already from a historic perspective. Similarly, Elizabeth McNutt's (2003) 'Performing electroacoustic music: a wider view of interactivity' demonstrates the common, albeit continuously relevant, dilemmas in regards to electroacoustic performance – such as understanding scores lacking representation of the electronic part; careful positioning of speakers in space to aid monitoring during a live performance; and the physical awkwardness of operating performative electronics alongside one's primary instrument. Sebastian Berweck's (2012) doctoral research focused on meticulously tracing and analysing the occurrence of various domain-specific performance errors. In other scholarship, pianist Sarah Nicolls (2010) describes the early days of implementing gestural controllers into her instrumental performance, while Xenia Pestova (2009) exemplifies possible approaches and strategies for working with live electronics for classically trained instrumentalists. More recently, Noam Bierstone (2019) investigates performative analogue electronics such as guitar pedals paired with percussion instruments; and Zubin Kanga (2021) reflects upon the scope for the formation of an innovative performance strategy while working in a multimedia environment.

These above writings offer a multitude of perspectives on the second research question for the present project, namely: How do practitioners form a performance practice which engages with the uniquely interdisciplinary demands of recent experimental work? Berweck (2012) makes a compelling case for considering it an entirely separate discipline from the instrumental discipline he once trained in. From demonstrating the fundamental differences between acoustic and electroacoustic concert preparation, such as lengthy setting up, securing compatibility of devices, acquiring appropriate electronic tools and materials from the publishers where necessary, creative sound design, and coding as a

part of the performer's skill set, to meticulous analysis of variables leading to hectic and risky concert-day situations and performance breakdowns, Berweck portrays working with electronics as an endless, somewhat confusing and at times frustrating learning curve. Moreover, his view is that this curve is never a solo endeavour but rather a collaborative process involving exchange of a lot of knowledge and skills between performers, composers, sound engineers, computer programmers and stage technicians. Pestova (2009), on the other hand, proposes to utilise the existing skills and experiences that an instrumentalist might have, acknowledging her learnt discipline by suggesting points of reference with classical music tradition, such as when she compares playing with electronics to chamber music or conducting:

> Performing with a monitor speaker while the audience hears the full speaker array is comparable to issues of sound balance and projection in traditional performance practice. Interacting with the computer or another musician at the computer is similar to performing with an accompanist or a duo partner. Triggering sound files or processing with the combination of a MIDI pedal and computer listening methods can approach conducting an orchestra from the keyboard while performing a concerto, as well as performing in a less prominent ensemble role. (pp. 123-124)

Bierstone (2019) observes a correlation between the modern percussion practice (aligning it with the term post-percussion, discussed in Chapter 4) and the handling of performer-controlled electronics, which he demonstrates through contemporary and postwar avant-garde examples, such as Cage's *Cartridge Music* (1960) and Stockhausen's *Mikrophonie I* (1964). In his view, instrumentalising electronics is a similar approach to how percussionists need to creatively work with the sonic potentials of objects and materials. According to Bierstone, such a mindset can 'help bridge the gap that currently exists between acoustic performance and live electronic music' (p. ii).

Both Pestova and Berweck however stress the importance of acquiring basic knowledge of technology, both hardware and software, in order to gain creative control over one's performance. Berweck (2012) compares it to the assumed knowledge of a particular sound culture that is embedded in classical music notation:

> This kind of expertise could be compared with the knowledge interpreters of classical music bring to the music they play. They know that a trill in a Bach suite needs to be played differently than that in a Beethoven sonata. A pianist knows that the technique for a piece by Liszt differs substantially from

that of Scarlatti. They read books and attended master classes on Cage's prepared piano and they know that composers invented about five different ways to notate clusters. All this information is not actually written in the score, it is knowledge learned from teachers in private and at universities. (...) Likewise is it understood that a certain kind of knowledge must be assumed from the interpreter of music with electronics. Examples for this would be the knowledge of how to load a patch, set up an audio or MIDI interface, and have a general knowledge about how things work, without turning a performer into a computer programmer. Some sort of intermediate knowledge has to do. (p. 37)

Not all technology is however accessible at this intermediate level. Moroz (2015), who works with gestural controllers both as a composer and performer, notices that despite her formal schooling in a range of softwares, 'the learning curve is steeper for some applications than others', and that some of their creative coding adjustments 'require support from engineers in STEIM' (p. 27). This sentiment is also shared by Berweck (2012), who claims that 'for an interpreter of music with electronics it is vital to build up a network of experts', since 'the amount of knowledge regarding technology and software used for the production of music in the past and present is so vast' (p. 225). These statements suggest that one of the crucial skills when performing with electronics is an ability to collaborate and learn from practitioners outside of one's discipline.

The challenge therefore lies in obtaining the necessary knowledge, which should be understood as acquiring technical skills on a par with the instrumental ones. If approached from the perspective of the concept of virtuosity, understood as great technical skill, the challenge becomes even vaster and more complex than previously. The idea of revising and updating music education is a recurrent theme; for instance, Berweck (2012) calls for 'a change in the curriculum in the education of musicians' (p. 39), and Pestova (2009) suggests establishing 'University-level interdisciplinary programmes that introduce performers to working with technology and bring together performers, composers and music technologists' (p. 124). My interviewees, on the other hand, asked about how they view the transformation of the curriculum, were not all certain that institutionalising the transmission of knowledge pertaining to working with electronics is an entirely beneficial idea. Something that came up regularly in our private communication was the spirit of experimentation, auto-didactism and creativity that lies at the foundation of combining disciplines. With the relative accessibility of softwares, and a wealth of open-source sound engineering and digital skills tutorials (facilitated by the YouTube community or run by

the companies themselves e.g., Ableton) much of the basic information can be retrieved outside of formal education.

However, I would argue that at times this is not the most time-efficient method of learning; it can be unfeasibly time-consuming to sift through tutorials and online forums for a piece of information pertaining to a specific problem one is trying to troubleshoot. Equally, the epistemic complexity embedded in performance practices with electronics could appear less daunting, and therefore more approachable and normalised, when promoted to some degree by a formal course of training. Bierstone (personal communication, April 17, 2018), when interviewed about his practice of working with performer-controlled analogue electronics, questioned whether it even made sense to teach it to someone; maybe rather the approach of an institution should be that of facilitating experimentation with various types of devices and media by creating a supportive and accessible environment.[21] Trombonist Weston Olencki shares a similar opinion:

> Maybe teaching performing with electronics should be about finding ways to really instil curiosity, and teaching students to be able to teach themselves? Okay, you need to learn how to do something, this is where you work to gain skills to do that. Super basics of microphones, recording, amplification, and digital audio workstations and how that can be tweakable, performable. (W. OIencki, personal communication, October 25, 2018)

It certainly is true that an easy access to spaces where mixers, speakers, computers, microphones and controllers would be easily available to performers could greatly improve their confidence with taking such creative risks. One also needs to stay mindful of the fact that much of the aforementioned standard equipment is simply largely outside of a young musician's budget and likely not an immediate priority for home purchase. A

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[21] In 2019 I conducted a teaching experiment by suggesting that one of my violin students at Leeds Conservatoire, where I work, learns Mauricio Pauly's *Its fleece electrostatic* (2012) for her final recital. The piece, which is for amplified violin with three specific guitar pedals, required the student to invest in parts of the set-up, as well as make substantial effort to plan her practice. We also had a hard time conducting lessons with the appropriate amplification. I considered my role in the process of her learning more that of a facilitator and advisor, rather than what is commonly understood as a teacher. I shared tips and practice strategies. We both had to figure out the patching anew with every change of a mixer brand, as the set-up at times didn't work according to how I learnt it. I myself need to keep learning too – treating education as an ongoing process of learning with the student. Therefore, I imagine that a blended methodology of facilitated learning and auto-didactism could bring the interdisciplinarity of working with electronics into sharper focus.

struggle between paying rent and saving up for devices to make music could potentially hinder or at least slow down the integration of electronics into a musician's skill set. I believe the necessity of such integration will only intensify in the upcoming years, hence one of the most important functions of music degree programs in the future is to supply the facilities and equipment around which communities of auto-didactic musicians can develop their practices.

Interdisciplinary performance courses are certainly on the rise as music education tries to maintain its relevance in the modern world.[22] Pianist Zubin Kanga, recently appointed Lecturer in Performance and Digital Arts at Royal Holloway, University of London, is proposing new courses focused on teaching various digital skills via a flexible curriculum:

> Performers will learn live electronics and video techniques for studio and stage alongside the types of theatrical stagecraft used in contemporary interdisciplinary practice. And they can also develop many of these techniques in composition modules – as a university music department, the students have more flexibility than a conservatoire in choosing options and don't necessarily have to specialise as a performer or a composer. However, there will always be a place for auto-didactic modes of learning as there is an ever-expanding list of skills to learn, but that's the case for any art form or subject area that is rapidly developing and expanding. As educators we should be teaching specialist skills in interdisciplinary performance, as well as giving students a solid conceptual framework from which to continue to develop these skills throughout their careers. (Z. Kanga, personal communication, May 10, 2021)

I find it urgent and important that efforts at blurring the creative divide between skill sets of composers and performers become commonplace, both as a result of structured learning in an institution as well as a practitioner's inner curiosity and drive. They can be considered as levelling up the epistemic field of music-making. Typically, software and sound-engineering instruction is available if not mandatory at composition degrees. These skills are considered both necessary and basic since composers need to be able to record and mix their music so that it can be uploaded online and exist in the virtual realm as their

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[22] Interdisciplinary performance courses take on a form of a synthesis of theatre, dance, music production, voice, performance art and video art studies such as MA in Performance & Culture: Interdisciplinary Perspectives at Goldsmiths University, London UK; Speaking Dancer at Dance Research Studio, UK; Interdisciplinary Arts and Performance, BA at Arizona State University, USA; Interdisciplinary Performance Minor at Oberlin, USA; Interdisciplinary Performance And Production at Douglas College, Canada; Theorie und Praxis experimenteller Performance at the HMDK Staatliche Hochschule für Musik und Darstellende Kunst Stuttgart, Germany.

business card. It is considered a part of completing the presentation of their work. Performers however are rarely expected to take the same modules (in contrast to the Baroque period when the study of basso continuo was commonplace among all musicians (Bukofzer, 1948, pp. 379-84)) and are less likely to show appropriate levels of sound-engineering and digital proficiency. Percussionist Victor Barceló, when asked about performer's creative agency when working with electronics, remarks:

> The composer brought me this special interface and I'm just sitting here like this Cleopatra eating grapes? I think the main problem for performers is to care about knowing how the music they play works. (…) if you see some importance there for yourself, then it's a question of professionality - do you want to be ahead of what you should be doing, or do you want to just sit there and do what is written in the score? (V. Barceló, personal communication, November 04, 2018)

For Olencki the process of acquiring fluency in working with electronics resulted organically from his engagement with diverse new music performance practices as well as improvisation, which propelled him to start composing with electronics.

> It's coming from just doing and figuring things out, starting on the trombone, then moving to amplify and process the sounds. And then wanting to know how all the processing is working. And then starting to have ideas about what I like and dislike, prefer and don't prefer about that stuff. I feel I'm a naturally curious person. If I'm doing something I want to know. I'm not comfortable with using a pedal if I don't really know what it does. Instead, I will take an hour or two or however long it takes and try to work it out. And if I'm going to use something, and I like the sound of it, I want to know what's going on under the hood. With my composition practice, I started out with amplification, then moving on to a bunch of guitar pedals. And then I taught myself Max/MSP, because I wanted to be able to have the flexibility to build simple things. Then I moved to a modular synthesis environment. It's a kind of additive process, trying to go deeper into the various questions of "how and why" these particular techniques/listening methods/cultural resonances exist right now. (W. OIencki, personal communication, October 25, 2018)

Similarly, Barceló sees technology as a potential equalizer, not only within the field of new music between performers and composers, but also for wider purposes of being creative:

> I think there's a lot of potential for bringing some sort of compositional thinking to performers through electronic experimentation. When you are creating something, you are slowly bringing together elements, structures. It's easier to do it with software than to start writing things on paper because at the basic level it's copy-and-paste. Today all the electronic equipment is so much cheaper

than it was even ten years ago. So, this phenomena of kids with Ableton MIDI controllers and iPads, at home for example in the middle of Germany eating German stuff and drinking two litres of Cola while doing some electronic music in their basements, is huge. A lot of people are doing music with a computer at home, very good stuff. (V. Barceló, personal communication, November 04, 2018)

Earlier in the introduction to Part II and in conclusion to Chapter 2 I suggested that the concept of virtuosity has been altered by contemporary media culture. I observed that the access to technology and information creates audiences whose perception is filtered by a greater awareness of diverse sound cultures. I asked – how do we approach music performance which no longer clearly attaches itself to a narrow discipline, but rather, influenced by many other disciplines and art forms, transitions towards a general, broadly framed practice of sound? Both Barceló and Olencki echo what Pestova and Berweck deem necessary basic knowledge of electronics, but they additionally highlight the need for understanding sound engineering and processing as a way of gaining creative liberty and engaging with one's own concert presentation (including the digital presentation via recorded media). Barceló views it in part as a way of maintaining control over his performance, but he also sees it as a gateway to creating new concert formats where he connects more readily with audiences within a society shaped by sonic diversity and determined by technology:

I listen to rock music, techno, and more, and it's not reflected in what I do professionally or artistically, but it is a big part of my life, so I asked myself why am I not connecting this? I found that I could express myself with electronics. I found a lot of realities there, and I started looking at myself like a member of society, because I was connecting with what I liked the most. The crucial change happened that year where smartphones and Spotify were introduced, pouring information and sounds into our daily lives. I found a connection point to people, because we all have technology, and we all use it daily. I thought it could be a very interesting way to express myself in the most real manner. Working with electronics opened a lot of new ways of thinking, for instance, sensorial. I started being aware of how a room smelled, the temperature of a room, every single detail of the concert could potentially be determined. I got very interested in that because technology opened me to more ways of thinking about scenario, light, sound. (V. Barceló, personal communication, November 04, 2018)

Creating engaging content and staying connected to audiences via recordings and videos became the landmark issue of the years 2020 and 2021, when performing live came to a halt due to worldwide national lockdowns and Covid-19 pandemic social-distancing

restrictions. It has never been more obvious how much the field of new music is connected to the context of a concert presentation, institutional funding and fragile audience participation. This period has demonstrated that there is certainly more to be explored in terms of engaging with media presence, as the world continues to further evolve technologically. Therefore, the earlier mentioned basic knowledge of operating electronics in live situations should be paired with audio-video recording skills and digital skills for live streaming sessions. Combined, they could be viewed as new instrumental techniques, extended techniques for those who accept this terminology, or more generally as necessary creative survival skills. These skills, considered standard among pop music training courses, are still to be more widely implemented at conservatoires teaching instrumental music in the classical lineage.

Interdisciplinary virtuosity in electroacoustic performance

Performing with electronics, as I have tried to depict it, constitutes an inherently interdisciplinary practice, with a range of concerns, vectors and dynamics of integration. According to the earlier mentioned proposed distinction by Barry and Born (2013), performing with electronics can equally have an integrative-synthesis, subordination-service, or agonistic-antagonistic mode, perhaps even all three dynamics of interaction and knowledge exchange existing throughout one piece, concert or collaborative process. We could call a collaboration between a performer who is developing an interactive gestural set-up and a programmer or engineer a process of synthesis and integration based on an 'assumption of a parity between diverse bodies of knowledge' (ibid., p. 11). When a sound engineer is engaged to amplify a concert but isn't given a creative sound design role, we could consider it a subordination and service type of interdisciplinarity, understood as a discipline playing 'a supporting role by 'making up for, or filling in for, an absence or lack in the other, (master) discipline(s)' (ibid.). A performer questioning the established boundaries of a discipline and calling for 'reconfiguring the assumptions of its epistemology and ontology' (ibid.) could be seen as engaged in an agonistic-antagonistic mode of interdisciplinarity. For instance, Berweck's suggestion that performing with electronics should be considered an entirely separate discipline reflects what Barry and Born call 'an interdiscipline not resembling the disciplines from which it originated' (ibid., p. 12). At the end of his doctoral thesis Berweck (2012) proposes an eight-step programme

to gaining proficiency in the new interdiscipline, based on his work with twentieth and twenty-first-century electroacoustic repertoire (pp. 209-240). The areas of focus are:

- Concert programming, which involves setting up a clear communication with the event organiser about the needs of a particular composition's set-up.
- Restoration / Coding, pertaining to working with outdated hardware and software.
- Equipment, which Berweck suggests, needs to be chosen and purchased for its 'flexibility, portability, replaceability, durability and sound quality' (p. 217).
- Rehearsal space, which allows a performer easy and immediate access to electronics setups, similar to how one approaches practicing an acoustic instrument.
- Network of technological experts, who can provide necessary insight and support, as well as collaborate on solutions or alternatives.
- Concert preparation, which is divided into 'technical preparation (technical riders), preparation for backups, concert set-up preparation and concert preparation' (pp. 226-235).
- Management of a concert including estimating time required for delivery, setting up, line check, sound check, rehearsal (technical and musical) (p. 236).
- Archiving strategies, which enable performers to access aging technologies of the 20th century's electroacoustic repertoire.

All of the above point to both entirely practical and pragmatic behaviours, such as organising detailed tech riders or one's own practice space, as well as to larger changes in perspective on and approach to performing, which demand a greater degree of research curiosity related to how a composition's structure functions, fluency in collaboration and co-creating with experts from other disciplines, plus creativity and auto-didactic learning of new skills for both live and digital presentations. Berweck portrays the discipline of electroacoustic music performance as inherently interdisciplinary. As a perpetually evolving discipline, performing with electronics is therefore a perfect example of a practice that requires interdisciplinary virtuosity, which is to say great skill in knowledge formation, creativity, collaboration and co-creation. Furthermore, I identify intellectual dispositions such as curiosity, process-oriented mindset and creative problem-solving as

the contemporary virtuosic skills for an interdisciplinary era, skills which should be fostered and promoted also within formal education.

Through the following case studies, I will quote from three published critical reviews that interpreted my performances with electronics in terms of virtuosity – whether positively or negatively. My aim, as mentioned earlier, is not to analyse the works in detail but rather to exemplify how the particularities of these works question the understanding of virtuosity which I have outlined in Chapter 2 – namely, mastery and specialised skill that is visible and recognisable. The goal is to demonstrate that the multi-layered challenges of the discussed works require interdisciplinary virtuosity from a performer, regardless of whether it is noticed and appreciated or not.

5.1. Hybridity and virtuosity in works by Mauricio Pauly.

5.1.1. *Its fleece electrostatic*

Its fleece electrostatic (2012) is Mauricio Pauly's first piece exploring a hybrid system consisting of an acoustic instrument, a set of guitar pedals and amplification. Written for and premiered by Karin Hellqvist at the Ultima Festival in Oslo in September of 2012, the composition now exists in alternative versions for flute (arranged in collaboration with Alessandra Rombolá), for percussion (version by Noam Bierstone) and for viola. *Its fleece electrostatic* is one of the solo pieces I have performed most frequently to date across Europe, in the USA and at a TEDx event in Costa Rica (please refer to my Artistic Portfolio (Dropbox #5.1) https://www.dropbox.com/s/h5gld5q9hufsr6v/5.1.mp4?dl=0; (Dropbox #5.2) https://www.dropbox.com/s/3kzkb8b6a54sppc/5.2.mp4?dl=0)

The set-up (Fig. 8) is made of three pedals: Boss DD6 (delay), Digitech Whammy (pitch shifter) and a bit crusher and sample rate reducer pedal (in this case Pauly chose a Frantabit pedal made by Iron Ether). The violin is amplified through a speaker or a guitar amplifier, using a miniature omnidirectional microphone (DPA or similar). An alternative set-up version exists in order to facilitate working on the piece for those performers who don't have access to the required guitar pedals. The set-up includs a USB MIDI control pedal with expression control such as the FBV Line 6 MkII Express and a smaller version of Rodrigo Constanzo's Max/MSP based application *The Party Van*.

