

**TEMPORALITY OF THE IMPOSSIBLE:**  
**exploring the multifaceted process of preparation of complex pieces**  
**from the late 20th and 21st centuries**

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of the requirements for the degree of Doctor of Philosophy

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# Abstract

*Temporality of the Impossible* is a research project about my artistic practice on performing late 20th- and 21st-century solo violin repertoire with multi-dimensional difficulties. Within this repertoire, I focused on pieces that, despite minute-detailed annotations in the score, intentionally escape the extreme fixity that they at first glance seem to be designed to achieve. As such, they impose a novel approach to the interface between performer, instrument, notation, movement, and sound, and thus demand redefining of performance practice and practicing.

The challenges begin from the notation and range over destabilised sonic identity of the instrument, extreme combinations and successions of techniques, challenging meanings of physical actions and gestures, and going as far as using the non-linear passing of time and using performance space as part of the musical material. With these kinds of challenges as a starting point, the sounding outcome of each of these pieces can greatly vary from one performance to another.

The following thesis is an account of the process, in which my explorations aimed to reexamine, deconstruct, and reconfigure understandings and approaches to the interpretation and performance practice of a classically trained violinist in relation to this chosen repertoire. Through the process of deconstructing and unlearning, I had to develop methodologies that facilitated learning how to retain, navigate, and channel surplus amounts of information which was often contradictory. My main aim was to establish ways that would allow for embodiment of potentials of all the material of the piece individually, rather than fixing one interpretation during the preparation process and thus imposing undesired hierarchy between the material. In this way, the material could continue to evolve and organically build the interpretation always anew in the moment of the performance, according to the design of the pieces. Accepting this continuous process as the necessary tool of the performative vocabulary in the pieces and its protean nature was a significant part of the research.

The research outcomes presented here include recordings of performances alongside a detailed account of the process leading to performance. Both the performances and the methodology can feed into current thought on performance practice, and the methodologies could be adopted by other violinists dealing with works from late 20th- and 21st-century solo violin repertoire.



# A Note on the Accompanying Documentation and Publications

This thesis is accompanied by documentation that has been organised as follows.

## Portfolio

Contents of the Artistic Portfolio can be found on page 8 of the thesis. Artistic Portfolio contains recordings from selected performances throughout the research, and can be seen on the designated, unlisted webpage:

[https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html)

The documentation is organised in four groups, identified as AP1 to AP4, and the contents of each group are referenced with an added second numeral [for example, the section ‘Temporality of the Impossible: Album Release Videos’ has the reference **AP2**, and the first example in this section, Dario Buccino’s *Finalmente il tempo è intero n° 16* (2019) for violin or viola, has a reference **AP2.1**.]

## Figures and Examples

Figures and examples are embedded and hyperlinked throughout the body of the text. They can also be found as a list at:

[https://temporalityoftheimpossible.com/research/figures\\_and\\_excerpts.html](https://temporalityoftheimpossible.com/research/figures_and_excerpts.html)

Each chapter has an assigned folder (labelled numerically and with underscore – Chapter\_3, Chapter\_4, and 4\_4\_CODA). Files labelled using only the figure number that they are introduced with in the body of the text (with dots exchanged for underscore).

The format of the name of the file in the folder is therefore: “figurenumber.extension”.

For example: a figure ‘Figure 3.1.9: Practicalities for setting up the preparation in Clara Iannotta’s *dead wasps in the jam-jar(i)*’, corresponds to a file labelled **3\_1\_9.mp4**, which is to be found in folder **Chapter\_3**. All external figures (video and audio) are hyperlinked in the caption and image.

## Publications

CD *Temporality of the Impossible* was released by Huddersfield Contemporary Records label on 11 February 2022 (catalog number HCR26), for which, besides playing, I was also the author of the liner notes and the artwork. Website <https://temporalityoftheimpossible.com/> was used as a platform to announce and follow performances, with short posts, mentions, and descriptions.



# Artistic Portfolio

The Artistic Portfolio accompanying this thesis can be found at [https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html)

## AP1 Temporality of the Impossible: Album

Release Date: February 11<sup>th</sup>, 2022

Contains: CD artwork; Album Liner Notes

Track List:

Track 1: Clara Iannotta: *dead wasps in the jam jar (i)* (2014-15)

Track 2: Dario Buccino: *Finalmente il tempo è intero n° 16* (2019)

Track 3: Rebecca Saunders: *Hauch* (2018)

Track 4: Liza Lim: *The Su Song Star Map* (2017)

Track 5: Evan Johnson: *Wolke über Bäumen* (2016)

Track 6: Cathy Milliken: *Crie* (2018)

Track 7: Aaron Cassidy: *The Crutch of Memory* (2004)

Complete Album (Huddersfield Contemporary Records, No. HCR26. 2022)

## AP2 Temporality of the Impossible: Album Release Videos

AP2.1. Dario Buccino: *Finalmente il tempo è intero n° 16* (2019), for violin or viola

Studio, Brussels, December 2021.

AP2.2. Clara Iannotta: *dead wasps in the jam-jar (i)* (2014-15), for solo violin

Studio, Brussels, December 2021.

AP2.3. Rebecca Saunders: *Hauch* (2018), for solo violin

Studio, Brussels, December 2021.

## AP3 Selected Performances: Video Documentation

AP3.1. Temporality of the Impossible at Unerhörte Musik

Performance featuring Clara Iannotta's *dead wasps in the jam jar (i)*, Cathy Milliken's *Crie* (2018), Evan Johnson's *Wolke über Bäumen* (2016), Rebecca Saunders' *Hauch* (2018), Aaron Cassidy's *The Crutch of Memory* (2004), Liza Lim's *The Su Song Star Map* (2017), and Dario Buccino's *Finalmente il tempo è intero n° 16* (2019), at BKA Theater, 24 May 2022, Berlin (Germany).

AP3.2. Dario Buccino: *Finalmente il tempo è intero n° 16* (2019), for violin or viola

Premiere performance, 25 February 2020, Phipps Hall, Huddersfield (UK)

AP3.3. Miika Hyytiäinen: *Impossibilities for Violin*

Live performance, 25 February 2020, Phipps Hall, Huddersfield (UK)

AP3.4. Dario Buccino: *Finalmente il tempo è intero n° 16* (2019), for violin or viola

Performance at the Festival Prima Vera Contemporanea, Curva Minore, 2  
April 2022, Palermo (Italy) [excerpt]

AP3.5. Festival hcmf// shorts, 2021

Performance featuring works by Liza Lim [*The Su Song Star Map* (2018), for  
solo violin] and Dario Buccino [*Finalmente il tempo è intero n° 16* (2019), for  
violin or viola]

22 November 2021, St Paul's Hall, Huddersfield (UK)

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... to the pieces of music that made me question everything, helped me shape my thoughts and practice on this path of curiosity, and beyond grateful and thankful to their composers: Dario Buccino, John Cage†, Aaron Cassidy, Miika Hyytiäinen, Clara Iannotta, Evan Johnson, Liza Lim, and Rebecca Saunders. To each one of these inspiring humans – thank you for all the conversations and exchange throughout this process ...

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*'The universe is full of magical things patiently waiting for our wits to grow sharper.'*

– Eden Phillpotts<sup>1</sup>

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<sup>1</sup> Eden Phillpotts, *A Shadow Passes* (London: Cecil Palmer & Hayward, 1918), p.19.



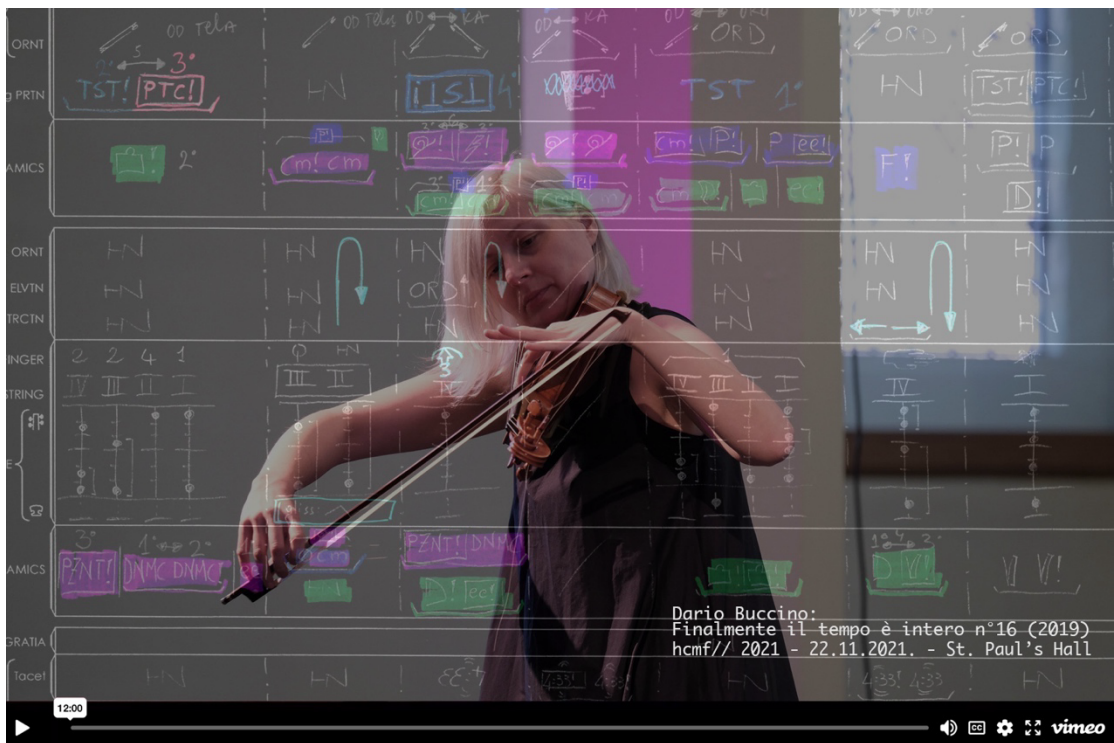


Figure 0: Dario Buccino's *Finalmente il tempo è intero n° 16*; performance at hcmf// 2021  
 [ <https://vimeo.com/670821313/b8ba5c1690> ]





# INTRODUCTION

*'These are intentionally as difficult as I can make them, because I think we're now surrounded by very serious problems in society, and we tend to think that the situation is hopeless and that it's just impossible to do something that will make everything turn out properly. So I think that this music, which is almost impossible, gives an instance of the practicality of the impossible.'* – John Cage<sup>2</sup>

Inspired by Cage's *Freeman Etudes* and their overcoming of the status of "impossible" pieces,<sup>3</sup> this PhD portfolio seeks to articulate possible trajectories and methodologies that can be adopted for solo violin performance practice dealing with works from the late 20<sup>th</sup> and the 21<sup>st</sup> century. More specifically, it concerns itself with works whose seemingly extremely fixed, minutely detailed notation belies the variability of their sounding outcomes in performance. The challenges in these pieces include: destabilised sonic identity of the instrument prompted by scordaturas or preparations; complete separation of the left and the right hand; the prescription of separated actions *within* each hand; extreme combinations and fast successions of techniques; annotations for actions within the body; audible and non-audible vocalisation. At times they also stretch as far as prescribed manners of interacting with the audience, the use of performance space as part of the musical material, and the non-linear passing of time within the piece. All of these factors contribute to the sometimes very different sounding results between different performances of the

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<sup>2</sup> John Cage, 'John Cage in conversation with Thomas Moore and Laura Fletcher' (interviewed by Thomas Moore and Laura Fletcher on 18 November 1982, in Washington, D.C.) <<https://thomasmooore.info/interview-john-cage/>> [accessed 22 May 2023].

<sup>3</sup> James Pritchett, 'The Completion of John Cage's *Freeman Etudes*', *Perspectives of New Music*, 32.2 (1994), p. 264.

same piece. This extreme ‘multi-dimensional level of difficulties’ challenged me to rethink how can a piece be embodied and brought before audiences.<sup>4</sup>

Following a standard path for a classically trained violinist built an immense foundation for me as a performer,<sup>5</sup> but the more I engaged with pieces from the contemporary repertoire, the more I found the need to reevaluate my practice, my approach to reading and interpreting a score. My attention began to focus on particularly dense and complex pieces from the late 20<sup>th</sup> and 21<sup>st</sup> century that, despite a highly determined level of detail, have unfixed outcomes and can become quite different from one performance to the next. Rather than having a fixed goal-interpretation to strive for, in these pieces each performance thus becomes one *situation of existence* to be explored. While it can be argued that in any solo violin repertoire no two performances are really the same, this repertoire shook the foundations of how far this unfixity of performance outcome could go, and with it raised new questions regarding *how* and *what* to practise, how to embody the material, and how to prepare mentally for the uncertainty the performance will bring. Confronted with an inner need to achieve a learnt ideal of perfect interpretation of utmost accuracy, in a repertoire which at its core relies on unexpected and unfixed outcomes and which poses ‘impossible’ demands, I had to ‘reassemble into new configurations’ aspects of my performance practice, as well as my understanding of the processes of preparation and the situation of performance.<sup>6</sup>

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<sup>4</sup> Mieko Kanno, ‘Cage’s *Freeman Etudes*: sounding out’, in *metaCage: essays on and around ‘Freeman Etudes’, ‘Fontana Mix’, ‘Aria’* (Leuven: Leuven University Press, 2009), p.47.

<sup>5</sup> In my case, classical training started within a pedagogical system of a State lead 6-year primary music school, followed by a 4-year secondary music school, Bachelor studies (performance-violin) at the University of Arts (Nis), and Masters studies at Koninklijk Conservatorium Brussels.

<sup>6</sup> Rutherford-Johnson, Tim, ‘Rambler Roundtables: ELISION ensemble concluded’ (interview with Richard Barrett and others) (2010) <<https://johnsonrambler.wordpress.com/2010/02/04/rambler-roundtables-elision-ensemble-concluded/>> [accessed 22 May 2023].

The movements of a violinist while playing are linked to the production of sound, and while ‘conventional string discourse has tended to regard technique as a distinctly physical, and more specifically manual discipline’,<sup>7</sup> it is directed toward the goal of achieving a specific sound the performer expects the violin to produce in return.

Through interpreting the pieces from my repertoire, I found that physicality is ‘not merely a repeated pattern or set of rules’ to achieve this expected sonic outcome, but rather is one of the musical materials which has to be approached as ‘an area of practical and technical knowledge’, beyond ‘that which is manual, as it may involve the whole body – not just its physiology but its emotional and mental life as well’.<sup>8</sup>

On the other side, I equally had to listen closely, deeply, and carefully for each nuance in the sound my instrument makes in response to action, to learn the potential timbres and sounds that these pieces enable, whether because of changed tensions caused by alternative tunings, non-pitch-based sound material, the use of the whole instrument as a potential contact point, or all of the above.

I had to develop a practice in which aspects of performance that more commonly represent coherent actions in playing and producing sound have to be separated — listened to and embodied — unlinked from each other but then set in action simultaneously and in conversation but not disturbing one another during the performance. The biggest challenge was perhaps learning how to channel all these separate conceptualisations, memorising and embodying gestures and sounds not in connection with one another but as separate potential outcomes.

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<sup>7</sup> Mira Benjamin, ‘Thick Relationality: Microtonality and the Technique of Intonation in 21st-Century String Performance’ (unpublished doctoral thesis, University of Huddersfield, 2019), p.29.

<sup>8</sup> Ben Spatz, *What a Body Can Do: Technique as Knowledge, Practice as Research* (Abingdon: Routledge, 2015), pp.30-40.

The PhD portfolio offers a repository of accumulated knowledge of some possible trajectories for navigating *within, through, and with* this complexity.

## **What's in a Name: about the title of the research**

*'Groping for the ungraspable is the most satisfying of modern pastimes, where the satisfaction lies in the fact that satisfaction is impossible.'* – Cornelius Cardew<sup>9</sup>

Robert Adlington argues that there is a type of musical movement which creates the possibility for path-like metaphors to arise, leading listeners to perceive music as an event of motion in linear time, with forward direction.<sup>10</sup> As a listener to a music performance, even if I can decide to engage in non-linear listening,<sup>11</sup> my experience of the moment of the act of performance will undoubtedly be influenced by the common linear perception of time, that everyday perception of time, the 'single time: the time of our experience: uniform, universal and ordered'.<sup>12</sup> As a performer, I cannot give in to that common perception of time but must question every aspect of the time and temporality of performance. These questions of time and temporality

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<sup>9</sup> Cornelius Cardew, 'Notation: Interpretation, etc.', *Tempo*, 58 (1961), p.22.

<sup>10</sup> Robert Adlington, 'Moving beyond Motion: Metaphors for Changing Sound', *Journal of the Royal Musical Association* 128/2 (2003), 297-318.

<sup>11</sup> Sciarrino speaks about *la forma a finestra* ['shapes with windows'], whose premise is that each work is created by a layering process and is dependent on memory. It implies that, to discover every layer of the piece, the listener must not only listen in the "now" but also rely on memory. Memory acts as a canvas on which all the layers of music are laid out and while initially the listener is passing through the piece in forward motion, he has the capacity to move back and forth in this "memory space". It is in this way that all the layers and meanings of the work are discovered. See Salvatore Sciarrino, *Le figure della musica da Beethoven a oggi* (Milano: Ricordi, 1998), pp. 97-148. For more on ways of listening see Richard Glover, Bryn Harrison, and Jennie Gottschalk, *Being Time: Case Studies in Musical Temporality* (New York: Bloomsbury, 2019).

<sup>12</sup> Carlo Rovelli, *The Order of Time*, trans. by Simon Carnell and Erica Segre (UK: Penguin Random House, 2018), p. 171.

became pressing in connection with the pieces from my focus repertoire.<sup>13</sup> These are pieces that in their design have an extreme superposition of material that is unlikely to be performed in entirety without some level of hierarchical order put in place for each of its performances. Pieces which are extremely precise and determinate in their design yet in which sonic and timbral characteristics are blurred, unexpected, and unrepeatable to the point they do not have a fixed sounding result, and thus become unconceivable in the mind based on anything previously “heard”.<sup>14</sup> In this context, when I think about the piece and its sound, movement, and music in relation to all of my own movement to produce the sounding of that piece, I must question the relation between temporality and the piece’s existence, and I do so by thinking about concepts and asking myself questions in the following ways:

Sound exists as an object in physical space only in one split moment of time.

A sound percept appears only in relation with one exact moment of time.

The consciousness of the moment signifies that it is already in the past.

For how long does a sound exist within me as a performer?

Recorded sound is the history of an event.

Our memory of sound is a subjective record of the past.

In my body as a performer the sound is recorded in the mind, the muscles, the soul, all – separately or collectively?

How long does embodied sound exist within me as a performer?

The sound is a measure of time. The time is a measure of space. The time and the space are the measure of temporality. The temporality is existence.

What is the meaning of *temporality* in playing music?

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<sup>13</sup> The choice of pieces for the focus repertoire is discussed in Chapter 1.1, and a list of these pieces is provided in Appendix A; a list of supplementary pieces can be found in Appendix B.

<sup>14</sup> Levels of difficulty, material and hierarchy, and “impossible” demands are discussed in depth in Chapter 1.1 and Chapter 2; sonic identities are discussed in Chapter 4.

When I speak about temporality in the context of these “impossible” pieces, I am taking a cue from Carlo Rovelli’s argument that the growth of our knowledge has subsequently led to disintegration of the previous notions of the structure of time. ‘What we call “time”’, he writes, ‘is a complex collection of structures, of layers.’<sup>15</sup> I consider each layer of time a space occupied by a temporality, and each temporality as one *existence*.

A piece has its *existence*, independent of a linearly passing perception of time. A performer is a second existence, another temporality. When these two layers of *existences* enter into a conversation, there is a superposition of temporalities in play.<sup>16</sup> It is the interaction of these two existences relative to each other that interests me in the “impossible” pieces of this study. The difficulties of these pieces are characterised as being on the verge of possibility, which in turn made them less accessible to performers, hindered opportunity to be performed and in some cases even stalled their completion. Yet in each case, after a certain time this impeded state has passed. If the piece has its temporality and so does the performer, what appears as “impossible” is rather a situation where the performer’s current perspective has not enabled a proper relationship to the piece. If a performer is able to change their viewpoint, a ‘light cone’<sup>17</sup> of thinking, feeling, and doing may appear.<sup>18</sup> In the context of these extremely difficult pieces, the ‘practicality of the impossible’ is located in sustained self-encouraged dedication,<sup>19</sup> looking for solutions and remedies to overcome the

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<sup>15</sup> Rovelli, *The Order of Time*, p.3.

<sup>16</sup> Rovelli, p.15.

<sup>17</sup> Rovelli, pp.45-50.

<sup>18</sup> In case of some pieces the change in perspective comes from searching for technique, in some cases it is related to the instrument, in others to the notation, and in some it is about time as duration. All these aspects will be discussed at length within the research, with examples from.

<sup>19</sup> Cage, ‘John Cage in conversation with Thomas Moore and Laura Fletcher’.

challenges. In this sense, temporality is not simply a question of duration of the piece, its existence in everyday time. It is an existence in time-space which envelops all agents of the piece, and includes the preparation whereby the performer creates a relationship in order to translate a written score into a sounding event in one moment in physical time and space.

In each performance, by interpreting the score, I find I ‘bear witness to its precarious possibility of existence in an “open” space of collisions, of momentary fusions between word and referent’.<sup>20</sup> My title *Temporality of the Impossible* recognises that while these pieces can seem impossible for a while, through adjustments in my performance practice and ‘musicking’<sup>21</sup> the “impossible” state of existence becomes one surmountable layer of these superposed temporalities, this ‘legion of times’.<sup>22</sup> Sharing possible practical trajectories for rendering the “impossible” possible, my aim is for any other violinist either to use some of the approaches described, or to find in them inspiration to create their own.

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<sup>20</sup> George Steiner, ‘On Difficulty’, *The Journal of Aesthetics and Art Criticism*, 36.3 (1978), p. 275.

<sup>21</sup> Christopher Small, *Musicking: The Meanings of Performing and Listening* (Middletown, Connecticut: Wesleyan University Press, 1998).

<sup>22</sup> Rovelli, *The Order of Time*, p.15.

## Organisation of the Thesis

The thesis is organised in two parts, with introduction. The introduction addresses the context of the research and presents the basis and environment for my artistic research practice and my understanding of the discipline, outlines my methodologies, and reflects on related reading and resources. In Chapter 1, I address the question of “impossible” pieces from the late 20<sup>th</sup> and 21<sup>st</sup> centuries exhibiting different kinds of complexity, I identify three challenge areas, and describe the process of arriving at my focus repertoire. John Cage’s *Freeman Etudes* was one of the igniting pieces for the topic of my research. Through my research, this piece has turned out to be a ‘precursor’,<sup>23</sup> and it is the focus of chapter 1.2, spotlighting Etude XVIII. Chapter 2, in two sections, is dedicated to describing the development of a performer’s conceptual relation with a score, in particular the reading of the score and the role of the imagination.

Part II addresses practice-oriented methodologies and presents case studies of each of the three challenge areas. Chapter 3 addresses and discusses the area of sonic identities, Chapter 4 is dedicated to physicality as material, and Chapter 5 to learning methods, processes, and memory when dealing with unfixated and dense material. The last part of the thesis is a space for reflection and conclusions, or rather conclusions as new openings.

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<sup>23</sup> In the essay ‘Kafka and His Precursors’ (1951), Jorge Luis Borges writes: ‘Kafka’s idiosyncrasy is present in each of these writings, to a greater or lesser degree, but if Kafka had not written, we would not perceive it; that is to say, it would not exist. [...] The word “precursor” is indispensable to the vocabulary of criticism, but one must try to purify it from any connotation of polemic or rivalry. The fact is that each writer creates his precursors. His work modifies our conception of the past, as it will modify the future.’ Jorge Luis Borges, ‘Kafka and his Precursors’, in *Labyrinths: Selected Stories & Other Writings*, ed. by Donald A. Yates and James E. Irby, trans. by James E. Irby (New York: New Directions Publishing, 1964), p. 192. Throughout my research, *Freeman Etudes* revealed precisely this kind of effect in the context of the pieces on which I chose to focus.



## Research Objectives and Questions

*'A becoming is always in the middle. [...] A becoming is neither one nor two, nor the relation of the two; it is the in-between.'* – Gilles Deleuze<sup>24</sup>

My aim has been to situate both the practical and theoretical components of my research between, on the one hand, conceptual thinking about sound, gesture, scores, notation and performance and, on the other, the tangible experience of performance and practice through concrete, specific examples from the solo violin repertoire from the perspective of a performer. The former investigates the challenges of violin techniques and notation. The latter considers the shaping of expressivity and sensibility, which in turn also influences the investigation of and the approach to expanding my own technique.<sup>25</sup> The aim of the research was to question wherein lies the “impossible” in my focus repertoire, how I can overcome it, and how to apply these versatile findings in my performance practice.<sup>26</sup>

Through this research, I explore performance methodologies, developing ways to read and construct interpretations for pieces with complex, multidimensional scores. This required me to redefine my practice by addressing the following questions:

1. What are the components of musical material that make these pieces so difficult?
2. What are the physical and mental conditions that are necessary in order to negotiate the demands of preparing the performance of pieces with highly determined and multi-layered or extreme amounts of information?
3. How does the moment of performance — the change in setting from “preparation” to “performance” — function as one of the components of musical material in these pieces, in a way that has a substantial effect on the final form of the piece, and what kinds of methodologies can be developed

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<sup>24</sup> Gilles Deleuze, *Two Regimes of Madness* (New York: Semiotext(e), 2007), p. 305.

<sup>25</sup> Excerpts from this paragraph appear at <https://temporalityoftheimpossible.com/>.

<sup>26</sup> Focus repertoire is discussed in chapter 1.

and assimilated into practice in order to negotiate the material in this new setting?

To find ways to navigate through the complex constructions my chosen repertoire offers, I had to find methods to break the pieces down into components, to understand each component individually, as well as to establish possible ways they might react in proximity with the other events and demands of the piece. In my process I identified themes (figure I.1) that, through their potential to interact in all directions, created an environment in which to explore each of the questions by continuously feeding information from practice to reflection to practice.

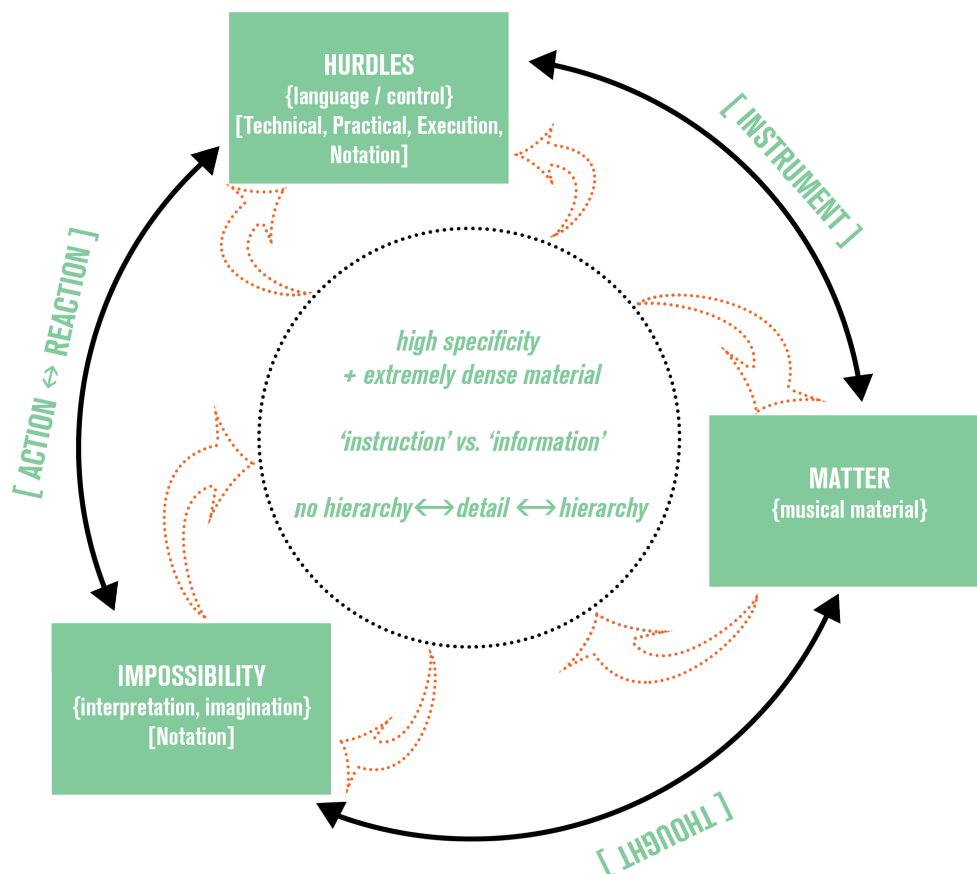


Figure I.1: Multi-directional theme environment for exploration research questions

While my goal was to find ways to create a more comfortable and stable connection with the material, it was equally important not to lose the angst and tenacious energy that the complexity imposes on the body, mind, and performative outcome. I devised a mental approach to the score, and also practical processes of organising scores, their material, and methods of memorisation (which are discussed in depth in chapter 4.3). I aimed to redefine my performance practice and to develop methodologies which allow me to understand complex material and to separate the actions of the left and right hands more easily from one another, from the body, from the instrument, and most of all from one expected sounding outcome.

## **Methodologies**

The research was conducted through continuous cycles and exchange between practice and reflection. Rigorous self-reflexivity was paramount and guided the research through the bi-directional relationship between individual and personal practice and broader socio-cultural context. In this way, my goal was to articulate what Shirley McKechnie and Catherine Stevens call ‘unspoken knowledges’,<sup>27</sup> within a broader aim of ‘epitomizing the challenges for the temporal arts in documenting, describing, quantifying and explaining’ both performance practice and the scholarly knowledge that underlies it.

In artistic practice-led research, the act of performance plays a crucial role and is an essential part of the methodology. Brad Haseman speaks about the idea of

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<sup>27</sup> Shirley McKechnie and Catherine Stevens, ‘Knowledge Unspoken: Contemporary Dance and the Cycle of Practice-led Research, Basic and Applied Research, and Research-led Practice’, in *Practice-led Research, Research-led Practice in the Creative Arts*, ed. by Hazel Smith and Roger T. Dean (Edinburgh: Edinburgh University Press, 2009), pp. 84-103.

‘performative’ research in 2006, arguing for the necessity of ‘practice as the method of research’,<sup>28</sup> where the practice is at the core of the research and plays a significant role in the outcomes. Performer-researchers are with increasing frequency adopting what Desmond Bell recognises as a ‘discovery-led’ approach which is not concerned primarily ‘with divining law-like regularities in artists’ behaviour, nor with arriving at binding judgements of taste in the aesthetic sphere’.<sup>29</sup> In this research paradigm, the scholarship and the ‘knowing’ is achieved ‘through the symbolic language and forms’ of practice.<sup>30</sup> The act of performance is understood in this discourse as facing in two directions: it is the outcome of the work and research done up to the point where it takes place, but also, the data from the performance becomes a new input in the continuation of the research. This approach, which a wide range of musician-researchers employ, allowed me to apply what John Rink defines as ‘performers’ analysis’<sup>31</sup> – a methodology where structural analysis of the piece is not done independently and in pursuit of what Nicholas Cook terms ‘theorist’s analysis’,<sup>32</sup> whose goal is to achieve meaning ‘concentrated in coherent wholes rather than the transitions between them’,<sup>33</sup> but only insofar as it constitutes an integral part of and useful supplement to the performing process. In this way I am able to draw out, from

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<sup>28</sup> Brad Haseman, ‘A Manifesto for Performative Research’, *Media International Australia incorporating Culture and Policy*, 118 (2006), 98-106. The first two decades of the 21st century have brought about a recognition of the much more nuanced relationship between “research” and “practice” in art and performance. This theorising of practice as a method and not only consequence of research, gradually strengthened and tendencies and transformation of recognising artistic research as a category of its own which further brought change and articulation of artistic research within academia. My own discourse in the field has also been informed from practices and work I was involved with since 2015 with the collective People Coming from NowHere (and the project PhD in One Night) in close collaboration with Jacques Rancière and his philosophy.