In *Its fleece electrostatic* Pauly made an extensive use of a feature (perhaps an error) only found in Boss DD-6. When the pedal is pressed, the material is recorded (creating a buffer of up to six seconds). When the pedal is released, the recording stops, and playback starts. Slow, careful press/release will overdub the input onto the current buffer contents. Rapid press/release will empty the contents of the buffer. The uniqueness of the DD-6 lies in the fact that when the buffer is empty, a rapid press/release records an extremely short (as short as a grain) sample.
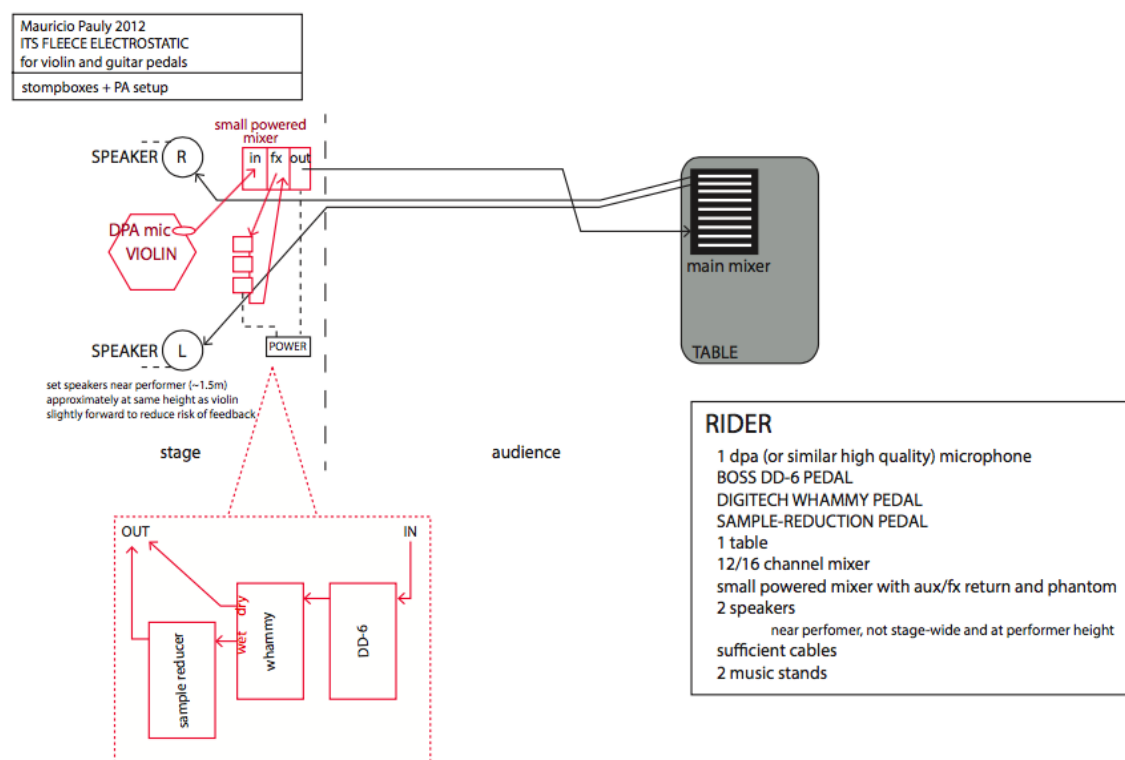
Figure 8: Mauricio Pauly, *Its fleece electrostatic,* set-up diagram.

Pauly (2012), in a programme note, describes the idea of the composition as follows:

> In this work the pure violin sounds and their processed counterpart are visually integrated through the mechanics evident in their performance. To the listener/viewer it is clear when – and to some degree, how – the violinist is activating the equipment surrounding her. Because the technology is integrated into the physical performance, the artifice is exclusively within the music as it unfolds over time.

Its fleece electrostatic is therefore an example of a hybrid work that's designed to merge electronic and acoustic instrumentality into a cohesive and expressive unit. The performer-controlled analogue technology is profoundly integrated with the violinist's gestures. The resulting effect of overdubbing relies fully upon performer's interpretative decisions.

Before embarking on the path of notated composition, Pauly was the lead singer and bass guitarist for the Costa Rican experimental rock band Bruno Porter. His formative-years' experience of amplified sound culture and the expertise resulting from making music with analogue tools were a decisive factor in conceptualising the hybridisation present in his composition practice:

> The reasons for this specific hybrid system have several branches. One of them is aesthetic preferences and we can unpack that as a thing related both to how the music sounds and how the music's performance looks. The second one has to do with my own compound expertise - the things that I have learned to do over time; essentially, the moves with which I can respond to certain aesthetic needs. To unpack it a little bit - the first one - I have a preference for music where the performers are actively involved in making it happen, and that doesn't necessarily speak of improvisation, but rather of interpretation; of understanding the context in terms of each particular occasion (the surrounding programme, the staging, the amplification system, the venue's acoustics, etc.) as well as in terms of its own culture. If one tries to anchor that with a score, one needs to consider notation strategies that work around the limitations of such an anchor on this broader interpretative space. That is, make a score that encourages the performer to seize the opportunities that emerge from each instance while also providing enough contextual information for the work to remain formally and aesthetically cohesive. (M. Pauly, personal communication, November 30, 2018)

The timely interpretation that he spoke of in this interview is a complex one. It folds in an understanding of several things. First, there is the overall sound culture of the music and how the technology used changes the acoustic sound of the instrument. Second, there is the matter of sonic authenticity within individual pieces (sonic gestures pertinent to the composer's language in specific compositions). Third, there is the technology itself – its operative capabilities and expressive range. Finally, there is the instability of the concert situation and how to interpretatively react to sound being produced through a different set of speakers in a different venue each time (what the composer calls 'reading the

space'). In the case of violinists working within the field of notated contemporary music it is still practically impossible to find someone who would have grown up with such a practice of hybrid violin playing. Mauricio Pauly, through combining violin – an instrument so heavy with classical music heritage – with effects pedals and amplification, gave *Its fleece electrostatic* a very particular place within the contemporary violin repertoire and violin playing tradition. His composition offers a new starting point for a generation of violinists, laying down an expectation of dealing with an electrified sound in a comprehensive and organic manner.

As a result of the integration of violin and analogue electronics within one hybrid system *Its fleece electrostatic* is a multi-layered challenge for a violinist. These layers consist of:

- Notation
- Amplification
- Choreography of the pedal part
- Unpredictability of the concert situation

5.1.1.1. Notation

Pauly created an idiosyncratic vocabulary of sounds and gestures, having conducted a series of improvisations over the course of several sessions. Figure 9 explains the eight parameters of sound production specified in the notation, which are primarily related to how much pressure and weight is applied to both fingerboard in the left hand and bow on string in the right hand. While pressed and half-pressed harmonics are standard elements present in contemporary violin repertoire, the bow technique in *Its fleece electrostatic* is unusually percussive. My initial attempt was to emulate the character of these sounds as truthfully as I could, based on Pauly's video demonstrations. I listened and observed his violin playing carefully. It has never been of vital importance to the composer that I replicate his way of making these sounds with absolute exactitude. I was encouraged to experiment with the techniques and bring in the individuality of my interpretation.

BOW
FROG ——————— TIP
[0/4] [1/4] [2/4] [3/4] [4/4]
- no bow friction, vertical bounce, emphasise the stickiness of the bow hair's rosin on the strings

× minimal friction on the above vertical bounce

◣ forced friction on semi-vertical bounce

Left Hand

■ toneless

◆ between regular and harmonic pressure

▲ tap with finger 2, 3 or 4 while muting (barring) with finger 1

⊕ mute strings to avoid any resonance and reduce pitch content

Figure 9: Mauricio Pauly, *Its fleece electrostatic,* notation explanation.

Through careful listening and dynamically gauging how the resulting sonic image compares with the one that can be speculated from the notation, I was able to discern how each variance contextualises each past variance and creates the space for a future iteration. The fact that there are three versions of this piece for other instruments – flute, percussion and viola – gives an indication of a wider field of permissible sonic outcomes than originally imagined. Pauly considers the piece existing in the grammar, in how the sounds relate across time, more than in the precise sounds themselves.
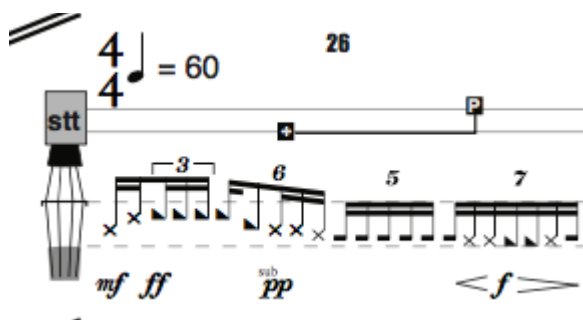
Figure 10: Excerpt demonstrating a sequence of three main percussive sounds/techniques in *Its fleece electrostatic*.

Figure 10 shows a sequence of three main percussive techniques moving up and down between the bridge and fingerboard: no bow friction and vertical bounce (rectangle); minimal friction and vertical bounce (triangle); forced friction and semi-vertical bounce (cross). Considering that these were devised empirically, the best method to start learning the piece is to adopt a playful and listening-based approach. This piece will maintain its

recognisable sonic character – on violin, flute, or in Bierstone's version for tiles played with thimbles – if and when there is a clear, audible difference between the mentioned percussive gestures. The variety of these sounds, which are then sampled and looped, is what creates poetic, interwoven layers all throughout the composition. It is therefore advisable to enter a 'listening playground', rather than to worry about 'getting it right'.

5.1.1.2. Amplification

Using amplification for acoustic instruments has great consequences when it comes to the performer's experience of timbre and dynamic range control. It continues to be one of the hardest elements of constructing the interpretation. Needless to say, in most cases practicing an amplified piece without amplification is a futile task. There might be works, where amplification serves primarily as a way of augmenting the total volume of the piece. However, in the case of *Its fleece electrostatic* and many other compositions discussed throughout this PhD, amplification is used to highlight the details of a sound that is otherwise audible only in great proximity to the sound source – the beauty of its granularity, minute pitch inflections, and delicate transformations of timbral shades. Amplification as an integral part of the composition – a way of extending the timbral range of both instrument and instrumentalist – needs to merge with the entirety of interpretative considerations from the very beginning. Moreover, Pauly's hybrid approach integrates electronics and instrumental playing in a manner which simply doesn't allow for attempting to practice this piece unamplified. Although it added time before I was ready to start working, I did not even once practice this piece without the fully plugged-in set-up.

5.1.1.3. Choreography of the pedal part

A violinist is usually taught to firmly stand on both feet and keep a posture that enables the support of the technical finesse and velocity of violin playing. It's a matter of balance and stability. The employment of three stomp boxes, sometimes in quick press/shift/release combinations between all pedals required from me an additional, well-conceived choreography of both hands and feet. It took a long time before I felt comfortable with the guitar pedals – it was not evident to me how to most efficiently perform in this manner. The character of the overdubbed samples in *Its fleece electrostatic* is created through a minutely synchronised reaction time between the bow and the foot, as well as a

well-choreographed sequence of transitions between the pedals. As a result, the pedal work demands finesse and sensitivity. The difficulty lies not only in the physical aspect of dealing with the tactile feedback of guitar pedals and one's synchronisation when pressing them, but also, or even primarily, in combining the above mentioned inherent motoric synchronisation of violin and feet with longitudinal listening that responds to the powerful element of unpredictability within the piece. Naturally, every physical response can be mastered, but the unique feature of the DD-6 pedal (speed of press/release decides about the character of the sample) combined with the complexity of using all four limbs to operate an extended instrument makes it almost impossible to achieve stability within the shape of the work. The energy and pacing in the piece greatly depend on the type of samples a violinist captures. Risk of failure to create a sample or the creation of an undesirable stutter speed is written into the structure of this composition – the greater the opportunity for variable outcome, the greater the differences between performances. Pauly however considers risk an inherent and necessary element of the performance practice of his music:

> (...) that risk has never turned into a bad thing. The hardest performance we did in those terms was the one we did in Berlin and it was still very good - the excitement that that brought to each performance was absolutely worth the trouble; not worth the trouble in the terms of 'oh, risk-taking, it doesn't matter if it's dirty or if it has feedback'; it's actually the knowledge that unless one assumes that risk, the piece is constrained to a… I don't know how to express this further, it's not only that you play less dynamically, since you are less invested in the particularities of each context and how the piece speaks in each case. That was quite a revelation for me, and that was the basis with which I started writing, where I absolutely gave complete control to the performers of everything that they were doing.[23] (M. Pauly, personal communication, November 30, 2018)

5.1.1.4. Unpredictability of the concert situation

In a live situation, the performer's ear must embrace a sound diffused in the space through an intermediary system. The usual connection between tactile sensation of sound-making (embodied contact with the instrument) and sound result is hugely altered. The adjustments to input that a performer usually makes in a live situation are based on reading the space. Although circumstances change with the audience's arrival, usually a

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[23] During a performance in Berlin in June 2014, we had to connect my station directly to a guitar amplifier, without an intervening mixer to rein in feedback or extraneous noise.

dress rehearsal is sufficient to achieve a level of comfort of listening and performing. My experience of playing *Its fleece electrostatic* in public has never been an easy one. I couldn't expect to be offered a sound system that I was familiar with. I was travelling with my own microphone, but the speakers or amplifiers changed at every venue. As a result, I had to master, both practically and psychologically, an ability to quickly familiarise myself with the context I found myself in. The interpretation could never be stable or solid in my mind, as I couldn't fully rely on a sonic outcome I was used to. At times this contributed towards feeling less happy with the concert. While practicing I got used to results I liked more, but which later were unachievable on stage.

At home I worked with two types of amplifiers (Fender '65 Deluxe Reverb, Marshall MG15CF) in a controlled environment. I was able to set the volume and parameters to suit my taste and needs. Being able to hear the sound I was producing at a comfortable distance and level allowed me to study the sonic range of the work in depth. It informed my bow technique – I was shaping articulation based on the differences of timbre I was able to detect within a practice room situation. Moreover, that comfort of hearing affected my pedal work response, and as a result I felt in control of the overall shape of the performance. However, in concerts that rapport with sound was distorted and challenged by either too far or too close of a distance to the speaker/amplifier, and altered sonic range mediated by the quality of equipment available. At times the accumulation of sampled sounds with a narrow timbral range made the music sound muddy, lacking the detail present in the composition. I learnt to navigate this problem by sharpening differences in my bow articulation. If I heard I had just sampled a sound that contributes a certain character to the layering, I had to quickly adjust my next sampling so that the final totality of layers created an interesting, intricate and detailed weave. In situations where I felt I couldn't hear what I was doing, the only solution I could come up with, as I was playing, was to make bigger gestures, move more and seem like I was very engaged in sound production. *Its fleece electrostatic* allowed me to enter into a sort of meta-dialogue. My reactivity and response to sound in the moment were a direct answer to what I had just created, forming a kind of answer that isn't mediated by a memory of sound but by immediate feedback of the outcome of one's own gesture manifested through a recorded sample.

5.1.1.5.　Performance history

In my history of performing *Its fleece electrostatic* the challenges and risk-taking were two-fold. One had to do with equipment, setting up and troubleshooting, as in the thirteen performances I have given so far, at least one-third had set-up related technical errors. The other challenge was usually connected to the rapport I had with the sound I was making. Although one can choose to amplify the sound through a guitar amplifier or a speaker, with time we opted for the latter. We realised that the range of sound possibilities tends to be greater when projecting through a speaker. As a result, my expressivity appeared freer. However, the amplifier still has an allure for me. Positioned on stage next to a performer hooked to a bunch of guitar pedals, the amplifier is more visually cohesive on a conceptual level. The issue of rapport with one's own sound could have been easily helped, if a monitor had been present on stage. In smaller venues this was never really a problem. In the case of performing with the amplifier, due to its proximity to the performer, the issue of sound rapport became rather an issue of feedback.

There are technological aspects of *Its fleece electrostatic* that are more predictable and more easily folded into a reliable performance practice – namely operativeness of the effects pedals. Although requiring a great deal of practice, like any physical response, a connection between the bow and the foot stomping on the pedal and sampling can be mastered into a predictable action. With time I got better at recording similar samples on stage, in speed and character, to what I had conceptualised at home. I was then able to control the overall pacing of the performance of the piece, which relies so heavily on the distribution of energy consequential to the speed of recorded stutter samples. What I couldn't often control with enough confidence was the volume and timbral response, which the amplification system mediated for me. Judging by the performances of the piece I made so far, this is an integral part of the interpretation that will never be fully controllable, unless I travel with a complete sound system of my own.

5.1.1.6.　Virtuosity in *Its fleece electrostatic - a* critic's review

In November 2014 I performed *Its fleece electrostatic* at Vertixe Sonora's *Do Audible* Concert Series in Pontevedra, Spain. Paco Yáñez wrote a review for Mundoclassico.com, which made me consider this work through a lens of the concept of virtuosity. Remembering Howard's proposed model (see Chapter 2), the three nodes in virtuosity's

nexus are: artist, domain and audience, comprising public and critics' recognition (Howard, 2008, p. 19). Yáñez (2014) called my interpretation 'dazzling', the score 'immensely difficult' and observed the audience being captivated and 'absorbed by such demonstration of musical excellence' (para. 5). My recollection of this performance bears no memories of this having happened; however, I need to acknowledge how performatively demanding *Its fleece electrostatic* looks to the audience. Regardless of the variability of critical taste and style, the rapid pedal work, the intricate, percussive articulation and the ambiguity of sound layering, gives a possibility of observing an execution of physical difficulty, and can ground the judgement of *Its fleece electrostatic* performance within the typical understanding of the concept of virtuosity. The physical demonstration of challenges that the composition holds, as demonstrated above, is however only one of the layers of accomplishment within virtuosity – the only noticeable one and the one that sometimes distracts both performer's and audience's attention away from other layers of expertise and depth. When discussing the critics' role in the construction of virtuosity, Howard (2008) points to the necessity for more sophisticated judgments pressing into deeper layers of performance quality (p. 116). Without discrediting Yáñez's perspective, for whose positive review I am grateful, another critic examining the performance from the perspective of its hybrid complexity, and perhaps more focused on the quality of the diffused sound, could have potentially disagreed with Yáñez, hearing room for growth within the timbral spectrum of my performance.

Pauly's piece challenges a performer on many accounts. It is a work of intertwined observable and hidden complexity. Performing *Its fleece electrostatic* expanded my skill set into the area of working with performative electronics – an area that has been central to my practice ever since. The greatest achievement for me has been to amass knowledge and bring all the above-mentioned complexities together – the physicality of hybrid performance, listening within an environment mediated by technology, and technological proficiency. The inherent hybridisation of *Its fleece electrostatic* allows the violinist to step out of the classical performance tradition pertinent to the instrument. It encourages development of a new skill set, consisting of a knowledge of working with amplification, as well as handling analogue technology like guitar pedals. It invites a more alert kind of listening and a sense of excitement related to the unpredictability of the performance outcome. The work challenges a performer to cultivate a different kind of approach to

instrumental sound. Despite the elements of physical bravura written into the composition, *Its fleece electrostatic* is more than a virtuosic piece in a romantic understanding of the concept. The layers of expertise necessary to convincingly demonstrate its richness, branch out of the purely instrumental and into the interdisciplinary virtuosity required for the successful realisation of electroacoustic music performance.

5.1.2.   *Charred Edifice Shining*

Charred Edifice Shining (2016) was written for and premiered by Distractfold Ensemble during the International Summer Courses for New Music in Darmstadt in August 2016 (please refer to my Artistic Portfolio (Dropbox #5.3) https://www.dropbox.com/s/dw81cc34owgtvpb/5.3.mp4?dl=0). This amplified string trio is Pauly's further exploration of the merger of acoustic instruments and performative electronics. Steadily adding more layers of complexity within his set-ups between 2012 and 2016, in *Charred Edifice Shining* across the ensemble the composer utilises eleven pedals, three small stage mixers, one front-of-house ten-channel mixer, three string condenser microphones, one Naiant x-x capsule microphone, a computer, and three MIDI controllers (Fig. 11).

The structural organisation of the workings of this setup is based on several FX circuits in operation. All FX are guitar type stomp box pedals. Additionally, each player has a hand operated controller with faders and buttons to trigger and live-mix a series of pre-recorded sounds. Each instrumentalist has an on-stage mixer with which they can mix the different aspects of their signal. The mixers enable execution of the feedback section of the piece. The point of this complex web of stomp boxes, mixers, controllers and cables is to give each player individually and the ensemble as a team full control of the sound they are producing. Effects, then, are not applied on top of the playing but are profoundly and expressively embedded in the instrumental performance, a concern Pauly has prioritised in his compositional practice, as seen in the previous case study.

1. Local circuit	2. Global circuit on pure signals	3. Global circuit on local FX signals
Each instrument has a local circuit, meaning that it only has an effect on their individual instrument. violin: 1 sampler viola: 1 sampler cello: 1 sampler + 1 spectral freeze pedal	This is a circuit of FX that only affects the pure signal of the instruments before their local process. All pedals affect all instruments regardless of who operates it. viola: operates a Whammy pedal (expressive transposition) and an Octave pedal (non-expressive transposition). cello: operates a Whammy and an Octave pedal.	This FX circuit has an effect on the sampled signals emerging from the local FX circuit. violin: operates an expressive Bit Crusher pedal and a Sample Rate Reducer.

Figure 12: Mauricio Pauly, *Charred Edifice Shining,* setup diagram and explanation.

On an individual level the technical difficulties, such as shaping one's articulation when amplified, listening and reacting to the character of the samples, and the pedal choreography, are largely similar to the challenges arising in *Its fleece electrostatic*. The additional choreographic complexity in the string trio is augmented by the addition of on-stage mixers and hand operated controllers. At times the choreography required calculated holding or putting down of the instruments or bows, and skilful moving between the acoustic and electronic instruments, similar to the multi-object percussion set-ups described in the previous chapter. Moreover, *Charred Edifice Shining*, being a chamber music piece, requires a far greater precision and synchronisation when it comes to creating samples with performers' feet, as Pauly treated the sampling rhythmically. The pedal stomps were tightly interwoven with the instrumental gestures across the ensemble.

The present case study intends to focus on two areas of performance complexity within *Charred Edifice Shining*, which I have not yet explored in my previous deliberation about Pauly's practice. First, I will examine the role of the sound engineer. Afterwards I will discuss our arrangement of the violin part for a sound diffusion with controllers. I will end with a discussion about hybrid virtuosity, a term Eric Wubbels (2020) used in liner notes to Pauly's and Distractfold's *Charred Edifice Shining* album release.

5.1.2.1.   Role of the sound engineer

In the introduction to his thesis, Berweck (2012) indicates that frequently overheard opinions, such as 'Electroacoustic compositions are never solo pieces' or 'Just like a violinist needs a luthier, a performer of electroacoustic music needs a technician' might need challenging and clarification (p. 10). He therefore discusses them at length throughout his study and concludes that performers who neglect to familiarise themselves with the workings of their set-up create an unhealthy dependency on sound technicians, which results in an impoverished knowledge of one's instrument and its possibilities (pp. 191-2). At the same time, he suggests that if a sound engineer isn't present during rehearsals and doesn't have an involved creative role in the sound design process, such musical cooperation cannot be considered in terms of chamber music partnership (pp. 199-202). Although there is nothing inherently untrue or contentious about these statements, as they certainly result from Berweck's experience with a particular repertoire, the example of *Charred Edifice Shining* demonstrates how a sound technician may indeed assume the role of an indispensable fourth player.

Charred Edifice Shining was written for and premiered by Distractfold Ensemble. To date we have given five live performances and recorded a studio album; however, not even once has the ensemble set up the system by themselves. The reasons are manifold but the principal one is pragmatic. As a self-produced ensemble we often face time restrictions on the use of rehearsal spaces. As a result, to facilitate the process, the most proficient person, normally the composer, tends to do the work. Additionally, there is a complexity embedded in this work that benefits from one person meticulously following the set-up script, which reduces the number of possible errors and ensures an overview of the web of connections. In *Charred Edifice Shining* not only are there segregated stations, pairs and trios within the ensemble in terms of the connectivity and processing, but there is also signal going to and from the front-of-house desk to create the final mix. Learning how to set up all the stations of the piece would require trial-and-error learning. As beneficial and important as it is, it is also time consuming. Pauly remarks:

> There would be an inherent difficulty, even if you knew how to connect it, for you to be able to
> monitor and check that everything is fine from the perspective of a player in her position onstage.
> There is no way to escape the fact that this piece needs a fourth person. (M. Pauly, personal
> communication, November 30, 2018)

Figure 11: Distractfold Ensemble rehearsing at the RNCM in Manchester, July 2016.

When asked about the ensemble's shortcomings related to the understanding of the set-up, Pauly isn't convinced that it necessarily indicates lack of expertise or knowledge of the music:

> I'm in two minds on that aspect because I think that the three of you have an expertise particular to that piece that is quite profound. It's not a simple couple of things that you know how to do. There are things that the three of you are doing on that piece that mean a knowledge of the system at a musical level that is very, very real. It is limited, as you said - there's a lot of things you can't do with the system because you don't know how it works, but there is a lot of expertise there for sure; you are not just playing violin and pressing buttons. (M. Pauly, personal communication, November 30, 2018)

There is also a psychological aspect to the realities of performing brand new concert works with electronics. It is sufficiently nerve wracking to quickly learn to skilfully instrumentalise an entirely new set-up, its mechanics and sound qualities that could then

inform the interpretation of the work. Additionally, the frequently restricted time and space for rehearsing, and insufficient concert set-up time do not allow for trial-and-error-based set-up learning. The purely operational complexity of the piece is so great that in order to focus on delivering the best quality performance one needs to reduce the layers of cognitive control over its various elements. In works such as *Charred Edifice Shining* it might not even be possible or realistic to attempt to do both things at once, such as performing and overseeing one's electronically processed sound, as this would exhaust a performer even before entering the stage. There are some very real musical benefits in establishing a collaborative and equally creative partnership with a sound technician. In the case of *Charred Edifice Shining* that role was always successfully filled by the composer, whose presence at the desk not only ensured that the performances were delivered without complications and with the desired sound, but also gave us a true sense of confidence necessary to face performing a piece of such complexity in public. Such collaboration quite naturally puts into perspective the idea of virtuosity as an individual achievement. Virtuosity is *Charred Edifice Shining* is therefore necessarily collaborative and diffused between all of the participants.

5.1.2.2.   Arranging instrumental parts for a sound diffusion with controllers
In October 2016 I unexpectedly suffered hand paralysis. Doctors concluded I squashed an ulnar nerve. I had to undergo rehabilitation and wouldn't be able to play the violin for the next few months. Distractfold had a concert coming up at Huddersfield Contemporary Music Festival, where we were scheduled to perform *Charred Edifice Shining.* The composer and I agreed that we would try to make it work by arranging my part for something I could operate despite the injury, namely, controllers. Pauly edited audio recordings from our previous concerts and revised my part to add simple alphanumerical commands. The structure of interactions between the ensemble remained largely the same, and so did my pedal choreography. What needed relearning were the entirely new and quite complicated button-pressing combinations and sequences. My new instrument became the Akai APC40 MKII Ableton Live Performance Controller (Fig. 13). Its design is, as the name indicates, aimed at operating Ableton Live, typically used in a variety of music genres including techno, pop, electronic music.

The controller's button and knob functions are mapped to be compatible with the software, meaning that particular buttons play, record or stop audio files, and allow a performer to move them between different sessions or tracks in a session. However, there is always flexibility to reprogram one's controller to give buttons different functions and suit one's needs. The controller has a large range of advanced live performance and music production functions, as well as lighting which give visual cues, freeing the sight of the performer away from the computer screen. In *Charred Edifice Shining* we did not have the opportunity to explore this new instrument in its full scope; however, Pauly customised its use without prior expertise in Ableton Live. The already existing combination of acoustic and electronic instruments, and some proficiency gained in instrumentalising the work's hybrid set-up, allowed us to reimagine the new version based on the concept of performer-controlled electronics.

This experiment also demonstrated new possibilities of electronic integration and enabled a shift away from a disciplinarian approach or attachment to one's musical identity derived from playing a particular instrument. It showed that flexibility, curiosity and openness in trying and learning are the most crucial of technical skills to hone. It puts into perspective the idea of expertise that needs to be developed long-term and in a structured learning environment. Although the new choreography for *Charred Edifice Shining* was quite fiddly, it could have been well-enough physically delivered by an amateur musician, who had enough time and patience to learn it. An instrument like the Akai APC40 MKII Ableton Live Performance Controller was designed to give a more widely accessible and inclusive tool for creativity. Although we used it due to an unfortunate accident, the experiment with arranging the violin part for a controller was successful and did not hinder the integrity and reception of the music. Therefore, the virtuosic skill that *Charred Edifice Shining* certainly requires, cannot be solely considered for its visible operative difficulty. It is indeed not easy to move between acoustic and electronic instruments using all four limbs at the same time; however, the virtuosity doesn't stop there. Rather, it extends to multiple layers of visible and hidden areas of knowledge and expertise that require incessant willingness to learn new ways of expression and collaboration between all four participating musicians, making the interdisciplinary virtuosity present in this piece a collective endeavour.

Figure 13: Distractfold rehearsing *Charred Edifice Shining*, version with the diffused violin part, Manchester, November 2016.

5.1.2.3. Hybrid virtuosity

In liner notes to Distractfold and Pauly's *Charred Edifice Shining* album release Eric Wubbels (2020) wrote:

> Without recourse to superficial musical references or tropes, and importantly, without dumbing down or rejecting the training, skill, and musical sophistication he and his collaborators in Distractfold have accumulated, this music maintains an immediate approachability and directness of address that extend its natural audience well beyond the world of new music. This recording is clearly a team effort, and credit is due to Murat Çolak for the excellent production and overall sound, and of course above all to Linda Jankowska, Emma Richards, and Alice Purton of Distractfold, doing double and triple duty across a range of instrumental and electronic devices in a bar-raising performance of hybrid virtuosity. (para. 4-5)

Hybridity, a term I briefly reviewed in Chapter 3, is one of the frequently referenced methodologies of interdisciplinarity, one that is also well-suited to describe the integration of performer-controlled electronics with acoustic instruments in the field of new music. It

speaks not only of a merger of sound cultures and blurring of disciplines, but also of the physical integration of instrumental skill sets. Hybridity promotes organic transformation of the performer and the forgoing of a particular conditioning associated with the assumed function of the tools in use. Hybrid virtuosity is therefore a welcome and helpful term for those looking for a new way of framing an experience of performance skills within the interdiscipline of electroacoustic music. Early in Chapter 1 I stated that I consider interdisciplinary virtuosity a term that can come under the guise of many other names, depending on a practitioner's concerns. Hybrid virtuosity can be considered as a form of interdisciplinary virtuosity that foregrounds seamless integration of the physical operation of divergent tools, in this case acoustic and electronic instruments. Hybridity as a concept helps us to imagine a performer that has internalised and coordinated a multiplicity of actions.

Would the same perception of performance hybridity occur if *Charred Edifice Shining* was a percussion trio? Or is it a factor of it being written for string instruments, so profoundly associated with the classical music tradition? As happy as I am with Wubbels's recognition, which I do not want to challenge *per se*, this study shows that within one practitioner's practice there can be different types of interdisciplinary approaches, and as a result, of virtuosity. As a more inclusive category, interdisciplinary virtuosity carries greater potential for changing the narrative of virtuosity. Virtuosity in music has been historically located in the performer's body and considered for its physicality and liveness. The intellectual labour and creativity of performers have only recently been subjected to more rigorous and thorough examinations. While hybrid virtuosity certainly suggests an embodied synthesis, the idea of interdisciplinary virtuosity embraces a much broader and multidimensional perspective on musicianship in the twenty-first century, which includes collaboration and co-creation. Hybridity can be understood in line with Barry and Born's (2013) integrative-synthesis interdisciplinarity, but perhaps omits the subordination-service or agonistic-antagonistic modes discussed earlier. Referring to Berweck's (2012) eight-step programme in gaining proficiency in the interdiscipline of electroacoustic performance, it is immediately clear how many additional purely practical tasks a performer needs to take on in order to engage with this practice. Those practical tasks however, such as figuring out one's set-up and establishing a rehearsal space, are also an integral part of this interdiscipline's technique, au pair with fixing a glitching Max/MSP

patch and smooth moving between acoustic and electronic instruments. In the case of *Charred Edifice Shining,* they were undertaken by both the composer and the performers. Interdisciplinary virtuosity, unlike hybrid virtuosity that focuses on the visible outcome of the synthesis of operating tools, could offer a more open-ended and process-oriented approach to performing that strives to highlight the activity of creating new methodologies of learning and gaining knowledge and new skills through integration, friction, failure, collaboration and collectivism.

To conclude, virtuosity in Pauly's *Charred Edifice Shining* is made of layers of interactions between humans and tools within volatile performance circumstances. In Chapter 1 I suggested that instead of tracing interdisciplinary virtuosity back to the work or its performance, a focus on the merger of diverse skill sets from a team of experts is needed to understand its nature. It is certainly true in the case of the above discussed piece, where collaboration between performers and the sound engineer, auto-didactism in figuring out one's way of operating the set-up and disintegration of a classical music string player's identity are entangled. The new epistemology of contemporary musicianship demands both rigour and openness from all participants. As the example of *Charred Edifice Shining* demonstrates, interdisciplinary virtuosity can result from a team effort at rendering something unique and idiosyncratic to all its members.

5.2.   Hypercomplexity, volatility and virtuosity in Sam Salem's *London Triptych*.

Legibility of performance skills and physicality continue to be two of the crucial and determining components of the reception of virtuosity. As I will demonstrate in this next case study, although some works pose highly complex challenges and require a formation of multidimensional skills, they are not received as virtuosic precisely because these skills cannot be easily recognised.

Mathias Monrad Møller (2016), reviewing Distractfold's concert at KLANG Festival in Copenhagen in 2016 (Fig. 14), wrote:

> The highlight of the evening was Mauricio Pauly's *Sky Destroys Dog* (2014) for electric solo guitar,
> played by the composer himself. Distortions and electric rattles characterize this virtuoso work (...)
> Sam Salem's *not one can pass away* was played on various invisible gear at a table in front of the big

screen, while a footage of e.g., a beach, leaves in the wind, puddles, house walls and abstract digital figures was shown. The well-produced video was reminiscent of Terrence Malik's aesthetics, with the same tendency for pathos and kitsch. Salem stages everyday life as something melancholic, and the title suggests a depth where there are only beautiful surfaces, meanwhile the noise-oriented music that arises from the musicians moving around a table and playing on objects that cannot be seen by the audience becomes a little indifferent. (Besøg fra Manchester, para. 3-4, my translation)

The critic's lukewarm reception of Salem's work, legitimate in its own right, does not correspond with the experience of building a virtuosic performance practice for any of the three parts of *London Triptych* (2015-18) – *not one can pass away* (2015), *Untitled Valley of Fear* (2016), *The Great Inundation* (2017). Based on a set of locations, connected by a theme (e.g., a person, a historic event, a myth), Salem's compositional process resembles drawing a personal map. Through a series of audio and video recordings, the composer collects his building blocks, and uses them to create a reading of the connections between his chosen landmarks (Salem, n.d., para. 2). *London Triptych* is an idiosyncratic map of occult London connected to the artist and poet William Blake, surrealist and occultist Austin Osman Spare, and master architect Nicholas Hawksmoor. As such, it is an intricate, mysterious and ambiguous set of pieces, whose sources of inspiration can appear non-referential and unclear to the observer. For the performers it is a highly involved and complex process of music-making, rather than an indifferent one, to bring back the critical review (video recordings of the discussed pieces and performance practice are available in my Artistic Portfolio: *not one can pass away*, (Dropbox #5.4) https://www.dropbox.com/s/tntwuix15a8xirr/5.4.mp4?dl=0; *Untitled Valley of Fear*, (Dropbox #5.5) https://www.dropbox.com/s/eocidnsuxjqxjjb/5.5.mp4?dl=0; *The Great Inundation*, (Dropbox #5.6) https://www.dropbox.com/s/ft0gtlbfuds39x5/5.6.mp4?dl=0).

To demonstrate the scope of virtuosity embedded in Salem's music I interviewed Distractfold members – Rocío Bolaños, Daniel Brew, Alice Purton and Emma Richards – as well as Noam Bierstone and Weston Olencki, who both performed *not one can pass away* (2015) at various occasions in the past.

Salem (n.d., para. 1) gives a critical spin on the concept of virtuosity in his works. In his artist bio he states:

I create audiovisual works for performers, electronics and video, which challenge traditional notions of concert presentation and instrumental virtuosity.

The lack of the traditional aspects of instrumental virtuosity, such as operative legibility and expressive physicality, is precisely what made Møller consider the resulting music unremarkable. Operative legibility entails a clear and visible way in which the performance is conducted so that the audience understands the source from which the music arises.

The set-up for *London Triptych* builds upon a range of small analogue electronics such as guitar pedals, small controllers, transducers, speakers and amplified objects, which are bowed with cello and violin bows. The compositions also involve singing and precise synchronisation of gestures with the tape part, which the performers achieve thanks to an in-ear click track. The set-ups for performers one and two remain the same throughout the three parts of the triptych. A cello part is introduced in part three, *The Great Inundation*. The objects and electronics are instrumentalised in a way that, together with the tape part, creates an intricate yet ambiguous sonic weave. The sound source of a given layer or gesture isn't always obvious, which is a deliberate compositional choice on Salem's part. Some gestures are created by almost unnoticeable knob turning, others through foot pedals hidden away from audience view. Additionally, the staging happens in darkness or semi-darkness to allow for a good visibility of the video.

The experience of developing performers' virtuosity in *London Triptych*, based on the interviewees' responses, can be divided into:

- Hypercomplexity of notation and resulting actions
- Volatility of sonic qualities of the electronic instruments
- Sound design and speculating about the translation of gesture to sound

After considering each of these in turn, I will finish my discussion by demonstrating how performers consider virtuosity in their work.

Figure 14: Distractfold performing Sam Salem's *not one can pass away* at KLANG Festival, Copenhagen, June 2016.

5.2.1. Hypercomplexity of notation and resulting actions

The notation across individual parts of *London Triptych* varies between four and eight staves, divided between foot pedals, objects, controllers and voice actions. Figure 15 demonstrates the opening gesture of *not one can pass away,* where performer one simultaneously bows an organ pipe with right hand, activates the delay pedal with the left hand's middle finger, turns the delay pedal's time knob with left hand's thumb and index finger, changes volume pedal level with one's foot, sings, and changes from organ pipe to a contact speaker attached to a snare drum where the performer bows a ping pong ball. In the meantime, performer two bows a Styrofoam ball with a DPA microphone hidden inside it, above a contact speaker attached to a snare drum, changes the resulting feedback by changing the distance of the ball from the speaker, adjusts the volume level of feedback with a volume pedal by their foot, and sings.

Considering the number of rhythmic actions that have to be synchronised at once, there is an unquestionable complexity distributed across several components, not dissimilar to so-called 'New Complexity' works such as Ferneyhough's *Bone Alphabet* (1992) or *Time and Motion Study II* (1973-6). However, in the case of *London Triptych* these actions are obscured not only from the audience's view by being small, hidden or illegible in their

difficulty, but also because the sounding compositions prioritise an ambiguity of correspondence between instrumental actions that largely produce noise sounds, the tape part and the video projection.

Figure 15: Opening page of *not one can pass away*.

As a result, there is no clear evidence that the performers' labour is intensive and highly skilled. Daniel Brew, when asked what the greatest difficulty was when performing *not one can pass away*, and if he minds that people might not appreciate and understand his virtuosity, remarks:

> I think that one of the challenging things was translating the score into the sound, and what the score was trying to communicate. With Sam's piece you are often reading four or five lines of music, so even though you are creating one gesture, it's multifaceted by all the things that are going on. In terms of being performative I'm not really bothered, because I'm generally not bothered if people think that what I'm doing looks cool or is being performed well. I don't really care about that, but what I care about is creating the music, and usually if I feel like I'm doing that well, it's picked up by the audience and that's what I want to be picked up. I don't want anything that might fuel my pride to be an indicator of what's been a good performance, so I'm not bothered that people can't necessarily see or understand fully what I'm doing. One of the hard things was singing, just because obviously there is so much

going on in the piece. Not only am I trying to play with you, who is playing another part and sometimes we have things that interact with each other, but I'm trying to play with the tape. Additionally, we had things we had to sing, and we were given notes in our ears that we had to pitch. (D. Brew, personal communication, October 25, 2018)

Both Rocío Bolaños (personal communication, August 21, 2018) and Noam Bierstone (personal communication, April 17, 2018) agree with Brew – Salem's practice requires great focus and mental dexterity. Emma Richards additionally notes that although the individual elements of her part do not pose greater performative difficulty, their integration within one set-up remains challenging. Richards, who learnt the part of performer three, had to perform with very specific electronic instruments such as Eowave Ribbon Mk2, Crudlabs Crudman cassette player and the Elektrosluch/Hard Drive system (Fig. 16). The ribbon controller is a tactile instrument reliant upon position and pressure, while the Elektrosluch responds to the vertical distance between the controller and the Hard Drive surface.
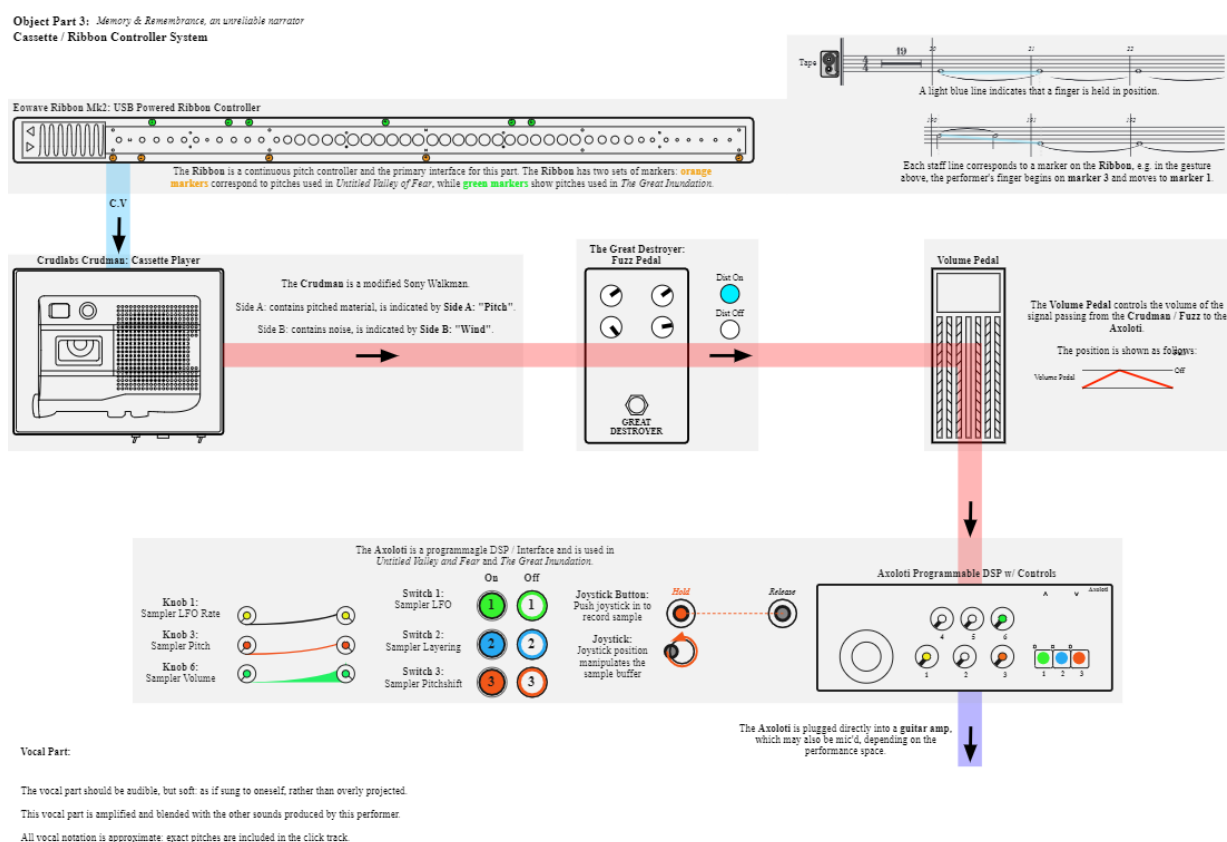
Figure 16: *London Triptych* set-up legend and performance instructions, performer three.