<sup>29</sup> Desmond Bell (ed), *Mind the Gap! Working Papers on Practice Based Doctoral Research in the Creative Arts and Media 2016* (Dublin: Distillers Press, 2016), p.19.

<sup>30</sup> Haseman, pp.100-101.

<sup>31</sup> John Rink, ‘Analysis and (or?) Performance’, in *Musical Performance: A Guide to Understanding*, ed. by John Rink (Cambridge: Cambridge University Press, 2002), p.36.

<sup>32</sup> Nicholas Cook, *Beyond the Score: Music as Performance* (Oxford: Oxford University Press, 2013), pp. 33-50.

<sup>33</sup> Cook, *Beyond the Score*, p.49.

my empirical conceptualisation of music as practitioner, an ‘elusive but elucidatory notion more temporally conceived than that of structure’.<sup>34</sup>

While in Rink’s ‘performers’ analysis’ the focus is on ‘particular attention to contextual functions and means of projecting them’,<sup>35</sup> ‘performance analysis’<sup>36</sup> as a method, as described by Cook, allows the act of performance itself to become ‘an object of analysis’.<sup>37</sup> Both of these approaches to analysis were essential to my research into embodying independently how actions feel within my body from how my mind remembers the sonic outcomes they produce, where this independence has to contribute to achieving a coherent interpretation of a piece, analysing on one side as a *doer* and then as an *observer* my own body, its relation with and to the instrument, and comparing the differences in results they achieved in each of the performance situations.

Throughout the research, I used writing as a methodology of reflective practice, examining and reevaluating the theory of thresholds of knowledge born out of a performer’s own practice and developing a *performance theory from below*.<sup>38</sup>

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<sup>34</sup> Rink, ‘Analysis and (or?) Performance’, p.36.

<sup>35</sup> John Rink, *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press, 2005).

<sup>36</sup> Cook, *Beyond the Score*, pp.33-50.

<sup>37</sup> Cook, p.49.

<sup>38</sup> E. P. Thompson introduces the concept of ‘history from below’, a narrative which aims to account for historical events from the perspective of the worker and for the point of view of common people, in the article ‘History from Below’, *Times Literary Supplement* (7 April 1966), pp. 279–80. For more on history from below see Sven Lindqvist, ‘Dig Where You Stand’, *Oral History*, 7.2 (1979), pp.24-30; Anthony Iles and Tom Roberts, *All Knees and Elbows of Susceptibility and Refusal* (London: Mute Books, 2012); work by Eric J. Hobsbawm; and Jared Davidson, ‘History from Below: A Reading List with Marcus Rediker’ (2019), at < <https://www.historyworkshop.org.uk/history-from-below-a-reading-list-with-marcus-rediker/> > [accessed 24 May 2023].

Drawing from this concept I turned also to close listening to the body — its movements, parts of the movements, actions and reactions — and to individual sounds. I focused on listening to individual parameters as means to deduce which types of embodiment can be applied to which parameter or to which challenge, in piece-specific cases.

## Research Context

Carlo Rovelli's *The Order of Time* has contributed significantly to my understanding of the topic of time. With phrases like 'fluctuation does not mean that what happens is never determined. It means that it is determined only at certain moments, and in an unpredictable way. Indeterminacy is resolved when quantity interacts with something else',<sup>39</sup> this text opened for me a conversation with aspects of my research related to complexity, the score, and indeterminacy. It pushed me to understand time and temporality in music beyond music's durational properties.

A number of other sources contributed to my expanded understanding of principles of musical time. Robert Adlington, in his article 'Moving Beyond Motion', offers a different kind of thinking about the perception of music and musical time in contrast to more common 'path-like' linear perceptions and metaphors.<sup>40</sup> In the preface to the edited collection *Unfolding Time*, Darla Crispin refers to musical temporality as 'unfinished business'.<sup>41</sup> Among the contributions to that volume, Mark Delaere's 'Tempo, Metre, Rhythm: Time in Twentieth-Century Music' addresses the complex

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<sup>39</sup> Rovelli, *The Order of Time*, p.78.

<sup>40</sup> Adlington, 'Moving beyond Motion', pp.297-318.

<sup>41</sup> Darla Crispin, 'Preface: Studies in Temporality in Twentieth-Century Music', in *Unfolding Time: Studies in Temporality in Twentieth Century Music*, ed. by Darla Crispin (Leuven: Leuven University Press, 2009), pp. 7-12.

challenges composers are faced with in their pursuit of blurring the sense of time (he examines repertoire by Schoenberg, Messiaen, Bartók, Stravinsky, Cowell, Lutosławski and Cage), and touches on the impact evolution in notating time in 20<sup>th</sup>-century music has on performers.<sup>42</sup> Justin London, in his chapter ‘Temporal Complexity in Modern and Post-Modern Music: A critique from Cognitive Aesthetics’, focuses on experiential aspects of the perception of time, but now from the first-person aural experience.<sup>43</sup> Ian Pace approaches the discussion of time through the lens of musical practice and the performer’s perspective, and creates a narrative for finding a balance between performative practicality and the effort not to compromise the aesthetic goals of specific pieces.<sup>44</sup> In their book *Being Time: Case Studies in Musical Temporality*, Richard Glover, Jennie Gottschalk, and Bryn Harrison focus on the perception of musical temporality through the act of listening and listening to oneself listening. Discussing musical examples by Morton Feldman, James Saunders, Chiyoko Szlavnic, Ryojo Ikeda, Toshiya Tsunoda, and Laurie Spiegel, they offer a ‘meditation on the capacity of musical works to influence temporality’.<sup>45</sup> They touch on the role of continuity and discontinuity in form, structure, and memory, and conclude with the suggestion that fully engaged listening is not merely an abstract exercise but an actual experience. Although Arnie Cox’s *Music and Embodied Cognition* is not directly related to time and temporality, his writing on the perception of music through senses and embodied cognition contributes

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<sup>42</sup> Mark Delaere, ‘Tempo, Metre, Rhythm: Time in Twentieth-Century Music’, in *Unfolding Time: Studies in Temporality in Twentieth-Century Music*, ed. by Darla Crispin (Leuven: Leuven University Press, 2009), pp. 13-43.

<sup>43</sup> Justin London, ‘Temporal Complexity in Modern and Post-Modern Music: a Critique from Cognitive Aesthetics’, in *Unfolding Time: Studies in Temporality in Twentieth-Century Music*, ed. by Darla Crispin (Leuven: Leuven University Press, 2009), pp. 45-68.

<sup>44</sup> Ian Pace, ‘Notation, Time and the Performer's Relationship to the Score in Contemporary Music’, in *Unfolding Time: Studies in Temporality in Twentieth-Century Music*, ed. by Darla Crispin (Leuven: Leuven University Press, 2009), pp. 149-192.

<sup>45</sup> Richard Glover, Bryn Harrison, and Jennie Gottschalk, *Being Time: Case Studies*, p.1.

in a broader sense to the discourse of temporality.<sup>46</sup> Cox addresses and analyses the experience and effect of listening primarily through mimetic comprehension, which comes from spatial conceptions that he devises through height/pitch and temporal and musical motion, and musical affects. He opens pathways to reconsider and reevaluate approaches to embodied listening for and from a performer's point of view.

Kathleen Coessens leads a discussion about sensorial experiencing in artistic practice in *Sensorial Aesthetics in Music Practices*.<sup>47</sup> In this publication, aesthetics and the sensorial are investigated through the perspective of embodied artistic practice, with contributions from a range of authors. A chapter by Michaël Levinas offers an overview of the development of the keyboard, from its origins to MIDI keyboards.<sup>48</sup> Questioning the links and relationships between text and music through the instrument's development, and through aspects of harmony and melody, he investigates whether melodic morphologies can develop without connections to language, and through body and music instead. In the following chapter, Coessens herself lays out a broader philosophical context for sensorial versus intellectual perception and understanding of art.<sup>49</sup> She invokes Goethe's assessment that the quest for knowledge shifted from open experiential and sensorial investigations to controlled settings in the West. In connection to art, and especially to artistic practice, Coessens draws on a necessity to explore and collect knowledge through the use of sensorial and embodied experience as a tool to aid creation that also appeals to the

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<sup>46</sup> Arnie Cox, *Music and Embodied Cognition: Listening, Moving, Feeling, and Thinking (Musical Meaning and Interpretation)* (Bloomington, Indiana: Indiana University Press, 2017).

<sup>47</sup> Kathleen Coessens (ed.), *Sensorial Aesthetics in Music Practices* (Leuven: Leuven University Press., 2019).

<sup>48</sup> Michaël Levinas, 'Sound and Sense in Musical Phrases: From the Art of the Keyboard to the Question of Phrase and Melody', in *Sensorial Aesthetics in Music Practices*, ed. by Kathleen Coessens (Leuven: Leuven University Press, 2019), pp. 15-33.

<sup>49</sup> Kathleen Coessens, 'On the Sensorial of Aesthetics', in *Sensorial Aesthetics in Music Practices*, ed. by Kathleen Coessens (Leuven: Leuven University Press, 2019), pp. 31-46.



senses. Fabien Lévy's chapter discusses innate premises of strongly intertwined the sensorial and cultural in compositional practices.<sup>50</sup> While acknowledging its status in the arts, he challenges the logocentrism of Western music and its excessive efforts for annotating every detail in the score, which may come at the expense of musical meaning. A further chapter by Coessens looks at the role of the performer's body and its relationship to a score and interpretation.<sup>51</sup> She looks at the body from within the performer's own experience, and also considers recent theories of perception and embodiment, looking at the body from the outside as an instrument itself, and concluding that these seemingly opposed approaches are in fact complementary and even overlapping.

The discussion about complexity, and subsequent attempts to define, contextualise, and reject the repertoire known as 'the new complexity', have been in the air since Richard Toop's pioneering article *Four Facets of the 'New Complexity'*.<sup>52</sup> Claus-Steffen Mahnkopf introduces 'complexism' as a term in his 1990 contribution through an interview in the booklet *Complexity in Music? An Inquiry into its nature, motivation and performability*.<sup>53</sup> Mahnkopf was also a coeditor of *Polyphony & Complexity*, the first volume in the series *New Music and Aesthetics in the 21<sup>st</sup> Century*, featuring speculations and discussion about the aesthetic questions around music, polyphony and complexity.<sup>54</sup> Mahnkopf's own contribution to this volume

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<sup>50</sup> Fabien Lévy, 'Sense versus Sensitivity in Composition: A Phoney Debate?', in *Sensorial Aesthetics in Music Practices*, ed. by Kathleen Coessens (Leuven: Leuven University Press, 2019), pp. 73-88.

<sup>51</sup> Kathleen Coessens, 'On the Sensorial of the Human Body in Performance', in *Sensorial Aesthetics in Music Practices*, ed. by Kathleen Coessens (Leuven: Leuven University Press, 2019), pp. 133-150.

<sup>52</sup> Richard Toop, 'Four Facets of "The New Complexity"', *Contact*, 32 (1988), 4-50.

<sup>53</sup> Claus-Steffen Mahnkopf, 'Complexism as a new step in musical evolution', in *Complexity in Music? An inquiry into its nature, motivation and performability*, ed. by Joël Bons (Rotterdam: Job Press Rotterdam, 1990), pp. 28-29.

<sup>54</sup> Mahnkopf, Claus-Steffen, Frank Cox, and Wolfram Schurig (eds), *Polyphony & Complexity* [series 'New Music and Aesthetics in the 21st Century', Vol. 1] (Hofheim: Wolke Verlag, 2002).

offers a further elaboration on how to understand and grasp complexism, complexist music and complexist composers in their explorations for ‘almost labyrinthine architecture in order to protect the unique, the special, that which is poetically important’.<sup>55</sup> Paul Cilliers’s book *Complexity and Postmodernism: Understanding Complex Systems* offers a broader take and explanations about complex systems, and especially how they differ from simply complicated systems.<sup>56</sup> Manuel Lima, in his book *Visual Complexity: Mapping Patterns of Information*, shows how a surplus of information, data, and intricate patterns can be used and transformed into appealing, often poetic, or intriguing, or even silly artworks.<sup>57</sup>

In addition to the selection of the literature mentioned above, further sources have provided inspiration and information for specific areas of my research. Articles by W. Luke Windsor,<sup>58</sup> Rolf Inge Godøy,<sup>59</sup> and Ole Kühl<sup>60</sup> in the volume *New Perspectives on Music and Gesture* edited by Anthony Gritten and Elaine King offer a variety of approaches to the musical body and to music cognition, within a discourse that aims to enhance the understanding and awareness of the importance of gesture in human music-making.<sup>61</sup> Although primarily concerned with gestural typology for mixed electronic music, Xenia Pestova and Andrew Lewis’s article ‘The audible and the

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<sup>55</sup> Mahnkopf, Claus-Steffen, ‘Complex Music: An Attempt at a Definition’, in *Polyphony & Complexity* [series ‘New Music and Aesthetics in the 21st Century’, Vol. 1], ed. by Claus-Steffen Mahnkopf, Frank Cox, and Wolfram Schurig (Hofheim: Wolke Verlag, 2002), p.64.

<sup>56</sup> Paul Cilliers, *Complexity and Postmodernism: Understanding Complex Systems* (London: Routledge, 1998).

<sup>57</sup> Manuel Lima, *Visual Complexity: Mapping Patterns of Information* (New York: Princeton Architectural Press, 2011).

<sup>58</sup> W. Luke Windsor, ‘Gestures in Music-making: Action, Information and Perception’, in *New Perspectives on Music and Gesture*, ed. by Anthony Gritten and Elaine King (New York: Routledge, 2011), pp. 45-66.

<sup>59</sup> Rolf Inge Godøy, ‘Coarticulated Gestural-Sonic Objects in Music’, in *New Perspectives on Music and Gesture*, ed. by Anthony Gritten and Elaine King (New York: Routledge, 2011), pp. 67-83.

<sup>60</sup> Ole Kühl, ‘The Semiotic Gesture’, in *New Perspectives on Music and Gesture*, ed. by Anthony Gritten and Elaine King (New York: Routledge, 2011), pp. 123-130.

<sup>61</sup> Anthony Gritten and Elaine King (eds), *New Perspectives on Music and Gesture* (New York: Routledge, 2011).

physical: a gestural typology for “mixed” electronic music’ discusses gesture from the physical human performer in a way that can be considered and also observed for its own merit in music performance.<sup>62</sup> Klaus K. Hübler’s ‘Expanding the String Technique’ is an invaluable reflection on grasping the directions and paths that string music and the left- and right-hand technique take, exploring movement as gestural matter and not only as an intermediary tool towards sound.<sup>63</sup> Further relevant discussions of the purpose and meaning of notation and score, material, timbre, sound, and gesture is included in an edited volume by Paulo de Assis, William Brooks, and Kathleen Coessens,<sup>64</sup> in texts by Nigel McBride<sup>65</sup>, Cornelius Cardew,<sup>66</sup> Philip Thomas<sup>67</sup>, and Aaron Cassidy,<sup>68</sup> and in a further volume in the series edited by Mahnkopf, Cox, and Schurig.<sup>69</sup> These are just some of the writings that offered me as a performer thoughts for careful consideration, that opened new paths and helped me to expand and reshape my awareness of potential sources for and of interpretation and action.

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<sup>62</sup> Andrew Lewis and Xenia Pestova, ‘The audible and the physical: a gestural typology for “mixed” electronic music’, *Proceedings of the Electroacoustic Music Studies Network Conference Meaning and Meaningfulness in Electroacoustic Music, Stockholm* (2012), 1-13.

<sup>63</sup> Klaus K. Hübler, ‘Expanding the String Technique’, *Interface*, 13 (1984), 187-198.

<sup>64</sup> Paulo de Assis, William Brooks and Kathleen Coessens (eds), *Sound & Score: Essays on Sound, Score and Notation* (Leuven: Leuven University Press, 2013).

<sup>65</sup> Nigel McBride, ‘Ontological implication in the work of Finnissey’, in *Critical perspectives on Michael Finnissey: bright futures, dark pasts*, ed. by Ian Pace and Nigel McBride (New York: Routledge, 2019), pp. 104-125; McBride, ‘Notational and non-notational paradigms in Finnissey’s music’, in *ibid.*, pp. 221-240.

<sup>66</sup> Cornelius Cardew, ‘Notation: Interpretation, etc.’, *Tempo*, 58 (1961), 21-33.

<sup>67</sup> Philip Thomas, ‘Determining the indeterminate’, *Contemporary Music Review*, 26.2 (2007), 129-140; Thomas, *Morton Feldman Piano* [box set, liner notes] (Another Timbre, at144x5, 2019).

<sup>68</sup> Aaron Cassidy, ‘Constraint Schemata, Multi-axis Movement Modeling, and Unified, Multi-parametric Notation for Strings and Voices’, *Search Journal for New Music and Culture*, 10 (2013)

<sup>69</sup> Mahnkopf, Claus-Steffen, Frank Cox, and Wolfram Schurig (eds), *Musical Material Today* [series ‘New Music and Aesthetics in the 21st Century’, Vol. 8] (Hofheim: Wolke Verlag, 2012).



# PART I

## CHAPTER 1

Chapter 1 situates my research in the context of contemporary violin music. The first part of this chapter identifies the “impossible” in the context of solo violin repertoire in the late 20<sup>th</sup> and 21<sup>st</sup> century and my trajectory of arriving at the *repertorium materia prima* of this research project. The second part of the chapter is a detailed account of John Cage’s *Freeman Etudes*, which became the “mother piece” of my research.

### 1.1 How Impossible is the “Impossible”? Finding my *Repertorium Materia Prima*

*‘The presumption of something being impossible presumes that we have the knowledge of the future, that I am not sure is always warranted. Maybe if we hold open what future will be or even understand that future by its definition is something unpredictable, something different to what we know will appear.’ – Andrew Herscher<sup>70</sup>*

Many pieces considered today to be a standard part of the solo violin repertoire of course also once brought challenges to violin playing, technique, artistry, and musical

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<sup>70</sup> Andrew Herscher, speaking at ‘International Lecture Series: Settler Colonial City Project’ (Royal College of Art, London, on 7 November 2020).

understanding. The repertoire offers numerous examples of the surprising and the unconventional that provoked not only performers but also audiences. To name just a few of these once fresh and “impossible” works, now established as masterpieces not only of the standard performance repertoire but also the academic curriculum, one need look no further than Johann Sebastian Bach’s *Sonatas and Partitas*, Niccolò Paganini’s *24 Caprices* or Eugene Ysaÿe’s six solo Sonatas. Interpretations have been influenced by the time and social environments in which a performer is/was active, and also by technical achievements and changes that the instrument and, subsequently, playing technique have gone through. Although they are still considered difficult, the mindset today regarding the performative accessibility of these works has long surpassed their consideration as “impossible”.

However, next to this now-standard repertoire stand pieces written for violin in recent years that continue to be ‘marked to a large extent by the disregard of the instrument and its limitations’.<sup>71</sup> Or rather, I would argue, not by this disregard but instead by the desire to find still undiscovered ways of using the violin, often reflected in explorations of extra-musical content, the use of the instrument as a whole (as opposed to using only the sounding portion of the strings), as well as limits of human physicality. Combined, these aspects can shatter our perception of the parameters conventionally considered crucial for judging the values (such as tone, melody, brilliance, virtuosity) and hierarchy of information in musical content and material, with consequences for interpretative decisions and for how the success of a performance is judged.

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<sup>71</sup> Klaus K. Hübler, ‘Expanding the String Technique’, *Interface*, 13 (1984), p.187.

In my research I focus on pieces riddled with complexism, often described as almost impossible to play.<sup>72</sup> As Ben Spatz notes, ‘we should be wary of declaring things impossible, since technique is never more than an incomplete and unfinished engagement with the affordances of reality’; my approach to this repertoire was to examine what is the current state of my technique and what might contribute to having a continuous expansion of my ‘affordances of reality’.<sup>73</sup>

The mythology surrounding John Cage’s *Freeman Etudes* impelled me to gather, as a starting point, very difficult pieces from violin repertoire written after 1977. In addition to creating a list of mostly solo violin pieces, there was a selection of string quartets and violin plus one instrument pieces, which in a broader sense contributed to the discourse of the research.<sup>74</sup> Further, in 2018 I launched a call for scores, which resulted in my commissioning and collaborating with Dario Buccino on the piece *Finalmente il tempo è intero n° 16*; this work too became a substantial contribution to my repertoire and research.<sup>75</sup>

To find which pieces from the vast repertoire might constitute my *repertorium materia prima* and would serve as the ‘starting-point of knowledge’<sup>76</sup> in my quest to redefine my performance practice, I first had to establish the common difficulties across these pieces. To achieve this, I relied on the feedback loop between theory and

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<sup>72</sup> Claus-Steffen Mahnkopf, ‘Complex Music: An Attempt at a Definition’, pp.54-64.

<sup>73</sup> Spatz, *What a Body Can Do*, p. 66.

<sup>74</sup> The list of all the pieces that contributed to the research in addition to *repertorium materia prima* can be found in Appendix B.

<sup>75</sup> The call for scores was launched on 6 July 2018. By the closing date, 25 September, the panel received 86 applications from composers of a very diverse origin (31 countries). The call for scores can be retrieved via: [http://temporalityoftheimpossible.com/happenings/call\\_for\\_scores\\_2018.html](http://temporalityoftheimpossible.com/happenings/call_for_scores_2018.html), and the announcement of the selected composers here:

[http://temporalityoftheimpossible.com/happenings/announcement\\_call\\_for\\_scores\\_2018.html](http://temporalityoftheimpossible.com/happenings/announcement_call_for_scores_2018.html)

<sup>76</sup> Rudolf Steiner, *Truth and Knowledge* (Weimar: Steiner Books, 1981), p. 26.

practice/performance. As a performer, approaching a piece of music analytically to aid performance does not mean solely analysing its structure and form from a compositional point of view, but also analysing and understanding all its performative aspects.<sup>77</sup> Through playing and analysing, a performer has to find a way ‘to channel all this information, not rearrange it to suit their own perceptual need’.<sup>78</sup> Each of the pieces is unique in its combination of extreme, multilayered demands, both technically and aesthetically, but working on them revealed that there are common threads. I used these common threads to define areas of difficulty that posed challenges for the performance practice.

George Steiner develops a ‘theory of difficulty’<sup>79</sup> in contemporary poetry and proposes a typology of four classes:

- The Epiphenomenal Difficulty – the apparent or contingent difficulty which for Steiner resides in the use of unusual or obscure words, i.e. the specific type of language;
- The Modal Difficulty, which for him is the most difficult of difficulties as it deals with double meanings and questions of tone; whereas epiphenomenal or contingent difficulties are ‘tractable’,<sup>80</sup> modal difficulty fully ‘lie with the beholder’;<sup>81</sup>
- The Tactical Difficulty, in which the writer deliberately withholds something;<sup>82</sup>

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<sup>77</sup> ‘In fact we have to rethink the term “structure” fundamentally, since structure implies fixity (and conventionally, linearity). When infusing non-identity (non-fixity) on a structural level I not only aim to liquefy or destroy fixity but intend to capture a dynamically active structure – active in itself – a certain multidimensional heterogeneous continuity (continuous multiplicity), an interweaving, twisting and folding activity, where they all continuously “dovetail into one another”’. Bergson (1992), quoted in Einar Torfi Einarsson, ‘Desiring-Machines: In between Difference and Repetition, Performer and Conductor, Cyclones and Physicality, Structure and Notation’, *Perspectives of New Music*, 53.1 (2015), p.19.

<sup>78</sup> Marc Couroux, ‘Evryali and the Exploding of the Interface: From Virtuosity to Anti-virtuosity and Beyond’, *Contemporary Music Review*, 21.2-3 (2002), pp.53-67.

<sup>79</sup> George Steiner, ‘On Difficulty’, *The Journal of Aesthetics and Art Criticism*, 36.3 (1978), 263-276.

<sup>80</sup> Steiner, p. 268.

<sup>81</sup> Steiner, p. 270.

<sup>82</sup> Steiner, p. 270.



- The Ontological Difficulty, which ‘confront[s] us with blank questions about the nature of human speech, about the status of significance, about the necessity and purpose of the construct which we have, with more or less rough and ready consensus, come to perceive as a poem’.<sup>83</sup>

Borrowing from this thread of thinking, and adjusting it to be more in tune with my repertoire, I devised a six-class system:

- The Epiphenomenal Difficulty – understanding notation as a ‘type of language’ in Steiner’s sense, this is further broken into several subdivisions: the use of tablature notation (for violin writing), the surplus of notation symbols, new symbols (expanding on “traditional” western notation), and finally, cases of fully custom designed and unique notation language (figure 1.1.1);

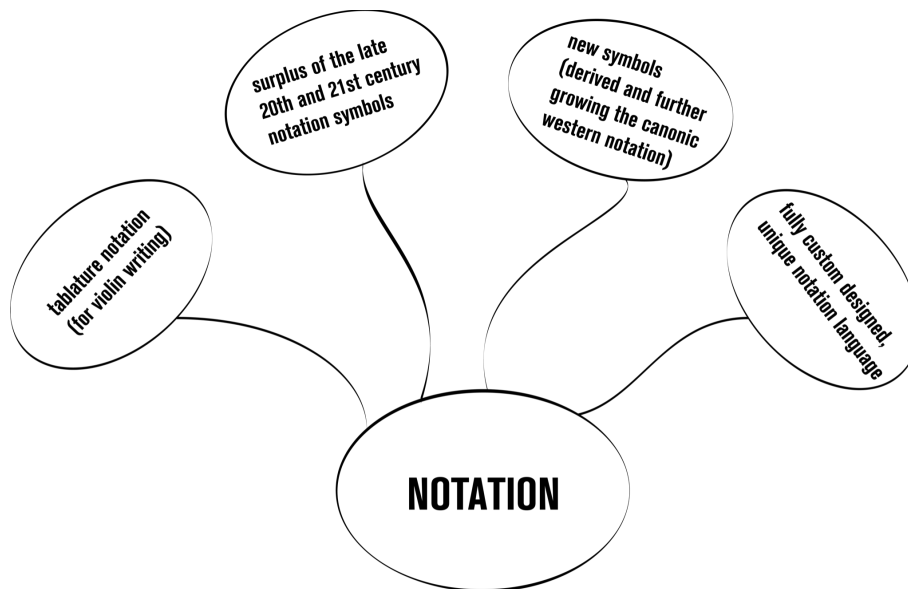


Figure 1.1.1: Subdivision of the epiphenomenal difficulty

- The Modal Difficulty: a surplus of notation / information density which might impose dual meanings, contradictory meanings, or near-impossible executions that demand performative and interpretational decision making by the performer – a difficulty whose meaning ‘lies with the beholder’;<sup>84</sup>
- The Tactical Difficulty: diverging from Steiner’s definition, in contemporary violin repertoire I consider tactical difficulty not as any kind of deliberate

<sup>83</sup> Steiner, p. 273.

<sup>84</sup> Steiner, p. 270.

withholding of information, but rather as a tactical choice in composing the piece to employ (extensively) one or more of the following features:

- Polyrhythmic gestural complexity: overly complex rhythmic structures; overly complex rhythmic structures based on triplets with different rhythm for each of the hands; double-, complex rhythmic structures based on triplets, with double- or triple-nested triplets, rhythmic pacing and tempo, changes, division and subdivision, all of which affects the physicality of engagement of the performer and has an effect on the outcome
  - Polyrhythmic accidental-sonic complexity: use of complex rhythmic structures (as above) with a complex system of nested repetitions; fast-paced changes between highly contrasted and distant sonic objects/motives
  - Altering the instrument: preparations, scordatura/alternative tunings of the instrument,<sup>85</sup> alternative stringing of the instrument – drastically changing the physicality of the instrument, thus creating a disorienting environment that demands re-evaluation of the known relationship between the instrument and the performer and the sonic expectations
  - Non-fixed form: the piece is designed so as to generate its form only in the moment of the performance (yet without improvisation with the material)
  - Non-hierarchical approach to material, serving to equalise everything, and in all directions
  - Physical acrobatics in relation to holding the instrument during the performance. While minor changes to the position in which the bow or the violin itself is held are common, here I refer to drastic mid-performance changes occurring throughout the piece
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- The Unpremeditated Difficulty: unplanned withholding of information caused by an inherent difficulty in making an absolute notation of the sound
  - The Ontological Difficulty: finding both practical meanings of the notation (for example a diamond notehead represents a harmonic finger pressure) and the contextual meanings of and within the piece
  - The Practical Difficulty: this is a “practitioner’s” specific area and it covers the wide spectrum of ways in which to enact both practical and contextual meanings, separately and together, by finding the right techniques for playing (everything that is related to the gesture and movement of the player – one example would be finding the right type of left-hand finger pressure), as well

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<sup>85</sup> I use both terms, scordatura and alternative tuning, interchangeably throughout the text.

as the demands on concentration when dealing with the notation of difficulties and near-impossibilities.

However, these classes of difficulty on their own are not the cause of “impossibility” when it comes to performance. This “impossibility” arises when multiple classes are present in a piece in relation to the complexity that is live performance, which influences and affects everything. While all of the pieces I initially gathered continue to represent various aspects of complexity, my focus narrowed to pieces with a very detailed and highly determined writing which ultimately, precisely due to this complexity, have sonically unfixed forms and demand a reconfiguration of a performer’s practice, wherein the interaction of all the agents of difficulty create an environment in which impossible situations arise (figure 1.1.2). These are pieces that demand of a performer to situate themselves between, on the one hand, the existing traditions and conventions that accompany difficult pieces from the canonical repertoire and, on the other, the position ‘of openness, of inquiry, of uncertainty, of discovery’<sup>86</sup> that characterises experimental practice – to arrive at a position where transfer of knowledge from each side is welcome and where ‘speculation takes place by repeatedly creating the conditions for alternatives to appear, or not to appear, in and through the practice’.<sup>87</sup>

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<sup>86</sup> Jennie Gottschalk, *Experimental Music Since 1970* (New York: Bloomsbury, 2016), p.1.

<sup>87</sup> Annette Arlander, ‘Artistic Research as Speculative Practice’, *Journal of Artistic Research* (2017), at <<https://jar-online.net/en/artistic-research-speculative-practice>> [accessed 22 May 2023].

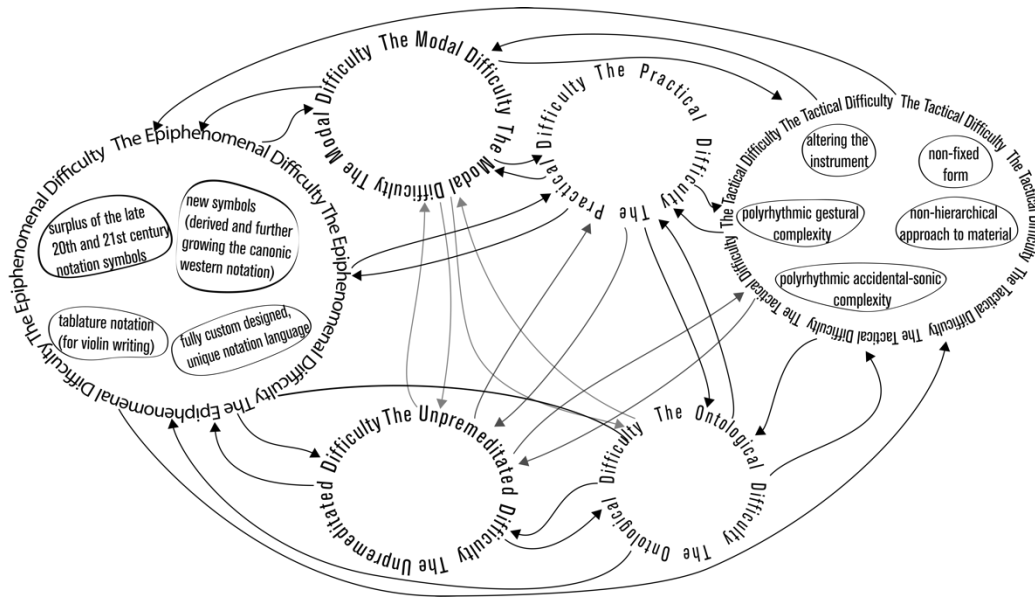


Figure 1.1.2: Interaction of classes and sub-classes of difficulty

My examination of the relation between difficulties, material, and demands on a performer revealed a densely intertwined network of influences. I organised these difficulties and identified three challenge areas for the process of redefining my practice:

1. Challenge Area 1 – clarifying sonic identities;
2. Challenge Area 2 – physicality in general and physicality as material;
3. Challenge Area 3 – process and memory.