Both tools require experimentation and are uniquely difficult to systematise or notate in a score:

> That was probably the most difficult thing when I had to perform with the Ribbon Controller, the Elektrosluch and sing at the same time. Even just two of those simultaneously feel like a lot. Although individually the instrumental and the voice parts are very straightforward, the coordination of putting all those elements together makes your head hurt. (E. Richards, personal communication, September 03, 2018)

5.2.2. Volatility of sonic qualities of the electronic instruments

In *London Triptych* Salem utilises feedback as one of the sonic elements integrated into the composition, an element inherently unpredictable. Performers one and two as a part of their stations both have a small speaker attached to a snare drum, which is controlled with a volume pedal. Performer one bows either a ping pong ball with a bow that has a contact microphone attached to its frog, or the speaker directly. Performer two operates a Styrofoam ball with a DPA microphone inside it above the speaker, while controlling resulting feedback with a volume pedal. Although during soundcheck one can set a framework for conditions in which certain sonic qualities of feedback would occur, these can change at any point during the performance, since every variable parameter such as microphone placement, movement and volume level of action, determines and alters the resulting feedback. Bierstone remarks that the key to performing with feedback is the understanding of which parameters are involved in creating the sound, and not getting fixated on one outcome but rather playing around with what feedback results in the moment:

> It changes all the time so although it is a bit of an illusion, one needs to be able to adapt in real time and try to find a sound, be open to the sound, not have a view of this one specific sound that one is looking for, but of this sound's character. So even if the sound might change, one can still be happy with the character, the sound's contour and how it fits into the music. (N. Bierstone, personal communication, April 17, 2018)

Similarly, Bolaños suggests getting comfortable with improvising and relying on one's memory of the sound:

Every time you play the instrument in a different room its behaviour is completely altered; you must be very aware of that; you must be able to adjust levels. I rely on my hearing and try to adjust the memory of the sound versus the actual outcome in the moment. Sometimes it is very frustrating because things get out of hand. There are so many electronics instruments involved in the piece that sometimes you just can't control them all. Instead, you must go with the flow, do as much as you can and hope for the best. (R. Bolaños, personal communication, August 21, 2018)

When devising his set-ups, Salem experiments and tries to understand what sounds are reproducible and which are phenomena which he cannot sufficiently control. Many of the sonic elements of the composition are based on live capturing of samples, such as vocals, hits or bow ricochets, further extending the sonic unpredictability. Richards stresses the importance of understanding the role of each sample in relation to other elements of the composition:

A lot of the time you have to capture certain things on your sample, that are later used and manipulated. In my part I do quite a bit of improvising with samples and the settings of the controllers. If you don't have a good sample you need to understand why it's not good, be able to re-do it, be able to readjust it or cope during a performance if it's not a good sample. Finally, you need to know what to do if you accidentally delete your sample. (E. Richards, personal communication, September 03, 2018)

5.2.3. Sound design and speculating

In August 2018 Distractfold and Salem recorded *London Triptych* in a studio using four-channel monitoring in performers' headphones. This experience made us aware of the extent to which the live performances had depended upon speculation about the translation of gesture to sound and our chamber musicianship within the totality of the work. Although individually and as a team we always practiced with amplification, the live monitoring of the separate parts and the resulting total mix was never sufficient and as a result we could not engage in a similar level of controlled musicianship as we were accustomed to in acoustic playing. Alice Purton remarks:

When I was performing in order to feel the kind of movement and emotion and colour that one needs in order to give an exciting performance, I was taking a lot of the general sound world from the tape so maybe it was less chamber music and more a dramatic feeling of the moment. (A. Purton, personal communication, September 05, 2018)

The process of recording highlighted the complex and intertwined set of relationships between the tape and the instrumental parts. 'We've heard things that we have never heard before from each other', admits Bolaños (personal communication, August 21, 2018). We finally started feeling like we were playing together. But as crucial as the sound design of the live performance is for presenting the aesthetic of the music and for performers' expression, as Olencki (personal communication, October 25, 2018) suggests, the realities of new music concert production, such as limited monitoring resources or time in the venue on the day of the concert, determine the level of speculation that undoubtedly happens on stage. Olencki concedes that thanks to tactile sensitivity and good rhythm one can learn to approximate one's desired outcome in rehearsals and on stage even if the monitoring isn't sufficient. One solution would be to perform with headphones that can provide more reliable feedback between performers and tape, similarly to how live pop music performance is conducted. Although we still have not had a chance to test it, we are positive about trying to address the lack of hearing each other on stage in this way.

To conclude, *London Triptych* poses several challenges to performers, some of which are illegible to the audience. Despite this, the work's complexity, the number of skills required and the knowledge that needs to be formed in order to operate the frequently volatile electronic instruments, qualifies the performances of *London Triptych* as virtuosic. Richards observes that it is the sum of the many small parts that contributes towards her virtuosity:

> None of it is obviously virtuoso, but it's the kind of combination of ongoing shapes that happen within one element that requires a very careful and skilled approach. And then you've got a million other things to think about, for example with the settings. Additionally, you sing on top of the instrumental part and must be able to sort yourself out if something goes wrong. It feels like a brain overload, but in an exciting way. (E. Richards, personal communication, September 03, 2018)

Bolaños admits that the piece puts a strain on her physical and mental faculties:

> I think mentally it's an incredibly difficult music to perform, as rewarding as it is. Sometimes physically as well, because everything is very delicate. It's challenging because you can never feel really comfortable. (R. Bolaños, personal communication, August 21, 2018)

When asked about the expertise needed for performing *London Triptych*, Purton notes:

It's the learning of skills. Your expertise is that you have learned how to train your body to do certain movements with control, precision and expression, and you have done that over a long period of time. It's still virtuosic, but I think there's an instrumental element of bravado or hubris that we don't have when we do Salem's music. You know, that "I'm so good at my violin, I can do all this stuff, look at me do it, and I can do that because I've played violin for twenty-five years and you haven't so you can't do it". Whereas with these objects and electronic instruments, it's going to take you some time to learn but you can start from zero. (A. Purton, personal communication, September 05, 2018)

Thus far, besides members of Distractfold, the first part of the triptych *not one can pass away* has been performed by a saxophonist, trombonist, pianist, guitarist, and percussionists, demonstrating that despite all its complexity and specificity, Salem's music requires virtuosity that transcends instrumental disciplines. And although its operative component is frequently too small or obscured to be noticed by the public, only a meticulous and dedicated approach of performers to working with electronics can give this music the virtuosic presentation it requires and deserves. Moreover, this work, rather than enable integration, allows performers to question established norms of what constitutes electroacoustic performativity. By combining objects, rare electronic instruments and singing, all performed in darkness against a sizable video projection, Salem creates an interdiscipline that calls for an entirely singular approach, both in preparation for and during performance. What results is what Barry and Born (2013) call an agonistic-antagonistic mode of interdisciplinarity, where the disciplines of acoustic and electronic performance collide to form a result that resembles neither. The interdisciplinary virtuosity resulting from engaging with Salem's practice leaves a performer in doubt, rather than in control of one's abilities, and never certain of the total outcome. The performer rigorously attempts to synchronise complex actions with the click track, as well as to act upon their knowledge of the properties of the electronic instruments, in order to be able to speculate and improvise around the character of the most volatile and unpredictable of sounds. As a result, *London Triptych* offers an opportunity to reconfigure various assumptions around the idea that virtuosity constitutes a mastery and specialised skill that clearly looks difficult to do.

5.3. Conclusion

In this chapter I have aimed to present electroacoustic performance as an interdiscipline, based on the examples of Mauricio Pauly's *Its fleece electrostatic* and *Charred Edifice*

Shining, and Sam Salem's *London Triptych.* Through discussing challenges specific to their performance, I suggested that their complexity invites different modes of interdisciplinarity, as indicated by Barry and Born (2013). As a result, I demonstrated that interdisciplinary virtuosity can be equally understood as synthesis, collaboration and collision, and benefits from being treated as an open and flexible conceptual framework. I showed that the key individual skills for electroacoustic performance such as working with amplification and understanding of one's set-up, already delineated by Berweck in 2012, persist. However, I equally stressed the need to recognise how the collective effort of bringing disciplines of performance, composition, sound engineering and sound design, undoubtedly changes the understanding of virtuosity that views it as individual mastery. In doing so I prepared the ground for the following case study that investigates co-composition and co-creation as a form of interdisciplinary virtuosity.

6.

boundarymind - feminist co-composing:

collaboration, co-authorship and interdisciplinary virtuosity

Boundarymind is a long-distance collaboration between myself and Katherine Young developed over the course of eight years. It started as a simple project. Young's music came recommended by a shared friend of ours at a time when I was looking for new solo violin repertoire. We didn't know each other and it quickly became clear that unless we went through a period of learning about each other, we couldn't create together. The process of forming a friendship became the methodology of our project, and as Young puts it 'even as it has grown in collaborators, media, and years of germination, [it] remains a humble endeavor' (Jankowska & Young, 2020). The artistic result is 'an evening-length electroacoustic sound piece and aggregating installation that explores and transgresses the geographical, cultural, psychological, and musical boundaries that impact how we share—and modulate—our past, present, and future selves through collection and interaction with our material world' (Emory University, 2021). The materials for the co-composition and installation include everyday objects and sound recordings, which were gathered on a series of visits in 2015 when Young and I travelled to our early childhood homes and locations in rural Poland and Mississippi, US. They were chosen for their personal, often sentimental significance and memory-evoking power to bring us back in time to the places of our formative years (Jankowska & Young, 2020). While working on *boundarymind* we have invited filmmaker Kera MacKenzie and sculptor Molly Roth Scranton to collaborate with us on the multimedia installation, as well as established production partnerships with Experimental Sound Studio and 6018|North, a cultural centre situated in a dilapidated mansion in Edgewater in Chicago, for which the final presentation is designed. The multi-movement performance piece and installation is a three-dimensional tapestry woven with various household objects such as wooden spoons, boomboxes, clay pots and plastic toys. Their sounds and images were recorded, remixed, filmed and animated, while their materiality and purpose have been altered to become

sculptural elements and musical instruments. We also intend to invite the public to contribute to the project by creating social listening events, aimed at facilitating listening to the inconspicuous sonic properties of audience members' significant objects through close-miking. The recordings we would make of the objects people share, with participants' consent, will be incorporated into the subsequent presentations of *boundarymind*, either as a part of our performance or a second iteration of the installation. The entire multi-part premiere of *boundarymind* was set to open in June 2020. Due to the Covid-19 pandemic the live events have been postponed to 2022. In the meantime, throughout 2021 we have been releasing aspects of the work via a storefront installation at RomanSusan gallery in Chicago, online performance at ESS's *The Quarantine Concerts* and at SEAMUS 2021 Digital Conference, a radio broadcast at Wave Farm Radio, a cinema screening at Sidewalk Cinema in Philmont, NY, and an online Call-For-Recordings.[24] We have also spoken about it in an academic context at University of Huddersfield, Emory University, and at the Yarn/Wire Institute.

Boundarymind can be considered from various perspectives – for its music, concept and methodology, installation and visual components, or its public engagement element. For the purpose of this case study I will be investigating it through a feminist perspective on virtuosity that emphasises collaboration, co-creation between practitioners with diverse bodies of knowledge, and active audience participation. Contrary to the popular notion of virtuosity as an individual achievement, I want to highlight how collective aspects of creation, growth and ideation make the concept of virtuosity more attuned with the epistemic complexity and interdisciplinarity of the twenty-first century. I argue that interdisciplinary virtuosity is inherently collective and characterised by distributed creativity. The personal methodology of learning from other disciplines, which I proposed in my definition (see Chapter 1), can take on many forms. It can be done alone or in collaboration. However, the foregrounding of exceptionality and individuality, typical of the traditional notion of virtuosity, is thrown into question by the process of acquiring

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[24] Call-For-Recordings is an ongoing invitation to contribute recordings of sounds of memorable objects from Young and Jankowska. These recordings will eventually become integrated with other materials into the live presentation of *boundarymind.* Unable to collect sounds through live recording events in 2020 and 2021, we decided to open the call to anyone anywhere; see https://www.boundarymind.com/communityrecordings; rolling email submission at boundarymind2021@gmail.com.

knowledge from other people. A feminist perspective of interconnectedness and relativity challenges the masculine underpinning of the concept.

I will begin my argument with a discussion about collaboration and authorship, demonstrating that although working together has been characteristic of both historical and contemporary creativity, the authorship of musical works rests on an internalised patriarchal foundation of ownership that shaped Western Art Music. Drawing from the writings of Donna Haraway, Anna Lowenhaupt Tsing, Elizabeth Grosz and Marcia Citron, I will introduce different concepts pertaining to collaboration and authorship such as composting, response-ability and decentralised authorship, among others. I will use these perspectives to help me underline the interdependence and entanglement of collaborating that could transform the paradigm of the single-author model in Western Art Music. My discussion of the process of *boundarymind* will account for Young's and my methodology, choice of materials, approach to notation and authorship, collaboration with other artists and production partners, and audience participation. The themes pertaining to this examination are: collaboration resulting in co-authorship as a feminist methodology; tender listening and friendship as a compositional method; repurposing old objects into instruments as a pledge to sustainability; and distributed creativity. I will conclude with a discussion about interdisciplinary virtuosity as a form of collaboration and co-creation that sees excelling at its social and relational aspects as some of its most important goals.

Collaboration resulting in co-authorship as a feminist methodology

Artists working together are neither a novel nor a gendered phenomenon, as John-Steiner (2000) explains in *Creative Collaboration*. In music, opera and ballet are the most obvious genres where cooperation between practitioners from disciplines such as scenography, choreography, costume design and music composition dates back to the seventeenth century. There are a number of documented collaborations in the eighteenth and nineteenth centuries between composers working on a piece together in which each individually wrote a movement or an act.[25] Throughout the twentieth century, examples of interdisciplinary collaborations can be found in both prewar avant-garde movements such

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[25] E.g., Gabriel Fauré and André Messager's mass *Messe des pêcheurs de Villerville* (1881); Léo Delibes and Ludwig Minkus's ballet *La source* (1866). For more examples see Classical music written in collaboration (2021).

as Dada, and in postwar avant-garde, most prominently between students at the Black Mountain College (mentioned previously in Chapter 3) and among members of Fluxus.[26] These collaborations paved the way to thinking of the concept of artworks less as objects and more as process-rich collective endeavours. The observable shift in the way music-making is perceived and accounted for in recent musicology, as seen in seminal studies by Small (1998) and Cook (2013) among others, challenged the composer-performer divide and put into perspective the work-concept's cultural hegemony in Western Art Music. Yet, despite the increased awareness of music as a social act, the cultural heritage attributed to the Romantic concept of music as a cerebral idea residing in the heads of composers (Piotrowska, 2007) persists in the convention of single authorship. It thrives on the basis of a value judgment placed in works and their scores that permeates formal music studies, funding structures and cultural infrastructures such as festivals.

Recent performer-led studies in collaboration such as Roche (2011), Kanga (2014), Östersjö (2008), Roe (2007), Fraser (2019 & 2021), attempt to broaden our understanding of the inconspicuous and often subtle intricacies of music-making interactions between composers and performers, while the edited volume by Redhead and Glover (2018) focuses on process and the range of collaborative methodologies that music-making can support. Redhead and Glover equate artistic collaborations to interdisciplinarity in a way that resembles Born's (2010) typology – integrative-synthesis, subordination-service, and agonistic-antagonistic, suggesting that process and dynamic between its creators is in fact a part of the materials from which musical works are developed (ibid., p. 3).[27] Collaborations therefore not only contribute towards the production of new knowledge about participating disciplines, but also become an integral part of the epistemic complexity of musical works and the technical skill involved in their production. In John-Steiner's (2000) view artistic disciplines are innovated largely due to new aesthetics that are socially-constructed and developed among thought communities (p. 73). Shared conversations, cross-pollinating influences and interests, mutual emotional support, constructive criticism and a healthy dose of mutual admiration and respect determine the

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[26] E.g., Francis Picabia's *Relâche* (1924)*,* conceived together with composer Erik Satie and cameraman René Clair (Lushetich, 2016, p. 44); Charlotte Moorman and Nam June Paik's collaborative practice spanning decades.

[27] The same typology appears in Barry & Born (2013).

collective and individual growth and creativity of its members. However, those are precisely the hard-to-examine interactions that render collaborations difficult to research and account for in terms of authorship of ideas.

The single author model is defined by the authorship of ideas primarily attributed to the act of notation. Hayden and Windsor (2007), Roche (2011), Taylor (2016), and Torrence (2018) try to organise the dynamic of composer-performer collaborations based on hierarchies of flow of instruction, creative ideas and decision-making that determine the character and structure of the work. But no matter how one conceptually and abstractly addresses such organisation, the reality of human interactions is messy, and resulting works are frequently composites and amalgamates rather than the children of a single brain. Redhead (2018) observes that any labelling that attempts to delineate complex social interactions ends up inadequate, and while labels 'may serve to group examples of work together, they do not necessarily help practitioners to interrogate their work' (p. 32). The acknowledgement of collaborative methodologies that defy Western Art Music's authorship convention requires introspection, retrospection, a practice of fairness and an ethos of collectivism. Even if such efforts are undertaken, the trouble with accepting mutuality in the arts, according to John-Steiner (2000), stems from the priority that individuality and recognisable style are given as a market currency (p. 73). This is perhaps why, among artists who recognise their interconnectedness, understanding of the act of collaborating draws on concepts such as compost, response-ability and mycorrhiza among others. Compost appears in Haraway (2016) (amongst other definitions) as a metaphor for creating as collective making, unmaking, failing, ruminating, processing, decaying and merging into organicity – a process-oriented approach to collectively cultivating work, ideas and mishaps. Response-ability, from the same author and book, is a term meant to strengthen the concept of interconnectedness, 'collective knowing and doing' (p. 34) by highlighting ethical sensitivity of interactions, which influence all participants' (both human and non-human) responses and growth. Mycorrhiza is a biological term describing joint and mutually beneficial structures of fungi and tree roots, adapted from Tsing (2015), also as a metaphor for a re-imagined approach to materiality and vitality of the diverse agents in the natural world. Furthermore, environmental metaphors such as contaminated entanglements (Fraser, 2021) and eco-systems of co-creation (Kölbel, 2017) strive to describe the variegated intertwinings of human and non-human agents without

necessarily ascribing hierarchies to the way they come about. In my view these terms more amply and inclusively encompass the chaos and interdependence of collaborative dynamics. However, the situatedness of co-creating within a capitalist system directed towards an 'adversarial mode of self-presentation' (John-Steiner, 2000, p. 100), ownership of ideas and market-driven assessment of the value of labour urgently needs a new discussion and a corresponding reassessment of the single author convention.

Western Art Music seems to lie on the fringes of International Property Law. It is perhaps due to it being considered a non-commercial practice and conducted under a premise of inspiration, sacrifice for the art, edification achieved by personal expression and spiritual fulfilment – in brief, a vocation rather than a profession. While genres such as hip-hop and pop are ridden with curious cases of lawsuits for copyright breach, and an increasingly common multi-author credit song writing practice (Bakare, 2021), collaborating new music performers usually get a nice front-page dedication and access to a much smaller pool of royalty payments, whether from a radio broadcast or a concert performance. Unless of course different arrangements between collaborators, entirely in line with the existing IPL, are struck. It is not however only about an odd royalty payment but primarily about all the other forms of cultural capital that are connected to an author. Fraser (2019) notices that the collective aspect of music making is not recognised. She calls the new music industry 'stymied by inherited hierarchical structures and a persistent lack of imagination' (para. 5), despite the advancements in experimental music since the 1960s. What I find most peculiar is the continuation of attributions of single authorship, financially or in terms of recognition, in a world determined by data. Previously, when traceable proofs of communication were much harder to collect, and the act of notation was the only way to assess labour and creativity, the score couldn't talk and account for the way the ideas came about. The web, together with other communication and recording technologies, gave artists a much greater power of self-presentation, as well as traceability of their creative decisions. It would be extremely tedious and arbitrary to have to analyse how much percentage of a work's identity resulted from a specific idea. Yet it is no longer a completely impossible argument to have. Creative processes can be traced if needed. That is why it is much better to follow Deane's (Zaba & Deane, 2017) collaborative strategy:

> We all know that a tiny musical moment can make a masterpiece. So can two hours of material.
> There is no such thing as equal time spent on collaboration. Don't keep track. Only keep track of how
> good the piece is - constantly. ([A transcription of] „Luke's handy rules for collaborating", 3.)

There is an emergent sense within the community that collaborating parties should end up with a sense of fulfilment, increased cultural capital and agency. Interestingly, despite many hardships that the cultural sector experienced during the pandemic, the world-wide lockdowns and social-distancing measures saw a lot of artists working together long-distance, sending each other sound files, co-mixing recordings and discussing ideas over Zoom. The necessarily collaborative nature of such exchanges, the digital place of their happening, and perhaps at least a partial renouncing of notation, saw a rise in co-author credits and public discussions about it.[28]

Co-creating resulting in co-authorship, with the exception of Chopin and Franchomme's *Grand Duo concertant* (1832), is virtually absent from Western Art Music's history. The roots of the evolution of the sole-author model can be traced back to the self-fashioning artists of Italian Renaissance period, when being recognised for the virtue of one's work, then called virtuosity, meant a chance for a more lucrative patronage (Ruggiero, 2015, pp. 429-31). Two centuries later the Romantic socio-cultural developments infused the act of composition, as Citron (1994) notes, with transcendence, ego, exaggerated notion of self, and Beethovenesque cult of genius (p. 23). This heritage manifests until today in the privilege given to the authorship of scores. Although music can hardly be reduced to scores alone, the act of notating, as Taylor (2016) observes, cannot usually become a collaborative task (p. 576). Musical works therefore directly represent how our culture grew accustomed to narrating itself. In her study of the musical canon and gender, Citron (2000) recognises the symbolic power of musical works:

> The canon is seen as a replication of social relations and a potent symbol on their behalf. It provides
> a means of instilling a sense of identity in a culture. (...) the canon creates a narrative of the past and
> a template for the future. (p. 1)

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[28] E.g., During Yarn/Wire Institute 2020 remotely collaborating composer-performer student duos ended up with a joint credit; Emory Compfest 2021 was entitled *Co-Authorship in Electro-Acoustic Music* and saw only co-authored presentations. Young and I gave presentations about co-authorship at both events.

It is therefore logical to examine the convention of authorship in Western Art Music from a feminist perspective given that our entire culture is fundamentally developed by men and structured upon patriarchal convictions of ownership.

This narrative of the past influencing our present McClary (2002) calls the 'Master Narrative of "Absolute Music" ' (p. 55). In her view it is the textless instrumental music, considered 'pure, ineffable, and emphatically not concerned with such mundane issues' (ibid.) as its socially-constructed meanings, that has long avoided scrutiny of its patriarchal underpinnings and overtones. Feminist scholarship has therefore tried to deconstruct among others its canon, forms, approach to materials and privileging of certain creativity and expression (Citron, 2000; McClary, 2002; Cook & Tsou, 1994; Colton & Haworth, 2015). Through the reconstruction of a much more nuanced social narrative and an excavation of works of its forgotten female participants, feminist musicology could focus on the inequality of female representation in the canon and historic lack of access to male privileges such as education, public performances and recognition of authorship of compositions. Given that the status of a composer-author has played a leading role in the construction of Western Art Music's culture, it is no wonder that researching and questioning the input of female composers has gained such importance. After all, the fixation on an individual's subjective and presumably original expression, ideas and discoveries, has become the way in which we have learnt to commemorate the history of humanity, despite the fact that, as Harari (2018) suggests, Homo sapiens dominated planet Earth due to 'our unparalleled ability to think together in large groups' (p. 218).

The name of an author, or in Foucault's (1969) terms 'author-function', symbolises discourses and their cultural status (pp. 209-16). Authors become research categories and brands infused with expectations of style and its value (Citron, 2000, pp. 115-6). In musicology, author-function for a long time obscured music's socially-constructed nature, and especially the role of race, gender and class in the production of meaning (ibid., p. 119). In brief, author-function has become a simplified way of sidelining the epistemic complexity of human interactions. The proposed alternatives to the author-function include Foucault's focus on work and 'écriture' (the process of writing), Barthes's total elimination of the author for the sake of the reader as the maker of meaning, and Lipkind's 'affiliation', where the collective and community, or the 'centered-author' in Citron's terms, would be associated with the shared act of creation and organisation (pp. 116-8).

However, the author-function has such a fundamental role in our already existing organisation of knowledge that alternatives are as problematic as the original problem itself. Furthermore, obliteration of the author-function, just when feminists started to rewrite parts of our culture's narrative, 'would prematurely preclude recognition of female achievement, and the net result could be further suppression of women's artistic contributions', according to Citron (p. 118). She therefore proposes that a viable choice for women could be 'decentering of the author', understood as 'displacing the weight of the author-function by a lessened emphasis on the transcendent subjectivity of the author' (p. 119). In her view the focal point could move to social context and process, as a way to acknowledge the inherently complex and interactive nature of music. According to Citron this would help not only to demystify Western Art Music's author convention but also allow for more flexibility of interrogating and situating women's work. While it is essential that women are granted full access to options and privileges available to men, it is equally important to culturally appreciate and support the different ways of working and conceiving ideas that might be more suitable and desired by women and others who wish to move away from the author-function.

Can collaboration resulting in co-authorship in music be considered a feminist methodology? John-Steiner (2000) suggests that collaboration is an inherently social practice of mutuality and interdependence, therefore a process that goes against the male-established model of socialisation that frequently manifests as individuality and competitiveness (p. 100). In music it is the heritage of absolute music's transcendence that profiles single authorship as male. According to Citron (1994), 'Transcendence caps male psychological growth as the ego attains maximum separateness and goes beyond the here and now' (p. 23). Additionally, the resulting work-concept internalises a model of domination and subordination, characteristic of patriarchy. Baker Miller (1975) describes it as a system structured upon inequalities of access to resources, status and power, that stem from inability to comprehend, accept and co-exist with differences (pp. 3-13). In the domination-subordination model, the definition of inferiority and superiority is ascribed to groups of people and concepts, determining power relations (ibid.). It has been argued by feminist psychologists and psychoanalysts that the socialisation of women's thinking, learning and expressing themselves in a men-made society, contributed towards considering vulnerability, cooperation, emotionality, caring for others and mutuality as

weaknesses (Baker Miller, 1976; Gilligan, 1993; Clinchy et al., 1986). John-Steiner (2000) connects the marginalisation of women, minority and economically oppressed groups to their greater interest in collaborating (p. 100). It is however important not to consider working together and sharing knowledge, resources and authorship from a position of lack, but rather, as Grosz (2010) proposes, as a transformational freedom to choose autonomy from the prevalent model:

> Freedom is not so much linked to choice (a selection from pregiven options or commodities) as it is to autonomy, and autonomy is linked to the ability to make (or refuse to make) activities (including language and systems of representation and value) one's own, that is, to integrate the activities one undertakes into one's history, one's becoming. (pp. 151-2)

In her view, the feminist progress towards greater equality should be focused on expanding the cultural acceptance and recognition for a range of possible forms of expression, modes of knowledge production and perspectives for everyone, so that 'new interests, perspectives, and frameworks hitherto not adequately explored or invented' (p. 154) could be explored:

> (...) the challenge facing feminism today is no longer only how to give women a more equal place within existing social networks and relations but how to enable women to par-take in the creation of a future unlike the present. (ibid.)

So how widespread are collaborations resulting in co-authorship in new music in the twenty-first century? It is a slowly growing movement, and although there are examples of male co-authored works – for instance, *attraction* (2009) by Gerhard Stäbler and Kunsu Shim, and *Returning Odysseus* (2016) by Paul Zaba and Luke Deane – this alternative to the author-function is decisively led by women and minority genders. Examples include *Tyngdekraft* (2020) by Jennifer Torrence and Ane Marthe Sørlien Holen; *The Inversion* (2020) by Jessie Marino and Jessica Aszodi; *boundarymind* (2013-21) by Linda Jankowska and Katherine Young; *Ear action* by Neo Hülcker and Stellan Veloce; *Grafter* (2017) by Jessica Aszodi and Jenna Lyle; *Lizard Tongue* (2021) by Nina Dante and Bethany Younge; and *Vagus Correspondences* (2018-9) by Kathryn Williams and Jessica Aszodi, among others. The most frequently practiced co-authorship is the composer-performer duo partnership, when two musicians adopt the roles of all-encompassing co-creatives together. *The Duo Workshop* – a form of composer-performer workshop modelled after improvisation, performance art and visual arts duo practices – was scheduled to be

facilitated by Jennifer Walshe and David Helbich in 2020 at the International Darmstadt Summer Courses. Sadly, it had to be cancelled due to the pandemic-related restrictions. However, the growing popularity of the duo partnership will certainly continue to manifest in all sorts of creative partnership configurations in terms of disciplines, skill sets and gender expression.

There are of course other possibilities such as the work models of composer-performer collectives. Chicago-based Mocrep, British Bastard Assignments and American Ensemble Pamplemousse present two different types of group collaboration. The bulk of Mocrep's output is co-authored, with the creative credits distributed evenly between as many as six people (as in *Other Sensations* (2019)), or the authorship is shared between a collaborating non-member composer and the collective in order to acknowledge Mocrep's equally creative role in the making and performing of the piece (as in *#off-off-human* (2017) by Marcella Lucatelli and Mocrep). Bastard Assignments have a studio-based devising practice. They spend a great deal of time working together, undoubtedly influencing each other's ideas. However, they predominantly choose to assign single authorship to their pieces. Ensemble Pamplemousse presents a similar model. In their case the choice of pursuing a single-author model within a collective can be linked to some members' individual careers as composers writing for other ensembles. Conversely, their certainly 'unique virtuosic talents' (*About*, n.d.) and a wide range of interests could prove difficult to synthesize into co-authored works.

Co-composing and interdisciplinary virtuosity in *boundarymind*

The creative duo partnership that became the bedrock for my and Young's collaboration in *boundarymind* focuses on dialogue, liveness of exchange of ideas, and performing together. As a result, our work challenges established hierarchies of the work-concept and the sole-author convention. We accepted our distinct points of departure into this project, including our different education and career paths as a composer and performer, and together with our other collaborators merged our experiences and diverse expertise into complementary team skills. As a result, we learnt from one another, and honed new skills needed for conducting this project such as video editing, work with amplification, production and staging. Therefore, I regard the act of collaborating in *boundarymind* as a form of interdisciplinary virtuosity. Reiterating Born and Barry's (2013) typology, Young's

and my collaboration most likely exhibit integrative-synthesis and agonistic-antagonistic modes at the same time, simultaneously combining bodies of knowledge and criticising the boundaries and limitations of the disciplines. We observed more overlap in the way we think about our shared music making, rather than divergence resulting from supposedly different conditioning. This propelled us to enjoy and nurture the erosion of the socially-constructed border between composition and performance. The resulting performative installation and music, which I discuss in greater detail below, turned out to be idiosyncratic, unexpected and refreshing to our internalised modes of thinking about what music is, as well as to our perception of who we are as artists. Through a feminist approach to sharing authorship, resources and ideas, we entangled our process to the point of no return, meaning that we do not attribute any idea to one or the other. Moreover, interested in creating an extension of *boundarymind* into the community, we integrated an audience engagement idea that echoes Maggie Nichols's 'social virtuosity' (Tonelli, 2015). Through opening our process to the audience, we wanted to further cultivate the collective spirit of virtuosic music-making regardless of experience and ability championed by e.g., Nichols, in which all participating parties become creators of the event. Our work, among earlier mentioned examples of co-authorship, demonstrates that if more practitioners continue on the path of collaboration that fully disintegrates the single author convention, the future is likely to present more options of authorship not only artistically but also systemically.[29] This is why, following the earlier cited words by Grosz that modern feminism is about creating a future unlike the present, I consider collaborations resulting in co-authorship in Western Art Music a feminist methodology. Luckily, rather than being unique to women, co-authorship can be excelled at regardless of gender.

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[29] While International Property Law recognises multiple authorship in the form of percentages of rights attributed to a work, the funding bodies still lag behind when it comes to opening collaborative categories. There is however a striking difference between the visual arts context and Western Art Music. The artist duo co-authorship is a common methodology of working, with well-known and exhibited artists relinquishing their first names or surnames for simplicity of branding, e.g., Gilbert and George, Elmgreen and Dragset. In an unprecedented move the 2021 Turner Prize jurors have shortlisted five artist collectives demonstrating a shift towards decentralised authorship and supporting community-oriented practices (Jacques, 2021).

6.1.   The process of *boundarymind*

To facilitate better understanding of the act of co-composition I will begin by delineating the projected outcomes. As I am writing this chapter, the premiere has been postponed twice due to the COVID-19 pandemic. We are hopeful that we will be able to realise *boundarymind* live in Chicago in 2022. In the meantime, particularly in regards to staging and the audience participation element, I am still writing about our dreams, ideas and visions rather than facts. However, my Artistic Portfolio includes:

- *boundarymind*'s website - https://www.boundarymind.com/
- video recording of the live-streamed performance at ESS *Quarantine Concerts* in March 2021; (Dropbox #6.1)
  https://www.dropbox.com/s/novjv8udj63hvfc/6.1.mp4?dl=0
- video recording of work-in-progress installation at RomanSusan Gallery in Chicago in March 2021, featuring music for part 3, video projections by Kera MacKenzie and sculpture by Molly Roth Scranton; (Dropbox #6.2)
  https://www.dropbox.com/s/pr54tgm17gccsv1/6.2.mp4?dl=0

Boundarymind has been conceptualised for a specific venue, which is a three-storey townhouse (Fig. 17). The piece consists of four parts. In the lead up to the premiere, besides the ongoing online Call-For-Recordings we will also set up community recording events, opening to others our methodology of listening to meaningful objects. We intend to collect the sounds people share with us and weave them into the fabric of the piece. Additionally, the premiere performance will include a satellite string trio *bow breath crow* (2015-17), which I commissioned from Young for Distractfold. This piece belongs to the trajectory of our collaboration. The presentation is a promenade performance, which allows people to move freely between the rooms, where different elements will be installed. The room installation elements are:

1. A playable object sculpture for audience involvement e.g., a clay pot and a milk thistle flower amplified with dynamic and contact microphones; beaters, bow hair, Mardi Gras beads and pine straw for playing with on different amplified surfaces.
2. A room with small objects and ambiguous sound diffusion sources, decorated with photos and posters to resemble a child's bedroom.

The presentation begins on the third floor in a bedroom (Fig. 18), where Ensemble Chartreuse (Myra Hinrichs, Carrie Frey, Helen Newby) will play *bow breath crow.* We will begin cross-fading to part 1, which is situated on the ground floor (Fig. 19), by leading people downstairs carrying small Bluetooth speakers in the pockets of our jackets. The speakers will be diffusing short samples of sounds of my objects.

Figure 17: *boundarymind's* venue, 6018|N street view.

The piece will then proceed as follows:

- PART I - brief collective listening to the soundscape in the main performance space once everyone reassembles. The ground floor installation consists of 1. Chartreuse, Jankowska and Young walk around the room with small Bluetooth speakers diffusing samples of Jankowska's objects. 2. six boomboxes diffusing drone-like recordings of slowed down works by Beethoven, Mozart, Cindy Lauper and a field recording of Mississippi cicadas (Young's soundworld). 3. A recording of Young and Jankowska's conversation from a visit to Psary Wielkie in 2015 diffused via a

speaker hidden inside an old alarm clock that belonged to Jankowska's paternal grandmother.

- PART 2 - Young and Jankowska perform live with their childhood objects, amplified with dynamic and contact microphones, and with sound diffused via a quad of speakers. The object collection consists of clay pots, sleigh bells, poppy seed pod, dried milk thistle flower, antique coffee grinder, wooden butter press, brass jug, antique weaving brush, cement block, garden rake, pine cones, pine straw, vintage plastic toys, whistles and Mardi Gras beads.

- PART 3 - a mixed-media piece featuring a video by Kera MacKenzie is projected against Molly Scranton's sculpture. The sculpture is a set of woven panels made of bow hair, pine straw, and materials collected from people who supported us throughout the process of creating *boundarymind*, among other things.

- PART 4 - Young and Jankowska play an acoustic meditation on violin and bassoon, for which recordings of *boundarymind*'s objects were transcribed. This final performance is accompanied by a fixed media piece made of recordings collected during social recording events and the online Call-For-Recordings.

It all started with a simple email in February 2013. I asked Young whether I could play a solo violin piece she wrote. Interested in writing something new, Young offered to tailor the piece to my interests and strengths as a performer. This decision alone set off the tone of the process. It became conversational, personal and in many ways lacking a clear conceptual idea. At the start of the process we were strangers to one another. Through a series of email exchanges we shared recordings and links to music, art and literature in the hope of finding some common ground and a reason to make this piece. It took fourteen months since the date of the first email for us to finally meet in person in Chicago. Despite not really being familiar with one another, I stayed at Young's home for a few days to facilitate the process. We each had some ideas and curiosities we wanted to explore. I was drawn to wearable electronics and performative technology such as sensors, and to art installations that created ambiguous sonic scenarios. I wanted to hack objects and make them resound without performing with them. Young had a long-term interest in Kelly Link's (2001) short story *The Girl Detective*, which contains paragraph-long lists of lost,

found and misplaced objects. Looking retrospectively, talking about working with objects informed our conversations very early in the process. Initially we were just throwing ideas around to render this piece exciting and fulfilling to both.

 After eight years it is almost impossible to remember accurately the sequence of events. Which ideas came first? Which ones caught on better than the others? Sometimes however an emotional landmark is so memorable that it alters the course of the process between people for good. For us this was a conversation we had in a crowded bar in Ravenswood where I burst into tears, crying over missing my homeland and my culture, feeling misplaced yet detached from it (at that time I had lived abroad for seven years already). Young recalls feeling uncomfortable by such sharing from someone she had known less than a week, but the intensity and sincerity of this revelation made her suggest the pursuit of these feelings artistically. At the same time, she could relate to the uneasiness of geographic dislocation having moved around a lot as a child.

Figure 18: 6018|N, third floor bedroom where the premiere of *boundarymind* will begin.

Figure 19: 6018|N ground floor and main performance space.

After locating these empathetic resonances we asked ourselves various questions, trying to conceptualise the project further. In what ways do these variously distant cultural and geographical identities keep us grounded and give us a sense of permanency and belonging, even after repetitive migration? How are these identities transformed and reapplied in the places where we now live? How can we communicate to each other our past experiences? What does a significant childhood object or sharing stories convey about what it was like growing up in a certain culture? How have we distorted these stories and memories to serve our current projection of ourselves to other people, and how have they really understood what motivates and inspires us? (Jankowska & Young, 2020). From a very personal perspective, we became interested in communicating the challenges and possibilities of creating shared empathy while retaining and evolving individual cultural memories.

From that moment we committed to a long-distance transatlantic collaboration that necessitated coming up with ideas on how to meet to work together. Between 2014 and

2020 we met eight times in: Darmstadt, Germany (2014); Huddersfield-Leeds-Manchester-London, UK (2015); Gdańsk-Poznań-Psary Wielkie, Poland (2015); Chicago (2016, 2018, 2019) and Boston (2020), USA. Early on we set ourselves a task to return to the places from our childhoods that we mythologised in our memories. For me it was a cottage in rural Poland, for Young a house in Hattiesburg, Mississippi. The idea was to explore the sonic and visual potential of these places, collect objects, sound recordings, take photographs and let the memories germinate into other forms of artistic representation. It must be noted that both of us were privileged and lucky to have had access to these places and objects, which thanks to our parents and favourable conditions resisted scattering and stood the test of time in an almost unchanged fashion.

The following discussion of the creative process is based on an article Young and I wrote together for the 7th issue of the *CeReNeM Journal*, edited by Colin Frank (Jankowska & Young, 2020). While writing up my thesis is a lone endeavour, commitment to mutuality of presentation, responsibility for acknowledging the collaboration, and the sharing of workload have been crucial to sustaining *boundarymind* over a period of several years. To date we have never talked about the project publicly in separation. I would therefore like to express my gratitude to Katherine Young for the intellectual contribution she has made in shaping the following narrative.

6.1.1. Methodology

Boundarymind's foundation lies upon a slow and patient process of forming a very deep collaborative relationship and personal friendship. Friendship is in fact the project's primary compositional methodology. We created the world of *boundarymind* from a number of elements – objects collected from our childhood homes and donated by the people who supported our process, stories about our and our families' pasts, conversations about our artistic aspirations and visions of sharing the findings of our introspection in a meaningful and engaged way with the audience. Young and I committed to discussing every idea and decision. This means that none of the ideas, even if initially issued by one or the other, can be truly attributed to one person. The way we conceived of the structure always happened in dialogue e.g., the idea for part 3 as demonstrated in Figure 20. Young mentioned in passing, possibly in 2015 or 2016, adding a video element to highlight the visual side of the objects. I went to see Joan Jonas' retrospective at Tate Modern in 2018 and it triggered my memory of Young's idea. We kept discussing it further

and decided to ask Kera MacKenzie, with whom Young worked earlier on another project, to collaborate with us. Such a process, where one lets ideas brew and maturate aligns with Haraway's (2016) earlier mentioned concept of composting. Although not inherently collaborative, composting helps to embrace an ideation strategy that goes against the grain of outcome-focused product economy.