These challenges can be addressed in various ways. Even once “conquered”, each of these challenge areas can still be expanded, through new paths towards accomplishment, either for a similar result but through different/easier methods, or through finding alternative methods of execution that might bring improvement to the resulting technical execution, sounding results, or aesthetic expression. Challenges are a forever moving target, but this does not mean they are a futile quest: each conquest is one point of victory on the continuous road that is a performance practice. Even

while identifying these challenge areas, it is in fact difficult to isolate only one element and deal with it completely independently. Each of these challenges becomes ‘an independent force, affecting other materials in unpredictable ways’,<sup>88</sup> yet they are in an almost constant state of interaction. This is, after all, the reason why I see these pieces as *complex*, and not just complicated.<sup>89</sup>

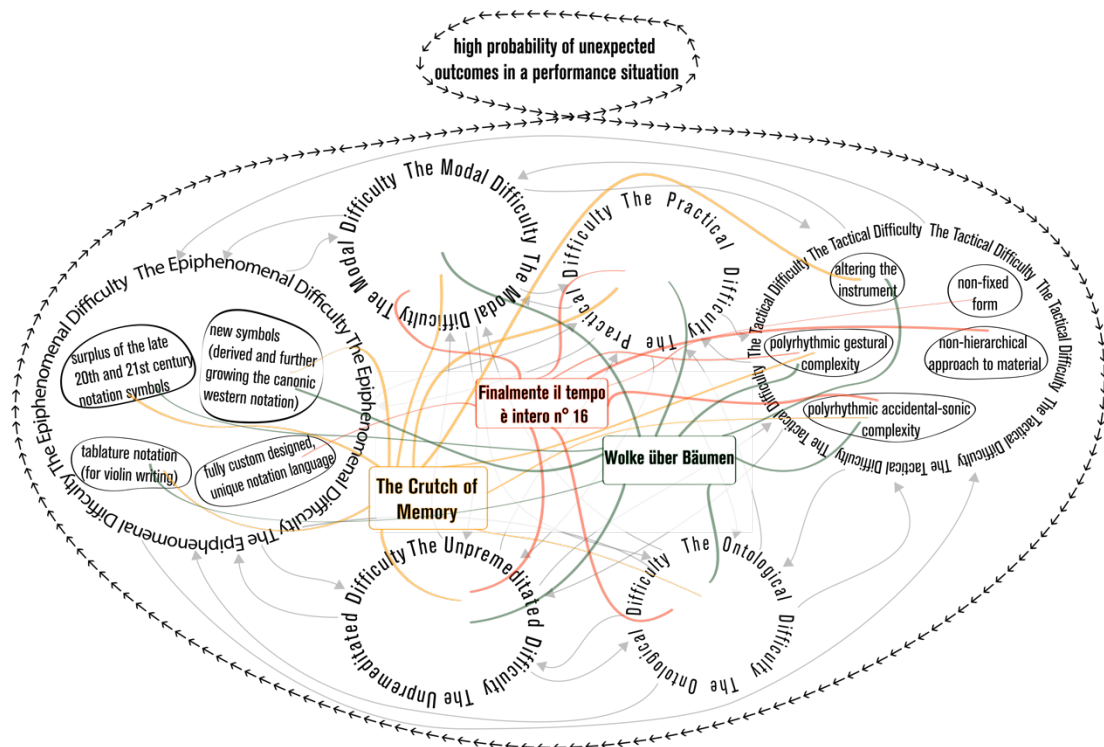


Figure 1.1.3: Web of difficulties

<sup>88</sup> Einarsson, ‘Desiring-Machines’, p. 6.

<sup>89</sup> Paul Cilliers makes a distinction between the notions of “complex” and “complicated” by stating that: ‘If a system – despite the fact that it may consist of a huge number of components – can be given a complete description in terms of its individual constituents, such a system is merely complicated. Things like jumbo jets or computers are complicated. In a complex system, on the other hand, the interaction among constituents of the system, and the interaction between the system and its environment, are of such a nature that the system as a whole cannot be fully understood simply by analysing its components. Moreover, these relationships are not fixed, but shift and change, often as a result of self-organisation. This can result in novel features, usually referred to in terms of emergent properties. The brain, natural language and social systems are complex.’ Paul Cilliers, *Complexity and Postmodernism: Understanding Complex Systems* (London: Routledge, 1998), pp.viii-ix.

Evaluating the repertoire through this lens, example of which can be seen in figure

1.1.3 using three of the pieces, my focus pieces, my *repertorium materia prima*,

became:<sup>90</sup>

- Dario Buccino: *Finalmente il tempo è intero n° 16* (2019), for violin or viola
- John Cage: *Freeman Etudes* (1977-80 & 1989-90), for solo violin, with a focus on Etude XVIII
- Aaron Cassidy: *The Crutch of Memory* (2004), for indeterminate solo string instrument
- Miika Hyytiäinen: *Impossibilities for Violin* (2019-2020)
- Clara Iannotta: *dead wasps in the jam-jar (i)* (2014-2015), for solo violin
- Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)
- Liza Lim: *The Su Song Star Map* (2018), for solo violin
- Rebecca Saunders: *Hauch* (2018), for solo violin

I also considered the ‘web of difficulties’ when it came to planning performances with my focus repertoire, and would present a selection of pieces with a specific concept, theme, which would focus and present pieces that are more representative for one of the areas.<sup>91</sup>

Although John Cage’s *Freeman Etudes* is amongst the case studies in Chapter 4, because of the insights it provided, and due to the noticeable distance between the year of its creation and those of the other works listed above, I consider it a ‘mother piece’. As such, I address this work in detail here in Chapter 1.2.

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<sup>90</sup> Publisher and reference information can be found in Appendix A.

<sup>91</sup> See Appendix D.

## 1.2 John Cage's *Freeman Etudes*, with a focus on *Etude XVIII*

*'The stars we are given. The constellations we make. That is to say, stars exist in the cosmos, but the constellations are the imagery lines we draw between them, the readings we give the sky, the stories we tell.'* – Rebecca Solnit<sup>92</sup>

John Cage's *Freeman Etudes* were conceived in the year 1977. The idea for a new solo violin piece came in response to Cage's *Etudes Australes* for piano (1974-75). Their 'non-graphical, relatively conventional notation'<sup>93</sup> inspired violinist Paul Zukofsky to approach Cage with the idea of Cage composing something similar for violin.<sup>94</sup> The title of the work comes from Betty Freeman, a supporter of Cage and Zukofsky, who finally commissioned the piece.<sup>95</sup> The plan was to have a set of thirty-two etudes, but after completing the first seventeen and starting work on *Etude XVIII* in 1980, the creation came to a halt.

Cage used chance operations in composing *Freeman Etudes*, a practice that had been present consistently in his methods since 1951. During the compositional process, chance operations started producing extremely dense clusters of notes, and in the case of *Etude XVIII* so extreme that Cage himself thought that he, or rather the chance process, had crossed the line of the humanly possible. James Pritchett, who played an important role in the life of the *Etudes*, writes: 'This was music that really was impossible. Not wanting an "easy way out" (such as realising the performance on

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<sup>92</sup> Rebecca Solnit, *Storming the Gates of Paradise: Landscapes for Politics* (London: University of California Press, 2007), p.165.

<sup>93</sup> Mieko Kanno, 'Cage's Freeman Etudes: sounding out', pp. 43-60.

<sup>94</sup> John Cage, *Chorals and Cheap Imitations* [liner notes] (CP<sup>2</sup> Recordings, CP<sup>2</sup>/ 7, 1981).

<sup>95</sup> Paul Zukofsky, 'John Cage's Recent Violin Music', in *A John Cage Reader*, ed. by Paul Gena and Jonathan Bent (New York: Peters, 1982), pp. 101-106.

tape), nor to compromise the compositional process he had set in motion, Cage abandoned the project altogether.<sup>96</sup>

However, in 1988 the violinist Irvine Arditti was asked to perform the completed and published first two books of *Etudes*. Arditti recalls that as difficult and dramatic as the learning of the piece beforehand might have been, when first playing for Cage, he discovered further layers of what he termed ‘unspoken’ aspects in the notational representation of the work, which the composer shared with him.<sup>97</sup> Difficulties for learning the *Freeman Etudes* come particularly from the very detailed score, which draws the focus of the performer to technical execution and precision. One of those ‘unspoken’, un-notated intentions that Arditti refers to is that Cage’s interest was towards the shape of the piece as a whole and the experience of listening of this music, rather than on any of the specific aspects of technical execution.

One of the reasons that the *Freeman Etudes* were deemed impossible was the fact that the sound events were often quick successions with extreme demands, not only with regard to the position on the fingerboard but also to every aspect of character and timbre a sound event can have. While Cage’s instruction implies both a relative and an absolute value,<sup>98</sup> Arditti still interpreted this at the absolute value of ‘*as fast as possible*’.<sup>99</sup> To go as fast as possible as a relative value means an accommodation of speed to the capabilities of the individual performer. The absolute value means going

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<sup>96</sup> James Pritchett, ‘The Completion of John Cage’s *Freeman Etudes*’, *Perspectives of New Music*, 32.2 (1994), p. 264.

<sup>97</sup> Roger Reynolds, ‘CAGE ... FREEMAN ... ARDITTI: Learning How to Listen’, feature for John Cage Centennial Festival Washington, DC, September 2012.

<sup>98</sup> The preface to the published score includes instructions to the performer to play ‘*as fast as virtuosity permits*’, but followed with ‘(circa 3 seconds)’.

<sup>99</sup> Pritchett, p. 265.



beyond one's own current capabilities and subsequently pushing the boundary of, for example, how fast a shift of the left hand can be made, or how fast a change in right-hand actions in executing abrupt changes between two very different sound characters. This made Arditti's approach to the *Etudes* an ongoing work in diligently improving his 'capabilities as a performer'.<sup>100</sup> It was in this interpretation, and through the discovery of Arditti's performance and performative thought process, that Cage saw that there are different ways a performer can perceive and treat the difficulties and arrive at interpreting this "impossible" music. Cage realised that he himself could treat the impossible numbers of notes in the similar way Arditti treated the indications for speed. This was the crucial realisation in which Cage found that the performer could be told to play 'as many as possible' notes.<sup>101</sup> This exchange and collaboration between Cage and Arditti for the 1988 performance led Cage to a decision to continue and complete the piece as originally planned, arriving at a set of four books, totalling thirty-two etudes. Returning to the composition process and remembering all the rules and complex details proved so difficult that he had to call upon James Pritchett for help. 'From the distance of nine years' time,' Pritchett recalls, 'the piece might as well have been composed by a stranger.'<sup>102</sup> Pritchett completed his report by the end of 1989 and at this point Cage resumed the work, firstly finishing the abandoned *Etude XVIII* and proceeding to compose the remaining fourteen etudes by 1990.

In *Freeman Etudes*, every pitch is on a fixed string and has an assigned dynamic marking. Both parameters vary to extremes from one event to another. The interval

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<sup>100</sup> Pritchett, p. 265.

<sup>101</sup> Pritchett, p. 265.

<sup>102</sup> Pritchett, p. 266.

between two pitches is frequently distant and demanding for left-hand position changes. The same is true for the dynamic range between adjacent events, requiring extreme control over each action of the right hand as well. Already with only these two parameters in play, achieving all the changes in milliseconds will often produce a sound that is different to the one expected. Added to that are all the other characteristics assigned; the performer must reconsider their imagination of what sound should be sounding. The performer must also be ready for the surprise of unexpected sounding results, and in the moment of performance adjust the ear to the unique form that arises.

The multiple possible outcomes of the same *Etude* are not governed by the free will of the performer, but rather by the physical (im)possibilities that arise when aiming to interpret each notational detail. The sounding result might differ from performance to performance and from performer to performer, due to their technical or physical capacities. However, the aim of the performer should be to maintain a rigorous, responsible, and vigilant approach in keeping the discourse of the specific ‘musical continuity’ that the *Freeman Etudes* prescribe.

These are intentionally as difficult as I can make them, because I think we’re now surrounded by very serious problems in society, and we tend to think that the situation is hopeless and that it’s just impossible to do something that will make everything turn out properly. So I think that this music, which is almost impossible, gives an instance of the practicality of the impossible.<sup>103</sup>

Taking these words of Cage into consideration, it is reasonable to consider that even when not every detail is sounding out “accurately” with respect to its notation, the rigorous approach and effort to execute as much as possible constitutes a performance truthful to the score.

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<sup>103</sup> John Cage, ‘John Cage in conversation with Thomas Moore and Laura Fletcher’ (1982).

There are additional aspects that one must take into consideration when assessing the “accuracy” of the sounding out of the text in a performance situation. One aspect that can influence the outcome is related to the acoustics and/or humidity of the space where the performance is taking place. The velocity at which sound events unfold in *Freeman Etudes* is far too frequent for the body to be able to control the parameters that are outside the control of the gesture. A specific acoustic environment will make some of the events sound out – or not. As such, in the moment of performance, no matter how well prepared, there will be inconsistencies in the result.

While, for some pieces, adjusting speed or prolonging phrasing may present a solution in order to have control over possibly problematic acoustics of a specific hall, such an approach would completely destroy the idea and the driving energy of the *Etudes*. Cage counted on its difficulties and on the “uncomfortableness” that arises from the time prescriptions as one of the elements that the performer should work with, not try to suppress. In this case, one of the solutions that a performer can call upon is the *memory of sound* and *memory of gesture*. Besides the performance space, the other influencing parameters include the instrument itself, as well as the current physical state of the performer’s body.<sup>104</sup>

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<sup>104</sup> A performer relies on the physical abilities of their body and movement for music-making. The ideal ‘performance body’ is at full energy and ready to respond to the musical thinking of the performer, and implement any action necessary in minute reaction for these thoughts to be realised through sound. Even simple fatigue can have an influence on this relationship. Although the result might not always be noticeable to the audience, the relativity of the body’s performance levels is something that has to be taken into consideration when we are speaking about a performance, performance situation and practising musician in action. This aspect is present in any performance that includes a human body, regardless of discipline. The more demanding the performance, the more expectations are placed on the physical performance levels of the body. The demands posed by *Freeman Etudes* are no exception to this.

### 1.2.1 Approaching the Infamous *Etude XVIII*

Etude XVIII is one of the densest and most difficult of all the *Freeman Etudes*. In section 1.2.1 I examine one possible methodology of learning how to deal with the extreme technical challenges at hand, through which I can incorporate as much detail as possible while creating a state of readiness to react to the unexpected that *will* appear in the moment of performance. Section 1.2.1 thus addresses questions of practice/advance preparation, and presents examples relating to decisions made in the moment of performance.

The basic recognition of pitches in *Freeman Etudes* does not in itself present a specifically challenging issue. As soon as the score is examined more closely, however, the challenging aspects and exceptions to a “standard” reading of otherwise standard-looking notation come to the fore.

The first of these exceptions involves inflectional markings added to the standard notational symbols for pitch (figure 1.2.1.1).

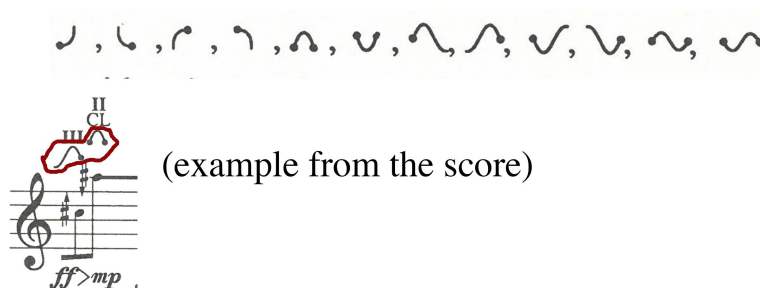


Figure 1.2.1.1: Pitch inflections - top: symbols for pitch inflections; bottom: example of pitch inflection

While the tones are ‘conventionally pitched or indeterminately microtonally sharp or flat’,<sup>105</sup> additional symbols for slight changes, as seen in the top part of figure

1.2.1.1, include:

- starting from the pitch and going slightly up
- going into the pitch from slightly above the pitch
- going into the pitch from slightly under
- starting from the pitch and going slightly under
- starting from the pitch going slightly above and returning to the original pitch
- starting from the pitch going slightly under and returning to the original pitch
- starting from the pitch going slightly above and then under
- going from slightly under to slightly above and arriving to the pitch
- starting from the pitch then going slightly under and then slightly above
- going from slightly above, then going slightly under and then arriving to the pitch
- starting from the pitch, going slightly above, then going slightly under, and then arriving back to the pitch
- starting from the pitch, going slightly under, then going slightly above, and ending back on the pitch.

Another unconventional addition is the way that Cage depicts the timing of events.

The division and placement of events in time – metre and rhythm – are represented by two horizontal lines underneath each system (figure 1.2.1.2).

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<sup>105</sup> John Cage, *Freeman Etudes Books 3&4*, performance notes, Edition Peters No. 66831cd (London: Peters Edition, 1992), p.1.



of rhythm. But unlike conventionally western classical notation of note lengths and rhythm, ictae/ictuses do not give the same immediate clarity of duration.

There are three ways in which a performer can approach interpreting these durations and rhythms. One way is by intuitively assessing approximate lengths between ictuses, and their relationship within the ‘three-second measure’ segments. But due to the density of ictuses, or in other places their sparsity, in addition to all other information that a performer has to deal with in the moment, this would result in very loosely defined happenings within the space-time.

The second possibility is to precisely measure the space between each ictus. Although this is a time-consuming task, especially when done for each of the 32 etudes, this approach produces reliable durations for each pitch.

Following is the example of one such calculation (figure 1.2.1.4), for the first *measure* (figure 1.2.1.3).



Figure 1.2.1.3: First measure from *Etude XVIII*

- Starting point: there is 30.51mm (3.05cm) per ‘measure’ (in the Edition Peters published score)

- 30.5mm = 3 seconds (or 3000ms)
- the first measure contains 13 ictuses

	Measure length: 30.5mm	Measure duration: (circa) 3000ms	
Ictae	Length between two ictuses	Duration (in ms)	In seconds
0-1	1.5mm	147.5409	0.1475
1-2	2.5mm	245.9016	0.2459
2-3	1.5mm	147.5409	0.1475
3-4	2mm	196.7213	0.1967
4-5	2.1mm	206.5573	0.2065
5-6	1.1mm	108.1967	0.1081
6-7	0.1mm	9.8360	0.0098
7-8	0.4mm	39.3442	0.0393
8-9	1.8mm	177.0491	0.1770
9-10	7mm	688.5245	0.6885
10-11	2mm	196.7213	0.1967
11-12	4.1mm	403.2786	0.4032
12-13	3.9mm	383.6065	0.3836
13-next <i>measure</i>	1.8mm, of which 0.3mm belong to the first <i>measure</i>	29.5081 (full note: 177.0491)	0.0295
		Total:	2.9798

Figure 1.2.1.4: Calculation transferring distances to time duration of each of the sound events in the first measure of *Freeman Etude XVIII*

Using this calculation, it would be possible to go even further in this approach and “re-notate” the rhythm with the use of notation that is more accessible to the eye (figure 1.2.1.5).



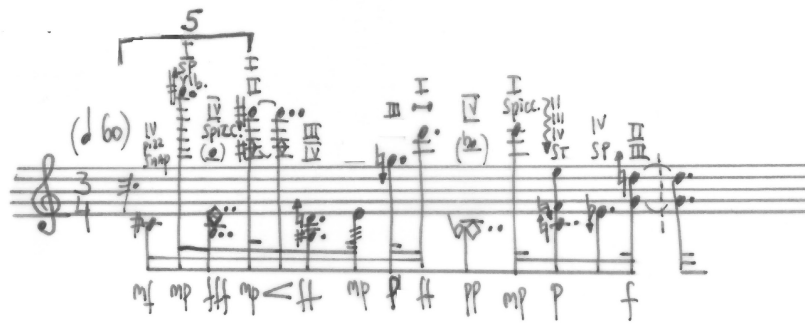


Figure 1.2.1.5: First measure of *Etude XVIII*, my “re-notation” with standard approach to rhythmic notation

The ‘measure’ of ‘circa 3 seconds’ was assigned a 3/4 time signature, with a tempo of quarter note = 60. With this organisation of space-time, and with 1 second per quarter note as a premise, ictuses 0–4 were (roughly) assigned to the first quarter note, ictuses 5–9 to the second and ictuses 10–13 to the third.

Although this approach can be considered useful for grasping some of the more complex time-space divisions in the beginning phases of work, through this new visual representation of the material the focus of the score would shift largely to rhythm. This visually imposed shift is bound to destroy both the *musical continuity* and *performative energy* that Cage’s notation conveys to the performer.

The third approach, and the one that I personally have settled on, is a combination of the two previously outlined. For me, the use of the original score layout of the *Etudes* in performance is imperative, but so is the work of calculating time division in the first phases of preparation. Although precise calculation (or re-notation) does not guarantee an “accurate” sounding of rhythm in portions with dense ictuses, knowing the duration of longer ictuses is of great importance for the final form and for constructing an interpretation. Performative indeterminacy is certainly present in the

moment of performance (because of all the previously described elements at play), but the identification of longer durations can provide anchor points among other, faster-changing ictuses and thus keep the general form and pace in place. The challenge of the division of time and the placement of events increases further when it comes to Etude XVIII, due to the appearance of additional note ‘segments’ – as will now be discussed in section 1.2.2.

### 1.2.2 Equalising the Optics of the Space: reading the “blow-up” segments

As described in Pritchett’s report, one of the first and main givens for the piece, that was decided before any of the notes/pitches were generated, was organising of the spatial layout of the score.<sup>107</sup> The second operation in the chance process – that of deciding pitches – started accumulating a significantly larger number of notes per bar, so much so that there would not be enough space to write them all properly in their respective spaces. *Etude XVII* is the first instance in which ‘out of place’ additional segments of notes can be noticed, appearing above the main staff (figure 1.2.2.1). In order to make legible the segments for which too many notes have been assigned, Cage puts only stems to mark the ictuses, moments when each of the sound events is going to happen within the bar. There are no noteheads, nor any of the additional characteristics. To actually notate the sound events, the “blow-up” segments appear, in most cases, relatively close to their original place.<sup>108</sup>

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<sup>107</sup> Pritchett, ‘The Completion of John Cage’s Freeman Etudes’.

<sup>108</sup> James Pritchett, *John Cage: Freeman Etudes Books One and Two* (Irvine Arditti, violin), CD liner notes (Mode Records, mode 32, 1993).

The image shows a musical score excerpt from Etude XVII. It features three distinct segments labeled A, B, and C. Segment A is marked with dynamics 'ppp p' and 'pp < f'. Segment B is marked with 'mp < ff'. Segment C is marked with 'ff', 'f', 'p', and 'ff'. The score includes various musical notations such as dynamics, articulation marks, and fingerings.

Figure 1.2.2.1: Excerpt from *Etude XVII*

As seen in figure 1.2.2.1, these segments are marked with letters; these additional groups of notes represent the corresponding letter segments from the main system. It is easy in this example to make this connection also because the segments appear relatively close to their original place, but this is not always the case. In the case of *Etude XVIII*, these break-out sections are much more extreme.

*Etude XVIII* has ten such segments, marked A to J (figure 1.2.2.2). The number of ictuses that appear in each of these segments are:

Segment	Number of ictuses
A	19
B	7
C	6
D	9
E	5
F	21
G	42
H	11
I	10
J	4

Figure 1.2.2.2: Number of ictus appearances per segment in *Etude XVIII*

When starting my own preparation process, the discrepancy of scale in augmentation of the segments (of “blowing up”), as well as their placement in the published score, revealed an issue. For a piece that relies on space-time notation throughout, the “displacement” of material can be considered a problem from the standpoint of grasping all the *musical intentions* and *continuity*. For example, even the simplest visual rendering will show that the proportion of the enlargement of segment A does not correspond to that of segment B (figure 1.2.2.3).

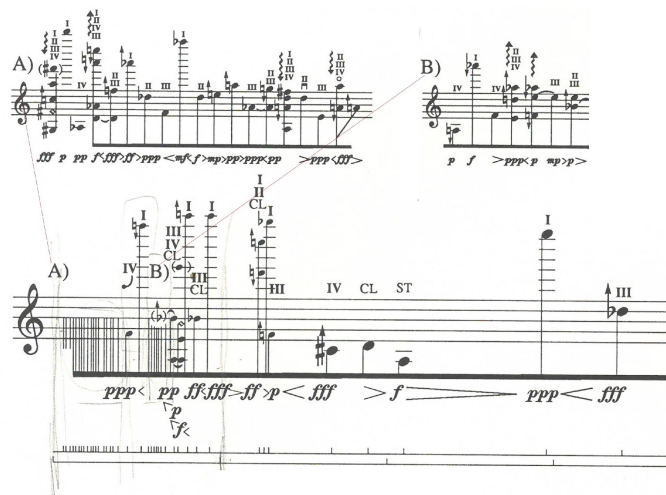


Figure 1.2.2.3: Example of uneven spatial representation of condensed material on the second line of *Etude XVIII*

The purpose of the “blow-up” sections had the sole goal of making the notes legible, but in doing so this representation removes the sense of proportion. In addition, there seems to be no specific rule according to which they are ‘blown up’. According to Pritchett, Cage did not have any involvement in the depiction of these ‘blow-up’ segments and how they were going to appear in the published score.<sup>109</sup> They were notated on separate, uncategorised pieces of paper and simply copied in a “legible” way by a copyist.

Taking into consideration the way the time and rhythm are depicted, and deciphering the duration of each note and placing sound events in their correct moment in time, these sections suddenly appear to be out of context. Because of their visual appearance – the relaxed, spread-out occupation of space – their interpretation in the moment of performance can suffer from slowing down, because of this inconsistency.

<sup>109</sup> Email, James Pritchett to the present author, 3 November 2018.

Even if a performer is conscious of this trap, it seems an unnecessary addition to all the other parameters that one has to deal with.

One solution could be to learn the segments by heart, which will inevitably happen over time to some extent. But because of the nature of the composition, performing without the score, however impressive, might risk giving the audience an impression of improvised music.<sup>110</sup> In addition, in segments like G, the sequence consists of 42 notes that are to be played in a little less than 4 seconds. This segment is where Cage's instruction – ‘the violinist, omitting when he must, should play as many ictuses as possible’ – applies most.<sup>111</sup> Learning this segment by heart with a predetermined note sequence and permanently disregarding the others, although not impossible as a solution, would be to forgo the ‘practicality of the impossible’ and the continuous personal development that comes from engaging with it.<sup>112</sup> The presence of the score allows for this segment to still change, evolve, over time.

It is with this readable context-directed aspect in mind that a representation with a more proportional scale applied for each segment could give a better overall understanding and possibility for navigation through these segments in the piece. For example, the second system of Etude XVIII (of which an excerpt is shown in Figure 1.2.2.3) is 22.24cm long, or if we measure just from the beginning of the first to the end of the last bar 21.35cm (i.e. seven bars of 3.05cm). One bar should, according to Cage’s instructions, be approximately 3 seconds long. As seen in figure 1.2.2.3, segment A in the main score occupies approximately 1cm of space. When blown up

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<sup>110</sup> In this respect, one could think of Emis Theodorakis’s performances of Xenakis’s *Evryali*.

<sup>111</sup> Cage, *Freeman Etudes*, p.1.

<sup>112</sup> Cage, ‘John Cage in conversation with Thomas Moore and Laura Fletcher’.

for reasons of legibility (figure 1.2.2.3), the segment occupies 5.6cm. Segment B in the main score occupies approximately 0.3cm, and its augmentation measures 2.2cm. This means that segment A was enlarged by 5.6 times, segment B by approximately 7.33 times. If section B were enlarged proportionally, by 5.6 times as for section A, it would occupy 1.68cm. As it can be seen in figure 1.2.2.4, making this proportional enlargement would still make the segment legible, yet it would also maintain visual-spatial consistency with section A in terms of their relationship to the main staff line.

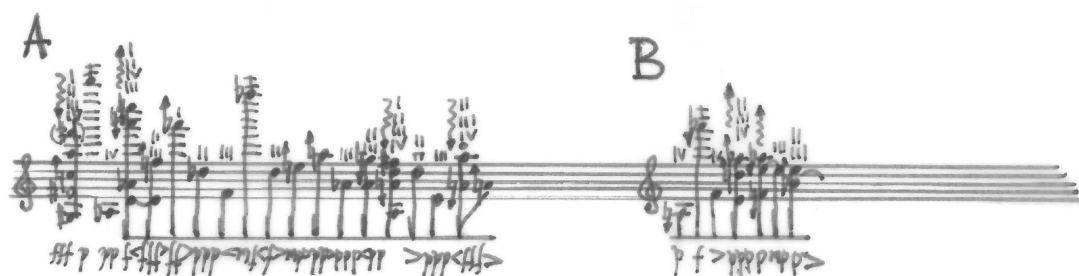


Figure 1.2.2.4: Segments A and B from *Etude XVIII*, my handwritten proportional enlargement

Segment G is especially problematic, and not only for the fact that it appears on a different page from the corresponding part of the main staff line. In the main staff, the last ictus of group G is beamed to the next ictus. In the blown-up representation, this beam is significantly shorter than its original and does not therefore represent a performatively usable duration. Segment G occupies 3.69cm in the main staff and 13.6cm in the blow-up, making this approximately 3.69 times augmentation, in the proportion that renders segment G legible.

In the score, the blown-up sections do not have any representation of the different distances between ictuses, whose existence can clearly be seen in the main timeline

for sound events. This means that the blown-up segments in the score do not include information on durations, as can be seen from example in Figure 1.2.2.5 where blown-up representations do not follow distances between the notes in the way they appear in the main system.

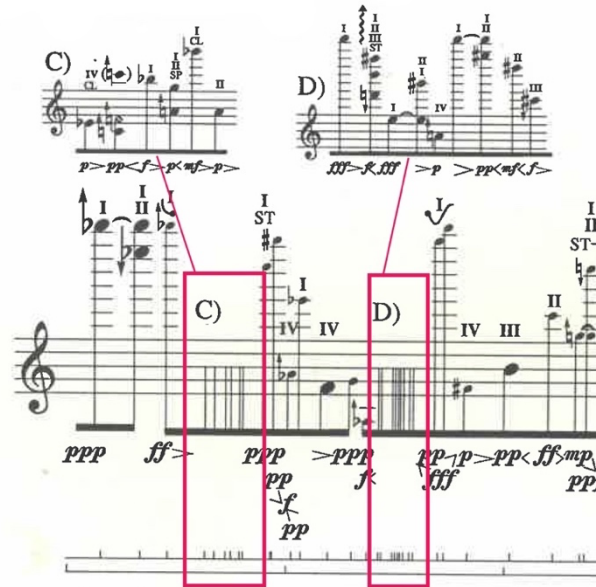


Figure 1.2.2.5: Segments C and D from *Etude XVIII*

It is inevitable to have these blown-up segments. But a greater degree of proportionality in the augmentation for segments A–J would be better maintain the original score’s principle of space-time division and its musical intentions, and would enable the performer to more easily imagine the relationship of the ten segments within the overall form. My approach, to re-notate segments A–J having in mind time-space proportion and durations (example can be seen in Figure 1.2.2.6 on segment G), does not infringe on the authenticity of the score or the compositional process since, as previously mentioned, Cage himself did not write them in the way they appear in the published score.

Another possible aid to understanding the spatial and temporal relationship between these segments and the piece as a whole would be to augment the entire etude to the



scale of the blow-up letter segments. An example of proportionally applied augmentation to the sixth line of the etude – which contains the longest segment, segment G (itself shown in figure 1.2.2.6)– would measure approximately 78cm in length (figure 1.2.2.7 and 1.2.2.8).