On Thursday, 28 June 2018, 15:23:37 BST, Linda Jankowska <***@***> wrote:

heart heart heart heart !!!!
let me know what Olivia says etc and on my return in a week I will be more helpful and communicative!
as a side note and another idea, just before I went to Rome I had been to Tate Modern to see the Joan Jonas retrospective and found this beautiful quote:
"I always thought the activity of putting one object next to another is like making a visual poem"

remember you had that idea for a very simple video of us putting objects together in some space? something as simple as assembling them on a table against a white wall or sth like that?
I think this would work really well for when movement 3 happens, so the electronic piece....
I think moving them in space literally might be somewhat a mishap as they are generally quite small, while a video poem might amplify them and give the music an extra dimension.
we'd need a screen in space but maybe that's doable?

also think that at the begging we should consider having a bow hair/pine straw playground installation on the ground.
like the kind of thing you were drawing/putting on the ground in Mississippi ?

anyways, just a playground for staging ideas…

Figure 20: An email exchange between Young and myself, depicting the seed of idea for movement 3.

As a result, we decided to be transparent about our methodology and dedicated an entire section on *boundarymind*'s website to depict our process through revealing email conversations, personal photos and videos of failed experiments among others.[30]

One of the most important skills that we have both sharpened during our collaboration is listening – to the hidden sounds of the objects, to the world surrounding us and to each other. This practice of deep and attentive listening stems from Pauline Oliveros' life's work and her views on identifying listening as an ethical action that determines how we conduct our lives (Oliveros, 2010, pp. 73-91). Inspired by Olga Tokarczuk's (2019) Nobel Prize acceptance speech *The Tender Narrator*, we also add tenderness to the list of crucial methodological abilities that helped us create together. Tenderness in Tokarczuk's words is:

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[30] https://www.boundarymind.com/process

a deep emotional concern about another being, its fragility, its unique nature, and its lack of immunity to suffering and the effects of time. Tenderness perceives the bonds that connect us, the similarities and sameness between us. It is a way of looking that shows the world as being alive, living, interconnected, cooperating with, and codependent on itself. (pp. 24-5)

Baker Miller (1975) hails 'intense, emotionally connected cooperation and creativity' as a crucial component for human growth (p. 27), an idea that further echoes in Haraway's (2016) concept of response-ability. Deane (Zaba & Deane, 2017) remarks that the act of co-composing transformed him as a human being – 'The collectivist and abundant spirit will live on in me for months following a performance' (para. 8). Similarly for us, friendship and tender listening as a creative methodology gave not only a scaffolding to *boundarymind*, but most importantly a new dimension to Young and me as people.

6.1.2. Materials

The choice of materials and objects has been from the onset driven by personal significance and memorability. We have therefore scavenged through the forgotten and dusty collections of things that surrounded us as children. Having acquired adult sensibilities and perspectives we re-imagined the potential of their purpose and materiality through plucking, scraping, bowing, squeezing, bouncing and more. We haven't bought any new objects, except a cement block and a garden rake, in an effort to remain genuinely connected to these historic materials. During summer holidays we each collected natural elements such as pine cones, pine straw and milk thistle flowers, and had friends help us gather them as well. Moreover, the more awake we became to the exacerbating effects of the climate breakdown and our own role in it, we foregrounded reusing and repurposing already existing things for the sake of not adding more unnecessary human-made mass to the environment. We expanded this process onto friends, asking them to donate their unwanted objects. These contributions are now a part of Roth Scranton's sculpture.

6.1.3. Score

Boundarymind does not have a traditionally notated score. Instead, it has a script, a website and a collaboratively managed google drive database, where we store every piece of information, reference and element that in one way or another is connected to the process. From grant applications to Premiere Pro sessions, we generated text files, spreadsheets, photographs, videos, links to seemingly unrelated references, and emails.

Figure 21: *boundarymind's* objects all put together. Photo credit Kera MacKenzie.

6.1.4.   Authorship

The question of authorship did not really form a part of our considerations or discussion until we started applying for grants and publicly discussing the project in an academic context. Unable to find collaborative grant categories, we each had to make an uncomfortable decision to apply individually, making it seem as if one or the other was behind the piece. This extraordinary state of affairs has been mentioned by Zaba and Dean (2017), as well as researched by Fraser (2019) who discovered that many of the major international composition prizes are lagging behind the collective interests of the field they are meant to support. In academic presentations and discussions with colleagues, Young and I primarily needed to restate the co-authorship of *boundarymind*, the fact that it has been co-composed, since Young is well known as a composer and improviser, while I acquired a label of a new music performer through my work with Distractfold. For the most part it was my role as a fellow composer that most frequently needed highlighting. These omissions of credit or disbelief prove that the single-author model has been deeply internalised and conditioned into the mentality of Western Art Music's practitioners. Young's and my musicianship benefited from co-authorship in very practical terms. We

both had to acquire new skills to be able to co-compose. For me those were mostly digital skills such as audio and video editing; for Young, working with objects and close-miking. But our co-composing could in fact be speedy. For part 3, for instance, we sat in front of each other at Young's kitchen table in Boston around 10 am, and from the edited audio files I had prepared before arriving, we finished making the piece in time for dinner. We each created textures, gestures, and layers and sent each other examples, which then one or the other organised temporarily. We frequently listened to the piece together and commented on what we thought was still missing. Organisationally it is hard to imagine that one person could cope with a project of the size of *boundarymind*, hence collaborating and co-authorship enabled us to fall back onto the other person if there was a grant or application deadline, and one of us has another work or life event to attend to.

I like to think of our co-authorship as holding two somewhat different maps of the same geographic location. There are similarities but the cartography is personal and subjective, therefore neither of us can be fully certain of the layout of the terrain of *boundarymind*. Neither of us knows exactly what the other is doing with her objects as none of our individual memories can be owned by the other. Neither of us remembers precisely how the ideas came about. We agree that perhaps the land of *boundarymind* cannot ever be delineated accurately and comprehensively and will forever remain primarily understood through the impact that it had on us as individual people.

6.1.5.   Collaborators

With the accumulation of ideas, which we strongly felt needed realisation, we decided to look for collaborators with expertise in video art and sculpture. That's when *boundarymind* grew not only in complexity but enhanced in quality and vision. Kera MacKenzie and Molly Roth Scranton each brought a unique perspective and new ideas that altered what Young and I have originally intended. The sculptural element is a good example. Young mentioned during our first meeting in 2014 that she imagined a bow hair and pine straw sculpture in the performance space. It was still very early to dream that far into the future, but we put this idea on the back burner and recurrently revisited its alternatives over the years (Fig. 20). From there on I started collecting bow hair by asking a few violin makers for donations. On one of my visits to Tate Modern, I saw a woven divider that Annie Albers collected during her trips to South and Central America (Fig. 22). I emailed Young a photo and asked whether we could have a pine straw and bow hair

divider similar to the one I saw at the Annie Albers retrospective. We thought it would add dramaturgy to the finale of *boundarymind*. Since none of us had the skills to weave, we took interest in Roth Scranton's work, who has explored weaving in her artist practice. When we met for a discussion in Chicago, having heard about our process and objects, Molly proposed to create woven panels incorporating materials donated by the people who supported us on our transatlantic back-and-forth journey (Fig. 23). Her idea added an extra layer of meaning to our work and helped us intensify the collective aspect of the process of *boundarymind*'s creation. It made us reach out to very many friends, colleagues and family members, who offered us various forms of help and support, from accommodation and rehearsal space, to time, skills and ideas, and ask them for their memorabilia or simply things hard to get rid of. We received ex-boyfriend's T-shirts, wedding rings from defunct marriages, earrings, gloves, shells, floppy discs, and stuffed animal toys among other things (Fig. 24). We wanted to show gratitude and honour the importance of our contributors by factoring their memories into the fabric of *boundarymind.* We also dedicated a separate section on our website to credit them individually.

MacKenzie and Roth Scranton retain author credits and rights for the parts of *boundarymind* they created. Although *boundarymind* remains co-authored by Young and me, our process of collaboration with MacKenzie and Roth Scranton is characterised by distributed creativity, understood here as network thinking and doing.[31] As the above example demonstrates, we engaged in various modes of intellectual exchange, influencing each others' practices. Redhead (2018) observes that 'awareness of network thinking has implications for the way that one experiences and analyses one's own practice' (p. 31). I argue that practicing this awareness is not only refreshing and full of curious discoveries, but also a necessary collaborative and artistic skill. Noticing when to foreground others for their ideas and contributions was long suppressed by the ideologies of individualism, single authorship, work-concept, and capitalism. Establishing creative partnerships with experts from other fields, who happen to be women, motivated Young and me to consider

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[31] Distributed creativity has been theorised in many different ways. There is scholarship that, among others, challenges the Romantic hierarchies of the work-concept and the notion of talent and genius through investigating composer-performer interactions; foregrounds the collaborative, distributed and network-oriented nature of creativity in musical process; discusses intermingling of cultural influences in the age of globalisation; researches the variety of approaches to understanding improvisation. For a more detailed perspective see Clarke & Doffman (2017).

our work from a feminist perspective of relationality, sharing, care and mutuality. Although MacKenzie and Roth Scranton have entered the network six years into *boundarymind*'s process, they are now vital partners in making decisions about staging and presentation, as we notice and value their creative impact, knowledge and perspective on what has once been Young's and my humbler and lesser vision.
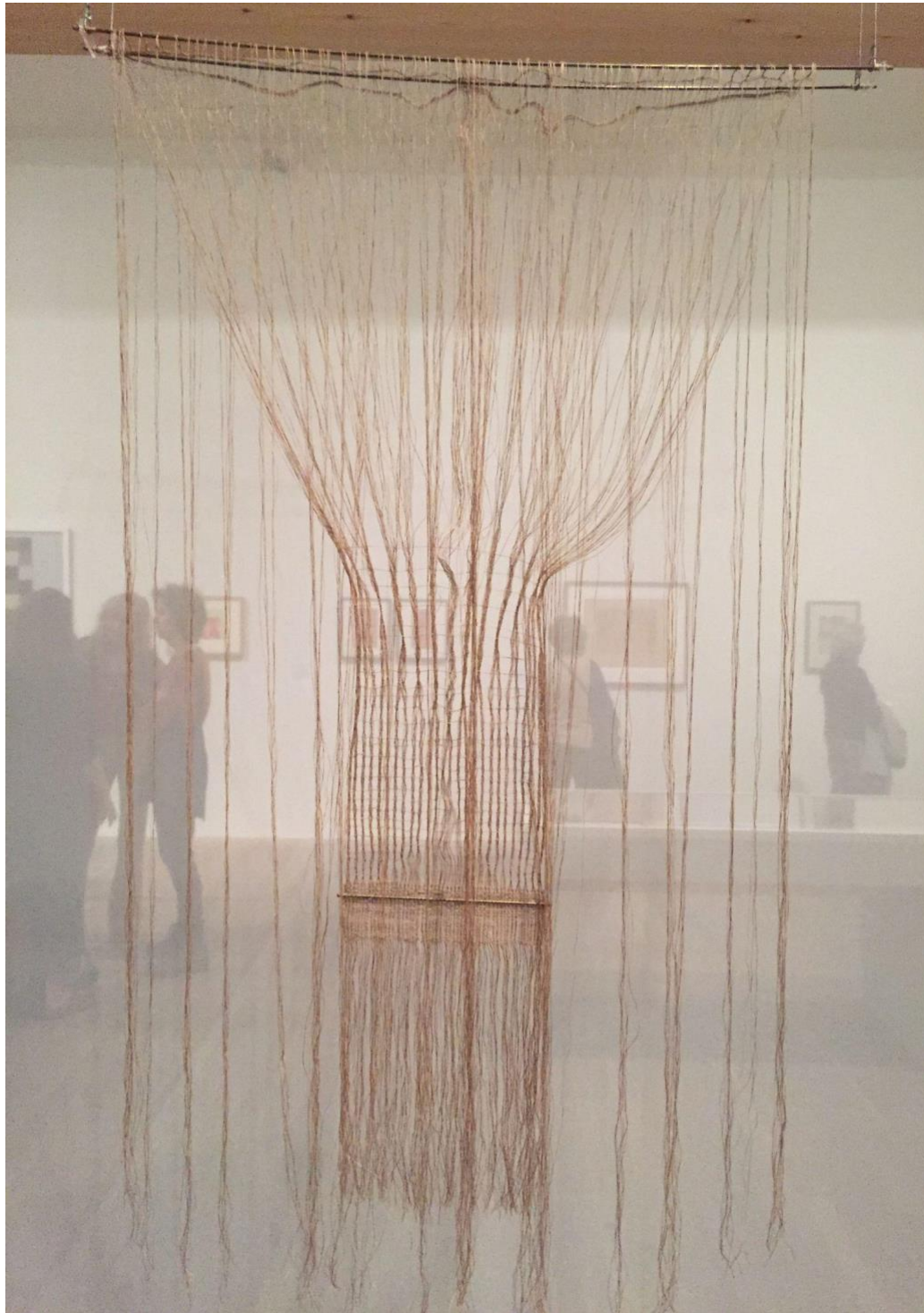
Figure 22: Woven divider, Annie Albers retrospective at Tate Modern, London, 2019.

Figure 23: Molly Roth Scranton's panels woven with bow hair, pine straw and objects collected from our friends, colleagues and family, who supported *boundarymind*'s process. Photo credit Molly Roth Scranton.

Figure 24: Close-up on Molly Roth Scranton's panels woven with bow hair, pine straw and objects collected from our friends, colleagues and family, who supported *boundarymind*'s process. Photo credit Molly Roth Scranton

6.1.6.　Public engagement

Having built a supportive community around *boundarymind*, including our production partners 6018|N and Experimental Sound Studio, we began thinking more intently about how we wanted to utilize our process and artistic practice further. It needs to be said that many more possibilities emerged the moment we met 6018|N' director Tricia Van Eck and

secured this multi-room venue (Fig. 17). We could also dream much bigger thanks to the production help and perspective of ESS's co-director Olivia Junell. While developing staging ideas, we asked ourselves two fundamental questions about our work. If people come to our show, how will they find it relatable? Why should they care about us exhibiting our artistic friendship, objects and homeland nostalgia? After all, our feelings and sentiments aren't particularly unique. In fact, we are profoundly aware that we have a substantial amount of privilege that allows us to take our musings as far as it has. We have not had to flee wars, cataclysms or personal traumas and leave everything dear to us behind, unlike so many people around the world. As much as possible we wanted to avoid being tone-deaf to these acute social problems and injustices. However, we hope that art, albeit driven by a degree of self-serving expression, can also be a manifestation of care for others – a container for imagining better alternatives to the aggravating elements of the systems we have built, for processing individual and collective memories, for healing and for collective growth. Our humble intention is not only to 'inspire others to reconsider what surrounds them, what they hold onto, how they interact with matter, and where do they store their memories' (Jankowska & Young, 2020), but more importantly to join our community of curious and tender listeners. We want to offer *boundarymind* methodology to others, who wish to reflect on the ways they listen to matter, and the ways in which their own imaginations and perception of memories impact their interaction with their loved ones and their broader community. Friendship and tender listening as an artistic method does not require special training but rather facilitation and invitation. This led us to envision community recording events during which we enable the process of listening to people's memorable objects by setting up stations with amplification, surfaces to play on and various sound inciters (Fig. 25). With consent and credit, we want to make recordings and weave these into the live presentation of *boundarymind,* as a way of creating a collective sonic tapestry, building other relationships and communities, and dreaming up a better collective future. Thanks to Junell's efforts, we were able to partner up with neighbourhood organisations RomanSusan gallery, PO Box Collective, and a local radio station Lumpen Radio. They are all instrumental in helping us spread *boundarymind*'s message and hosting social recording events. As mentioned earlier, during the pandemic we additionally opened an online Call-For-Recordings.

RE: Audience engagement idea for staging

On Thu, Jun 21, 2018 at 1:11 PM, Linda Jankowska <***@***> wrote:

hey Katie,

The other day I thought that if we could use the 2nd floor of 6018 N we could set up a room with microphones, some resonant surfaces, friction surfaces, mallets, and this could be a room where people could bring their memorable objects to play with.
We would have to announce it in the programme invite and make it a part of the show.
As in ask people to bring sth with them, if there is anything that has significance for them.
If they liked their sounds, we would ask them to leave a recording (we would facilitate some recorder) plus a short story or description of a memory to do with the object.
Would be also great if someone could take a picture of the person with the object.
Later we would mash up, or maybe someone from ESS would want to collaborate on a mash up of these recordings to create a blend of memories of our visitors.
In ESS's audible gallery we could display the short stories, pictures, some of our objects and this electroacoustic piece (to be listened through headphones ?) as a memory from the event and a blend of many people's sonic memories ??

It's just a thought as I have no clue how their audio gallery looks like :D
Maybe if you like it you can mention it to Alex tomorrow...

L xxx

On Thu, Jun 21, 2018 at 2:36 PM, katherine young <***@***> wrote:

this is a lovely idea. i will definitely bring it up with alex!
xoxok

Figure 25: An email exchange demonstrating early stages of the audience engagement's idea.

6.1.7.   Different forms of relating

Young and I created *boundarymind* urged on by a need for another kind of work process between a composer and a performer, a different way of relating to an audience, and a chance to utilize deeply personal materials such as objects and memories in a musical manner. When we started our collaboration we had neither a deadline nor a commission that would motivate us to cut the project short. Instead, as we became closer friends, we let it grow in layers, dimensions and collaborators. We never wondered whether there is anything special about our way of working. We both wanted to make each other curious and excited, fulfilled, listened to, respected and acknowledged. We wanted to support each other, exchange skills and help each other grow intellectually and artistically. We tried to be both empathetic and fair. While neither of these activities are uniquely feminine, we recognise that we behaved this way professionally and as a matter of fact because we are female. 'Life in relations' and community-building come easier to us due to our conditioning. It is precisely what sustained *boundarymind* for eight years. Baker Miller

(1975) reverses the long-considered argument that traits attributed more frequently to women such as vulnerability and emotionality are weaknesses. Instead, she identifies them as crucial strengths, that together with cooperation and participating in the development of others become basic necessities for survival of humankind (pp. 29-52). In her work on the ethics of care, Held (2006) emphasizes that unquestionable interdependence, mutual care and relational concern should be considered essential tools for the advancement of society. In *boundarymind* we could actively foreground these concerns as a creative methodology. This led us to notice that we can have an alternative approach to authorship despite starting off within a frame of a composer-performer collaboration. As a result, we stumbled upon a deep seated, yet often repressed feeling that we might have different artistic desires than those shown to us as formats and options at school. Composition and performance were taught to us as two separate disciplines, with different curricula and approach to music making. We ended up with two quite different skill sets. For more than a century performance and composition coincided precisely when there was a need to test some ideas, to collaborate. Recently however, more composers have shown interest in returning to the stage to perform in their own pieces, and more performers decided it is time to make their own music. And while both tendencies have been granted scholarly attention (Torrence, 2018; Groth, 2016), the argument for a composing performer still resonates a bit more like 'freedom from' rather than 'freedom to' (Grosz, 2010). It cannot be underestimated how deeply performers internalised the conditioning in the idea of serving the work and the composer, instead of experiencing the uninhibited joy and unrestricted freedom to simply make music. A composing performer, often formerly known as a virtuoso, is still establishing a voice amidst the system of internalised hierarchies and disciplinarian divides that we have grown to accept as status quo of Western Art Music. But rather than simply switching sides, composing performers might be leading this culture's evolution towards a more equal and generalised practice of sound, a practice that is performance-led rather than score-oriented.

6.1.8.   The New Virtuosity

After Walshe's (2016) widely discussed *The New Discipline* manifesto, which some commentators recognised as being primarily directed at composers (Kanga, 2021; Laws, 2018), there was time for a complementary contribution that more completely departed from the single-author model. While Walshe underlines that her manifesto is not an

aesthetic but rather an articulation of a specific way of working, Cat Hope and Louise Devenish's (2020) *The New Virtuosity: A Manifesto for Contemporary Sonic Practice* manages to be both. It simultaneously offers ideology and methodology, embracing practitioners of all denominations and disciplines. It states, among others, that the New Virtuosity:

- is built by the community of artists, rejecting the single-author model.
- is rigorous, generous and vulnerable.
- is an infinitely evolving network of ideas and articulations.
- thrives on curiosity and transferral of ideas across mediums.
- finds compositional materials in individual performers and their experiences.
- is a practice-led discovery in process.

In this decisive move to attribute the concept of virtuosity with both social and artistic paradigms, Hope and Devenish prove that the history of ideas is neither static nor fixed. Concepts evolve alongside humanity, and in its wobbly trajectory between praise and condemnation, virtuosity can seek to determine new values and virtues that our modern society needs – cooperation, collectivism, interdisciplinary collaborations, relationality and empathy.

I chose to analyse *boundarymind* as an example of interdisciplinary virtuosity since Young and I arrived at co-composing from two different angles and with seemingly two different skill sets. Interdisciplinary virtuosity in our case has a feminist and collaborative focus. This expression of the concept exhibits all the features of the above-mentioned New Virtuosity and doesn't need to be considered as distinct from it. Unlike earlier examples of hybrid virtuosity and virtuosity of adaptability, I do not seek to distinguish between my understanding of interdisciplinary virtuosity and the concept of the New Virtuosity. On the contrary, I welcome the additional points that Hope and Devenish raise in their manifesto, which my definition omits, such as inclusivity and diverse physical abilities. In my practice, as this research demonstrates, I have attempted to move between the disciplines of percussion, composition, electro-acoustic performance and movement, based on collaborating with and learning from other practitioners. *Boundarymind* as an example of interdisciplinary virtuosity intensified my belief that collectivism and co-creation are potentially the fiercest forces of artistic growth, and that concepts such as composting,

response-ability and friendship as a compositional method radically disrupt virtuosity's fixation on individualism, as a result helping to conceptualize its meaning for the twenty-first century. From this perspective great virtuosic skill is social, relational and collaborative.