Figure 1.2.2.6: Segment G from *Etude XVIII* – my handwritten augmentation

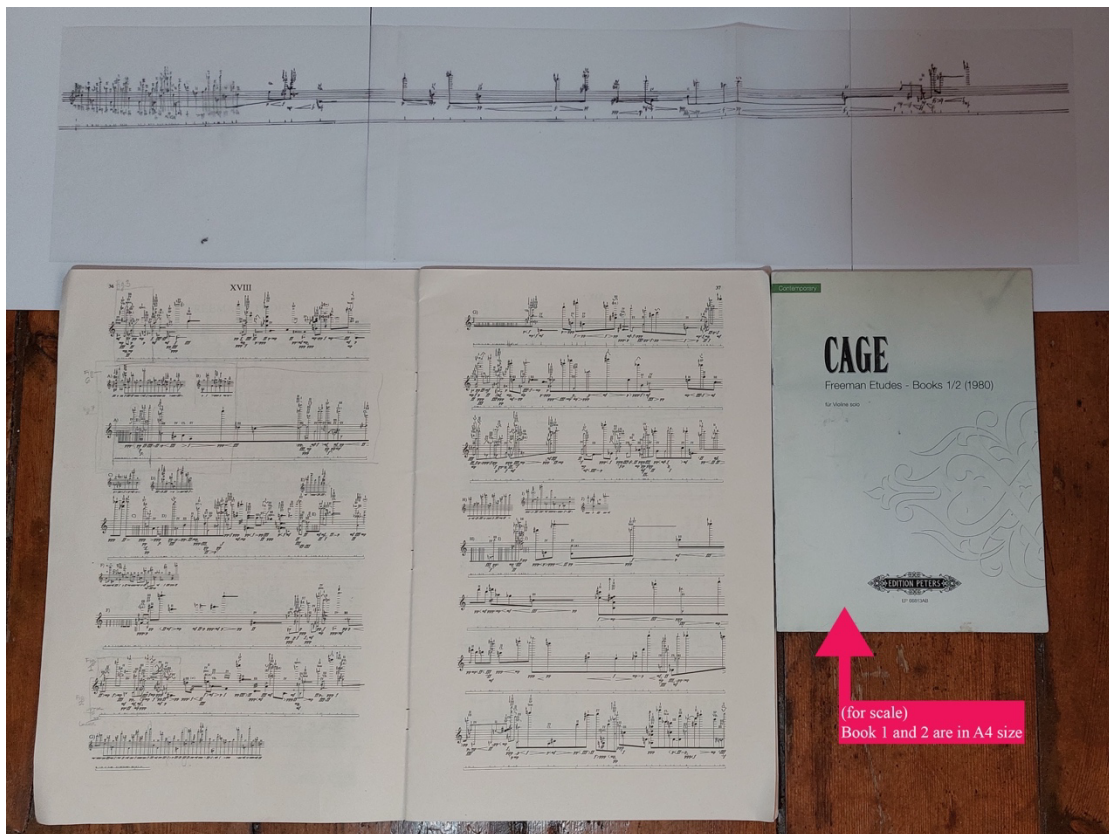


Figure 1.2.2.7: Photograph of the augmented sixth line of *Etude XVIII*

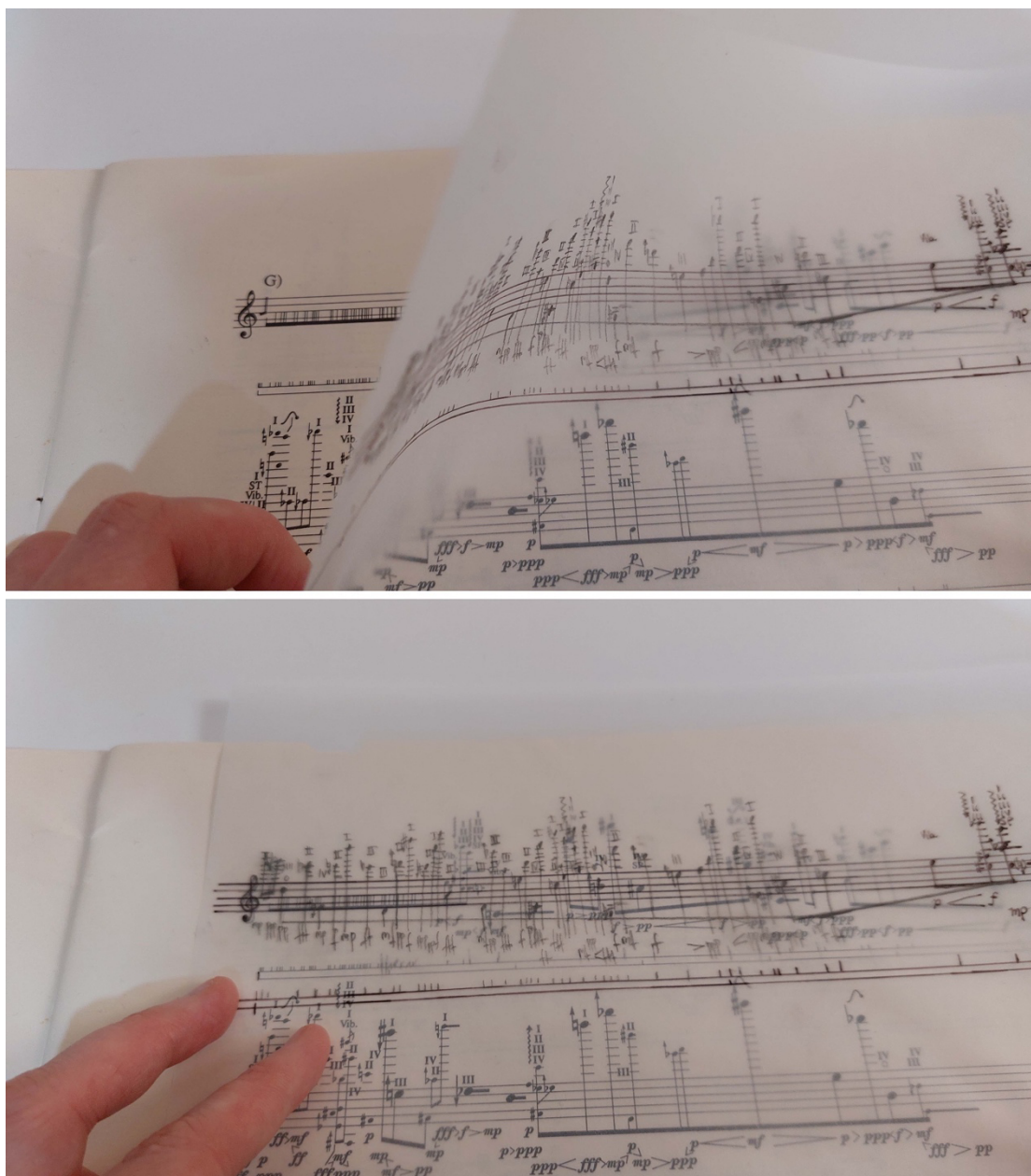


Figure 1.2.2.8: Superposition of tracing paper with legible section G and the original

With this complete augmented excerpt from the score I in no way intend to propose a rewriting of the original score for creating a more “convenient” performance score. Such a score on its own, as a performance copy, would be problematic and impractical for several reasons. If such a score were to be printed, it would be necessary either to break lines, for standard-size printing, or to print in a much larger format (Books 3 and 4 are already a non-standard format size). Either one of these

options would again go against the first ‘given’ of the piece – the meticulous organisation of space (12 [6+6] lines per etude, which again is not respected in Edition Peters’ published score). More importantly, this kind of enlarged score would work counter to the performative energy that the original score imposes on a performer, and thus even if more “accurate” in some way, would in fact work against another important aspect of the work’s musical intention. The only reason for attempting this augmentation throughout the etude was for me to gain a better grasp of the space-time layout of the work and to create coherent relationships. The process of ‘blowing up’ and augmentation also helped in combing through other particularly dense sections and deciphering precisely which characteristics belonged to which pitch, since as Figure 1.2.2.9 demonstrate, the indications cab be hard to disentangle at original size.

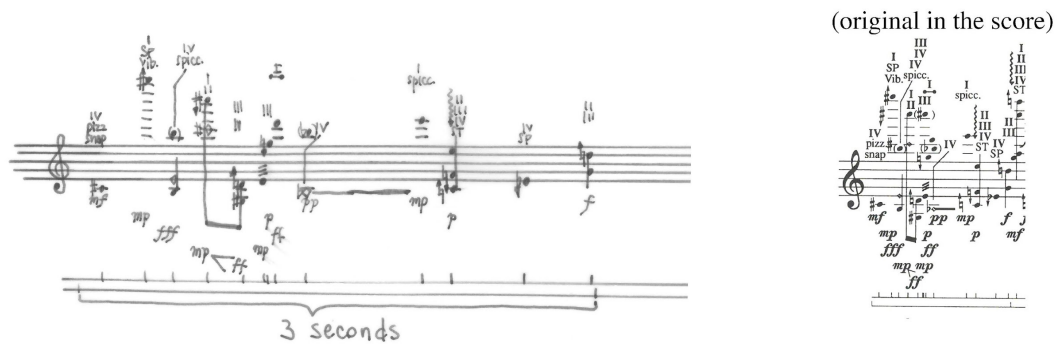


Figure 1.2.2.9: Augmentation of the first bar from *Etude XVIII*

In this way, the mind has the same space-time orientation as in the original score, with the benefit of clarity for practising in this augmented reality, like slow motion. I used enlarged scores as complementary to the original score during the preparation phases. I would always performance from the original score. While I transitioned to using

only the original score closer to the first time I performed the piece, to help strengthen the visual familiarity and comfort, I would on occasions still go back to the enlarged version for practicing a specific detail.

It remains challenging to execute all the events even after all these processes of practising have helped gain a more coherent, even a ‘rhythmical’ understanding of the piece. But the dedication to understanding the proportional relationships between the changes, and their spatial and temporal placement, certainly benefits the accustoming of the body and mind to execution, almost creating a choreography of gestures for the performance.

While making this detailed analysis of the enlarged segments, another possible inconsistency came to my attention. In these segments the main element is the depiction of the pitch, and the additional specifications are meticulous only for the dynamics, and occasional ‘arpeggio’ of the chords (figure 1.2.2.10).

Segment	Appearance of arpeggio
A	1 <sup>st</sup> , 4 <sup>th</sup> , 15 <sup>th</sup> , and 18 <sup>th</sup> ictus
B	4 <sup>th</sup> and 5 <sup>th</sup> ictus
C	none
D	2 <sup>nd</sup> ictus
E	5 <sup>th</sup> ictus
F	5 <sup>th</sup> ictus
G	27 <sup>th</sup> ictus
H	none
I	none
J	none

Figure 1.2.2.10: Specifications for arpeggio per ictus in condensed sections of *Etude XVIII*

Besides this breaking of the chord, additional elements that have been attributed to each note are (figure 1.2.2.11):

Segment	Assigned elements and characteristics
A	none
B	none
C	- col legno for 1 <sup>st</sup> and 5 <sup>th</sup> ictus - sul ponticello for the 4 <sup>th</sup> ictus
D	- sul tasto for 2 <sup>nd</sup> ictus
E	- sul tasto for 1 <sup>st</sup> ictus - vibrato for 2 <sup>nd</sup> ictus
F	- col legno for 1 <sup>st</sup> ictus, - vibrato and sul tasto for 3 <sup>rd</sup> ictus, - ricochet for 5 <sup>th</sup> ictus, - col legno for 6 <sup>th</sup> ictus, - sul ponticello for 13 <sup>th</sup> ictus - tremolo for 20 <sup>th</sup> ictus
G	none (of the 42 ictuses)
H	none
I	- col legno for 2 <sup>nd</sup> ictus
J	none

Figure 1.2.2.11: Elements and characteristics per ictus in condensed sections of *Etude XVIII*

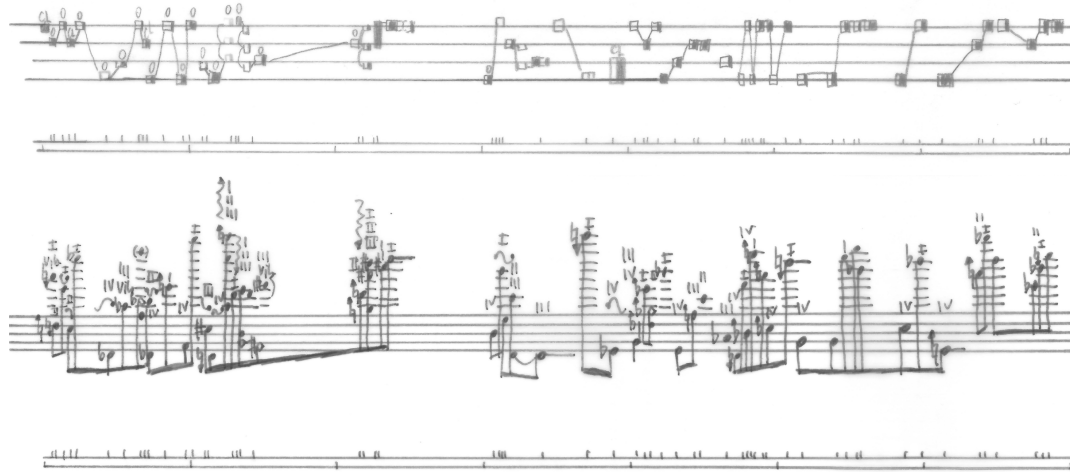
From this, it becomes apparent that these condensed segments (A-J) seem to contain far fewer parameters per sound event/note, than the rest of the *Etudes*. The most detailed from these segments, segment F, has seven agents. Considering that this consists of 21 ictuses, this makes only the third of it has assigned details beyond pitch and dynamics. With the dense determination of each aspect of each note throughout the work, these sections become sparsely detailed in comparison.

This raises the question of whether all the compositional steps were followed in these segments, and it just happens that chance process didn't assign further determinates, or is it rather that in the face of an overwhelming number of notes, some of the 'rounds' of chance were evaded.

### 1.2.3 The Melody of Movement

The combination of all the indications completely changed my understanding of how to interpret the work. The extreme detail of the notation does not depict the sound that will be reproduced. The pitch might be the basis, but it is all the attributes of each sounding event, with its specific time-space relation, that in fact determine the character and quality of the sound. In a way, the notation is a map for hand gestures, and the destination – the sounding result – is partially unknown.

The thought of *Freeman Etudes* being the progenitor of movement-based, left- and right-hand individually treated piece is not so far-fetched. A possible re-notation of an excerpt to separate left- and right-hand actions can be seen in figure 1.2.3.1. Here, the very top system is a tablature staff containing all the actions of the right hand, and the lower system contains all the actions of the left hand. Figure 1.2.3.2 further focuses on the actions of the right hand, using colour-coding for faster recognition of changes between points of contact with the string, and differently filled-in rectangles for dynamic indications.



(Line 8 as in score)

Figure 1.2.3.1: Reimagined excerpt from line eight of *Etude XVIII* with left- and right-hand actions separated

Legend:  
 [ ] - dynamic marking  
 green - Sp  
 orange - ST  
 black - other position  
 E - arpeggio  
 L - lily

Figure 1.2.3.2: Focus on the right-hand actions from line eight of *Etude XVIII*

Re-imagining the score with all agents regrouped into left-hand and right-hand aggregates, and then written out separating the actions into two separate system layers, might seem redundant at first. However, the intention in my process was not to introduce more complications to an already demanding score, but rather to find a way to get closer to the state of ‘liberating the sound’ between the score and the actions I must enact.<sup>113</sup> The parameters of each note were not to be linked among each other into forming layers of “right-hand aggregates” or “left-hand aggregates”. Rather, each note is an individual sound event determined by multiple agents: pitch, duration, sound character (bow stroke), volume (dynamics), or sound-quality- and timbre-related (all the previously mentioned). What comes out from this perspective and perception is the level of separation of the two hands and their actions. The facility of the score would in no way increase if it had been written this way; indeed, this kind of notation might have even rendered the piece more complicated. But this kind of overview was helpful for me in understanding all the layers of happenings and actions. The purpose this example aims to serve is to add to, and aid, the process of physical preparation, and guide the performer’s thinking towards possible differences in ‘musical continuity’,<sup>114</sup> interpretation, and expression.

Although working on successfully connecting one complete sound event to another must be practised, this representation can serve as an intermediary step in practising, for isolating a specific line of movement for the left or right hand. Lines may then be practised individually at first, and then in groupings, until, in simultaneously playing all the lines, the interpretation becomes that of the original score. Through this

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<sup>113</sup> Cage, *Chorals and Cheap Imitations*, liner notes.

<sup>114</sup> David Tudor and Victor Schonfeld, ‘From Piano to Electronics’, *Music and Musicians*, 20 (1972), p.24.



process an enhanced awareness of movements and of their place and influence on the overall structure is built, and more conscious manipulation of these movements becomes possible.



## CHAPTER 2 Beginning Before the Beginning:

### imagination and the first contacts with a score

*'Music is a physical/cerebral activity and should be challenged and explored accordingly.'* – Einar Torfi Einarsson<sup>115</sup>

Chapter 2 addresses two aspects I find essential as the initial phases in my creative practice: the close reading of the score and the ignition of the imagination. Pieces from my chosen repertoire all represent a kind of complexity, each with its own 'dialogue between hearing and imagination'.<sup>116</sup> In learning these pieces, I experienced the necessity of a stage of creating relationships with the material through abstract engagement with the score before commencing the practical work. Where necessary, I would continue to re-enter this abstract phase after the practical process of work had begun. There are two aspects to this phase; the inhabiting of the score (which is the topic of chapter 2.1) and finding sources of imagination (which I discuss in chapter 2.2).

#### **2.1 Score as First Space: understanding the gap between what *is* and what *is not* in the score**

*'Differentiate between creating a language in order to say something and evolving a language in which you can say anything.'* – Cornelius Cardew<sup>117</sup>

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<sup>115</sup> Einarsson, p. 21.

<sup>116</sup> James Dillon and Brian Ferneyhough, 'Ferneyhough and Dillon Talk', lecture-talk at hcmf// 2017 (Huddersfield, 18 November 2017).

<sup>117</sup> Cardew, p.22.

During my Masters studies my approach towards the score started shifting away from a positivistic view towards searching for my own personal approach.<sup>118</sup> This change was prompted mainly by scores which challenged the norms of Western classical notation, which were increasingly becoming the focus of my repertoire. I needed a way to enter and understand a piece through the score to find my path for playing it.

As a performer, I always ask what all the aspects are that lead to performance: what are the temporalities which the piece enacts, and, especially, what are the spaces in which the piece exists. In my practice, the first “time-space” of the piece I must inhabit became the score itself.<sup>119</sup> I started seeing the score as a three-dimensional space, a habitat that is a meeting point between the music, the composer, and myself, a place that I must learn to feel “at home” with, and whose notation is my map. Thus, the score became the *first space*.

To create an interpretation is to create a translation of a text. All notation is graphic. While graphic notation that uses drawings or other non-musical symbols to annotate musical scores exists as a category, in all the other forms that music notation uses, graphic symbols are an alphabet of notation. Graphic symbols hold meanings of sound and emotions while navigating between the parameters of what can be notated and ‘what cannot be notated’.<sup>120</sup> While Brian Ferneyhough considers the score as a ‘cultural artefact with an aura of spiritual resonance’,<sup>121</sup> Ian Pace suggests that a

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<sup>118</sup> Ian Pace, ‘Notation, Time and the Performer’s Relationship to the Score in Contemporary Music’, p.152.

<sup>119</sup> Cardew, p.22.

<sup>120</sup> Paul Roberts, ‘The Mysterious Whether Seen as Inspiration or as Alchemy: Some Thoughts on the Limitations of Notation’, in *Sound & Score: Essays on Sound, Score and Notation*, ed. by Paulo de Assis, William Brooks, and Kathleen Coessens (Leuven: Leuven University Press, 2013), p.33.

<sup>121</sup> Brian Ferneyhough, ‘Interview with Richard Toop’, in *Collected Writings*, ed. by James Boros and Richard Toop (London: Routledge, 1998), p.272.

musical score can be seen not as a prescriptive text telling a performer what to do, but rather as ‘delineat[ing] the range of possible performance activities by telling the performer what not to do’.<sup>122</sup> The ‘musico-cultural context’<sup>123</sup> that surrounds a specific piece might give the impression that the ‘suggestion’ is not a suggestion but direct instruction, but as Paul Roberts points out, there are lingering questions about what it means to be expressive with the notes and give expression to the notes written in the score.<sup>124</sup> In relation to my focus repertoire, I found it often depends on the context. Sometimes, and in the case of older and previously performed pieces, the context is somewhat easier to grasp. In the case of less performed and especially unperformed pieces, the context might be obscure, and must be gathered and built.

Approaching the pieces from my research repertoire for the first time, I read each score closely to discover every annotation, every event that is a sound object, locating its place and time, connections and relations to other objects in this space; discovering sometimes distant relationships across the space, and time, that enable finding the smallest particle of music-carrying event that has information on both what to do and what not to do. Spending time with the score in this manner means, for me, time to get to know and learn about the composer, their past and perhaps potential future, the music contained in the piece, and to situate myself in relation to them. It is an intimate space where trust and dedication are paramount. A close reading of a score is not a contained instance but a process. This practically flat object, a piece of paper, is a multidimensional volume with depths and occupied and unoccupied spaces.

Considering the score as a multidimensional space in which some objects are

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<sup>122</sup> Ian Pace, ‘Notation, Time and the Performer’s Relationship to the Score in Contemporary Music’, p.153.

<sup>123</sup> Jerrold Levinson, ‘What a Musical Work Is’, *The Journal of Philosophy*, 77.1 (1980), p. 13.

<sup>124</sup> Paul Roberts, ‘The Mysterious Whether Seen as Inspiration or as Alchemy’, pp.37-38.

objectively present (through symbols used to depict them) and some seem absent, due to the nature of notation having limitations to notate every detail about sound, it is the understanding of the reading as an ongoing process that allows for these “non-present” objects to also appear. While the description of this approach to the score is a conceptual abstraction, the process itself is one of intimacy and proximity, which demands engagement and a desire to leap. There is no fixed approach, no recipe to follow; rather, the methodology and process mould themselves in relation to a specific score. Reflecting on my practice, I can detect elements that recur with each piece – not necessarily always in this order:

- Take time to sit with the score. Silence is desired, if not paramount. In case of not having silence, develop focused and active “non-listening” and filtering out of the sounds of the environment.
- Take time to carefully read both performance and programme notes, where provided.
- Read the performance notes while comparing the corresponding and specific appearance(s) of that action in the score, especially in cases where the legend is placed before the beginning of the piece (and no information is written above the staff).
- Converse with the composer when needed and when possible.
- Start assembling my *first space*, being especially attentive to object placement in cases where composers employed spatial organisation.

The importance of understanding the score itself as the *first space* was, for me, particularly strong and relevant in the case of the *Freeman Etudes*. The first ‘given’ which was constitutive for this work, and probably the most grounding element of this

otherwise extraordinarily detailed yet completely non-linear music, is the spatial structure (the layout of the score).<sup>125</sup> Cage's parameter of the spatial organisation for the notation of the piece established that the score for each etude was to have twelve systems of music, with a length of 9.6 inches per system.<sup>126</sup> In this predetermined space, the first layer of composing was dedicated to choosing individual pitches as a point traced on to paper from Antonín Bečvář's *Atlas Australis 1950.0*. A performer must not only translate each individual sounding event but try to portray this "space". When I say non-linear music, this is because although there is a linear passing of time, each note is indeed a completely individual sounding event: like stars in the sky, each carrying its universe with it, all distant and scattered in vast space, yet sometimes as one looks the night sky is perceived as so close that they 'overlap, giving the effect of a near-continuous sheet of light'.<sup>127</sup> Considering the score through the metaphor of outer space helped me read all the technical elements and difficulties that the piece poses for the performer as a constellation of relations and helped me bring this chance-travel through outer space to the audience. First, I would approach technically honing and sonically understanding each sound event (each note with all its attributes), and in this process I would focus on how this sound feels in the hand and what is the relation between the hand and the instrument. In the following step, I would connect each sound event to its immediate neighbouring events. Similarly, while listening to changes occurring in the sounding outcome, I would also focus on the inner body feeling of this sound and relation of the hands to the instrument. The more I focused on the physicality between the gesture and the instrument, the more accepting and less disturbing the unexpected sonic "parasites" became. In this process

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<sup>125</sup> Pritchett, 'The Completion of John Cage's *Freeman Etudes*', p.266.

<sup>126</sup> For more detail on John Cage's *Freeman Etudes* see chapter 1.2.

<sup>127</sup> James B. Kaler, *Cosmic Clouds* (New York: Scientific American Library, 1997), p.2.

where I started shifting the focus on to learning physical distances and feeling the space travelled in the hand, a note, one pitch, became a location on the fingerboard, a physical coordinate which the hand must reach. Contrary to my initial belief that shifting focus away from aiming for one sound a pitch has to produce would result in less precision, this process of work yielded more successful execution.

While performance notes carry indispensable clarification about symbols, the programme notes written by the composer (when accessible) can provide equally indispensable information, helping to understand the infamous element of what is not possible to notate and giving context to all the technical parameters.

Rebecca Saunders' comments, in relation to her piece *Hauch*, that 'silence is the canvas' and that the 'bow is drawing out the sound out of silence' reinforce the presence, notion, and understanding of the empty spaces after and between phrases on the layout of the page (figures 2.1.1 and 2.1.2).<sup>128</sup> These details for me enhanced the process of navigating through the score, finding the pace and the way of breathing, and finding the beginnings of the sound before it physically and perceptibly appears.<sup>129</sup>

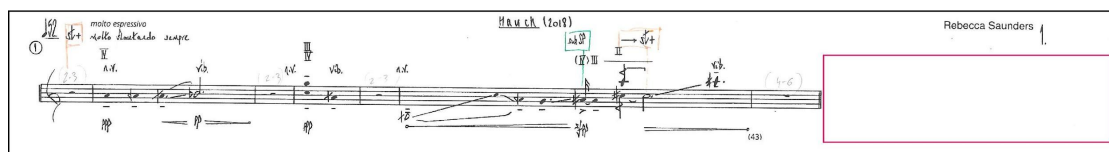


Figure 2.1.1: Excerpt from Rebecca Saunders' *Hauch*, with focus on the empty space after the first phrase

<sup>128</sup> Rebecca Saunders, *Hauch*, performance and programme notes, Edition Peters EP 14345 (London: Peters Edition, 2017).

<sup>129</sup> *Hauch* is discussed in more detail in Chapter 2.2.



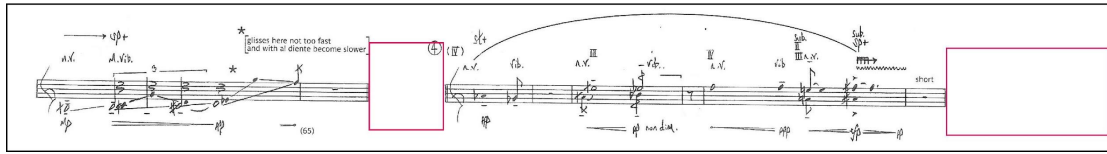


Figure 2.1.2: Excerpt from Rebecca Saunders' *Hauch*, with focus on the empty space between the third and the fourth phrase, and after the fourth phrase

In his programme note for *Wolke über Bäumen*, Evan Johnson says that the link, although he offers one, between Paul Klee's crayon drawing of the same name and the piece 'isn't entirely clear'.<sup>130</sup> However, for me, his description of the drawing as 'a sinuous, snakingly horizontal nest of a line above a jagged, chaotic, but equally horizontal forest of sharp angles' provides a strong imagery from which to start building a space,<sup>131</sup> and imagery, moreover, that corresponds quite closely with the way the handwritten score looks. Johnson's manuscript score feels as if it is the piece's diary. Dense tiny writings at times needed enlargement in order to decipher the elements present in a sound object, often bringing a discovery that there was in fact a further object in there. Figures 2.1.3 and 2.1.4 show just two of many such instances: in bar 11, the indication of change of pressure of the left-hand finger and in bar 118 the appearance of the only *crini batt.* (crini battuto bow stroke) of a muted string, which is somehow inconspicuously hiding in plain sight, obscured by the barline, time signature, and pause. *Wolke über Bäumen* is one of the pieces where, because of the complexity and dense writing, it is necessary to comparatively go through the performance notes and sounding objects. In doing so, relationships between these objects fall into place, and this obscure unknown space evolves into a familiar time-space, in which I can start to move.

<sup>130</sup> Evan Johnson, *Wolke über Bäumen*, (self-published, 2016), performance notes, p. i.

<sup>131</sup> Evan Johnson, *Wolke über Bäumen*, p. i.

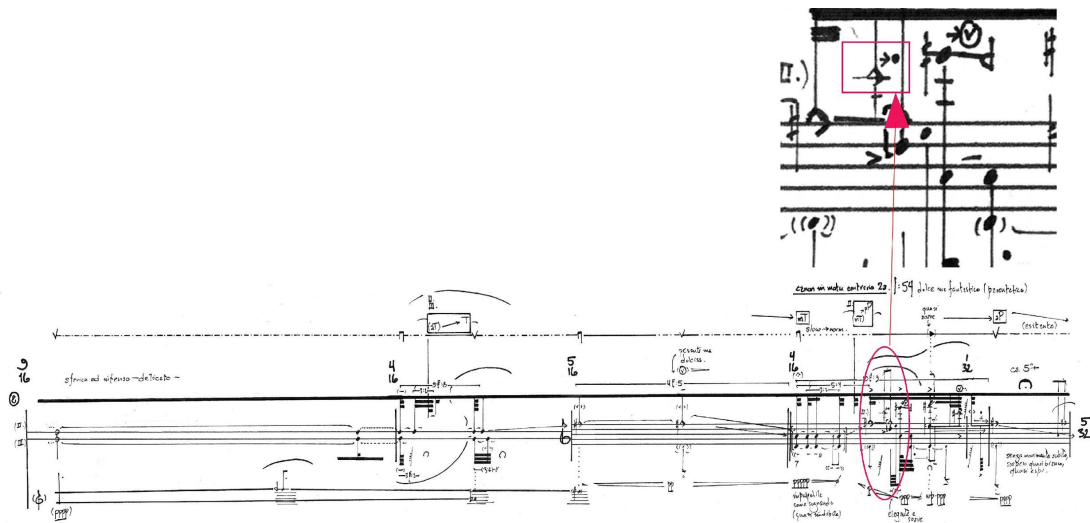


Figure 2.1.3: Evan Johnson's *Wolke über Bäumen*, bar 11

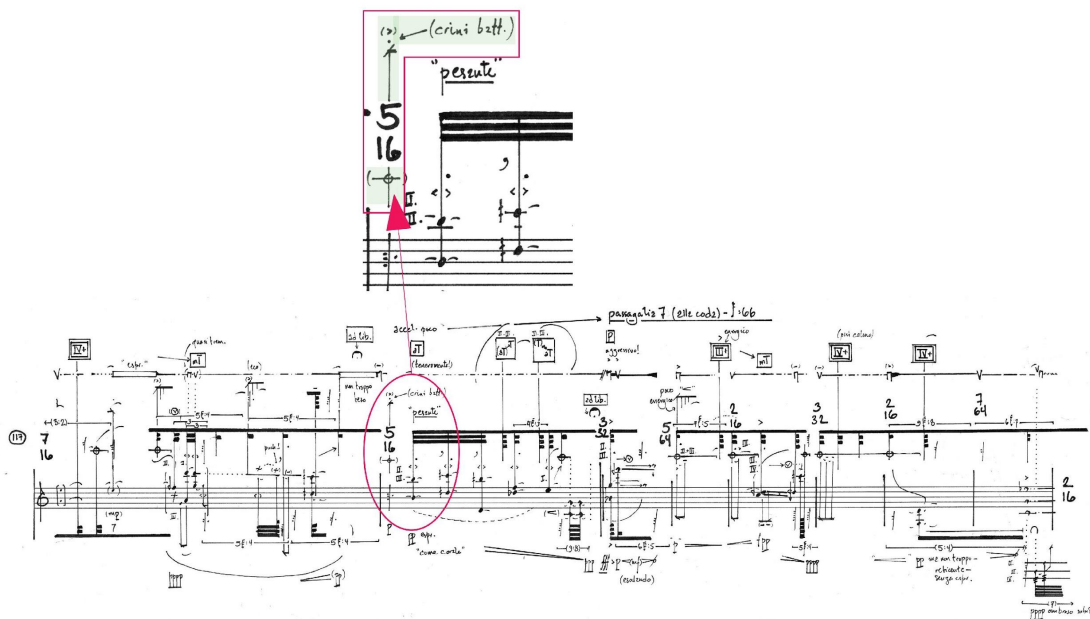


Figure 2.1.4: Evan Johnson's *Wolke über Bäumen*, bar 118

Inhabiting *Hauch* placed me in a vast, foggy space which seemed to be breathing on its own. As I would start to move and get closer to the sound objects, this veils of silence would start to disperse, its residues still obscuring the clear apparition of the sound. The score for Johnson's *Wolke über Bäumen* was a forest interspersed with patches of erased space in which silence vibrates. This space became a forest not due

to the word ‘trees’ (*Bäumen*) in the title but rather because of the elongated upwards and downwards stems whose notes and beams create flourishing canopies and also reveal complex networks of communication through their roots. This imagery fueled the imagining of the felt sound, that all contributed to finding movements, gestures, an appropriate relationship with the instrument when playing. It directly influenced how I approached searching for sound characters, adjusting bow placement and speed along the way. The way I used my left hand went through similar processes of exploration: flatness or roundness of the finger, portions of fingertips touching or gliding over the string, speed of movement (especially for glissandos or glissando-like movements of the left hand), finger pressure (not only between harmonic or normal pressure, but also within each of these categories), balancing pressure on adjacent strings to allow a more usable portion of string over fingerboard for the bowing.