7.

Marionette - searching for violin and movement interdiscipline. Violinist as a string puppet.

In my final case study my investigation of interdisciplinary virtuosity circles back to its point of departure – Shlomowitz's (2016) understanding of the concept as a feature of performance practices integrating 'non-musical elements' such as theatricality and movement. Elsewhere I have written with colleagues about violin repertoire that incorporates such non-musical elements (Sekulic et al., 2020). After some investigation, we realised that no solo violin pieces of this kind can be found. However, there are a number of ensemble pieces. One branch explores team work, such as where the instrument is performed simultaneously by more than just a solo player e.g., Kate Soper's *Cipher* (2011) for violin and soprano, where at one point the singer approaches the violinist with a seemingly casual interaction; Tyler Futrell's *Pas de Deux* (2014/2015) for violinist and performer, where the performer alters the gestures of the violinist as if learning to become the instrument; and Samuel Cedillo's *Estudios de Contrapunto 1* (2015/16), where a second performer joins the main performer with additional bows to play on the same instrument (ibid., pp. 47-8). The other branch comprises ensemble works exploring various kinds of theatricality such as Steven Kazuo Takasugi's *Sideshow* (2009-15), where the theatre of the face is mixed with instrumental playing; Natacha Diels's *Second Nightmare, for KIKU (2013)* and Alexander Schubert's *Sensate Focus* (2014), where theatrical gestures are rhythmicised and integrated into the composition; Michael Beil's *Black Jack* (2011), a piece exploring coordinated stage walking; and Matthew Shlomowitz's *Lecture About Sad Music and Happy Dance* (2017)**,** where the violinist is at once a player and an actor reciting a lecture.

To complete my research, given the lack of solo pieces involving elements of movement and theatricality, I had to either commission a new work or conduct the experiment of arranging an existing piece. While looking for anything remotely theatrical involving violin playing that had a potential for expanding in that direction, I took interest in Elena

Rykova's *Marionette* (2014) – a solo piece for amplified violin that introduces theatrical freezes, as well as a few forward bends while holding the violin. I thought of creating my own arrangement of the piece that would introduce more marionette-like gestures. Albeit not intended as a theatrical piece, *Marionette* seemed perfect primarily because the piece has a very evocative sound world, achieved practically without the left hand. It is based on several percussive sounds imitating the sound of a wooden string puppet, all created with the bow. I wanted to see if I could maintain similarly convincing sonic results while altering my movements to look more like a string puppet. The other reason was that marionettes are inanimate objects that mimic humanity. Their movements can be awkward but aim to look human. I thought this was an interesting challenge for my body awareness, which could push me towards unexplored territories and a new understanding of violin technique, possibly resulting in interesting research findings. I consulted with the composer, who agreed to my idea with curiosity.

As a first point of enquiry, I needed to learn how string puppets move. In a stroke of luck, I met Italian musicians from Quartetto Maurice who knew a puppetry artist in the UK – Stephen Mottram. I travelled to Oxford in January 2020 for a workshop at Mottram's home studio, which I documented on video. The following case study is an analysis of our work session and the video recording of my final experiments, which I completed at the University of Huddersfield in May 2021. Unlike previous case studies where I reviewed applicable literature and quoted interviews pertaining to the topic of the case study, in my final case study I want to focus primarily on analysing the video documentation, as this chapter is the only part of my thesis that discusses a work that has not and possibly will never result in a live performance of this arrangement. My aim is for this experiment to be treated on a par with the other elements of my artistic portfolio, despite the lack of public performance. Moreover, rather than derive concepts and methodologies from theatre and dance studies, I focused on exploring what my own body is capable of, as per Spatz's (2015) concept of technique as embodied knowledge 'which is made up of countless specific answers to the question: What can a body do? (…)' (p. 1; see also discussion in Chapter 2). On closer examination I realised that every theatre method is specific in its assumptions, and although some analogies can always be found, I could not find answers to my technical problems pertaining to marionette movement by reading about acting and moving. I had to create a work-specific technique, or rather an arrangement-specific

method for myself. I started my work without preconceptions because I didn't really know what could be possible for me to achieve. In brief I did not know my body well enough to imagine a result and work towards it with certainty that I could make it happen. My primary interest was in understanding the possibilities and limitations of theatricality involving violin playing and the full scope of the violinist's body, as opposed to the kind of theatricality where an instrumentalist is, for example, walking, reading or character acting in addition to playing one's instrument.

I very quickly understood that there is one fundamental reason why instrumental theatricality is so hard to do well. The main problem lies in an altered sense of instrumental control and balance. Pianist Catherine Laws (2018) notices that the instrumentalist's body is disciplined and shaped by the instrument and its repertoire, which she calls 'a system of regulation' (p. 177):

> It is through the longer-term relationship with the instrument, triangulated with the demands of practising a particular repertoire, that the body develops a specific gestural vocabulary, but one which continues to transform according to the affordances of specific pianos and specific pieces. (p. 176)

Violin method compendia such as Galamian's (2013) *Principles of Violin Playing and Teaching*, Havas's (1998) *A New Approach To Violin Playing*, and Rolland's (2010) *The Teaching of Action in String Playing*, each of which were derived from and dedicated to the classical style of violin playing, focus on physical coordination through symmetric and balanced posture, on the dexterity of the left hand, and on flexible bow arm movements. Although Rolland's approach has incorporated elements of full body awareness by including playful rhythmic walking games for beginners, the main priority of violin education is given to upper-body and micro finger-fitness. The repertoire from which this focus originates includes much of the Romantic virtuosic pieces and concerti. Although virtuoso performances were originally highly dependent upon their theatricality and physicality, and the stage persona of virtuosi was strictly connected to the reception of their skill, modern recording technology shifted the focus of much of the pedagogy towards perfection and achieving impeccable, recording-quality control. The sound-

producing hands and fingers are considered independently from the rest of the body, to which much less attention is given.

This approach is however not unique to violin playing but rather manifests throughout the various instrumental groups. Historically an instrumentalist's body has been defined by the instrument it could skilfully operate. Western Art Music compositions in the Absolute Music tradition, even if frequently written for particular instrumentalists with specific faculties, are presented as if written for general materials and tools e.g., Berio's *Sequenza XIV for cello* instead of *Sequenza XIV* inspired by Rohan de Saram's unique merger of sound cultures. The sidelining of the performer's self, both one's singular experience and one's physicality, in order to foreground disembodied meaning-making through sound, developed a paradox of physical neglect in Western Art Music. Bodies on stage at once matter enough for composers to seek out live performances, but at the same time not enough to factor their specificity into compositions. Aszodi (2017) remarks:

> Practitioners of serious music have often neglected to take their physical selves seriously as the material through which meaning is conveyed—beyond what might be required to produce the desired sounds and images for their notations, interpretations, or publicity photographs. (para. 2)

However, as Walshe (2016) observes, the cultural shift away from a purely cochlear perspective on Western Art Music and towards an embodied form of expression has already been happening for a while. Walshe argues:

> Perhaps we are finally willing to accept that the bodies playing the music are part of the music, that they're present, they're valid and they inform our listening whether subconsciously or consciously. That it's not too late for us to have bodies. (para. 6)

Doesn't this perspective carry distant overtones of Romantic virtuosity's focus on performer's demeanour and stage presence? With the metamorphosis of instrumentalists into new music performers (Torrence, 2019), their individual and singular physical faculties will undoubtedly shape new repertoire and forms of expression. From this point of view, the non-musical and interdisciplinary elements of new music, in necessitating learning how to foreground the body on stage anew, do in fact lead to a new form of virtuosity.

An instrumentalist interested in engaging with movement and theatrical elements in which they were not trained needs to embark on a journey exploring their body consciousness through all sorts of additional means. In May 2021 I attended a virtual conference *Framing the Normal: Examining Embodied and Artistic Practices in Musicians Movement Repertoire* at the Royal Conservatoire Antwerp, exploring various related topics, among others the consciousness of one's body. Dance practitioner Magda Thielemans (2021) suggested that physical awareness can be initially nurtured by various basic exercises that anyone can do, such as mindful walking and breathing and simple unstructured moving. This helps a musician remember how to stay present in one's body. Furthermore, when greater body awareness becomes an inherent part of one's daily instrumental practice, one can discover what a specific gesture or movement feels like and what muscles take part in the activity, which movements are economic and can be done with least resistance, and which ones are strenuous and why. Most importantly one can become more attuned to the rise of tension in particular areas of one's physiology and learn ways to release it in order to create finer, more intent gestures. Such an approach echoes the Gaga movement language developed by Ohad Naharin. In a public letter written to professional and amateur dancers in the early months of COVID-19 lockdowns, when classes moved online, Naharin (2020) recalled the following awareness-grounding steps, which he calls 'magnificent passives, the things we need to be aware of that don't require extra effort':

– Flow of energy

– Negating gravity

– Distance between our body parts (form)

– The sense of plenty of time (being in the moment)

– Sensing the distance of things with our skin (give, receive, generosity)

– Pleasure (decorated from the inside, delicacy)

– Letting go (surrendering, horizontal spread)

– Gravity slicing us on a molecular level

– Groove (the connection to the rhythm/speed of gravity)

– The virtue of lightness (ability to laugh at ourselves, piece of cake...) – Sense of wow (sublime, bliss...)

– Availability (for movement in all of our joints, and to change our mind) [32]

These prompts are meant to facilitate points of mental focus while moving, in order to step out of one's default modes of physical behaviour. Appropriate to all levels of fitness, Naharin's movement language can help movers stay present in the moment of action.

There is of course no shortage of other practices and methodologies to learn from, and each practitioner should investigate what interests, motivates and helps them in developing the skills needed for whatever they are working on. When asked about learning from other movement methods Thielemans (2021) concluded – 'I made my own soup from the practices I observed'. As a result, her perspective on musician movement is open and full of encouragement, rather than dogmatic. Other panellists of the *Framing the Normal* conference highlighted the need to stay physically fit overall. Percussionist Håkon Stene admitted to practicing yoga and tai chi, which help him with flexibility and coordination, especially when creating physically demanding choreographies for multi percussion set-ups. Similarly, Jennifer Torrence (2019) and Kathryn Williams (2021) discuss incorporating movement classes and physical training alongside their instrumental practice routine. In addition to practicing mindfulness meditation and Iyengar Yoga, which I have had interest in for some time outside of this research, I engaged with Gaga/people and 5Rhythms in order to sensitise myself to how my body feels and what it can do in preparation for making the arrangement.[33] When I started working on *Marionette* I immediately felt the need to work out and stretch more often. I knew that patience was required. Musician movement, regardless of what it entails, if regarded as an instrumental technique like any other, requires systematic, focused and dedicated

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[32] At the time of writing this chapter the article has been removed.

[33] Gaga is a movement language developed by Ohad Naharin. Gaga/people classes offer non-professional movers of all abilities a framework for connecting with their bodies, ideas and physical sensations. The practice is improvisatory yet facilitated by trained teachers of this language, who through a series of imaginative instructions guide the movers through a multisensory physical challenge (*About Gaga*, n.d.). 5Rhythms is a therapeutic dance and movement practice developed by Gabrielle Roth. Classes are open to people of all ages and abilities. The practice consists of 'Maps of the 5Rhythms body of work – Waves, Heartbeat, Cycles, Mirrors and Silver Desert – moving individuals through sessions focused on Body, Heart, Mind, Soul, and Spirit'. During the classes movers explore different dancing frameworks and paces in order to connect one's body with the conscious, subconscious, spiritual, emotional and creative parts of one's being (*5Rhythms Cosmology*, n.d.).

practice. Full body awareness and fitness develops gradually over a long period of time. Although a crucial skill for all music performers whose bodies channel sounds, gestures, movements and words, it is so far only considered necessary in music-theatre and opera training, while instrumental training does not consider musician movement as a skill of equal importance to orchestra training or chamber music. To counterbalance the conditioning of the pedagogic system, instrumentalists do need to exhibit a fair dose of personal interest and motivation in learning new body-oriented skills.

Aszodi (2017) suggests that practitioners who would like to find new methodologies of working and rehearsing musical works that involve the body need to prioritise documentation and self-evaluation of rehearsals and performances. According to her, 'Journaling, peer-feedback, video-documented rehearsal, and the honest assessment of those materials is key' (para. 10). I used precisely this approach in conducting my research and the following case study discussion, which takes the form of a detailed analysis of my workshop with the puppetry artist Stephen Mottram and the resulting experiments with arranging Elena Rykova's *Marionette.* I use video excerpts from both sessions, as well as puppetry movement examples which Mottram kindly recorded for me, to demonstrate what I have learnt from Mottram and the results I arrived at in my practice. I compare these against what Rykova indicated in her score. The videos of the full workshop with Mottram, as well as the entire folder of string puppet movement examples are listed in Appendix 1. The selected excerpts from the sessions and marionette movement examples pertaining to specific points in my analysis are available as a part of my Artistic Portfolio and correspond with the figure numbers in the List of Figures.

7.1. The process of arranging Elena Rykova's *Marionette*

7.1.1.   Workshop with Stephen Mottram in Oxford, January 2020.

7.1.1.1.   Balance and weight

Before I went to Oxford to work with Mottram, I had learnt *Marionette* exactly how the score indicates. The original work references puppetry both through theatrical and sonic elements. The theatrical gestures such as stage freezes and forward bends which aim at depicting marionette's inanimacy are occasional and not the primary focus of the work.

The sonic materials, which are percussive – combinations of con legno ricochets ranging from a single string to the full length of the fingerboard, con legno battuto rhythms played on the bridge, left-hand pizzicati and glissandi with bow screw – shape the work's character, which could be described as clacky, plucky and woody.

The workshop started with Mottram explaining to me the basics of human movement - how we transfer body weight by creating sideways movements in order to stay in balance (Fig. 26). In order to take a step, rather than forward, we move in a wide diagonal movement.

Figure 26: Video excerpt from workshop with Stephen Mottram; discussing basics of human movement. Available in Artistic Portfolio as (Dropbox #7.1)
https://www.dropbox.com/s/x9uc51mycrb2ow6/7.1.mp4?dl=0

By contrast, a marionette hangs on strings and is controlled by the puppeteer from above uniquely by an upward force of a pull of a string. Any sideways movements of the puppet are a result of a swing that follows the pull. Since the puppet does not have agency to stand by itself, it does not need to adjust its weight in order to stay in balance. By design marionettes look a bit out of balance: 'Their centre of gravity looks a bit "off" ', says Mottram (personal communication, January 29, 2020). In order to resemble a string

puppet's behaviour, I was advised to look for ways that would disguise my humanity, either by doing the balancing sideways movement before the main gesture or doing it in a different way.

Mottram suggested a couple of ideas related to looking off-balance (Fig. 27). The first one was to sag my knees, which is a trick frequently used by puppeteers to make the marionette look more animated and grounded instead of having its feet hovering above the floor. By dropping my body's weight, I could play with it in a performative way and seem like I am not fully controlling my limbs.

Figure 27: Video excerpt from workshop with Stephen Mottram; discussing an idea on how to look off-balance, specifically sagging the knees. Available in Artistic Portfolio as (Dropbox #7.2) https://www.dropbox.com/s/vwko33hcqxcbxh6/7.2.mp4?dl=0

Another idea involved rotating my entire body while standing on one leg in order to look 'dead', as if my agency was in fact determined by someone else (Fig. 28). This gesture requires a fair amount of inner balance and initially felt hard to achieve. I was told to stay upright as much as possible, otherwise any amount of leaning forward would possibly result in me falling. Many months later when I was making my arrangement, I found the trick challenging and despite some efforts and relative success during home practice, I

ended up not using it in my final recording, as I could not convincingly deliver a full rotation without touching the floor while moving.

Figure 28: Video excerpt from workshop with Stephen Mottram; discussing an idea on how to look off-balance, specifically rotating the entire body while lifting one leg. Available in Artistic Portfolio as (Dropbox #7.3) https://www.dropbox.com/s/pfm08s1z6yhkyf7/7.3.mp4?dl=0

7.1.1.2. Walking and bringing up the violin

After discussing balance and weight, we workshopped walking, bringing up the violin, head movements and marionette gaze. Walking is difficult for string puppets, says Mottram:

> Usually the strings only pull up the knees, allowing the lower leg to swing forward under the knee and slop down on the floor somewhere in front. Often the steps seem too big for the size of the puppet, giving the impression of artificially large and cumbersome leg movements which appear not to support the weight of the puppet since the centre of gravity often appears too far back. This is because the strings are pulling the legs forward at the knee (literally from under the puppet), instead of the body moving onto the supporting leg, which is what we do when we walk. (S. Mottram, personal communication, January 29, 2020)

Video excerpts in Figure 29 and Figure 30 demonstrate the action. I was advised to work on artificially large steps, while the body drifts forward.

Figure 29: Video excerpt demonstrating marionette walking as well as bringing the violin up by sliding it up the body. Available in Artistic Portfolio as (Dropbox #7.4) https://www.dropbox.com/s/o4t02last036k17/7.4.MOV?dl=0

Interestingly the puppet can only bring the violin up by sliding it up the body, as demonstrated in Figure 29 and Figure 30 I found it very interesting and later incorporated this gesture into my arrangement.

Figure 30: Video excerpt demonstrating marionette walking as well as bringing the violin up by sliding it up the body. Available in Artistic Portfolio as (Dropbox #7.5) https://www.dropbox.com/s/74z2dpp5tv8sfzd/7.5.MOV?dl=0

7.1.1.3.   Head movement, sympathetic movement and marionette gaze

A marionette usually moves its head from side to side by dropping it forward initially, followed by a rotation in the neck. It is a characteristic string puppet movement meaning that the puppet is unlikely to look around while keeping its head straight up. Figure 31 demonstrates possible head movements.

Another typical marionette movement is the sympathetic swinging movement in another part of the puppet's body e.g., Figure 32 demonstrates how dropping the head and bending the body upwards creates swinging movements in the puppet's arms.

The characteristic gaze of a string puppet gives an impression of a 'dead' gaze. Marionettes tend not to be able to follow a movement with their eyes' says Mottram, so we read them as inanimate. Marionettes frequently look off centre since they cannot look straight at what they are doing. Figure 33 exemplifies Mottram advising me how to achieve an expressionless face and gives tips on performing this way. His advice is to look off centre or in the wrong direction while facing the audience, as well as keep a gaze that is out of

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focus, especially when turning and bending. As a result, in the video documentation of my final arrangement (discussed in section 7.1.2.), I play from memory whilst facing the camera and attempt to look as if I was devoid of consciousness.

Figure 31: Video excerpt demonstrating string puppet head movements. Available in Artistic Portfolio as (Dropbox #7.6) https://www.dropbox.com/s/db4ulc1tqwp99jq/7.6.MOV?dl=0

Figure 32: Video excerpt demonstrating sympathetic swinging movements of the puppet's arms.
Available in Artistic Portfolio as (Dropbox #7.7)
https://www.dropbox.com/s/kocg8q9psd75mke/7.7.MOV?dl=0

Figure 33: Video excerpt of a discussion about the marionette gaze and general string puppet stage demeanour. Available in Artistic Portfolio as (Dropbox #7.8) https://www.dropbox.com/s/j8yb0u8kvzwmqk5/7.8.mp4?dl=0

7.1.1.4. Bow movements

Finally, we worked on bow movements and gestures, and workshopped them using the opening sequence of *Marionette*. One of the primary things I learnt was that the bow of a string puppet violinist is controlled by a number of strings attached to the marionette's hand and the bow itself, depending on how the puppeteer designed the interaction. In the case of Mottram's marionette there was one string attached to the middle of the bow, another to the bottom end of the bow, and yet another to the marionette's forearm. As per the rules of puppetry, the action can only be controlled upwards with a pull. This means that the bow can move upwards easily and fast. It can also fall relatively quickly, but a marionette will never be seen bowing laterally. Figure 34 shows the tentative bowing of a string puppet violinist. The tip of the bow frequently shakes and goes sideways due to it not being attached to a string. The wrist bends in and out depending on direction, just like in human violin playing. However, the string puppet bowing is characterised by an extreme bend of the wrist inwards on the down bow.

Figure 34: Demonstration of a tentative bowing of a string puppet. Available in Artistic Portfolio as (Dropbox #7.9) https://www.dropbox.com/s/tpj5ffuba0ohqw8/7.9.MOV?dl=0

Another important feature of marionette bowing is the diagonal direction of the arm movement, which is led by the bow, in contrast to human bowing which is controlled from the forearm. As there are just a few strings controlling the bow, it tends to have a much smaller trajectory and moves slightly backwards on the down bow. The human bow arm opens in the elbow and a violinist controls the bow from the forearm until it stretches fully at approximately 180 degrees angle. A marionette cannot do that since no lateral movements are possible. Mottram advised me to practice holding a stick imitating a bow and pulling its end with my other hand as if someone else was doing it for me (Fig. 35). It should feel as if the bow was leading the movement instead of the arm. Unsurprisingly it was difficult to do, as I could not let go of controlling the movement. Letting go of agency, in the muscles and mind, while at the same time performing complex actions with intent has been one of the key difficulties in creating this arrangement.