This approach is an abstraction of an already abstract concept of putting sound on paper. But, for me, this process of thinking turns a flat piece of paper into a three-dimensional space in which I feel I am gaining better insights into the spatiality of the work, its sound identities, their positions, and relationships. A place from which I can start to imagine the interpretation, what might be its potential sounding or potential physical movements (a specific contemplation about source of imagination is discussed in more detail in chapter 2.2, and I elaborate further about my conceptualisation of physical movement as material in chapter 4.2), all together bringing me closer to finding my way in how and what, in a practical sense, I have to do to play the piece.

### **2.1.1 Inhabiting and Understanding the Structure of Dario Buccino's *Finalmente il tempo è intero n° 16***

Dario Buccino's *Finalmente il tempo è intero n° 16* was perhaps the most challenging of spaces to inhabit. While some elements in the score seemed relatively familiar, the unfamiliarity and the unknowns were far more present, and this ratio made even the familiar feel uncertain. The score of *Finalmente il tempo è intero n° 16* demanded a complete remapping of my understanding of how the score can function, as well as an intensive learning process relating to Buccino's unique use of vocabulary, symbols, and language. Before even getting to the point of building my *first space*, I had to learn how to read the blueprint.

In his compositional practice, Dario Buccino has developed his own spatial and temporal system, *hic et nunc* (here and now, abbreviated by Buccino as HN). In addition to the extreme amount of information and detail regarding every aspect of every outer and inner movement of the performer and their interaction with the instrument, Buccino incorporates the time and the physical space in which the piece is to be performed as equal musical material to sound and gesture in the piece. A music piece composed with the HN approach is a highly developed network system.

Buccino constructs his score through a compositional process that employs chance processes and algorithms. The score is however not read in the traditional way a violin piece would be read: there is no linear reading of the material; there is no order nor hierarchy of material; everything is equally important; each action of the body and in the body has individual assignment, which makes each movement and action independent from any other, and these actions do not have a clear sonic result to aim

for. The performer must make constructions from all of this material in the moment of the performance.

Buccino's notation initially might look like a graphic score, but to approach it like one would be to misunderstand the piece. Just as one has to develop skills in reading and interpreting the graphics of western classical music notation in a specific way, HN notation needed the same approach. Each symbol of Buccino's notation has assigned meaning and represents determinate values, but it is the nature of the HN system that within the structure of the piece influences the fluctuations and creates a practically indeterminate number of possible outcomes a symbol can result in. In this sense, the score is what Einar Torfi Einarsson calls 'not a chronological indicator of events but instead a nonlinear map/diagram'. In Buccino's work the score is the medium that is 'capable of seizing any material/content that comes its way' but it is the HN system and the moment of the performance that are 'a machine, a dynamic system or function' which deliver a shaping of the material into a form.<sup>132</sup>

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<sup>132</sup> Einar Torfi Einarsson, 'Desiring-Machines: The Score as a Map', at <<http://einartorfiainarsson.com/text4.html>> [accessed 24 May 2023].

The figure illustrates the spatial organization of the score for *Finalmente il tempo è intero n° 16*. It is structured as a grid of sub-bars (columns) within a larger bar (row). The grid is divided into sections for the Right Hand and Left Hand, with various musical and performance instructions. The sub-bars are labeled with identities: MAGICAL Contr., BACK Voice, TAIL Piece, VOICE, PAD, SCRIBBLE, and MULTI Voice. The Right Hand section includes ACTION, String PRIN, and DYNAMICS. The Left Hand section includes ORNT, EUVN, TRICTI, FINGED, STRING, RANGE, SR, and DYNAMICS. The Endo Corporeal section includes GRATA, Tactil, Vocal, and Body. A yellow vertical bar on the left is labeled 'SUB-BAR (column/identity)'. Red arrows point to vertical dash-dot lines labeled 'vertical dash-dot sub-bar dividers'.

Figure 2.1.1.1: Overview of the structure of *Finalmente il tempo è intero n° 16*

The score for *Finalmente il tempo è intero n° 16* represents a space that contains the outlined backbone of the piece and material from which and within which I as a performer must build one performance iteration. The score has 12 pages. The structure of the score is spatially organised (figure 2.1.1.1). One page equals one bar, and, seen vertically, it is further subdivided into eight sub-bars/columns. Each of these eight sub-bars is one identity. They always appear in the same order on the page:

- MUTE Action
- MAGICAL Contribution
- BACK Voice
- TAIL
- Voice
- PAD
- Scribble
- MULTI Voice.

Each identity represents a container of possible aesthetic characteristics, but this does not entail a fixed character. ‘Magical Contribution’, for example, will most likely develop through a single character during one performance, but it might also start to deviate from it. In a different performance, although the same base concepts that represent ‘Magical Contribution’ will be the main driver, the sounding character could be completely different when contextualised in this new setting, new time, new space, new *hic et nunc*.

The same goes for each of the eight sub-bars/columns. There is a general aura of sets of potentials the associated identities could become, but externalising and memorising one fixed interpretation would run counter to the intentions of the work. The reading of the score and execution of the order of identities is free. This characteristic is closely linked to the temporal nonlinearity of the piece, as Buccino’s instructions state that the execution of identities does not and should not be performed by reading left to right (or right to left), but this order should be governed by the *hic et nunc*. Furthermore, it is also possible to go forwards and then jump back to a page.

The horizontal organisation of the page reveals six strata that are, reading from the top:

- Stave for duration/time (‘Tempo’)
- Stave for space (‘Spazio’)
- Stave for the Right Hand, which is subdivided into: Action, Bow with subdivision into: Portion and Orientation (of the bow), String Portion (the

- contact point of the bow with the string), Dynamics (with potential subdivisions for movement, touch, and volume)
- Stave for the Left Hand, which is further subdivided into: Orientation, Elevation, Traction, Finger, String, Range, Dynamics (with potential subdivisions for movement, touch, and volume)
- Stave for Endocorporeal annotations, which is subdivided into: Gratia and Ignition, with Ignition further subdivided into Tacet, Voice, and Body.



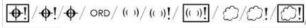
Each parameter of each movement and action has its own gradation of possibilities. The table found in figure 2.1.1.2 shows an excerpt from the description of symbols (featuring only symbols for the right hand),<sup>133</sup> compiled by myself during the process of working with the composer, notes from our sessions, and from subsequent conversations and exchanges.<sup>134</sup> The ‘HN’ symbol can stand for any iteration of any of the parameters of the area where it is found, respectively. This means that if and when an HN symbol appears in the score (see figure 2.1.1.1), the performer must decide, in the moment of the performance and guided by the feeling of the performative situation, which gradation from the range that that specific parameter where the symbol is found can have, has to be used.





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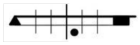
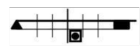
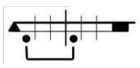





<sup>133</sup> The full list can be found as Appendix C.




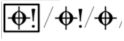
<sup>134</sup> As this list was my source in the process of working on the piece between 2019 and 2022, it is the list mainly used for reference. The legend of symbols and their meanings, which were completed in April 2022, can be obtained along with the score on request from the composer. I discuss the small differences found between the two lists that occurred through the process of creation (between the first performance in 2019 and 2022) in chapter 5.3.



Area	Applied to	Symbol	Meaning
General			<p>Symbol standing for “Hic et nunc”. It can appear in any identity for any parameter. It activates use of any of the possible degrees from spectrum of said parameter in a freely spontaneous, in “here and now”, way</p>
Right Hand	Action – horizontal and lateral		<p>Mute action, can include moving and stillness, but should never intentionally produce sound / Discontinuous action (intentional sound producing action) that can become silent even without stopping to be active / Almost continuous action (intentional sound producing action) that sometimes comes close to becoming silent but immediately bounces back to having an audible output / Continuous action that produces uninterrupted sound</p>
Right Hand	Action – vertical		<p>Interrupt the sound by pressing the bow on the strings as much as possible (or with the greatest possible intention) (the action remains internally active and +/- immovable) / Interrupt the sound by pressing a lot (or with a lot of intention) the bow on the strings (the action remains internally active and more/less immovable) / Stop the sound by pressing the bow on the strings (the action remains internally active and more/less immobile) / ordinario / Interrupt the sound by lifting the bow from the strings (the action remains internally active and +/- mobile) / Interrupt the sound by lifting the bow a lot (or with a lot of intention) from the strings (the action remains internally active and +/- mobile) / Interrupt the sound by lifting the bow from the strings as much as possible (or with the greatest possible intention) (the action remains internally active and +/- mobile) / /</p>

			<p>The bow always runs over, but it produces some breathy, disappearing voices</p> <p>/</p> <p>The bow always runs over, but it produces a lot of breathy, disappearing voices</p> <p>/</p> <p>The bow always runs over, but it produces the maximum possible of breathy, disappearing voices</p>
			<p>Alternate between the interruption (lifting) and pressed bow</p> <p>/</p> <p>Alternate the two previous modes: with more intention or more pressure</p> <p>/</p> <p>Alternate the two previous modes: lift or press as much as possible (or with the greatest possible intention)</p>
			<p>Alternate between the interruption (lifting) and breathy (disappearing) voice</p> <p>/</p> <p>Alternate the two previous modes: with more intention or breathy (disappearing) voice</p> <p>/</p> <p>Alternate the two previous modes: lift or most breathy voice as much as possible (all with the greatest possible intention)</p>
			<p>Alternate between the breathy (disappearing) voice and pressed bow</p> <p>/</p> <p>Alternate the two previous modes: with more pressure or breathy (disappearing) voice</p> <p>/</p> <p>Alternate the two previous modes: press as much as possible or most breathy voice (all with the greatest possible intention)</p>
			<p>Alternate between three modes in normal degree</p> <p>/</p> <p>Alternate between the three modes with each being done with a lot of intention</p> <p>/</p> <p>Alternate between three modes: each done in its extreme</p>

Right Hand	Bow portion		Use the whole area of the indicated portion of the bow
			Use only the smallest area of the indicated portion of the bow
			Explore the indicated portions of the bow, but also the whole area between the two portions indicated with the dot. There is no temporal preference in succession of explorations of the entire area of the bow
Right Hand	Bow orientation		Tip of the bow going inwards, as if towards the face; maximum angle 40° / Ordinario – normal, bow parallel to the bridge, orientation of the bow / Tip of the bow going outwards, towards the head of the violin; maximum angle 40°
Right Hand	Bow location on the string		Bow on the other side of the left hand: between the fingers and the nut
			Sul tasto++: bowing as extreme and as far as possible on the fingerboard, almost on/over the left hand / Sul tasto+: bowing significantly far over the fingerboard / Sul tasto: bowing close to the beginning and slightly over the fingerboard
			Sul ponticello: bowing towards the bridge / Sul ponticello+: bowing very close to the bridge / Sul ponticello++: bowing on the bridge or as close to the bridge as possible
Right Hand	Dynamics: Movement – Speed		Motion-less movement++: excessively energetic stillness, immobility; movement inside of the body as If the bow is moving / Motion-less movement+: energetic stillness, immobility /

			<p>Motion-less movement: present stillness, immobility</p> <p>/</p> <p>Magical contribution++: the most magical contribution possible; movements of the bow/hand are so slow that it is not completely sure whether there is any motion happening</p> <p>/</p> <p>Magical contribution+: as above, but imperceptibly faster</p> <p>/</p> <p>Magical contribution: as above, but imperceptibly faster</p>
			<p>As slow as possible, but with the movement still being immediately perceivable</p> <p>/</p> <p>Very slow</p> <p>/</p> <p>Slow</p>
			<p>Regular fast</p> <p>/</p> <p>Very fast</p> <p>/</p> <p>As fast as possible</p>
			<p>Exceeding energy: as fast as possible but with even more motor and volitional energy than necessary; exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding Energy+: as before, but with additional excess energy</p> <p>/</p> <p>Exceeding Energy++: as above, but with the maximum excess energy that one is capable of</p>
Right Hand	Dynamics: Movement – Affection		<p>Deliberate intention of a non-moving motion; transfer of energetic affection towards the instrument, for the instrument to feel</p> <p>/</p> <p>As above, but imperceptibly less, thus more present: the idea of noticeable affection</p> <p>/</p> <p>as above, but imperceptibly less, thus more present: the idea of noticeable affection is beginning to emit</p>

		<u>c.m.!</u> / c.m. / c.m.	<p>Magical contribution++: articulate the bow in its interaction with the string with affection of carrying and in such a patient way that it is not certain that there will be any reaction of string</p> <p>/</p> <p>Magical contribution+: as above, but in imperceptibly less patient way</p> <p>/</p> <p>Magical contribution: as above, but in imperceptibly less patient way</p>
		<u>PZNT!</u> / PZNT! / PZNT,	<p>Affection of contact in the most patient way possible; there is an immediately perceivable lowest level of being in motion</p> <p>/</p> <p>Very patient</p> <p>/</p> <p>Patient</p>
		<u>DNMC</u> / DNMC! / <u>DNMC!</u> ,	<p>Dynamic affection of contact (dynamic is not representing musical dynamics, but aspects of the sound articulation as a whole).</p> <p>/</p> <p>Very dynamic.</p> <p>/</p> <p>As dynamic as possible</p>
		e.e. / e.e. / <u>e.e.!</u>	<p>Exceeding energy: as dynamic as possible but with even more motor and volitional energy than necessary; unleashing the maximum possible dynamism through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding energy+: as above but with additional excess energy</p> <p>/</p> <p>Exceeding energy++: as above but with the maximum excess energy</p>
Right Hand	Dynamics: Touch – Weight	<u>(c )!</u> / (c )! / (c )	<p>Contactless touch++: excessively energetic gentleness of light weight, touching the air that is just over the string, and pushing it down to the string</p> <p>/</p> <p>Contactless touch+: energetic gentleness of light weight, touching the air that is just over the string, and pushing it down to the string</p> <p>/</p> <p>Contactless touch: gentle contact of light weight, touching the air that is just over</p>

			the string, and pushing it down to the string
		$\boxed{c.m.} / c.m. / c.m.$	Magical contribution++: exerting such light pressure that it is uncertain whether the bow is touching the string(s) / Magical contribution+: as above, but imperceptibly heavier / Magic contribution: as above, but imperceptibly heavier
		$\boxed{\phi!} / \phi! / \phi,$	Feather pressure++: As light as possible; with barely perceivable but perceivable touching of the strings / Feather pressure+: Very light / Feather pressure: Light
		$\boxed{\uparrow} / \boxed{\uparrow!} / \boxed{\uparrow!}$	Heavy / Really heavy / As heavy as possible
		$e.e. / e.e. / \boxed{e.e.}$	Exceeding energy: as heavy as possible but with even more motor and volitional energy than necessary; the maximum possible pressure through an exaggerated involvement of the body and will, as if going beyond the limit of reality / Exceeding energy+: as above, but with additional excess energy / Exceeding energy++: as above but with the maximum excess energy
Right Hand	Dynamics: Touch – Affection	$\boxed{(c)} / (c)! / (c),$	Contactless++: the conception of contact with affection, in furthest distance / Contactless +: the conception of contact with affection, in close distance / Contactless: the conception of contact with affection, in immediate distance
		$\boxed{c.m.} / c.m. / c.m.$	Magical contribution++: caress/pamper the string with the bow so delicately that it is practically not apparent/perceivable that it is being touched /

			<p>Magical contribution+: as above, but with imperceptibly less delicate bowing</p> <p>/</p> <p>Magical contribution: as above, but with imperceptibly less delicate bowing</p>
		$\boxed{D^{lef!}}$ / $D^{lef!}$ / $D^{lef}$	<p>Caress/cuddle the string with the most delicate and patient bowing possible; there is a faintest, but immediate perception of the bow is in motion</p> <p>/</p> <p>Very delicate</p> <p>/</p> <p>Delicate</p>
		$V^{inf}$ / $V^{inf!}$ / $\boxed{V^{inf!}}$	<p>Violent (emotionally, personally; “violence” as overwhelming power, not aggression: extremely intense emotion-brutalness, ferociousness, fierce, wild, powerful)</p> <p>/</p> <p>Very violent</p> <p>/</p> <p>As violent as possible</p>
		$e.e.$ / $e.e.!$ / $\boxed{e.e.!$	<p>Exceeding energy: make contact with the string with exuberating most violent affection possible, with even more physical and volitional energy than necessary; affection in the most excessive way possible through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding energy+: as above but with additional excess energy</p> <p>/</p> <p>Exceeding energy++: as above but with the maximum excess energy</p>
Right Hand	Dynamics: Volume	$\boxed{(c \circ)!}$ / $(c \circ)! / (c \circ)$ // $\boxed{\phi!}$ / $\phi!$ / $\phi$	<p>Imperceptible resonance++: the volume inside the idea of physical vibration, happening, but only on outskirts of mind</p> <p>/</p> <p>Imperceptible resonance+: as above, but getting closer</p> <p>/</p> <p>Imperceptible resonance: as above, but close to become a real thought of resonance</p> <p>//</p> <p>Volume-less volume++: the idea of resonance and sound volume is clearly present in thought and internal energy is</p>

			/ Volume-less volume: as above, but approaching further the common-world sounding
		c.m./c.m./c.m.	Magical contribution++: producing the sound at a volume so low that it is not sure to be heard / Magical contribution+: as above, but imperceptibly more audible. / Magical contribution: as above, but imperceptibly more audible.
		P!/P!/P,	As softly as possible: the first degree of immediate perception of hearing of the sound / Very soft / Soft (in area of common piano volume)
		F/F!/F!	Loud / Very loud / As loud as possible
		e.e./e.e./e.e. <sup>ORD</sup> /	Exceeding energy: playing as loud as possible but with even more physical and strong-willed energy than necessary; achieve the loudest possible volume through an exaggerated involvement of the body and will, as if going beyond the limit of reality / Exceeding energy+: as above, but with additional excess energy / Exceeding energy++: as above, but with the maximum excess energy

Figure 2.1.1.2: Excerpt from self-made list of meanings of symbols for Dario Buccino's *Finalmente il tempo è intero n° 16*<sup>135</sup>

<sup>135</sup> The full list can be found as Appendix C.



## 2.2 Locating Imagination: tactile sensorial conception of the unheard

*'Sound is intrinsically and unignorably relational: it emanates, propagates, communicates, vibrates, and agitates; it leaves a body and enters others; it binds and unhinges, harmonizes and traumatizes; it sends the body moving, the mind dreaming, the air oscillating. It seemingly eludes definition, while having profound effect.'* – Brandon LaBelle<sup>136</sup>

To imagine a score, a performer must conceptualise music from written text preceding its actual sonic-auditory experience. Reading and hearing music is 'never a simple matter,'<sup>137</sup> and in this section I will concentrate on conceptualisations of sound through their possible pre-gestural tactile experiential states. While I introduce the conceptual process of thought behind the topic of imagination and imagining of the sounding of scores mainly using examples from Dario Buccino's *Finalmente il tempo è intero n° 16*, Liza Lim's *The Sun Song Star Map*, and Rebecca Saunders's *Hauch*, in chapter 4.1 I further elaborate on clarifying sonic identities through and in practice. Works by Saunders and Lim might seem "simple" to imagine in conventional ways but they turn out not to be, and the sounding of Buccino's piece is unimaginable in common conception. As such, I chose these three pieces as they are three distant but connected points that create a space in which this way of thinking about imagining sound can be presented, and from which one can continue to develop.

The idea of expanding the pool of associations used as a source for imagining arose from the need to find complementary paths to the more habitual temporal, pitch-gesture driven, and multifaceted cues found in the score. Any written musical score carries information that enables the performer to imagine in the interplay between

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<sup>136</sup> Brandon LaBelle, *Background Noise: Perspectives on Sound Art* (London: Continuum Press, 2007), p.xi.

<sup>137</sup> Adlington, p.316.

location, gesture and sensation; where “location” signifies the place on the instrument where the specific pitch is obtainable, “gesture” is the actions made by the left and right hands in relation to this location, and the “sensation” is the spectrum of tactile sensations of sound that the body can feel. In western European notation, with precisely given location combined with duration, the initial and relatively truthful imagining of the outcome from the notation itself is possible. In this trajectory, triggers for imagination arise from *location-gesture-sensation order*. In pieces by Dario Buccino, Aaron Cassidy, Clara Iannotta, and Liza Lim, on the other hand, this base is challenged, and the need for thinking in *sensation-gesture-location* became, in my experience, a crucial element for playing the pieces. In this pursuit, the question becomes how to *feel* a sound that has not been heard before (and might not ever be repeated) beyond turning to habitual forward-motional, path-like, and visual-imagery metaphors for guidance.

Deciphering composers’ intentions and describing the desired sound outcome in the process, and subsequently the actions required, utilises metaphors from everyday language. Adlington concludes that ‘metaphor is not simply a feature of verbal description but is actually fundamental to the way in which we experience the world,’<sup>138</sup> closing his argument with a citation from Lakoff that ‘focus of metaphor is not in language at all, but in the way we conceptualise one mental domain in terms of another [...] Metaphor is fundamentally conceptual, not linguistic in nature.’<sup>139</sup>

Vocabulary used to express qualities of sound often comes through words borrowed from the visual epistemology: colour (bright, dark, light), or, for example, in violin

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<sup>138</sup> Adlington, p.302.

<sup>139</sup> Adlington, p.302.

playing the “shaping of the sound,” referring to imagining sound and the actions of the hands. Adlington speaks of metaphors that are often used for describing music that include terms such as ‘brightening, softening, swelling, floating, heating-up, explode,’ and argues that these descriptions provide instantly recognisable change when experiencing music.<sup>140</sup> In performance notes for *The Su Song Star Map*, Lim describes some of the desired sound distortions as “husky” and “throaty”, following with that ‘all distortions are of emotional type...or a veil of whisky and cigars over the sound,’<sup>141</sup> and Cassidy uses terms such as ‘fragile, splintered; crackling; explosive, wild; frenetic; fragile, fractured.’<sup>142</sup>

The descriptions offered by composers are invaluable guidance in the process of building an interpretation regardless of which area of experience and sensorial epistemology the terminology is drawn from. Thus, a performer can choose to position their departure point for imagining to be ‘the self-defined in terms of hearing rather than sight’ as this *self* is ‘imagined not as a point, but as a membrane; not as a picture, but as channel through which voices, noises and musics travel.’<sup>143</sup>

Within all its complexity, our hearing starts from a physical sensation of vibration of a membrane within our body, so this *is* a tactile sensation. Evelyn Glennie, a profoundly deaf percussionist, talks about hearing in terms of touch, and hearing through feeling the acoustic vibrations in body parts that go beyond just the ear.<sup>144</sup>

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<sup>140</sup> Adlington, p.308.

<sup>141</sup> Liza Lim, *The Su Song Star Map*, for solo violin. RICORDI. Sy.4794 (Berlin: Ricordi, 2018).

<sup>142</sup> Aaron Cassidy, *The Crutch of Memory*, for indeterminate string instrument (any bowed, non-fretted instrument with at least four adjacent strings), Self-published, SKU:200402 (2004), p. 1, 2, 7, and 8.

<sup>143</sup> Steven Connor, ‘The Modern Auditory I’, in *Rewriting the Self: Histories from the Renaissance to the Present*, ed. by Roy Porter (New York: Routledge, 1997), p.206.

<sup>144</sup> Evelyn Glennie, ‘How to truly Listen’ ([TED Talk] (2003), <[https://www.ted.com/talks/evelyn\\_glennie\\_how\\_to\\_truly\\_listen](https://www.ted.com/talks/evelyn_glennie_how_to_truly_listen)> [accessed 25 May 2023].

Taking a cue from this model, I more consciously started to approach imagining the unheard sound through tactile-felt thinking, intercepting and giving a second plane to the otherwise dominant visual-imagery or relating to pre-heard concepts.<sup>145</sup> When it comes to the experience of *knowing* through the modes of five external senses, Cox describes knowledge gathered from the sense of touch as ‘understanding is grasping’, as knowledge that comes from ‘physical investigation of objects, and this involves the power of the hand’<sup>146</sup> or tongue.<sup>147</sup> What I became interested in through my repertoire is perceiving the body of the performer as “the object” and sound as “the hands” that are touching. By inverting the starting point of who is the observer and what is the observed in sensing and understanding the vibration of the sound, the knowledge gathered is shifted to the very action of vibration of the sound, and, subsequently, its materiality and physicality, even when movement of the body is microscopic.

When it comes to the music I have focused on in this project, there is a rupture between how something is written and how it will sound. To imagine the sounding of this music-conveying text is to conceive a physical sensation of vibration before that vibration has ever taken place in the physical world. Unlike with more conventional scores where it is common to use the instrument already in the first reading, the first reading of these pieces requires a more focused and abstract process of imagining isolated from instrument and playing.<sup>148</sup> For a substantial portion of the violin

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<sup>145</sup> Arnie Cox, *Music and Embodied Cognition: Listening, Moving, Feeling, and Thinking (Musical Meaning and Interpretation)* (Bloomington, Indiana: Indiana University Press, 2017), p.165.

<sup>146</sup> Cox, p.168.

<sup>147</sup> On page 164 of *Music and Embodied Cognition*, Cox describes that the touch of the tongue also plays a correlating role in the knowledge gathered with tasting.

<sup>148</sup> For instance, Roger Woodward writes “I had assimilated the whole score in my mind's eye and musician's inner ear through analysis. Before I sat at the piano for the very first time, I felt that I knew the work sufficiently well and that it was, at least in many ways, already a part of me. I heard the opening ten bars even before I sat down to place my hands over the pitches themselves and bring to life the musical event of which they formed part”, see Roger Woodward, ‘Preparations for Xenakis and *Keqrops*’, *Contemporary Music Review*, 21.2-3 (2002), p.114.

repertoire, there is a basic reliance on the pitch and duration properties of the music, the “note”, that can be delineated from the score. There is also a considerable reliance on the memory of the sounds previously heard or made. With this in respect, even if not heard before, there is a plausible starting point from which an unheard score can still be conceived in the mind of the performer. In pieces with the surplus of layers and information, this initial processing becomes especially beneficial to understanding and creating a departing point and context.<sup>149</sup> With this kind of approach, there is an opening for metacognition to enter the next step that involves multilayered processing of cognitive and physical actions. As one endeavours to have meaning ‘created through senses beyond the traditionally privileged one, vision,’<sup>150</sup> a more critical approach is needed for imagining sound, as the intermediate structure between the score and the performance. How might one start to imagine phenomena that are physical but not necessarily recognisable by the eye in the notation?<sup>151</sup>

When working on these pieces, situating *when* and *where* one starts this process of imagining was of crucial importance. Jerrold Levinson’s definition of musical work as a ‘compound or conjunction’ that consists of two structures: a sound structure and a performing-means structure,<sup>152</sup> offered a frame within which I embedded the third structure, the imagining. In *becoming* of the musical work, bringing the music from

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<sup>149</sup> In their study of incremental comprehension of reading novel musical material, Hadley, Sturt, Eerola and Pickering suggest that “during initial processing, musicians comprehend notation in terms of contextual musical relationships, as opposed to simple performance instructions.” see Lauren V Hadley, Patrick Sturt, Tuomas Eerola, and Martin J. Pickering, ‘Incremental Comprehension of Pitch Relationships in Written Music: Evidence From Eye Movements’, *Quarterly Journal of Experimental Psychology*, 71.1 (2018), 211–219.

<sup>150</sup> John Baldessari, ‘Artist: John Baldessari’ <[https://www.saatchigallery.com/artist/john\\_baldessari](https://www.saatchigallery.com/artist/john_baldessari)> [accessed 22 May 2023].

<sup>151</sup> Sabine von Fischer, ‘A Visual Imprint of Moving Air: Methods, Models, and Media’, *Journal of the Society of Architectural Historians*, 76.3 (2017), 326-348.

<sup>152</sup> Jerrold Levinson, ‘What a Musical Work Is’, *The Journal of Philosophy*, 77.1 (1980), 5-28.

the ‘first space’<sup>153</sup> into the physical space, imagining stands as a transitional structure: conception of the sounding result as a complex system of thought and physical actions and interactions between a performer and their instrument. It is a transitional structure because the process of “imaging” is one of the elements towards the performing-means, yet its trajectory is not unilateral. The performing-means structure can return information to the conception and imagining, and in doing so further expand the understanding of the sound structure, creating a necessary feedback loop. The imagining of sounding belongs to both abstract and tangible worlds. It is abstract to anyone outside of the body of the performer, but it is a tangible world within the performer and body as the tactile sensory field. The more conventional, pitch-led gesture embodied knowledge deals with touch and weight as an addendum, providing timbral nuance to a note. The way of pressing and depressing the finger on the string, using the weight of the fingers or hand, right hand and bow pressure and contact, are all the elements the violinist evaluates and includes in repetition and practice.

Philip Thomas speaks about the tactile aspects of playing and sound, but again as something that comes after the initial conception, in the quest for building upon a specific pitch with all its desired timbral nuances. The effect of such care for the touch is audibly noticeable especially in Thomas’ interpretations of Morton Feldman’s piano music.<sup>154</sup> Thomas writes, ‘when I see a note within the context of Feldman’s music, I have a sense of action, or movement, and of touch. This is less a form of synaesthesia than the inevitable product of a prolonged and regular

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<sup>153</sup> The idea of the score as a ‘first space’ is discussed in chapter 2.1.

<sup>154</sup> For instance, exceptionally potent example for this can be heard in ‘Triadic Memories’ [Disc 3 and 4] of *Morton Feldman Piano* box set, released by Another Timbre. See Feldman, Morton, ‘Triadic Memories [Disc 3 and 4]’, *Morton Feldman Piano*, Philip Thomas (Another Timbre, at144x5, 2019).

engagement with the music.<sup>155</sup> Pianists' "tactile conception" of sound is not only about the gesture that they have to make, but also the response of the instrument that will turn this touch into the sounding result; no matter how much control the pianist has, there is a high probability for different sound, simply because it will literally be produced by a different instrument.

Although a violinist will repeat actions in the same manner and on the same instrument, the unpredictable nature of the pieces under discussion here will also have a threshold of unpredictable return of sound. Approaching the conception of tactile sensation as something that precedes the experience of the sound and the movement that produces it allows for "reversed" direction, in which the feeling of the sound goes to become sonorous (through technique of playing).<sup>156</sup> But just like the pitch-duration driven conception of sound and movement, this touch-imagination can be adjusted and refined upon the experience of the result through practice. In a conversation, Thomas, responds to this thinking with 'yes, when I play on a different piano, there is the imagination of how do I touch the key, but the outcome due to different instrument might/will not be the same...'<sup>157</sup> but the importance of touch and tactile nevertheless remains a crucial and important aspect. In his approach to playing Feldman, Thomas also draws attention to the materiality of sound as,

having a basis in some deep and sensuous contact between flesh and instrument. At the same time, for me it also has to do with the action prior to contact – how I lift my hand, my wrist, the sensation in my arm, the degree of tension felt, the balance of control and suppleness in my fingers, the angle of my finger as it approaches the key, the combination of finger-tip and finger-pad, the degree of finger lift before the contact, the velocity of the attack. ALL of these things are part of my conceptualization of the sound in response to the notation. This

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<sup>155</sup> Philip Thomas in Morton Feldman, *Morton Feldman Piano*, Philip Thomas, liner notes (Another Timbre, at144x5, 2019), p.6.

<sup>156</sup> Examples for this come from Clara Iannotta's and Aaron Cassidy's pieces, and "glissando" in particular, and this will be described in more detail later in the text.

<sup>157</sup> In conversation with the Philip Thomas, 6 October 2020, Huddersfield/Brussels.

complex set of configurations, each speaking to each other in mysterious ways, point to what I feel is the complex nature of the sound-world, none of which has anything to do with dynamics, other than that they would have very different meaning were they within the context of dynamics other than ppp.<sup>158</sup>

In music whose essence is not primarily based in the note but rather in mixtures of timbre and gesture, the tactile pre-conception of sound is necessary research for intentionality that starts from the inverted departing focus. The sensation and thinking in the form of sensed vibration allows for further developing intricate systems of imagination through how the sound *feels* rather than how it sounds. On the violin, the finger and the string are in direct contact without any intermediary object, allowing for direct contact and reaction to be captured and internalised. Just like “regular” hearing of a ‘score in print and playing it are of course worlds apart,’<sup>159</sup> this hypothetical tactile sound palette does not exist without practice and exploration. It is in this respect the same as its mirror action that seeks to obtain a pitch. This is where the feedback loop practice enters, and through experiences gathered through trial, self-analysis, and repetition the pool of tactile-sensed sound references is expanded and becomes available to be called upon as “information” that aids future conceptions (imagining). This process was for me specifically valuable as a path to bridge the gap in dealing with the unexpected and uncontrollable that arises from directions composers are taking.

In Rebecca Saunders’ *Hauch* I found a balance between that “regular” (with its demands from the left hand) and the undefined exploratory world (though abstractions it demands for the right hand). The piece has a strong note (pitch- and duration-)base, which provides for much information that then grounds left hand-related sensations

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<sup>158</sup> *Morton Feldman Piano*, pp.11-12.

<sup>159</sup> Woodward, p.117.



(and actions) to be guided with clear directionality. The name of the piece itself sets a particular environment: *hauch* is a German word without an exact English translation, for which Saunders lists a selection of possible meanings: ‘a trace, touch, hint, tinge, soupçon, tang, wisp, or a breath of something.’<sup>160</sup> She further explains that the word ‘implies a suggestion or intimation of the thing: a shadow, an aura, a glimmer hidden beneath the surface.’<sup>161</sup>

The piece follows a two-part melody line whose fragments appear and disappear in silence through eight clearly marked segments. There is no time signature, but the proportions and duration are firmly embedded within the staff line's graphic spatial organisation. Looking at first at the notation of this piece, it is possible to roughly conceive a departure from the notation itself (primarily relating to the pitch and duration), but the exceptionally nuanced and fragile sound and timbre demands extensive exploration for the performer.<sup>162</sup>

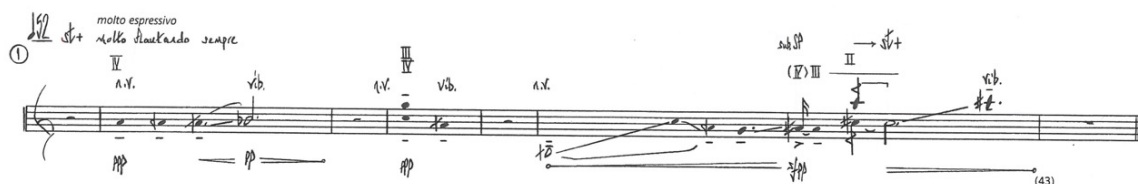


Figure 2.2.1: Example from Rebecca Saunders' *Hauch* (2018) for solo violin

Figure 2.2.1 shows the first of eight segments from the piece. Beyond pitch (and pitch alterations), duration, dynamics, and articulation, Saunders gives great detail and care for vibrato and placement of the bow. The legend differentiates five bow placement

<sup>160</sup> Rebecca Saunders, *Hauch*, Edition Peters EP 14345 (London: Peters Edition, 2017)

<sup>161</sup> Saunders, *Hauch*.

<sup>162</sup> This has been hinted also by Rebecca Saunders herself during our work session on the piece, which took place on 18 January 2020 in Berlin.

degrees (figure 2.2.2), with emphasis on the general remark for the “molto flautando sempre,” and eight types of vibratos (figure 2.2.3).

Bow contact points	
<i>molto flautando sempre</i>	Bow flowing, never stuttering, adding, bow changes as often as you need throughout the piece
st+	Extreme <i>sul tasto sempre flautando</i> : bow over fingerboard as near to half-way node as possible – hollow, floating, beautiful.
st	<i>sul tasto</i> : st+ automatically becomes st at mp dynamics; less <i>flautando</i> bow
sp+	<i>sul ponticello</i> [at, very close to the bridge] <i>extreme molto flautando</i> : bow flowing, never stuttering. Specifically applied to two vibrato effects ( <i>molto vibrato</i> and the <i>subito tight vibrato</i> )
sp	<i>sul ponticello</i> [close to the bridge]: bring out some overtones, but written tones of melodies still heard – flowing and expressive
ord.	<i>ordinario</i> : for louder clear moments

Figure 2.2.2: Bow contact points in Rebecca Saunders’ *Hauch*

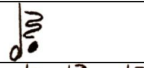
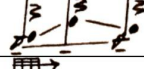
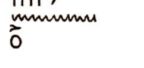

Vibrato	
n.v.	without vibrato
p.vib.	with a bit of vibrato
vib.	ordinary, expressive vibrato
m.vib.	extreme vibrato, with increased amplitude of the left hand/arm movement, resulting in a very fast glissando back and forth within a given interval
	vibrato with less finger pressure, with glissando
	Outer limits of the interval expanding and decreasing
	Subito tight and fast vibrato, in clear rhythm, with small amplitude of maximum circa 1/4 tone; with very light finger pressure
	An expressive, quasi-Brahmsian double vibrato pulse

Figure 2.2.3: Types of vibratos in Rebecca Saunders’ *Hauch*<sup>163</sup>

In the notes for the performer, Saunders gives a detailed description of general aspirations in how to think about time, timbre, and colour. There is even a very specific recommendation to ‘Try practicing st+ phrases just once with a wooden

<sup>163</sup> This table contains a mixture of explanations found in the score, information received while working with Saunders, as well as listening to her talks.

mute! – to hear the fragile dark st+ timbre you need to aim for.<sup>164</sup> The atmosphere, the repeated use of extremes, emphasising fragility, the coming in and out of silence, it would be easy to start thinking within a much wider spectrum, wider threshold of veiled, hidden sound that would disorient the sense of its origin being a violin.

Although the piece sets the performer on a quest for surfacing in and out of silence, examining timbre in high positions, having pulsations from vibrato wideness, in a rehearsal Saunders confirmed that these sound worlds are all still to remain within the realm of ‘just a regular [recognisable] violin sound.’<sup>165</sup> The Notes to the Performer detail clearly and to the point that a score should be read through the prism of the “standard” sound. The timbre and possibilities in the high positions of the lower strings remain to be explored and sound-constructed, but the outcome is to remain within the realm of the soft, (extreme) *piano* sound, never bringing in doubt that the source is the violin. All these pieces of information clearly suggest that the tactile has to be placed second behind the clear pitch-gesture as a departure for the construction when it comes to the left hand. However, the ideas of imagining through the prism of tactile that is beyond the common are already present in the guidance Saunders’ outlines for the right hand.

What is perhaps the most provoking thought about the work is not written in the notes to the performer, but in the programme notes:

‘Hauch is a solo study exploring pianissimo timbral nuances at the top of the lowest violin strings; tracing fragments of melody, drawn on a thread in and out of silence.

Surface, weight and touch of musical performance: the bow drawing the sound out of silence; the slightest differentiation of touch on the string; the expansion of the muscles between the shoulder blades; the player’s in-breath preceding

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<sup>164</sup> Saunders, *Hauch*.

<sup>165</sup> In conversation during the working session with the composer, 18 January 2020, in Berlin.

the played tone ... The fallible physical body behind the sound: feeling the weight of sound, exploring the essence of a timbre.’<sup>166</sup>

Although Saunders does not ask *Hauch*'s performer to explore the extremes of sound and silence beyond what will be recognised as violin sound, the imagery given by the composer in the notes which insist that the attention should be paid to ‘the slightest differentiation of touch on the string; the expansion of the muscles between the shoulder blades’<sup>167</sup> does flirt with the idea of tactile conception as the initiator of ways to imagine.

While still anchored within the commonly imaginable abstraction required from the right hand, and to some extent through specific use of vibrato for the left hand, moves *Hauch* to the undefined world and as such is a step toward the intentional disconnection from common empirical conception and imagining. In my practice, *Hauch*, together with other specified pieces, offered the kind of a positive provocation that led me to search for what happens when the solutions are initially even less clear.

To an extent, Liza Lim's *The Su Song Star Map* is another piece conceivable from a pitch-duration point of view from reading the score. However, with scordatura, intricately nested and interlaced repetition, and multiphonics, this piece too becomes one that exuberates intentional instability and unpredictability. One of these moments can be seen on page 15 (figure 2.2.4).

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<sup>166</sup> Saunders, *Hauch*.

<sup>167</sup> Saunders, *Hauch*.

Figure 2.2.4: Liza Lim's *The Su Song Star Map*, manuscript, page 15, annotated by the author

The essence of this section is not only in the timbral information conveyed in the notation, but also in the unique, intentionally unrepeatable and desired instability of a collection of the sounds that multiphonics and other non-standard harmonics create. The fast succession of changes between the harmonics and multiphonics, as well as interlaced repetitions, all contribute to each performance ultimately having a unique outcome. Different, fully or lightly<sup>168</sup> depressed actions of the finger in order to achieve them have the intention to create a flowing line, or as Lim writes in the performance notes, 'a fluid "3-dimensional" quality as one rapidly shifts across different timbral spaces'.<sup>169</sup> Added to that the various timbral directions (noted as breathy, husky, poco distortion), there is an exceptionally palpable richness of sound that arises. To reduce building of this complex sound architecture to execution that relies only on pitch-location of the finger seems almost impossible. Here, the practice and loop-feedback cycle become much more rewarding for the performer and

<sup>168</sup> Lim, *The Su Song Star Map*, in performance notes.

<sup>169</sup> Lim, in performance notes.

for the piece when care is placed on the tactile-imagining, at least in equal amounts to “standard” practice of action.

In pieces with ample information (Buccino, Cassidy, Johnson, Lim), whether asking for extreme timbral (Buccino, Iannotta, Johnson, Lim) or gestural explorations (Buccino, Cassidy), the basic challenge of how to imagine each element on its own, is further intensified by the impossibility of predicting how parameters react when they are combined. Further to this, the very legibility of notation can be challenging. Here it is possible to talk about two different strands of challenges. One, where the outcome in reference to the type of notation used seems easily imaginable, yet it is contradictory to the actuality of its intended sounding (Cage, Iannotta, Lim, Johnson). And the second, where the notation is very composer-language-specific, and with that even piece-specific, so that referencing any already experienced music, sound, and works is only vaguely applicable (Buccino, Cassidy). These strands interlace. In *dead wasps in a jam-jar (I)* (Iannotta), *The Crutch of Memory* (Cassidy), and *Finalmente il tempo e intero no. 16* (Buccino), neither pitch and hearing with the inner ear are any more reliable as a starting point, nor is the gesture related to it.<sup>170</sup> Repetition and practice over time will build more appropriate reference points and more accurate anticipation and reaction to what could be misinterpreted in the moment of the performance as mistakes or deviations from the truthfulness to the score.

Establishing an embodied experience for a particular sound, the various out-of-the-body (of the player as well as of the instrument) influences can greatly affect the outcome. However, the threshold of improbability for absolute control of accurate

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<sup>170</sup> Gesture and physicality as material is discussed in detail in chapter 4.2.

response of the instrument to the action made to produce a sound remains extremely low and unstable due to manifold demands to be applied simultaneously, each carrying its own instability. It is this multiplication of instabilities that results in pitch-gesture relation to lose on its status as provider of certainty and reliability and opens the space for abandoning privileging them ‘over the other acoustic auditory features.’<sup>171</sup>

Another reason that aiming for that reliable geographical<sup>172</sup> distance, the relation between pitch and duration and hand-movement-feeling as source should be avoided is that established gestural comfort obscures the instability and fragility that are important aspects of the auras of these pieces. In this context, relying on the recordings of previous interpretations as a source for initial conception can even be deceitful, as crucial parameters and determinants of pieces (such as preparation of the instrument or gesture that is determined by the physical properties of the hand of the performer) make for different possible “truthfulnesses.” The piece *dead wasps in a jam-jar (I)* uses preparation, and slight inconsistencies in placement of this preparation will result in a different sound.<sup>173</sup> Using gestures as musical material, *The Crutch of Memory* is dependent on physical characteristics of a hand of a specific player, thus again leaving room for greater oscillation in sounding as related to pitch.<sup>174</sup> It is of an extreme importance not to seek inspiration by simply listening to an interpretation, not of other but also not of self.

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<sup>171</sup> Cox, p. 172.

<sup>172</sup> Geographical distance understands the violin, and in this case more specifically the fingerboard, as a mapped terrain.

<sup>173</sup> Furthermore, certain existing recordings currently circulating can be even misleading, as in some cases the misinterpretation of the bow placement as well as paper clip placement produces a completely different sound. In this respect, it could be argued that the score itself could provide further precision on some aspects, for example placement of the bow, that could possibly render obsolete this kind of mishaps. These matters are discussed further and in detail in chapter 4.1.

<sup>174</sup> More detailed about *The Crutch of Memory* and on gesture as material is discussed in chapter 4.2.

According to recent theoretical studies,<sup>175</sup> ordinary sound waves carry a small amount of mass in them. The research in the measures, effects, and physical interpretation of the mass flow is still ongoing,<sup>176</sup> but this scientific discovery is attractive for musicians as it adds to the repertoire of features and aspects of sound a performer can consider in the process of imagining. If sound has a mass and a gravitational field of its own, even if they cannot be registered by human perception, this information and property becomes an element in the process of imagining that can be linked to tactile and felt. Instead of imagining how the sound sounds, a performer can imagine how this sound feels when the body is being touched by it, for the performer or when passing and landing close to the audience.

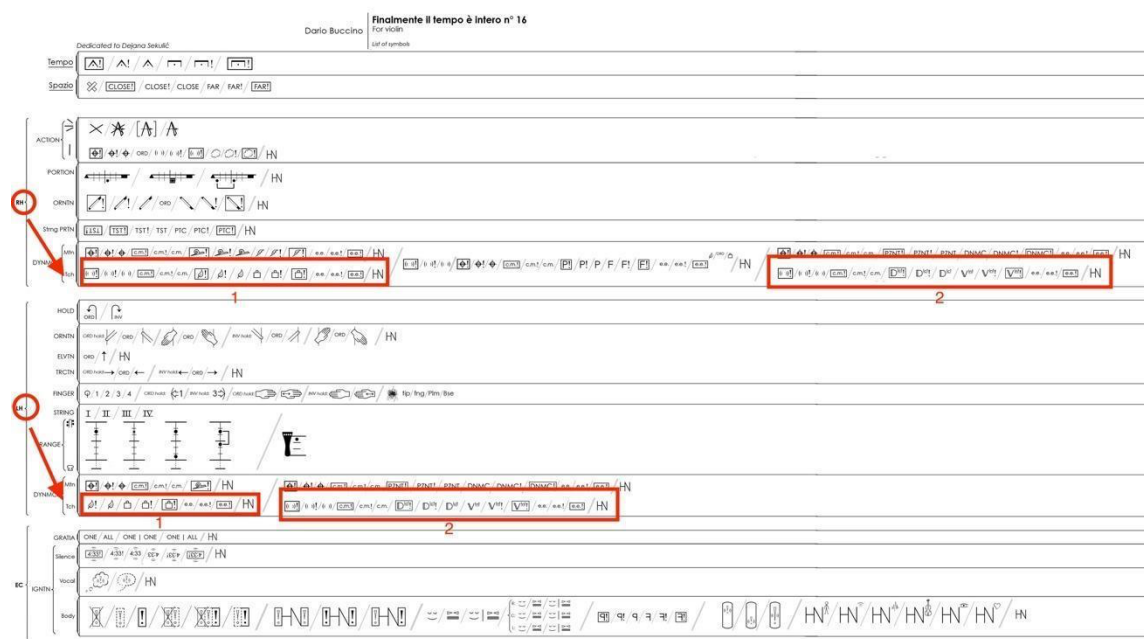


Figure 2.2.5: Dario Buccino's *Finalmente il tempo è intero n° 16*, list of symbols

<sup>175</sup> Alberto Nicolis and Riccardo Penco, 'Mutual Interactions of Phonons, Rotons, and Gravity', *Phys. Rev. B*, 97.13 (2018), 134516 and Angelo Esposito, Rafael Krichevsky, and Alberto Nicolis, 'Gravitational Mass Carried by Sound Waves', *Phys. Rev. Lett.*, 122.8 (2019), 084501.

<sup>176</sup> Buchanan, Mark, 'Sound Waves Carry Mass', *Physics Magazine* (2019), <<https://physics.aps.org/articles/v12/23>> [accessed 22 May 2023].



In his piece *Finalmente il tempo è intero n° 16*, Dario Buccino attempts to capture the weight of sound and its effects through several aspects. He constructs a scale of weights, pressures, and speed that he categorises as the dynamic of movement and touch. These are part of the notation and technique given to the performer for execution – both in the area of the left-hand and the right-hand actions (figure 2.2.5). Furthermore, he differentiates between two sub-division of these parameters, for this argument especially important in the area of the touch in more particularly of the left-hand: one directed to the action to be made *by the performer to the instrument* in order to achieve sound, and the second one is a set of affection intentions of weight and sensations that are to be felt by the instrument from interactions and responses between the performer and the instrument, and the vibration of sound. The scale for the action-execution for production of sound goes as: extreme feather light, feather light, normal, heavy, extremely heavy, exceeding energy, substantial exceeding energy, extreme exceeding energy. Symbol ‘HN’ is a landmark of Buccino’s compositional practice and aspirations, and it refers to the moment of the performance. It is a direction for the performer to decide which of the possible options from the predetermined scale to use, determined by what the music demands in the very moment of the performance (figure 2.2.6). The scale for affections differentiates following degrees: extreme absence of pressure/contact, substantial absence of pressure/contact, zero pressure/contact, extreme magical contribution (*c.m.* stands for *contributo magico*), substantial magical contribution, magical contribution, extreme delicate, substantial delicate, delicate, violent, substantial violent, extreme violent, exceeding energy, substantial exceeding energy, extreme exceeding energy (figure 2.2.7).



Figure 2.2.6: Range of the weight of action in *Finalmente il tempo è intero n° 16*



Figure 2.2.7: Range of the affection of action in *Finalmente il tempo è intero n° 16*

Buccino has a specially dedicated “staff line” for the body, the *endocorporeal staff* (marked EC in the list of symbols, as seen in figure 2.2.5), where everything that happens to the body from the inner point of view and related to the sound (either as a source or reaction) must be incorporated in the moment of the performance. In addition to already described scale of affections, in *endocorporeal* he interplays also the directions for intention, adding three more steps to the scale: exceeding intention, substantial exceeding intention, extreme exceeding intention. Furthermore, the top line of this staff line, called *Gratia*, is dedicated to heightening the consciousness in the projection and sharing of the sound by giving indications whom to direct sound to (figure 2.2.8).

ONE	to one person at a time
ALL	to all
ONE   ONE	to one person, then one other person, then one other person (always individually)
ONE   ALL	to one person, but through that one person to all
HN	as in each of the classifiers for sound production, there is HN in this category as well, meaning that (when appearing concretely in a bar or a sub-bar) a performer can choose between the other four indication depending on the momentary feeling of what is the necessity for the piece

Figure 2.2.8: Explanation of subdivision of *Gratia* in *Finalmente il tempo è intero n° 16*

Even though Buccino in the moment of writing the violin piece was not aware and therefore not aiming to apply nor “prove” any aspect of the theoretical studies mentioned, his compositional process intuitively engages with and alludes to the

necessity of consciously thinking and including the *mass of sound*, especially through affections and *endocorporeal* thinking about the sound.<sup>177</sup> Buccino's piece is an initial step in exploring the potentials this expanded thinking of mass and weight in the sense of what kind of weight the sound transfers and carries as it moves through space and time offers.



Figure 2.2.9: Interaction between the finger and the string's vibration (video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_2\\_fig\\_2\\_2\\_9.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_2_fig_2_2_9.html) )

Examples featured in Figure 2.2.9 aim to demonstrate the interaction between the performer and the string's vibration, thus inciting the thought about how this *feels* and how *imagining through tactile sensation* can start to occur. The first example features a bowed open G string. The second example shows a close-up of the finger very lightly pressed on the string and captures the string moving the surface of the finger. The third example has a combination of different pressures of the finger. The camera frame is intentionally kept wide to capture the string's continuous activity on either side of the point of pressure in the moment of greater applied weight. There is a far greater scale of happenings in this interaction that is internalised in the moment of playing, with finesse and nuance beyond anything that can be captured with a video recording. This internalised vibration as a reaction to sound is the embodied knowledge from which a new palette of conceiving sound and interpretation can be created.

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<sup>177</sup> Consciousness of weight, dynamics of movement and touch for sound, as well as endocorporeal aspects of playing are part of Buccino's compositions since the mid 1990s.

The extent with which Buccino develops his material into a music piece from the start requires the performer to think in minute detail about every aspect of sound itself, of its relation to the bodily self, and of sound production, often simultaneously in parameters that even seem to be contradicting each other. The structure of the piece is such that one page of music represents one bar, and this bar has eight sub-bars (figure 2.2.10). The reading of the “bar” is not intended in a linear way, from left to right. Order of triggering of sub-bars is to be decided by the performer, in the moment of the performance. This already provides a large spectrum of possible executions on its own. But, added to this, in almost every sub-section, in each of the parameters there will be the appearance of HN. As previously explained, this notational symbol allows the performer to, while performing, call upon any of the predetermined options for each particular parameter of each instrumental identity (eight sub-bars are eight instrumental identities). For Buccino, the music is not *in* the score but *within* the score, and he says that the only way to play his music correctly is to play it incorrectly. This does not imply that the performer should deviate from the score, but that the ideal interpretation of the piece comes from incorporating all the detailed definitions (figure 2.2.5), scales and symbols through their meaning thus liberating the self to confidently navigate through the unpredictable, feeling and expressing the *here and now*. With all this, the interpretation flows between precisely notated and option-notated (by implementation of HN) resulting in unrepeatability. With the level and layers of sound and timber, combined with both care of felt, affection and “regular”-action relationship between the performer, the instrument, and the sound, there is a vast amount of possible unpredictable and even surprising outcomes that cannot be practised in advance. Although extremely sound-silence perception bound,

the sound and gesture are never pitch bound. The notation is completely developed by Buccino, to accommodate and clearly convey all the details and nuances that the performer must consider and explore. For all these reasons, rethinking the origin of *knowledge* from which conception of the interpretation is drawn is almost paramount, and, in this case, because of its ever-changing structure, this process becomes a continuous moving state of imagining through felt and sensed through tactile.

		Tempo	^! 2 T.U. ≈							
		Spazio	[CLOSE!] [CLOSE!], 1' ↔ 2'							
			MUTE Action ≈	MAGICAL Cont. ≠	BACK Voice ≈	TALL Perc ≈	VOICE ≈	PAD ≠	SCRIBBLE ≈	MULTI Voice ≠
RH	ACTION		HN	HN	HN	HN	HN	HN	HN	HN
	Bow		HN	HN	HN	HN	HN	HN	HN	HN
	GRIND		HN	HN	HN	HN	HN	HN	HN	HN
	String PRIN		HN	HN	HN	HN	HN	HN	HN	HN
		DYNAMICS	HN	HN	HN	HN	HN	HN	HN	HN
LH	GRIND		HN	HN	HN	HN	HN	HN	HN	HN
	ELVIN		HN	HN	HN	HN	HN	HN	HN	HN
	IRGIN		HN	HN	HN	HN	HN	HN	HN	HN
	FINGER		HN	HN	HN	HN	HN	HN	HN	HN
		STRING		HN	HN	HN	HN	HN	HN	HN
		RANGE		HN	HN	HN	HN	HN	HN	HN
		SP		HN	HN	HN	HN	HN	HN	HN
		DYNAMICS	HN	HN	HN	HN	HN	HN	HN	HN
EC	GRATIA		HN	HN	HN	HN	HN	HN	HN	HN
	Facel		HN	HN	HN	HN	HN	HN	HN	HN
	Vocal		HN	HN	HN	HN	HN	HN	HN	HN
		IGNIN		HN	HN	HN	HN	HN	HN	HN
		Body		HN	HN	HN	HN	HN	HN	HN

Figure 2.2.10: Dario Buccino's *Finalmente il tempo è intero* n° 16, page 9, annotated by the present author

The unpredictable outcomes of fast successions of two sounding events are not isolated as happening only in the case of Buccino, and in a larger sense can happen in interpretation of any piece. The difference being that the unintentional, intermediary sounds that can appear on some occasion for example in a shift of position or change of strings in a piece from a more standard repertoire even when performed by the same person, are the non-desirable accidents. They do not influence the “imagining”, as the performer “knows” what sound it has to aim for and must swiftly react to achieve it. In the case of Buccino, these “accidents” become also the elements that

have to be considered as equal musical material – and in the moment of their appearance be recognised and utilised. They cannot be imagined in advance, as their existence will only arise in the moment of collision of the two concrete sound objects.

*'Don't look for traditional music or conventional things. Open your ears, your mind, and your soul without prejudice. Feel you are on another planet. If you can do this, it will be a big step forward in your own liberation. In Art, human nature can make leaps without intermediate phases.'* – Iannis Xenakis<sup>178</sup>

What ties together pieces as different as *Finalmente il tempo è intero n° 16*, *The Song Star Map*, *Hauch*, and other pieces from my focus repertoire is a need to rethink further how to conceive and imagine the sound and the piece's entire outcome. In their essence, they demand expanding which source of embodied knowledge the imagination is drawn from. Emphasising “sensation-gesture-location” as thinking of the tactile conception of sound over a more habitual “location-gesture-sensation” imagining allows for an amplified experience of the non-forward-motional thinking about the work. This approach to the process further facilitates better understanding of spatial and textural consistencies and presence of the sound in space.

When giving conceptual metaphors related to perceiving through five external senses, Cox describes the five modes of knowledge as knowing is smelling, knowing is tasting, knowing is touching (and understanding is grasping), knowing is seeing, and knowing is hearing.<sup>179</sup> In the context of music and conceptualising, conceiving, and translating a music score into sounding, interpretation, and performance, the process of combining epistemological experiences of senses far beyond hearing makes that in

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<sup>178</sup> Woodward, p.109.

<sup>179</sup> For more on metaphor ‘knowing is seeing’ see: George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980). For more on ‘knowing is hearing’ see Cox, pp.164-165.

music performance *knowing is listening* but with the body as a whole. Collection and assembly of the experienced in the mind as a possible outcome of an interpretation should include the “old fashion” imagining. The idea of conceiving sound from the score of the music piece beyond this habitual pitch-duration related knowledge is an attempt to broaden the way how to imagine the not-yet-heard. To conceive the outcome of the sound before it has been heard, a tactile sensation can be applied to any music, interpretation, and translation of any kind of notation, and not only to recent pieces. During the research, this became part of my conscious practice regardless of the repertoire. However, as it can be seen from the examples, pieces that are the focus of this research created the need to rethink and expand this practice more consciously. Cox advocates for ‘music’s power to elude the power of the eye and the hand.’<sup>180</sup> I would extend this thought with “the hand that touches” but not the overall tactile sensorial of the body as a whole and the sensory tool to collect and create tactile sound epistemologies.

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<sup>180</sup> Cox, p.173.





# **PART II Three Challenging Areas in Reconfiguring Performance Practice – Case Studies**

This chapter is a detailed account of explorations, investigations, and personal methodologies and approaches developed in pursuit to reconfigure performance practice prompted by pieces with multi-dimensional levels of difficulty. Chapter 3 brings insights to the approaches taken in clarifying sonic identities, Chapter 4 is dedicated to the *area* of physicality as material, and Chapter 5 to process and memory.

## **CHAPTER 3 Clarifying Sonic Identities**

*‘Acts of “waste and superfluity” can take the form of leaks in the composer-score-performer-listener chain, ruptures that irretrievably disperse the accumulated energies of one stage of the compositional/performative act in a way that leaves only traces at the margins of the next, so that the eventual sounding result is a residue-bearing core.’ – Evan Johnson<sup>181</sup>*

In pieces I have focused on, there is a rupture between how something is written and how it will sound. In particular, many of these works’ scores give very little to no indication of how the piece will sound, nor of the sonic environment within which the piece can evolve. The search for a sonic identity is triggered by this discrepancy and

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<sup>181</sup> Evan Johnson, ‘On Waste and Superfluity’ (unpublished article, 2011).

ambiguity between two parallel and equally important relations of expectations. One is the expectations based on what the score “looks like” and what the score expects to sound like, and the other is the relation between expectations of what the instrument is supposed to sound and be able to do, known from previous experiences, and what it actually can do. Although the notation of *Finalmente il tempo è intero n° 16* offers no clues to the sonic identity of the piece, the level of specificity in approach this piece demands establishing the basic field of sonic potentials to be a state of continuous process. As such, this aspect of *Finalmente il tempo è intero n° 16* is discussed in the challenge area of process in chapter 5. Here, I will draw from *dead wasps in the jam jar (i)*, *The Su Song Star Map*, *Wolke über Bäumen*, and *The Crutch of Memory*, pieces that have the same kind of non-relation between the appearance of the score and its sounding result, and which both include alterations to the instrument.<sup>182</sup>

Alterations to the instrument are one of the parameters that can profoundly obscure the overall sonic identity of the piece from the outset when looking at the score. As mentioned, it is already difficult to notate every aspect of the sound and even in a more standard piece, using the violin in its standard modern constitution, a lot is left out from the score because of this difficulty. Once adding preparations or exploring the range of the instrument with alternative tunings come into play, it becomes more difficult to represent these characteristics on paper. The composers include references and explanation, but these timbral nuances are an abstraction of an already abstract expression of a sound concept. Even the most basic set of timbral characteristics that can be acquired by playing open strings, that violinist’s ear and inner ear expect, are

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<sup>182</sup> What I consider as alterations to the instrument is described in chapter 1.1.

put to challenge when there is substantial alteration to the tuning or any kind of added preparation.

In the two sections of this chapter, I demonstrate my trajectories and approach when examining and finding paths over these ruptures.

### **3.1 Finding a Sonic Identity for Clara Iannotta's *dead wasps in the jam-jar (i)***

In *dead wasps in the jam-jar (i)*, Clara Iannotta extends the violin with three preparations – metal paperclips, a metal mute, and a metal thimble – that transform and destabilise the usual relationship between finger, string, and sound. The piece is based on the ‘Courante’ and ‘Double’ from J.S. Bach’s Partita No. 1 in B minor. The piece is divided in two, and as Tim Rutherford-Johnson notes:

Each half begins and ends the same, with the two endings varied only in the type of sustained noise effect used: the first half ends with slow and heavy bow pressure, resulting in a broken, crackling sound; the second adds a series of tinkling, metallic scrunches produced by tapping a thimble on the strings.<sup>183</sup>

Iannotta found inspiration in Bach’s scalic runs, which here become glissandi and provide the piece’s driving energy. But the technique of the glissando turns from an action into an object, with fingertips and skin becoming a tactile eardrum for the performer, and, for me, somehow turns sound into touch. What seems like a glissando

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<sup>183</sup> Tim Rutherford-Johnson, *program notes: dead wasps in the jam-jar (i) (2014-2015)* (2018) <<http://claraianotta.com/works/solo-works/dead-wasps-in-the-jam-jar-i-2014-2015/>> [accessed 24 May 2023].

is instead an extremely fast succession of threaded nodes of the string “playing” the skin of my finger.