Figure 35: Video excerpt from workshop with Stephen Mottram; discussing arm movements led by the bow and practicing letting go of my agency when performing them. Available in Artistic Portfolio as (Dropbox #7.10) https://www.dropbox.com/s/5aa1l6xhbuqwdwi/7.10.mp4?dl=0

Figure 36 demonstrates bow movements pertaining to pizzicato. In the case of a marionette this technique involves substantial elbow movements, as well as moving the head away from the violin (otherwise the head is in the way of the marionette's arm). Mottram suggested I do artificial elbow gestures to intensify the character of a string puppet. The same video excerpt also showcases how the puppet's bow rocks when held away from the violin due to there being no string attached to the tip of the bow. I used this rocking bow gesture in my final arrangement.

Figure 36: Video excerpt from workshop with Stephen Mottram; discussing pizzicato and bow movement when the bow is held away from the violin. Available in Artistic Portfolio as (Dropbox #7.11) https://www.dropbox.com/s/n6ixku7t7mwcsw1/7.11.MOV?dl=0

7.1.1.5.   *Marionette* opening sequence - coming up with ideas

Mottram's demonstrations and explanations of the above-mentioned string puppet gestures became the groundwork for my early attempts at arranging *Marionette* under his guidance. I describe my arranging decisions in greater details in section 7.1.2. Figure 37 shows our process and indicates the ideas that came from Mottram – namely, how to hold and move my bow when my body bends down, and how to comport myself, when I am bent. Mottram asked me to practice without a violin, only using a stick resembling the bow in order to focus on creating a connection with the new movements, and away from the tool and its technique that conditioned my physical behaviours. He also continuously reminded me not to move my body up and down when bent down, since a marionette cannot do that.

Figure 37: Video excerpt from workshop with Stephen Mottram; early attempts at arranging the opening sequence of *Marionette.* Available in Artistic Portfolio as (Dropbox #7.12) https://www.dropbox.com/s/9kbivuos2xga9i9/7.12.mp4?dl=0

7.1.2. *Marionette* arrangement

I left Oxford feeling hopeful yet unsure whether I could create this arrangement on my own. Mottram did suggest I search for a choreographer to work with. The global situation that followed our meeting in early 2020, made it particularly difficult for me to find a sensible solution throughout 2020. I was reluctant to attempt to work over Zoom. Eventually I asked a fellow PhD student and theatre practitioner Ilona Krawczyk for some tips regarding sensitising my body to marionette-like movements. Krawczyk suggested I focus on an all-encompassing feeling of supineness and relinquishing of agency, both in the way I look as well as in the way I narrate my internal performer monologue. She recommended practicing a facial expression that is absent from tension and thoughts, as well as a near complete feeling of weightlessness and release in the body which I could practice by rolling and turning over on the floor. Finally, she taught me how to alienate movements in the joints so that they can be performed as if in separation from one another (personal communication, July 4, 2020).

After a thorough examination of the documentation from the workshop in Oxford, I made the first attempts at arranging *Marionette* in early 2021. I asked myself three fundamental questions. What kind of articulation can I create when the primary impulse for movement comes from an upward pull and subsequent fall? What kinds of bow gestures are possible if I am not looking at the violin and therefore not controlling the bow's placement and balance? What kind of sonic properties do marionette-like gestures have and is it possible to maintain the character of Rykova's *Marionette*?

Early on I decided to play the piece off by heart, facing the audience, which helped me in memorising my own choreographic decisions. Despite making some written notes above the original score, I found it more efficient and immediate to simply try to memorise my experimentation as it was happening, even if later on I changed my mind. In this way, the ideas stayed within me as embodied knowledge rather than as abstract thoughts on paper. I repeated the sequence I was working on until I could do it almost without fail. The next day, before moving onto another sequence, I refreshed my memory of what I previously developed. As a result, I relied less on my notes or a score. Furthermore, I knew that incorporating leg, head and full-body movements is key in creating a convincing string puppet impression. However, that meant that I undoubtedly had to significantly alter some elements of the composition in order to make my arrangement. The video of the final experimentation, available in the Artistic Portfolio as (Dropbox #7.13) https://www.dropbox.com/s/u7so39k8sy0j5hc/7.13.mp4?dl=0, presents six out of twelve pages of the composition. Throughout the first half of the piece I included a great majority of the ideas and tricks discussed with Mottram and felt that no further experimentation was needed in order to answer the aforementioned research questions. I will discuss my findings on the first three pages of *Marionette*, as they include the most characteristic gestures of the work.

Figure 38 demonstrates the opening two gestures of the piece on page 2. Originally Rykova imagined that the violinist-marionette is activated and animated with the first pizzicato. Having learnt that string puppets usually cannot move their eyes, I chose to enter the stage in the character of a marionette by walking similarly to the puppet in video excerpt Figure 30, followed by sliding the violin up my body (also Fig. 30) and moving my head to the right by dropping it first and then turning (similarly to the puppet in video excerpt Fig. 31). Gazing away from the violin, once I felt the violin resting on my shoulder, I found the A

string and played the first pizzicato with my right hand, despite the composer's indication to use the left hand, bearing in mind that marionettes are unlikely to have strings attached to their fingers. I bent down after having played the first ricochet gesture, instead of during it as indicated in the score, and retained the posture with my bow upright swinging in the air as per Mottram's advice in Figure 37. For the following left-hand pizzicato gesture I had to strike a compromise between knowing that marionette violinists hardly ever move their left hand, and actually playing the composition. I imagined that my fingers did indeed have a string attached to them and the tapping was a result of a pull and release action of the puppeteer, ending with an abrupt left hand pizzicato.

Figure 38: Elena Rykova, *Marionette*, score, opening sequence.

After activating the following bow ricochet with my body's upwards pull, and resting in a position with bent, sagging knees, I diagonally directed my bow towards the E string in order to play the glissando with a screw. Unfortunately, this beautifully sounding technique requires a lot of precision and a great deal of control, hence I had to sacrifice it for the sake of remaining in character as a string puppet. In my arrangement I slide a

swinging bow's frog up and down the string while only partially being able to produce a clear glissando. The remaining ricochet bow gestures in the second system of page 2 were achieved by dropping the bow from above the string and letting it bounce without any control on my part. For the final gesture I again had to alter Rykova's articulation (quasi spiccato). A string puppet cannot make lateral bow movements, only fast upwards ones followed by a downfall with the force of gravity. I chose to play detaché, lift my elbow slightly, and move my bow arm awkwardly as if I was bowing diagonally, as advised by Mottram in Figure 35.

Figure 39: Elena Rykova, *Marionette,* score, page 3.

Figure 39 shows page 3. In the video of the final experiment what is notable is my use of the left hand to activate the pizzicati in the first system. I cup my hand on the string before pulling all the fingers strongly upwards for the pizzicato, as if I had a string connected to all of them. In system two I decided to improvise this section based on my knowledge of marionette gesture, rather than sticking to con legno and arco as indicated by Rykova. I also used pizzicato and some left-hand vibrato, focusing on pulling my right arm upwards

more than playing laterally. I applied the same methodology in analogical places throughout the piece. Unfortunately, I could not move my head significantly away from the violin for the pizzicato, neither here nor in other sections using this technique, hence I did not exactly retain the full scope of the string puppet gesture for the pizzicato sections. I finished the sequence on page 3 with my bow up in the air rocking on, and my knees slightly sagging instead of a stage freeze.

Figure 40. Elena Rykova, *Marionette*, score, page 4.

Figure 40 presents perhaps the hardest of the sections to arrange. The opening system includes left hand harmonics, simultaneous glissandi on both strings, and pizzicato. I worked on this section for quite a while, trying to find a way to achieve as clear a pitch as possible while maintaining a 'dead' gaze and marionette-like bow movement. The combination of glissandi and pizzicato requires movements that can hardly look as if they were controlled by the force of a pull. I tried to keep my hand cup-shaped when moving on the fingerboard as if only my wrist was moving, while simultaneously thinking about the bow moving laterally faster on the up bow and then immediately transitioning to a slower

speed on the down bow. I could not successfully control the pitch in the left hand, meaning that the harmonics do not sound pure. My arrangement of this system indicates overall that marionette-like gestures for violin playing ought to foreground and explore the percussivity of the bow rather than complex pitch structures and sequences.

7.2. Conclusion

Having thoroughly investigated string puppet movement both through the workshop with Stephen Mottram and the arrangement of Rykova's *Marionette*, I came to the conclusion that the arrangement would alter the sonic character of the piece in a way that impedes the composer's intention. For this reason, I gave up on the idea of presenting my arrangement in a live performance. Although I was curious to find out to what extent I could add marionette-like theatricality to my violin playing, such a conclusion was to be expected. After all, *Marionette* was designed as a sound piece, with many formidable sonic elements not to be discarded for the sake of gesture and movement. However, the research process also revealed how violin playing in the Western Art Music tradition is an already physically demanding and complex activity that does not lend itself easily to full-body movement. The rather precarious position of the violin hold, the complexity of the left- and right-hand interactions, and the supposed fragility of the instrument itself potentially limit the scope of possibilities for the addition of full-body movements and unusual gestures. At least, this is the perspective that emerges from my own bias conditioned by a specific pedagogy and repertoire. It should be borne in mind that historically the violin developed as dance music's most frequent and portable companion. Violinists played while jigging, a tradition preserved in many other sound cultures around the world.

The obvious solution to exploring a violinist's physicality beyond the limitations of the classical music lineage would be to structure movement from the entry point of a composition. Composers such as Matthew Shlomowitz, Natacha Diels and Elena Rykova have introduced some elements of additional movement into their works. However, based on my own process of developing a new kind of embodied technique, I would argue that in order to take movement, physicality and embodied performance seriously and advance it further, new music practitioners need to focus on creating works for specific bodies and their capabilities. This entails close collaboration, an interdisciplinary learning of new methodologies, and a disintegration of the single author model. Although the fields of

dance and theatre grapple with their own internal and long-standing hierarchies and there is a fair amount of critical scholarship analysing devising methodologies in these fields (e.g., Heddon & Milling, 2005; Callery, 2002; Govan et al., 2007), it is hard to identify in these fields an analogous scenario to that of a composer taking sole ownership for notating an embodied technique developed by and located within another body. Working with embodiment can potentially remove music notation from being the main creative surface. As such, many of our culture's assumptions about what constitutes a musical work are put into question. If we all learn new tools for composition and performance, we might simultaneously be eroding the centuries-long binary division, where compositional creativity is considered more valuable than that of performance. Reiterating Walshe's (2016) words, we all have bodies that we can creatively explore with respect and curiosity but without preconceptions and impositions.

As I wind up this case study, I would like briefly to bring back the discussion from Chapter 3, where I review the concept of inter- and transdisciplinarity. Craenen (2016) considers transdisciplinarity 'as a movement from inside to the outside':

> First, there is an attitude of curiosity and the wish to open doors and windows, followed by a 'going out' and listening, experimenting, feeling what happens. But transdisciplinary art also needs to bring these experiences back to a synthesis or integration into a singular artwork or individual expression, and at this point exploration becomes discovery. (a double move, para. 1)

In his view an instrumentalist who becomes aware of the ways in which their movement qualities go beyond the standard playing becomes ' "a kind of" dancing musician or music-making dancer' (characteristics, para. 4), and thus their practice becomes a possible manifestation of transdisciplinarity. From this perspective the outcome of my research into string puppet gesture and its integration into my violin playing can be regarded as a transdisciplinary act. The main point of difference between my conceptualization of interdisciplinary virtuosity and Craenen's perspective on transdisciplinarity is that he regards the process of transdisciplinary knowledge formation more as an individual and internal act. Contrarily, I think of the attitude of curiosity and experimentation needed for knowledge acquisition beyond one's discipline as a part of a methodology that factors in benefiting and learning from the disciplinary expertise of other practitioners. Although I include personal effort in the quest for learning from other fields, I come from a position that each of us has an inclination towards particular disciplines and while we try to

integrate more and more knowledge, we continue to value the disciplinarian bodies of knowledge that help us in our process. It goes without saying that none of the synthesis of violin and marionette gestures would be possible without the kind passing of knowledge from Stephen Mottram, Ilona Krawczyk, and my yoga and movement teachers. Instead of continuing to see virtuosity as an individual achievement, I would like to highlight its collective nature and perhaps even its mystery.

Closing reflection

Abstract concepts like 'virtuosity' arise and survive through the power of their narrative. They contain both facts and tales, tangible manifestations as well as opinions and projections. The story of virtuosity accounts for both remarkable and pitiful characteristics of our species – drive as well as jealousy, excellence as well as greed, individualism and uniqueness as well as domination, vanity as well as ingenuity. Associated with artisanal craftsmanship and learnedness in the Renaissance, knowledge acquisition and collecting curiosities in the Age of Enlightenment, excess and spectacle in the Romantic period, and fail-proof technical accuracy in the twentieth century, virtuosity in the twenty-first century undergoes its transformation alongside the concerns of its inventors. Humanity is facing many urgent and complex problems, some of which (climate breakdown; the global refugee crisis) seem past their breaking point. Interdisciplinarity is regarded as one of the collaborative methodologies that could provide some solutions to human-made complexities by teaming up experts with diverse bodies of knowledge in order to share, integrate, complement, transform and expand existing knowledge to achieve wider-reaching perspectives on potential solutions. Although more readily accepted in academia as a methodological strategy in the twenty-first century, interdisciplinarity, as Barry and Born (2013) observe, has in fact always been a key element of scientific, social and cultural knowledge formation, its 'historical constant'. Frodeman (2007) suggests that the modern interest in interdisciplinarity expresses the age-old question on how to organise what we understand of the world in order to collectively lead satisfying lives. If we accept that humans evolved to this degree not through exceptionalism and individualism but rather, as Harari (2018) claims, due to our unparalleled ability to think together, we ought to reconsider the narrative of virtuosity as an individual feat of technical skill. What is worth reimagining is how the excellence that lies at the root of the concept of virtuosity - the Latin virtú - could be applied to modern-day performance practices. In order to transition from the court and into the market system, the music of the era of Romanticism needed both the story of virtuosity as well as that of the work-concept. Can we continue to uphold these narratives two centuries later while neoliberalism has exacerbated both our production and consumption, as well as globalisation and access to information?

In this thesis I contested what I consider to be the main understandings of virtuosity prevailing in Western Art Music and contrasted them through my four case studies with virtuosity's more recent reconceptualization – namely, a virtuosity of adaptability, hybrid virtuosity, new virtuosity and interdisciplinary virtuosity. Having engaged with percussion practice, electroacoustic performance, co-composition and embodied performance, throughout my research I tried to understand how I and other practitioners make sense of the complexity of new music's forms of expression, and how these new pathways contribute towards an updated narrative of virtuosity.

The findings of my research point to four broad areas of musicianship that require rethinking in the light of the rapidly changing professional landscape, namely pedagogy and music education, collaboration and co-creation, embodiment, and reflexive, critically-engaged practice. Directly affecting the way virtuosity could be reimagined, in this study these areas were explored through a combination of auto-didactic and collaborative learning strategies, as I have demonstrated in Chapters 4-7. I focused on understanding how new interdisciplinary knowledge in performance practice could be formed. As a result, I suggest that project-based learning of multidimensional skills (throughout this thesis also called work-specific techniques) and collaborative learning should play a decisively prominent role in shaping modern pedagogy. Earlier, I hinted at the fact that new music auto-didacts are paving the way for such modes of institutional organisation (see Chapter 2.2). There is a strong likelihood that student-led auto-didactism, requiring support, facilitation and a degree of critical engagement and learning-with from the mentor, would naturally ensue. Besides providing vocational education for instrumentalists in competences such as notation reading and orchestral training, the institutional focus could be partitioned to allow for developing more critical thinking and reflexive musical practice, similarly to how artistic research is led (REACT - Rethinking Music Performance in European Higher Education Institutions, 2021, p. 1). Moreover, in accordance with the ongoing findings of scholarship pertaining to electroacoustic music performance, my research participants' views and my own experience both as a performer and teacher, I observe a strong need for greater technology-oriented knowledge implemented across classical music education programmes. As the world evolves further into the digital realm, being tech-savvy equates to being literate.

Collaborative co-creation in a mobile, nomadic (Ryberg et al., 2017, p. 237) and interdisciplinary reality of modern creative processes seems increasingly likely to become the norm. As such, analyses of how we work together as creative teams, such as those presented in Chapters 5 and 6, continue to challenge the dominance of individualism and specialism within thinking about virtuosity, with the hope of dethroning the dominant concept of sole-authorship and the independent creator in Western Art Music. Consequently, one of my research themes – the practice of co-composition – demonstrates the possibility of an alternative compositional methodology, which could be fostered throughout education early on via collaborative learning strategies between interdisciplinary teams. Additionally, my research into co-composition encourages further investigation into existing Intellectual Property Law stipulations in relation to modes of acquiring and sharing different forms of capital by collaborating practitioners.

The research findings arising from arranging Elena Rykova's *Marionette* point to a recommendation for a physically-aware and mind-body connected musical practice. Contemporary reconfiguration of the rapport between the cochlear and the physical in Western Art Music shows a potential for being at once socially-informed, politically attuned, and in line with the modern developments of neuropsychology and neurobiology. Similarly to the earlier mentioned musician-led project-based skill learning, the focus on the body – thinking through and with it to find out what it can, cannot or does not want to do – should be both auto-didactic and supported by formal music education where possible.

Finally, reflexive and critically-engaged practice manifests throughout this study in its ethnographic, auto-ethnomethodological and auto-ethnographic methodology, and presents an approach to constructing one's performance practice from a variety of resources. I have proposed to think of interdisciplinary virtuosity as an umbrella term that encompasses the various ways in which new music practitioners conduct their engagement with novel combinations of disciplines and methodologies. In my research I highlighted listening, tactility, co-creation and learning flexibility as key components of a modern practitioner's toolbox. Instead of focusing solely on individualistic achievement, I foregrounded the collective force of knowledge exchange and acquisition, achieved through collaboration and co-creation. I interviewed numerous colleagues, learnt from

them, and integrated their expertise into my performance and music-making practice. Rather than focusing on virtuosic outcome, I privilege the process of learning and the creativity that informs how new knowledge is formed.

As a result, interdisciplinarity virtuosity is in my mind a personal methodology conducted for the beauty of the act rather than for fame, recognition and fortune, open to pursuit by all music practitioners involved regardless of their disciplinary affiliation. This research could therefore be regarded as part of the next chapter in the evolution of the concept of virtuosity. It is my humble hope that it will be recognised as an academic contribution to knowledge.

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Appendix A

- Workshop footage; video documentation from the workshop on string puppet movement with Stephen Mottram at his home studio in Oxford, January 2020.
  (Dropbox #Appendix A. workshop with Stephen Mottram)
  https://www.dropbox.com/sh/gabuchh1ibaqzkp/AADMMpXNZG4jGBBXISuzTjh-a?dl=0
- Supplementary supporting materials; string puppet movement examples, recorded by Stephen Mottram.
  (Dropbox #Appendix A. violinist puppet)
  https://www.dropbox.com/sh/sq3mvi6j04c98h1/AAAeUNoHPC3eLu0YXGE9PwfEa?dl=0

Appendix B

List of concerts showcasing researched works:

- Kalv Festival (Sweden), 12-15.08. 2021; Hanna Hartman - *Message from the Lighthouse* & *BUG*
- Emory CompFest (Atlanta, USA), 23-24.03. 2021; live-streamed performance of *boundarymind* with Katherine Young
- RomanSusan (Chicago, USA), 3-6.03.2021; work-in-progress presentation of *boundarymind* installation.
- Global Adapter, Radialsystem (Berlin, German), 21.07.2019; Sam Salem - *not one can pass away*
- Cut&Splice Festival 2017 (Manchester, UK), 10-11.03.2017; Mauricio Pauly - *Charred Edifice Shining*, Sam Salem - *The Great Inundation*
- KammerKlang, Cafe OTO (London, UK), 04.10.2016; Mauricio Pauly - *Charred Edifice Shining,* Sam Salem - *Untitled Valley of Fear*
- International Summer Courses in Darmstadt (Germany), August 2016; Mauricio Pauly - *Charred Edifice Shining,* Sam Salem - *Untitled Valley of Fear*
- KLANG Festival (Copenhagen, Denmark), 14.06.2016; Sam Salem - *not one can pass away*
- ESS (Chicago, USA), Spectrum (NYC, USA), 06-08.04.2016; Sam Salem - *not one can pass away*
- Swedenborg Hall (London, UK), 08.12.2015; Sam Salem - *not one can pass away*
- Poznań Spring Music Festival (Poland), 29.03.2015; Mauricio Pauly - *Its fleece electrostatic*
- TEDx Costa Rica, February 2015; Mauricio Pauly - *Its fleece electrostatic*
- Do Audible (Pontevedra, Spain), 14.11.2014; Mauricio Pauly - *Its fleece electrostatic*
- Le Bruit de la Musique Festival (Creuse, France), 22.08.2014; Mauricio Pauly - *Its fleece electrostatic*
- 2014: Łódź (Poland), Ithaca (USA), Berlin (Germany), Café OTO (London, UK); Mauricio Pauly - *Its fleece electrostatic*

Academic presentations related to researched practices:

- Boston University - presentation with Mauricio Pauly; April 2016
- Kalv Festival - presentation about performing with electronics; August 2017
- CIRMMT, McGill University, Montreal - presentation with Hanna Hartman and Distractfold; April 2018
- Bath Spa University - presentation with Mauricio Pauly; April 2018
- Yarn/Wire Summer School - online presentation with Katherine Young; July 2020
- Emory University - online artist talk with Katherine Young; March 2021