Looking at the score (figure 3.1.1), there is a clear starting and ending pitch connected with the line for glissando. Starting from the pitch for which the left hand has to be placed in a semi-position (located below the first position) and going to the highest possible pitch, this illustrates the longest distance of pitches on a string.<sup>184</sup> The harmonic pressure of the left-hand finger, *AST* mark for playing with the bow contact point on the far *sul tasto* side, and light bow pressure all evoke the potential of familiar sounding to come as a response to action. However, everything about this impression is a deception, as the instrument, altered with spiral metal paper clips preparation and use of the metal mute, gives a response nothing can quite prepare the ear for. Furthermore, Iannotta with the placement of the paperclips ‘reduce[s] the length of the strings substantially – from both sides’, drastically shortening the playing/sounding portion of the string and thus completely altering the range of the instrument.<sup>185</sup>

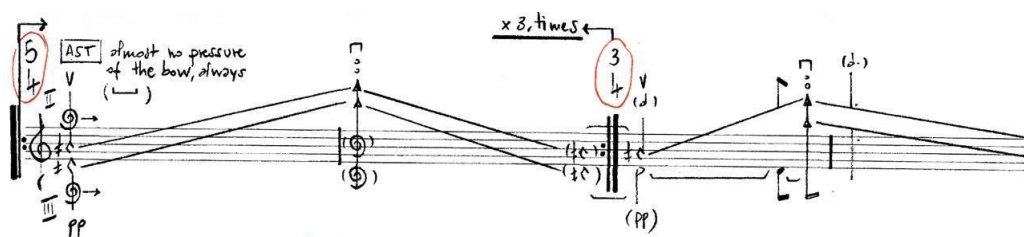


Figure 3.1.1: Clara Iannotta’s *dead wasps in the jam-jar (i)*, first four bars of the piece (Interpretations, with reference: AP1, AP2.2, and AP3, can be found at [https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html) )

I identified four main elements that contribute to the sound identity of *dead wasps in a jam-jar (I)*:

<sup>184</sup> Triangle noteheads of the note in the second bar of the figure 3.1.1 indicates the highest possible pitch on the violin.

<sup>185</sup> Clara Iannotta, *Composer Talk: Clara Iannotta* (online event organised at <https://www.lineuponlinepercussion.org/>, 25 September 2020).

- Metal: preparation of the strings with spiral, metal paper clips; the bridge is covered with a metal mute; the little finger of the left hand has a metal tumble
- Flesh: left hand in almost constant contact with the strings through continuous horizontal, glissando-like movement
- Wood: bowing of the sides of the body of the instrument
- Weight: different pressure of the bow, from very light to extremely heavy and change of pressure of the left-hand fingers.

The heavy metal mute is placed on the bridge before the beginning of the piece and is present throughout the piece.<sup>186</sup> Although the metal mute has a significant impact on the sound, it is the paper clips that are a crucial element of the piece, allowing Iannotta to construct a unique sonic identity that reflects and represents Iannotta's affinities for a very particular sound world and timbre.

The type of preparation used on the strings are small, spiral, metal paper clips. The performance notes include both a diagram and a picture of the violin (figure 3.1.2) with the preparation.<sup>187</sup> The instruction reads as follows: ‘Put on the strings II – III – IV a small, circular, metal paperclip (see the picture).’<sup>188</sup>

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<sup>186</sup> Heavy metal chrome-plated mute, also known as “hotel mute”, of kind such as offered in GEWA or TONEWOLF catalogues.

<sup>187</sup> Including an image, or multiple images, of preparation is not isolated to Iannotta’s practice. Robert Wannamaker includes as part of the score package images for each movement, as well as any in-movement possible crucial point. The inclusion of images can be seen not only as an aid to explaining the preparation of the instrument, the augmented technology of the instrument, but also a preparation for the imagining of the sound while looking at the score. John King, for his piece *Four Études for Prepared Violin* from 1982, does not provide a score. The piece consists of the photograph of an extensive preparation, accompanied with a recording of King playing a version of the piece. The performer is to decipher four areas which they themselves are then to explore and build into a performance length piece.

<sup>188</sup> Clara Iannotta, *dead wasps in the jam jar (i)*, for solo violin. Edition Peters. EP14268 (Berlin: Edition Peters, 2014-2015).

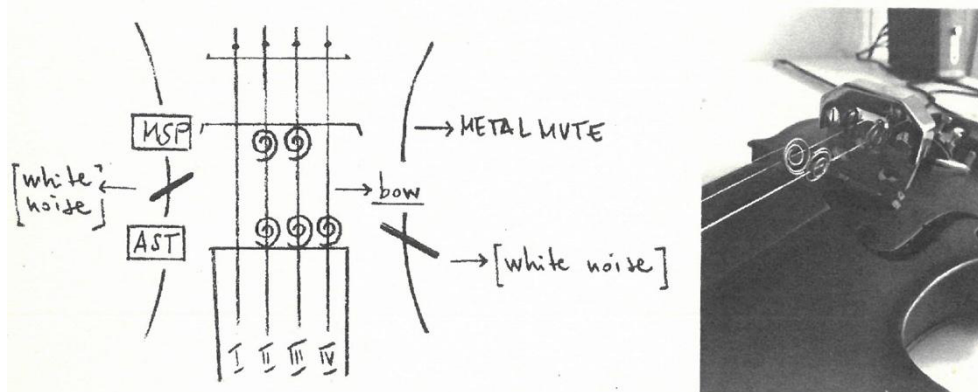


Figure 3.1.2: Preparation of the violin [The preparation setting can also be seen in the video at [https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html) , reference AP2.2]

However, there is no mention of the diameter or brand of the paperclip, which proved to be important information. When I first looked for circular paper clips, a variety of diameters and metal finishes became an option. My choice fell on a diameter that was as close an approximation to what a “small” paperclip should be, compared to the photograph in the score. Since the photograph is not in colour, it was further difficult to estimate whether these were golden-, silver-, copper-finish metal paper clips. The initial paperclips I acquired were of 11.8mm diameter, with a set of silver and gold ones. Upon the first work session with Iannotta, the first point we addressed was the sound, the sonic identity of the piece, and specifically everything related to the paperclips.<sup>189</sup> Upon playing the first time with the instrument prepared with self-acquired material, it became clear that this is not the goal sound, and we discovered just how delicate and fragile this sound is. Before changing the paperclips to the ones Iannotta brought with her, we first tried moving the ones already on the violin, to check whether the placement was the issue. This didn’t improve the result much, so we made the switch to the right set of paperclips. Although very subtle, in an already subtle sound, the difference was quite clear. These spiral paper clips were of 13mm

<sup>189</sup> The session took place on 6 December 2017 in Huddersfield

diameter and with copper finish<sup>190</sup>. This was not just a personal feeling of the sound, the difference was delicate, yet obvious and important. I took upon exploring the differences between the sets of paperclips. Besides the difference of the diameter and material, the weight of each of these groups of paperclips was different (figure 3.1.3).<sup>191</sup>



Figure 3.1.3: Process of measuring the paperclips on a digital scale

From my observations, these differences combined would pinch the string in a slightly different way, allowing for the vibration and the resulting harmonics to change (figure 3.1.4).

<sup>190</sup> The exact paper clips used are by Creative Impressions, they come in a packet of 25 paper clips, and the brand's reference is "Antique & Copper Mini Spiral Clips (25) ITEM 84999"

<sup>191</sup> The weight was measured using the digital type of scale.

Type/colour	Diameter	Width of wire	Material	samples used	Weight	Sound sample
Silver	11.8mm	0.8mm	metal	9	0.27-0.29g	Figure 3.1.5
Gold	12mm	0.7mm	metal	9	0.26g – 0.28g	Figure 3.1.6
Copper	13mm	0.8mm	metal	15	0.31g (2 weighing 0.30g)	Figure 3.1.7
Antique (gold)	13mm	0.7mm	metal	24	0.32 (3 weighing 0.33g)	Figure 3.1.8

Figure 3.1.4: Differences in measures between the paperclips (sound samples can be found in [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_3.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_3.html) )

As seen in the figure 3.1.2, three paperclips are to be placed just next to the edge of the fingerboard. Any object attached to the string (especially paperclips of any shapes/sizes), will, due to the vibration of the string, to some extent move on the string during playing. These specific spiral paper clips have proven through use to be less inclined to change place, and especially less likely to jump off the string, but they are not completely immune to it. The most vulnerable is the preparation of the IV string, which from experience, and experimenting, I found is best to place approximately 3,5mm further from the edge of the fingerboard.

The fact that this string and paperclip in particular are more sensitive is due not solely to the vibration of the string, but also to the combination of the left-hand finger pressure and right-hand bow pressure. From the total length of the piece, 100 bars, most of the piece is to be played by left hand touching the string as though playing natural harmonics. Bar 41 and the last 16 measures are to be played with dampened strings, which leaves only approximately 10 bars that ask for normal, full finger



pressure.<sup>192</sup> The first appearance of the full pressure of the left hand is in bar 11. Placing of the paperclip on the fourth (G) string 3.5mm further away from the edge of the fingerboard becomes increasingly important with the fact of this finger pressure so early in the piece. The bar is also the first bar where the bow pressure will change from light, almost no pressure, to normal pressure. As the left-hand finger presses the string to completely block it against the fingerboard and the bow is from the other side also pushing the string in the downward direction, the string comes close to the fingerboard in the area where the paperclip is. If the paperclip is placed too close to the edge of the fingerboard, this proximity to the fingerboard will push it off the string. Two other practical aspects to take care of for more secure setting are that the paper clips close to the bridge should not touch the metal mute and the outer open ends of the paper clip should face away from the bowing area. The first aspect allows the paper clips more freedom in vibrating, the latter is to diminish accidental tearing or entangling of the hair of the bow within the spiral (figure 3.1.9).



Figure 3.1.9: Practicalities for setting up the preparation in Clara Iannotta's *dead wasps in the jam-jar(i)* [video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_3\\_fig\\_3\\_1\\_9.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_3_fig_3_1_9.html)]

<sup>192</sup> The finger pressure is indicated with an empty diamond symbol for harmonic pressure and a completely colored small circle, a bullet dot, for use of full pressure.

Even in the event that this moment in the piece does not push the preparation completely off the string, any amount of moving it up also can destabilise the balance. There are two aspects where balance must be carefully considered here. One is linked to the placement of the paperclips for achieving a specific delicate sound and the other is the balance of physical interaction between the string and the paperclip. Displacement of the paperclip will make for more likely further twisting and eventually falling off of the paperclip from the string. With this event being so early in the piece, this can have undesirable consequences for contrasts that are to come. Most notable is the fifth appearance of this motive in bar 37. This moment comes little over a third into the piece, after overall *pp* and *p* dynamics, with only short instances of more than normal pressure (but still in *p* dynamic) to *mp* dynamic. With full left-hand finger pressure, greater than normal bow pressure and a crescendo at the end of bar 40 leading to *f*, this is not just a musically turbulent moment, but can also be a minor physical shock for the altered instrument, and its delicate preparation. The next bar, bar 41 (figure 3.1.10), brings the most severe overpressure, with a very granular texture. This effect is achieved with “plucking” of the string with the bow, with extreme vertical pressure controlled by the index finger, while continuing the horizontal movement (figure 3.1.10). Each grain of noise in this moment is a kind of shock to the paperclip, and it is very likely it will move more drastically. In addition to precaution with placement in relation to the fingerboard, here the left hand can be of help: while keeping the string muted, the finger should “push” the string to counter the pulling force of the bowing, thus neutralising to some extent the shock, and making the paperclip more likely to stay in place (figure 3.1.10). On the practical side, it is also important to keep in mind that paperclips lose their strength and grip, and should be regularly replaced with new ones.

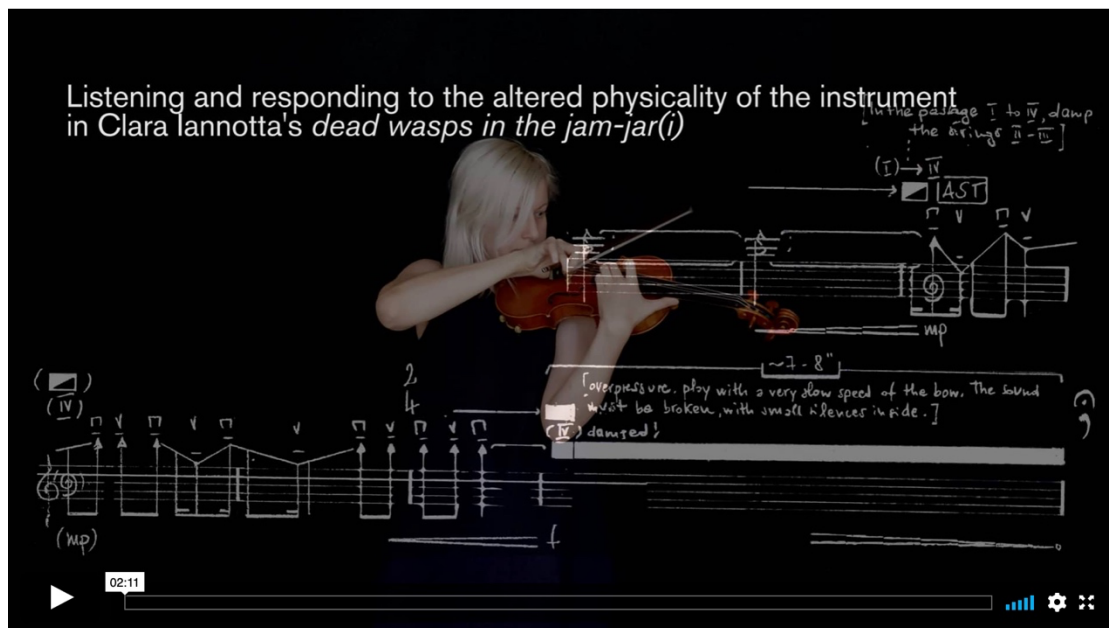


Figure 3.1.10: Listening and responding to the altered physicality of the instrument in Clara Iannotta's *dead wasps in the jam-jar(i)*, excerpt: bars 35 to 41; video also available at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_3\\_fig\\_3\\_1\\_10.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_3_fig_3_1_10.html)

The final element of preparation used in this piece is a metal thimble, which is to be placed on the little finger of the left hand (figure 3.1.12 and 3.1.13). The performance notes indicate the thimble to be placed on the fifth finger. Although technically correct as the thimble is to be placed on the little finger, in violin markings this finger is usually referred to as the fourth finger.<sup>193</sup> Since the piece has no pause, the thimble is to be on the finger throughout the piece, making this finger exclusively usable only for the actions requiring the thimble: bars 58 to 62 in combination with white noise produced with bowing on the wood body of the instrument, and 85 to 100 in combination with the overpressure motive (figure 3.1.11).

<sup>193</sup> Thumb is rarely counted as a “playing” finger, thus the counting starts from the index finger. If thumb is to be employed, it is mostly found in notation with reference to ‘thumb’. Or as in the case of Buccino, with a specifically assigned symbol.

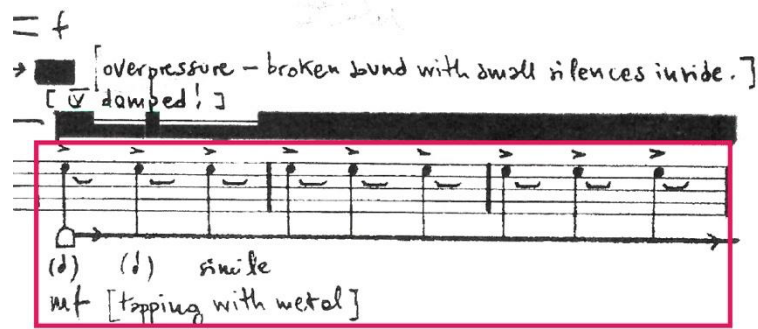


Figure 3.1.11: Bars 85 to 87; thimble and overpressure

Having the thimble on the finger throughout does not create any particular inconvenience, as the first, second, and third finger are sufficient for playing everything else in the score. With small adjustment to fingering of the artificial harmonic, first appearing in bar 34, pressed first finger should be combined with the third finger with harmonic pressure, instead of a more common fourth finger. Slight extension of the finger, thus providing more flesh, further aids the desired ‘very bright’ colour.



Figure 3.1.12: Close-up of the metal thimble on the finger holding the instrument prior playing; still from video available in [https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html) , reference AP2.2



Figure 3.1.13: Finger with the metal thimble in action (bar 58 to 62); still from video available in [https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html) , reference AP2.2

When speaking about the inspiration for the piece during our working session, Iannotta explained that, once she started thinking about the ‘Courante’ and ‘Double’ from Bach’s Partita No.1 in B minor, she started imagining what would happen if these scalar passages (figure 3.1.14) going up and down would be played at first normally and then faster, and faster, and faster. And thus, the left-hand material arose from the speed of moving up and down, represented as glissandos in Iannotta’s notation.



Figure 3.1.14: excerpt from J.S. Bach’s *Double* from *Partita no.1 in B minor*<sup>194</sup>

<sup>194</sup> Bach, Johann Sebastian, *Partita no.1 in B minor* (‘Courante’ and ‘Double’), in *Six Violin Sonatas and Partitas*, BWV 1001-1006. Manuscript, n.d. Copyist: Anna Magdalena Bach, Staatsbibliothek zu Berlin (D-B): Mus.ms. Bach P 268 (ca.1725-34)

Thinking and trying out Bach's 'Double' (BWV 1002) – going from normal, then fast, then faster, then even faster ... playing as fast as possible ... playing so fast that it must become legato ... then even faster – I arrived at Iannotta: a glissando which is not a glissando but a condensed time-space, a continuous line composed of thousands of “grain-notes”, that the mechanism of human fingers cannot quite achieve yet they exist. Iannotta confirms the validity of this approach, stressing on multiple occasions that this movement ‘is not a glissando’.<sup>195</sup>



Figure 3.1.15: Close-up of a violin string

I conceived the idea of inverting the roles of string and finger. Violin strings have a final coating as a thin winded layer, where each of the connections in the winding process becomes like a little node point (figure 3.1.15). If the fingers cannot play that many notes in that fast speed, and the hand must move in a gliding way up and down manner, this movement of the hand touching the string along the way becomes the

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<sup>195</sup> This was shared by Iannotta in our first work session on 6 December 2017, but also on three later occasions, one of which was on 25 November 2018 in Huddersfield.

“string” and each of these node points on the string is a fingered note playing the path of the finger. This approach, for me, unequivocally influences the affection with which finger touches the string as well as the movement as a whole. Once my mindset was placed in this state, it was easier to really start working on the piece, explore the potentials and aim for this timbre of flickering texture that is simultaneously a continuous sound.

Finally, characteristics of the metallic, trembling sparkling continuous sound and the heavy pressure grains are complemented with wind, breath-like vacuum, a white noise sound that is achieved by bowing on the wood of the body of the instrument (figure 3.1.16).

The image shows a handwritten musical score for violin, consisting of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The tempo is marked as quarter note = 96. The score includes various annotations and performance instructions:

- Staff 1 (Treble Clef):**
  - Bar 23: Starts with a note marked *pp* and a box containing *(d.)*. Above it, a note is marked *I*.
  - Bar 24: A note marked *mp* with a box containing *(d.)*. Above it, a note is marked *I*.
  - Bar 25: A note marked *pp* with a box containing *(d.)*. Above it, a note is marked *I*.
  - Bar 26: A note marked *pp* with a box containing *(d.)*. Above it, a note is marked *I*.
  - Bar 27: A note marked *pp* with a box containing *(d.)*. Above it, a note is marked *I*.
  - Bar 28: A note marked *pp* with a box containing *(d.)*. Above it, a note is marked *I*.
- Staff 2 (Bass Clef):**
  - Bar 23: Starts with a note marked *pp* and a box containing *(d.)*. Below it, a note is marked *I*.
  - Bar 24: A note marked *pp* with a box containing *(d.)*. Below it, a note is marked *I*.
  - Bar 25: A note marked *pp* with a box containing *(d.)*. Below it, a note is marked *I*.
  - Bar 26: A note marked *pp* with a box containing *(d.)*. Below it, a note is marked *I*.
  - Bar 27: A note marked *pp* with a box containing *(d.)*. Below it, a note is marked *I*.
  - Bar 28: A note marked *pp* with a box containing *(d.)*. Below it, a note is marked *I*.

Handwritten annotations and performance instructions include:

- “legotiskimo the passage between the overpressure and the white noise” (with a box around it)
- “white noise” (written twice)
- “bowing on the wood, the body of the instrument” (with a box around it)
- “~ 10''” (with a box around it)
- “Do not change the bow and legotiskimo the passage from II-III to I!”
- “legotiskimo all the passages: I - white noise,”
- “Stop white noise!”
- “[large vibrato]” (with a box around it)
- “[white noise]” (written twice)
- “pp” (pianissimo) and “mp” (mezzo-piano) markings.
- “I”, “II”, “III”, “I’” fingering indications.
- “(d.)” markings in boxes.

Figure 3.1.16: Bars 23-28, first appearance of bowing on the body of the instrument

## 3.2 Establishing Potentials of Sonic Identity in Pieces with Alternative Tunings

Finding a sonic identity in case of alternative tuning is a specific task for each scordatura and piece. Each alteration of the tuning, in combination with all the other musical materials in the piece and their interactions, influences the sonic outcome. Before embarking on tackling the details from the piece and creating an interpretation, I found that it is important to discover and create an initial feeling of the timbral world a specific scordatura opens up and of the potentials of this sonic environment (figure 3.2.1). The process is based on careful listening through the *heard* (listening with the ears) and the *felt* (listening with the body).

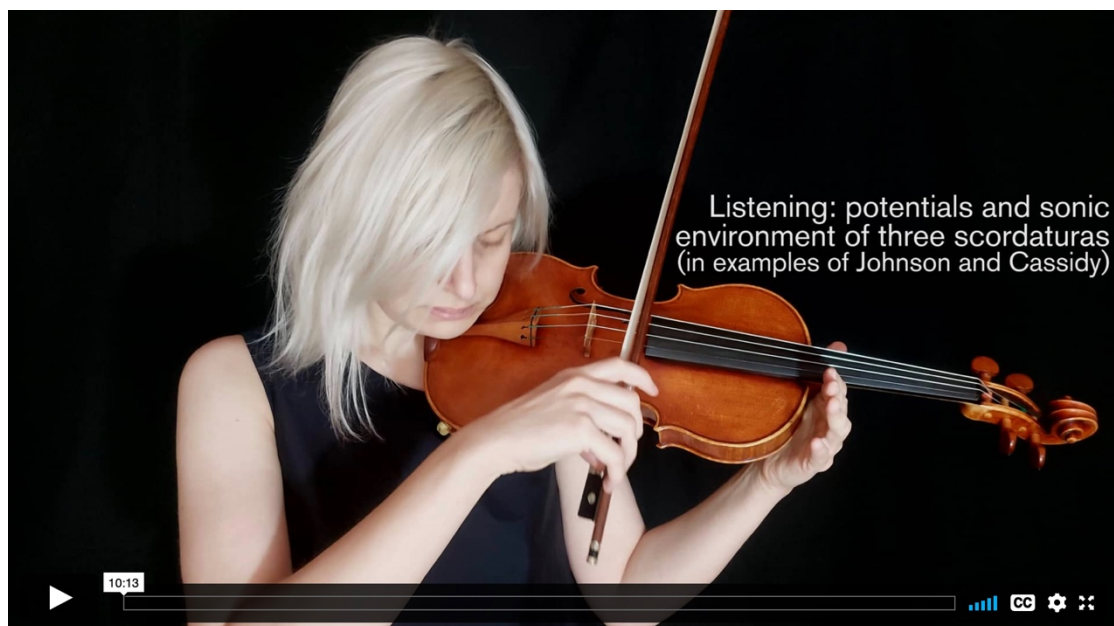


Figure 3.2.1: Listening: potentials and sonic environment of three scordaturas (in examples of Johnson and Cassidy) [video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_3\\_fig\\_3\\_2\\_1.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_3_fig_3_2_1.html)]

In my practice, this is a two-stage process. In the first stage, exercises are done working only with open strings, followed by the second stage in which different levels of left-hand finger pressure are tested. Knowledge about the potentials of the



sound, its production and its sound, to great extent, comes from the sensitivity and sensibility of the left hand, and of the fingers of the left hand in particular. I have named this the *vertical gesture*. Focusing on this relationship between the finger and the string allows for another type of location to emerge.<sup>196</sup> The changeable depth of space that exists between the finger and the string reveals much about the potentials of the sonic identity from the outset; in Einarsson's words, a 'point opens up, receives degrees, becomes bi-directional, and becomes equally important as the fingerboard space'.<sup>197</sup>

The two-stage work process is as follows:

- Listening to bowed open strings
  - Playing one string at a time
  - Playing two strings: IV+III, III+II, II+I
  - Considering that all the pieces from my focus repertoire make use of both *sul tasto* and *sul ponticello* contact points, the open string process of playing individual strings and then two strings simultaneously should be repeated playing: *sul ponticello*, *molto sul ponticello*, *sul tasto*, and *molto sul tasto*.
  - It is useful, for each of the steps, to go through a range of dynamics from *pp* to *ff*. More specific explorations of both extremely soft and extremely loud in combination with bow pressures are part of working with the exact material from the piece, but if time allows it is also advisable to explore different effects of different bow pressures.

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<sup>196</sup> This is further elaborated in chapter 4.2

<sup>197</sup> Einar Torfi Einarsson, *Negative Dynamics I(a/b): Exegesis* (2011) <<http://einartorfiainarsson.com/text2.html>> [accessed 24 May 2023].

- Exploring potential effects in combination with different left-hand finger pressure<sup>198</sup>
  - Exercise 1: Playing long bowed notes, alternating between open string and natural harmonic. Exercise is repeated with only one harmonic at a time. Lifting of the finger to the open string should be done very slowly, so that the point of release of the string can be felt in the finger. Choice of finger is free, and it is desired to be alternated, so that each finger participates in the sensory exploration (figure 3.2.2)

\*Notated at fingered pitch in standard tuning of the IV string.

\*When doing the exercise with alternative tuning, the sounding harmonics will be those corresponding to the tuning of the open string.

\*To be practiced on all four strings.

\*Variations:

a) single note per bow; slow

b) two notes per bow; slow



Figure 3.2.2: Exercise 1

- Exercise 2: Playing a long bowed note, fingered on:
  - Exercise 2A: the interval of an octave, starting with fully depressed finger, and then altering the finger pressure during the playing all the way to minimal lifting off the string (with briefest sounding of the open string), and going back. Choice of finger is free, and it is desired to be alternated, so that each finger participates in the sensory exploration (figure 3.2.3)

<sup>198</sup> It is important to note that individual violins, types of strings, string tensions, bridge heights all play a role in issues addressing vertical distance, and all these parameters must be taken in consideration accordingly when working on a specific instrument.

\*Notated at fingered pitch in standard tuning.

\*When doing the exercise with alternative tuning, the starting pitch and the sounding harmonic will be that corresponding to the specific tuning.

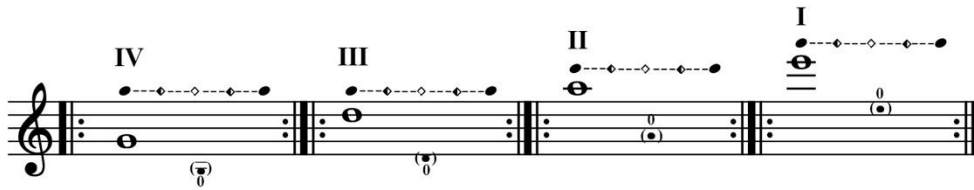


Figure 3.2.3: Exercise 2A

- Exercise 2B: the interval of a fifth, starting with a fully depressed finger, and then altering the finger pressure during the playing. Choice of finger is free, and it is desired to be alternated, so that each finger participates in the sensory exploration (figure 3.2.4)

\*Notated at fingered pitch in standard tuning.

\*When doing the exercise with alternative tuning, the starting pitch and the sounding harmonic will be that corresponding to the specific tuning.

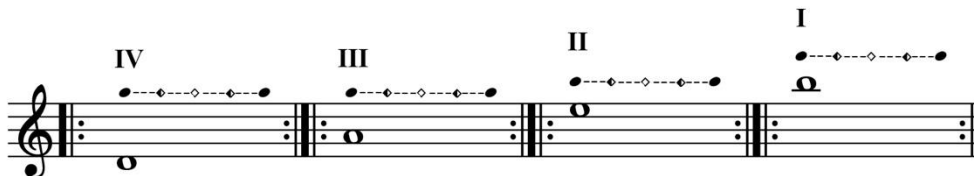


Figure 3.2.4: Exercise 2B

In later phases on working on the piece, depending on the demands and necessities of the piece, these exercises can be applied to explore any finger-stopping-location on the fingerboard

- Playing a long-bowed unison double stop between: IV+III, III+II, and II+I string, where:

- The lower string has a fully depressed finger, fingered on the pitch of the higher open string
- The lower string is played as open string and the stopped finger is fingering an octave, or multiple octave-distance, on the higher string

During the exercise, there should be attention to sympathetic resonance and vibration of the open string. The exercises also have a practical benefit in getting a better grasp of possibly altered relationship of levels and tensions of the strings, and possible alterations to angles the bow will have to account for when playing.

- When possible, working with a selected motive or sets of motives from the piece (figure 3.2.5, 3.2.6, and 3.2.7)

Three motives extracted from Liza Lim's *The Su Song Star Map*, from page 8, for expanding the understanding of the sonic identity. To be used as for exercises. Each group is a separate exercise, starting with playing each double stop from the group a long, held, note. Starting with one note per bow, and slowly adding speed and working towards fast, legato, playing.

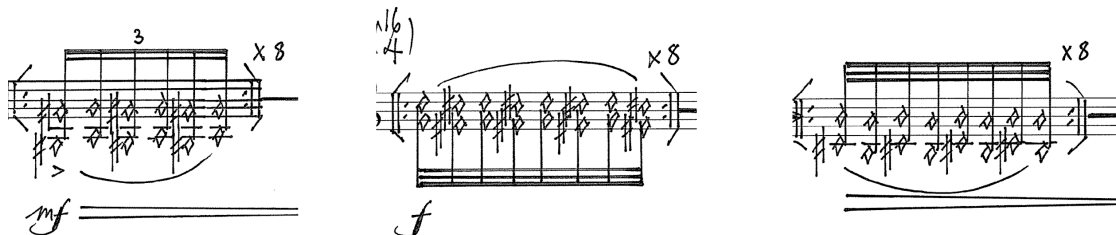


Figure 3.2.5: Motives from page 8 of *The Su Song Star Map* to be used as exercise

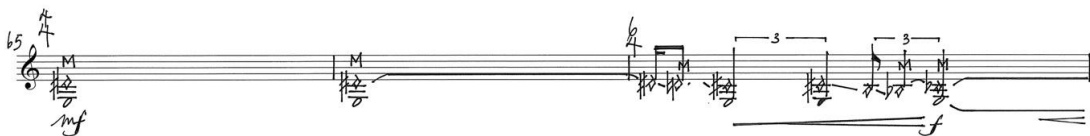


Figure 3.2.6: Motive from page 11 of *The Su Song Star Map* to be used as exercise

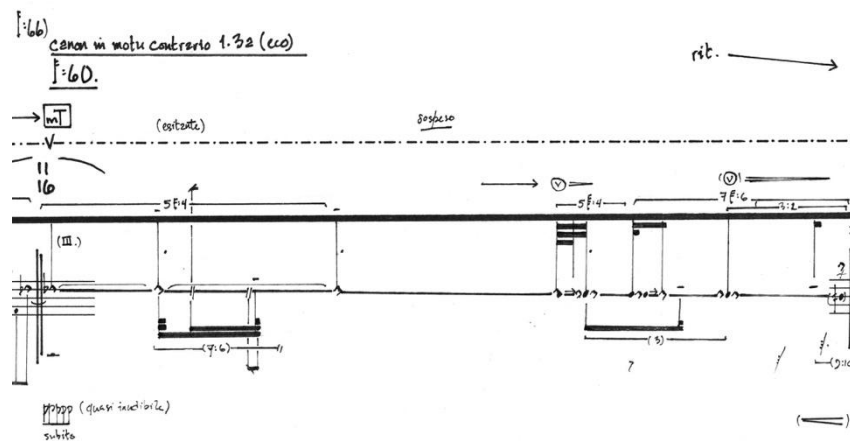


Figure 3.2.7: Motive from page 3 of *Wolke über Bäumen* to be used as exercise

There are four important points that must be kept in mind throughout all exercises of both stages of work. They are as follows:

- Take time. In more drastic alterations of tuning, take even more time for both single string and double stops, and even more for testing finger pressures. Do not rush the process.
- Maintain attentive and careful listening with the ears.
- Maintain attentive and careful listening with own body:
  - Listen through the left hand's fingertips. Let the sound vibration enter the body, and mind, through the skin of the fingertips
  - Listen through the tips of the right-hand thumb and little finger, and the distal and intermediate phalange areas of the index, middle, and ring fingers (figure 3.2.8)
  - Listen with the neck: through the point where the body of the instrument is in contact with one's own body

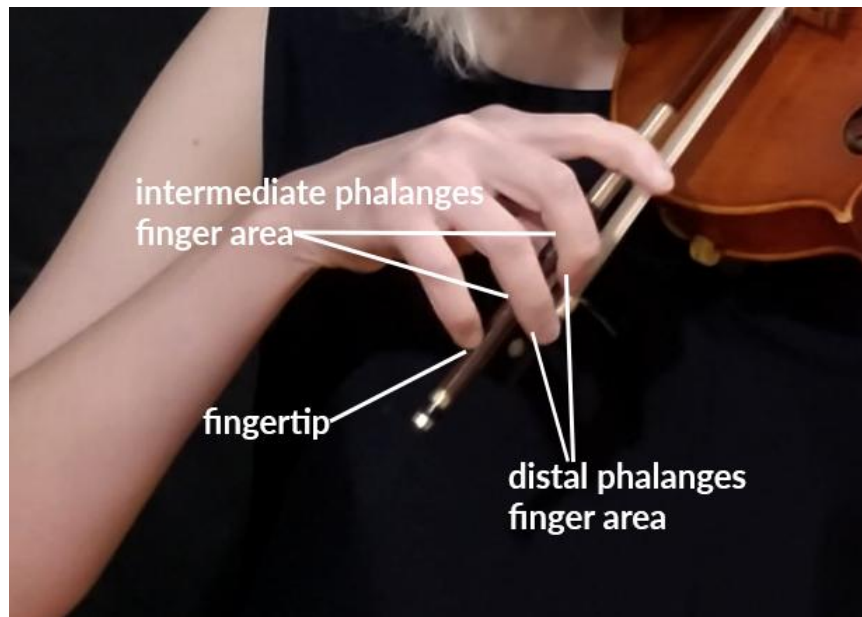


Figure 3.2.8: Areas of finger's contact points with the bow, in the bow-hold adjusted for playing on the tailpiece.<sup>199</sup>

- Listening to the physical responses of the *instrument's body*
  - Scordatura changes the tension of the string and the balance of tensions between the strings. For this reason, there is a higher probability of changed reaction and responsivity of setting the string in motion. Time should be spent listening and assessing the strings response and responses between the strings with both bowing and pizzicato interaction.

### 3.3 Conclusions as New Openings

Alterations to the instrument, whether involving alternative tuning or some type of preparation, cause great disruption to any potential anticipation of the sound, as well

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<sup>199</sup> Points of contact can vary depending of individual ways of holding the bow (whether adjusted for specific techniques needed in a piece, but also in a wider context depending on the training of the player.

as increasing the physical and technical challenges in interactions with the instrument. There is an added layer of anxiousness for the performer in that unpredictability of the paperclip detaching, or more precisely jumping off the string in the middle of the playing because of the vibration of the string or unplanned both non-moving, as in Iannotta, or complete unwinding of the peg, as in Johnson. Furthermore, the notation is often of very little help in this respect. With *dead wasps in the jam-jar(i)*, there is a very delicate and rich property of sound, filled with a kind of metallic dust element and with the extreme tactile aspect of the timbre, all of which cannot be easily conveyed in the notation. If time is not dedicated to overcoming the first visual impression, the possibility of achieving the profound and deep yet extremely fragile and delicate materiality of this sound can be foreclosed even before attempted. In *Wolke über Bäumen*, extracting an element in the process of developing awareness of the sonic field, a motive from the piece was especially useful since Johnson asks for the modern violin to be strung with gut strings. Besides very delicate timbral nuances, attentive listening through these exercises allows for developing better tactile sensibility and listening through the fingertips, as gut strings have different texture to modern strings, and their interaction with the fingers and skin is less smooth, thus every gesture of the finger develops a very delicate audible sound. In addition, gut strings come in variety of types, made from different animal guts, and thicknesses. These parameters, in combination with each individual instrument, influence both the tactile sensation and the timbre. Before settling with plain ox gut strings — gauges E=0,60mm, A=0,74mm, D=1,06mm, and G=1,60mm — which in combination with the instrument I used gave sound I found fitting the outcome I was aiming for with my interpretation, I also explored different gauges of ox gut strings as well as ram gut

strings.<sup>200</sup> The example in figure 3.2.7 was particularly important because the finger is not only working with the vertical gesture, the pressure change, but also the horizontal gesture because the motive is a glissando.

Getting to know the instrument's own reactions in this altered state as well as to identify and establish a starting point of timbral and sonic field within and upon which the interpretation of the piece is then developed is an essential part to help reduce, or even after some time, erase the challenges and disorientation created by limits the music notation has.

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<sup>200</sup> The other gauges of ox gut strings included E=0,56mm, E=0,60, A=0,80mm, D=1,12mm; I used ram gut strings with gauges: E=0,60mm, E=0,64, A=0,74mm, D=1,04mm, D=1,12mm, and G=1,60mm.



## CHAPTER 4    Physicality as Material

*'For any external observer, man is a complexus of gestures. We call gestures all the movements which are performed within the human compound. Visible or invisible, macroscopic or microscopic, highly developed or roughly outlined, conscious or subconscious, voluntary or involuntary, these gestures nonetheless show the same essentially motor nature.'* – Marcel Jousse<sup>201</sup>

Three pieces from my research repertoire, *Finalmente il tempo è intero n° 16*, *The Crutch of Memory*, and *prePositions*, brought openings for thinking about the physicality of a violinist's actions being the musical material of the piece.<sup>202</sup> Each of these pieces challenges the habitual relationship and expectations of use and the results of gesture and movement in the relationship between the body of the performer, the instrument, and the music. Examining the meaning gesture and movement can have when learning the piece allowed me to better understand their gestural virtuosity and find more holistic interpretations of this specific repertoire. My particular focus of interest became to clarify for myself the distinction from actions as “just” technique for achieving imagined sound and articulate actions as *sound-directed movements where gesture is the musical material*.<sup>203</sup> To think of a gesture as the musical material is to think of an action that is linked to playing violin and which might eventually result in sound, but that exists without being conceived through what

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<sup>201</sup> Marcel Jousse, *L'anthropologie du geste* (Paris: Gallimard, 1974), p.687; my translation.

<sup>202</sup> Two main pieces in focus are from the focus repertoire list: *Finalmente il tempo è intero n° 16* by Dario Buccino and *The Crutch of Memory* by Aaron Cassidy, and Dmitri Kourliandski's *prePositions* is part of my extended reference repertoire list. For the complete extended repertoire list, see Appendix B

<sup>203</sup> I formulated the phrase sound-directed movement drawing from object-directed movement, as defined by Novack, Wakefield, and Goldin-Meadow which for them has a goal 'to achieve some change in the world' (Miriam A. Novack, Elizabeth M. Wakefield, and Susan Goldin-Meadow, 'What makes a movement a gesture?', *Cognition*, 146 (2016), p.340).

sound it must produce but can draw from the physical embodiment of the gesture itself.

Gesture and movement have very intricately interlaced meanings. The inquiries into human gesture, as Christine Roquet notes, are often found in studies of how ‘gesture is represented (in paintings, engravings, bas-relief, photographs)’.<sup>204</sup> However, as Roquet continues, although ‘common wisdom traditionally allows for a distinction: movement is global – a movement of the whole body – while gesture is segmental – the gesture of the hand to say goodbye’, there is an increasing necessity to better understand the intricate relation between gesture and movement that exists in performing arts.<sup>205</sup> Miriam A. Novack et al also argue for distinction between gesture and movement, for expanding the discussion beyond gesture as part of ‘actions used to manipulate objects’ whose ‘features of movement [...] make it likely to be interpreted as a representation’ and to examine gesture through ‘a more cohesive understanding of action-interpretations’.<sup>206</sup>

To describe their definition of musical gesture Elaine King and Anthony Gritten depart from the understanding that ‘any energetic shaping through time may be interpreted as significant’,<sup>207</sup> and acknowledge the variety of meanings gesture can take and represent in music performance, saying that,

it is the site and vehicle for the crucial flow of energy between domains, and, as such, is the entropic loophole of music-making – that event through which, at which point, and by means of which music happens, and in consequence of

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<sup>204</sup> Christine Roquet, *From Movement to Gesture: Thinking Between Music and Dance*, trans. by Helen Boulac (Paris: Paris 8 Danse, 2019), p.1.

<sup>205</sup> Christine Roquet, *From Movement to Gesture*, p.1.

<sup>206</sup> Miriam A. Novack et al., ‘What makes a movement a gesture?’, p.354

<sup>207</sup> Robert Hatten, ‘A Theory of Musical Gesture and Its Application to Beethoven and Schubert’, in *Music and Gesture*, ed. by Anthony Gritten and Elaine King (Aldershot: Ashgate, 2006), p. 1.

which we are afforded and enjoy all those luxurious and multifarious activities that we describe as ‘musical’, whether compositional, performative, perceptual, critical, or all of the above.<sup>208</sup>

In discourse about gesture and instrumental music performance, two aspects of gesture are articulated: on the one hand, the actions of sound-production and other is the aural and visual perception of the performance.<sup>209</sup> Luke Windsor writes about categories of actions with their relative importance to sound-production, among which he mentions are those that directly make the sound – gestures ‘that have a physical mapping from action to acoustic consequence’ – and those that supplement the making of sound – gestures as closing of the eyes in delicate passages or facial expressions that ‘appear to have no causal relationship with the sound but certainly seem to play a huge role in the performance’.<sup>210</sup>

In more conventionally written violin pieces gestures and movements are elements of technique of playing where the idea of desired sound, a compound of pitch, timbre, volume, and articulation, is followed by the coarticulated gestures of the left and the right hand that become the movement which results in producing that imagined sound. Depending on context, a goal sound can have several different approaches– movements– that can produce the same result. This can be illustrated by a simple example: the almost same tone quality can be achieved by either down- or up-bow stroke (figure 4.1). Although these two movements of the right hand are opposites,

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<sup>208</sup> Gritten, Anthony and Elaine King, ‘Introduction’, in *New Perspectives on Music and Gesture*, ed. by Elaine King, and Anthony Gritten (New York: Routledge, 2011), p.2.

<sup>209</sup> For more on music and gesture see Davidson 1993, 1994, 1995, 2001, 2002, Fatone et al. 2011, Jerde et al. 2006 Godøy 2003, 2006, 2011, Godøy et al. 2006, Gritten and King 2011, Lewis and Pestova 2012, Vines et al. 2006; Windsor 1996, 2000, 2004, 2008, Windsor et al. 1997, 2006

<sup>210</sup> W. Luke Windsor, ‘Gestures in Music-making: Action, Information and Perception’, in *New Perspectives on Music and Gesture*, ed. by Anthony Gritten and Elaine King (New York: Routledge, 2011), pp.46-47.

their goal is the production of a sound that is as similar as possible, and the movement is guided by that sound.<sup>211</sup> Besides both of the movements being able to achieve the imagined sounding outcome, through practice they become embodied gestures that assure the possibility to repeat and achieve the same sounding outcome in any repeated performance. This is the difference I found with the repertoire in my research where the sounding outcome cannot be guaranteed, and where actions of the left and the right hand are not always coarticulated, nor easy to map on to precise ‘acoustic consequences’.<sup>212</sup>

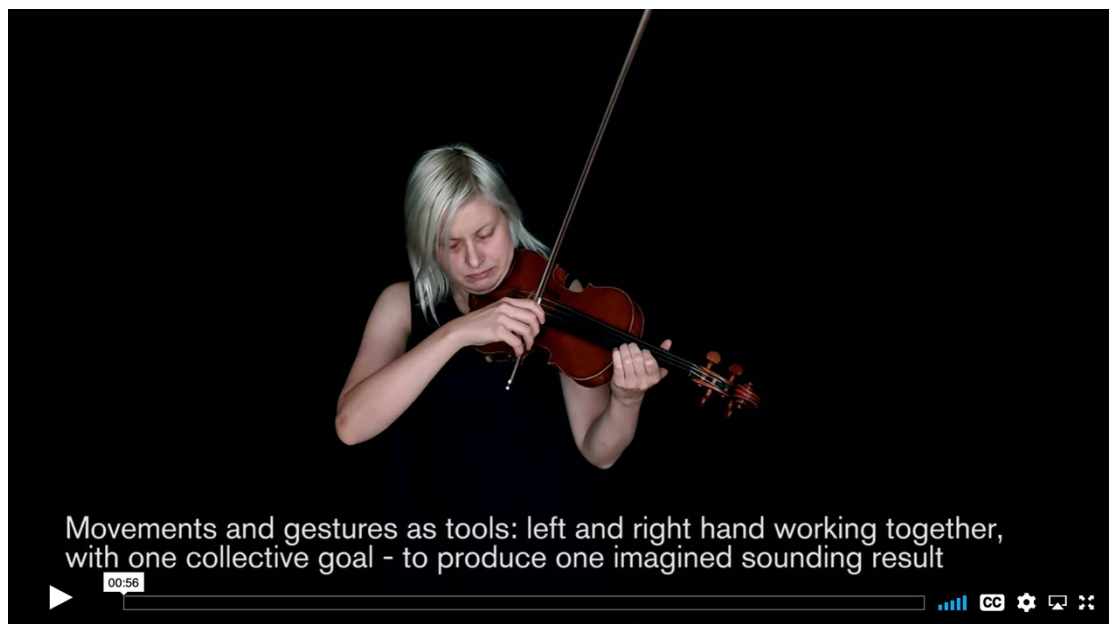


Figure 4.1: Movement and gesture as tools (video also at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_4\\_fig\\_4\\_1.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_4_fig_4_1.html) )

‘Supplementary’ movements in violin playing are common occurrences.<sup>213</sup> These can be various movements such as dramatic bow flourishes of phrases or of the entire

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<sup>211</sup> Throughout formative and more advanced studies developing tools for equal control and application of movement on different bow strokes is part of the habitual training and goal. In addition to simpler actions and bow control, this is the desired direction for many more advanced and more difficult bow strokes, an example to be mentioned here can be upbow and downbow staccato, the common bow stroke regarded as advanced virtuoso achievement.

<sup>212</sup> W. Luke Windsor, ‘Gestures in Music-making’, p.47.

<sup>213</sup> W. Luke Windsor, p.46.

piece, emphasising with the body or the head the melodic phrasing, facial expressions, sway, and emotion the performer wants to convey. While in playing chamber music they are sometimes used as cues to communicate between the musicians, in solo performance these exaggerated gestures are communication with the audience and *for* the audience, and belong to the theatrical aspect of performance as a whole. These types of movements, although to some extent they can come out naturally as a by-product of emotional investment and the desire to convey more persuasively the interpretation, are not necessary for the sound production and for interpreting the music.<sup>214</sup> Physicality is present in the work of Buccino, Cassidy, and Kourliandski not through extra-musical and theatrical gestures, but resides in a kind of gestural virtuosity that comes out from the physicality that is relatively consistent in its gestural outcome and with this consistency it directly interprets music regardless of potentially different and unexpected acoustic outcomes.

In these three pieces my starting thought to interpreting the music was often in *the imagining of gesture independent of its final sounding result*. This brought to my attention how this differs from a more common approach with other pieces where gesture and movements of the left- and right-hand act as coarticulated actions that together constitute technique of playing in pursuit to achieve *the imagined sonic result*. From this realisation a need to conceptualise sound-directed movement where units of gesture are musical material rather than solely tools to achieving sound was born. My initial inspiration to interpret gesture as musical material comes from pieces

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<sup>214</sup> During my studies at Brussels Conservatory, one of my teachers, Igor Oistrakh, would for example advise against any excessive additional gesticulation and movements which, although visually they can amplify the audiences' impression of a virtuosic and passionate interpretation, can draw energy away from the actual production of the sound.

that use decoupling – ‘a separation of the various activities of sound production’<sup>215</sup> for achieving ‘polyphonic texture’<sup>216</sup> in string instruments – in their writing, as is the case in Buccino and Kourliandski, but also in Cassidy’s earlier work “*the green is where*”. However, as I was developing my practising methods applying the concept of thinking of the gesture itself as the starting point and the goal in facilitating the interpretation of a violin piece, I found that this approach can become a useful tool also in pieces that do not employ decoupling in the composition process, but which are complexly written and have unstable sounding results that require the performer to ensure inner separation of the actions from expectations of one fixed acoustic outcome.

In my experience with the repertoire, I found that it is not possible in fact to make an absolute distinction between traditional and decoupled treatment of hands. In example of Dario Buccino’s *Finalmente il tempo è intero n° 16* who uses extreme decoupling in the compositional process, which in turn reflects with equal presence of separation of hands in interpretation, the nature of the piece still allows for moments where traditional coarticulated linked movements can arise. In another example, although decoupling is not a direct approach of Cassidy’s compositional process,<sup>217</sup> considering gesture as material and applying decoupling as the process in practising allowed me to arrive at my interpretation and performance of the piece. Drawing from these

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<sup>215</sup> Aaron Cassidy, ‘The String Quartet as Laboratory and Playground for Experimentation and Tradition (or, Opening Out/Closing In)’, *Contemporary Music Review*, 32.4 (2013), p.308.

<sup>216</sup> Hübler, Klaus K., ‘Expanding the String Technique’, *Interface*, 13 (1984), 187-198.

<sup>217</sup> In one of the working sessions that happened in the period between years 2018 and 2022, Cassidy shared that, while left and right hand have each their own assignments, the starting point and the goal of his compositional process is not to create a piece based in decoupling of the hands and actions, but that they still work towards a collective outcome.

experiences, I found that conscious awareness of different approaches to treating hands individually enabled me as a performer to have flexibility that allowed for finding more coherent interpretation of a piece with complex demands.

Furthermore, for understanding *Finalmente il tempo è intero n° 16* it was essential for me to also understand the layers a unit of gesture on its own can have. Andrew Lewis and Xenia Pestova offer a definition of sounding gesture that goes beyond physical actions which excites a sounding body to include the ‘latent sounding gestures’ that do not in themselves create sound and ‘negative sounding gestures’, audible only through their absence.<sup>218</sup> In this process of thinking of a violinist's gesture as an action that stems from the idea of gesture itself, the unit of gesture becomes what Godøy refers to as the ‘atom event’ extracted from the greater ‘coarticulation and contextual smearing’ that can develop its own ecosystem.<sup>219</sup> Building on Godøy, in this ecosystem I identified three layers of materiality a unit of gesture can possess: atomic, sub-atomic, and meta-atomic. Through the prism of *Finalmente il tempo è intero n° 16*, in chapter 4.3 I expand on this concept in which each unit of gesture is considered as an ecosystem, where every detail of Buccino’s writing can be enacted.

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<sup>218</sup> Lewis and Pestova, p.2.

<sup>219</sup> Godøy, ‘Coarticulated Gestural-Sonic Objects in Music’, pp.71-73.

## 4.1 Physicality Interpreted as Material in Dmitri Kourliandski's

### *prePositions*

In program note for *prePositions*, Kourliandski writes that:

The piece represents an extremely complex, saturated texture. It is impossible to achieve the exact interpretation of the musical text – it turns to be an ideal object which an interpreter has to follow but can never reach... The distance between the musical text and the performer, between the text and its actual interpretation, is the main material of the composition.<sup>220</sup>

The piece is notated in a seven-staff system. The fourth system is dedicated to the left hand, and the upper three and lower three systems to the actions of the right hand with each line being mapped to the portion of the instrument (figure 4.1.1). With the exception of 12 bars on page five and page seven each, and a section of 32 bars on page six where left- and right-hand actions come together in a more traditional way of writing (annotated as 'normal playing, *legatissimo*' as can be seen in bar six in figure 4.1.2), the remaining 108 bars of the piece maintain independent and separate treatment of actions for the left and the right hand.<sup>221</sup> Kourliandski writes in the performance notes that the 'performer has to achieve the maximum possible differentiation of sound between each line and each playing technique, as if each line is played by a different, separate musician. The piece is to be treated rather as an ensemble piece than as a solo one.'<sup>222</sup> Observing the behaviour of my body during my first tryouts of the piece, I noticed the extreme gestural virtuosity that is imposed with the way the right-hand playing techniques in combination with the mapping of the

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<sup>220</sup> Dmitri Kourliandski, *prePositions*, *Program Note* (2008) <<https://www.henry-lemoine.com/en/catalogue/fiche/JJ2072>> [accessed 25 May 2023].

<sup>221</sup> Dmitri Kourliandski, *prePositions*, Editions Jobert No. JJ2072 (Paris: Editions Jobert, 2008), p.6.

<sup>222</sup> Dmitri Kourliandski, *prePositions*, in *Performance Notes*.



instrument were used. The instruction ‘as if each line is played by a different, separate musician’ and with the notion that the musical text cannot be achieved through the more conventional assumptions regarding how music text is translated into sound, amplified the shift in my focus to be on gestures, the separation of gestures of the hands from each other, and from expectation of one fixed acoustic outcome.<sup>223</sup>

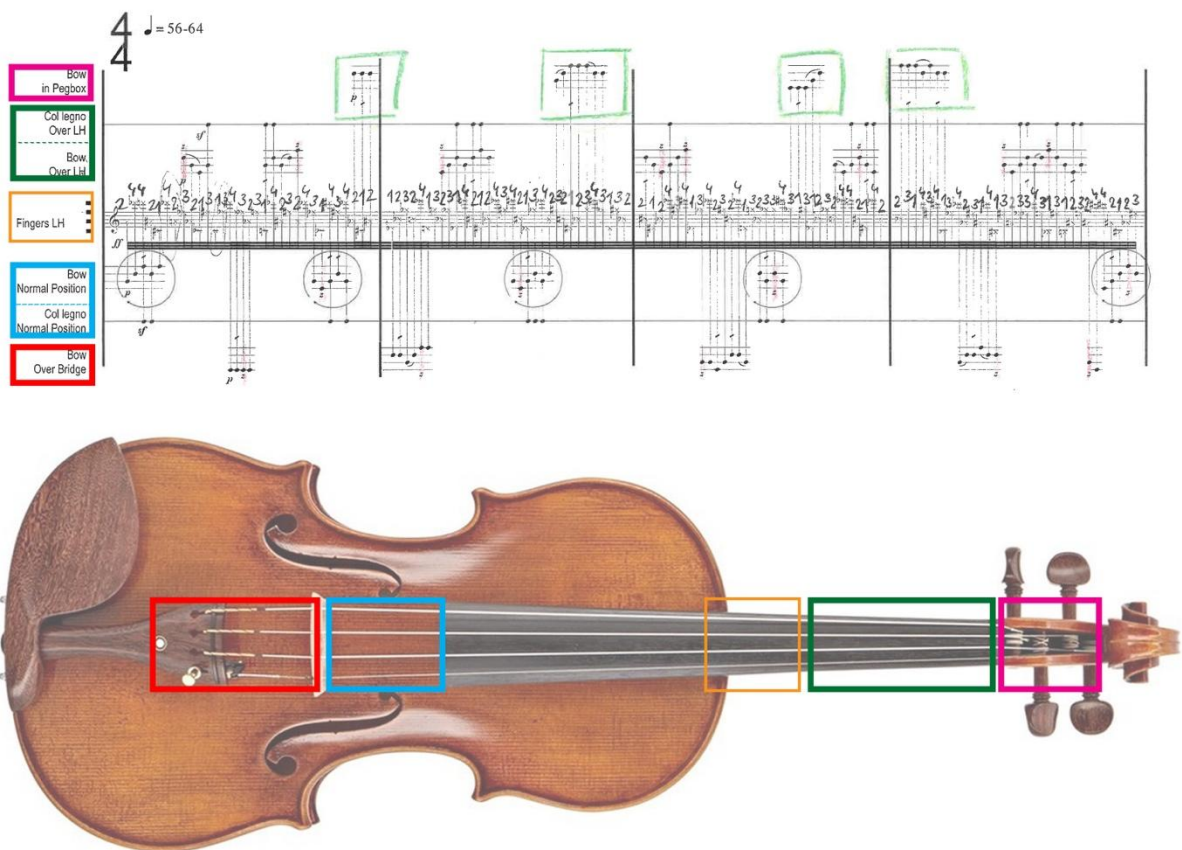


Figure 4.1.1: Dmitri Kourliandski’s *prePositions* (2008); diagram of points of contact with an excerpt from page one

<sup>223</sup> Kourliandski, in *Performance Notes*.

Figure 4.1.2: Dmitri Kourliandski's *prePositions* for solo violin, excerpt from page five

While working on the piece, I defined two different approaches to motives. One being the quick and frantic material of the left hand and short, sharp cut, and equally frantic small units of gesture for the right hand, like the material that can be seen in the four bars in figure 4.1.1. The other is glissando in the left hand and the right hand linked to sounding out the glissando in a more common manner, the “normal playing, legatissimo”, as in bars 6 to 8 of figure 4.1.2.

For the left hand Kourliandski writes,

all episodes with 32nds are rather represent an ‘image of the desirable texture’ than a concrete text to be performed precisely [...] the written sequence of pitches in these episodes [...] can be performed approximately. It is an “ideal text” which can’t be realised precisely but can be only imitated.<sup>224</sup>

<sup>224</sup> Dmitri Kourliandski, *prePositions*, in Performance Notes.

All the pitches in these sequences are happening around c3–a4–f5–d6, on IV (G)–III (D)–II (A)–I (E) strings respectively. The left hand thus is placed and remains throughout these sequences in the standard third position (area of the fingerboard marked in orange in figure 4.1.1). To achieve the desired dense texture with strong tapping of the fingers I practised these sequences devising a finger pattern mechanism training, partially inspired by the exercise number I.A. for left hand without bow from Carl Flesch’s *Urstudien für Violine*.<sup>225</sup> Considering that there are no returning pitch-patterns in the sequence that can facilitate creating chunks of patterns to be memorised, my approach was to start by working one bar at a time and then connecting bars, thus expanding until the entire sequence. The exercises were done without bow, with strong finger tap followed by immediate pressure release, but without lifting the finger off the string. I would start the exercise in slow tempo and work towards fastest possible, working through five rhythm patterns (figure 4.1.3).



Figure 4.1.3: Five starting patterns for the left-hand fingers

The eighth, dotted eighth, and the sixteenth values are here as demonstration of “long” and “short” note proportions. While the starting point with the dotted rhythm exercises is to play the exact proportion of the rhythm, as speed is built the long note

<sup>225</sup> Carl Flesch, *Urstudien für Violine*, Edition Ries & Erler (Berlin: Ries & Erler, 1955), p.11.

in the exercise becomes longer and the short note shorter, in both first and the second exercise pattern. Furthermore, the short note becomes as short as possible, cut from the previous note, and as linked as possible to the following note. Alternating practising with dotted rhythms is a great ally in developing speed in the finger action. The focus in these exercises is always on the sensation in the hand and fingers. While the attention should be predominantly on physical sensation, there should also be some care to listen to the tapping sound and pitch it produces. As the texture takes priority over pitch, listening to the pitch along the tapping is only a means of control to aid, assess, and train the firmness and pressure of the finger – a too gentle fall of the finger will produce a hollow tapping sound. Combined attention to the physical sensation in the hand and aural listening in the early phases of practising, strengthens the understanding of dynamic, control, and release of the gesture that helps avoid harmful tension while maintaining the necessary strength. As exercises reach faster tempo and fingers become faster in executing the sequences, the attention remains on the sensation in the hand, fingers, and fingertips.

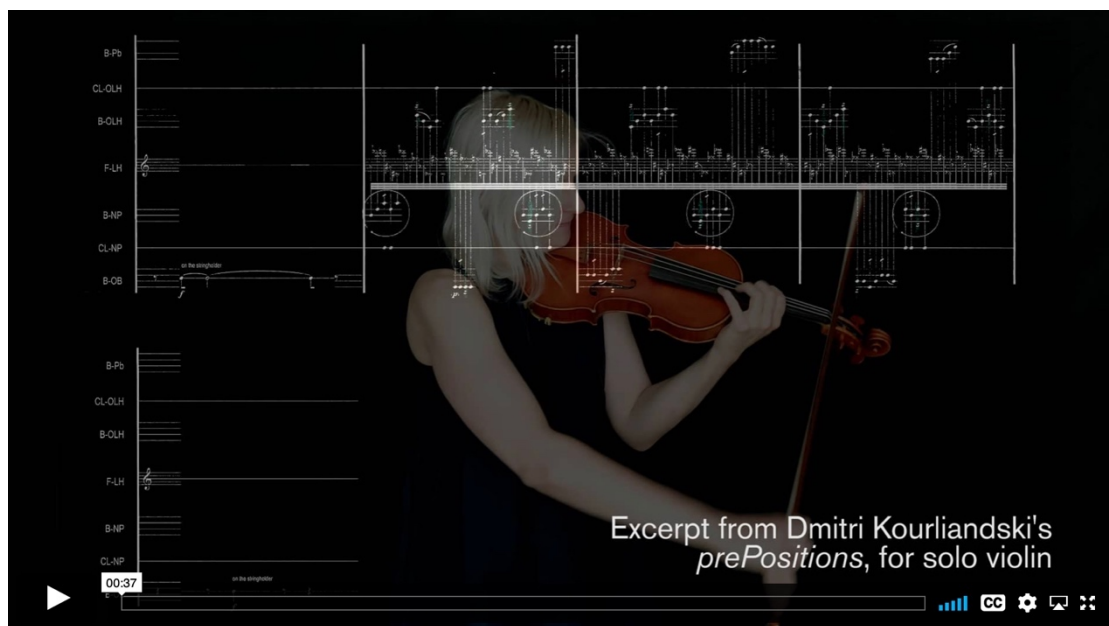


Figure 4.1.4: Excerpt from Dmitri Kourliandski's *prePositions* (video also at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_4\\_fig\\_4\\_1\\_4.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_4_fig_4_1_4.html))

As it can be observed in the video in figure 4.1.4, achieving the desired texture means that, although the left hand remains relatively static in its position, the extreme dexterity and tapping of the fingers adds to the overall gestural virtuosity of these sequences. It is however the actions of the right hand that particularly highlight the gestural aspect of the work. The travelling position of the point of contact (see figure 4.1.1) demands from the right hand a fast, at times frantic, succession of changes. These actions are happening completely independent and detached from anything that is happening in the left hand. All sonic outcomes that are produced are not linked to a specific pitch but arise as by-product of an immediate moment of bow touching the string and the specific textures of the sound are determined by the gesture itself (such as circular bowing, flip of the bow to col legno, pressure changes). The right-hand movement essentially amounts to the gliding of the arm along the length of the instrument, and in my interpretation, which I discussed with Kourliandski, it becomes a right-hand glissando (figure 4.1.5), and through this understanding connects to the second material area: that of the left-hand glissando.

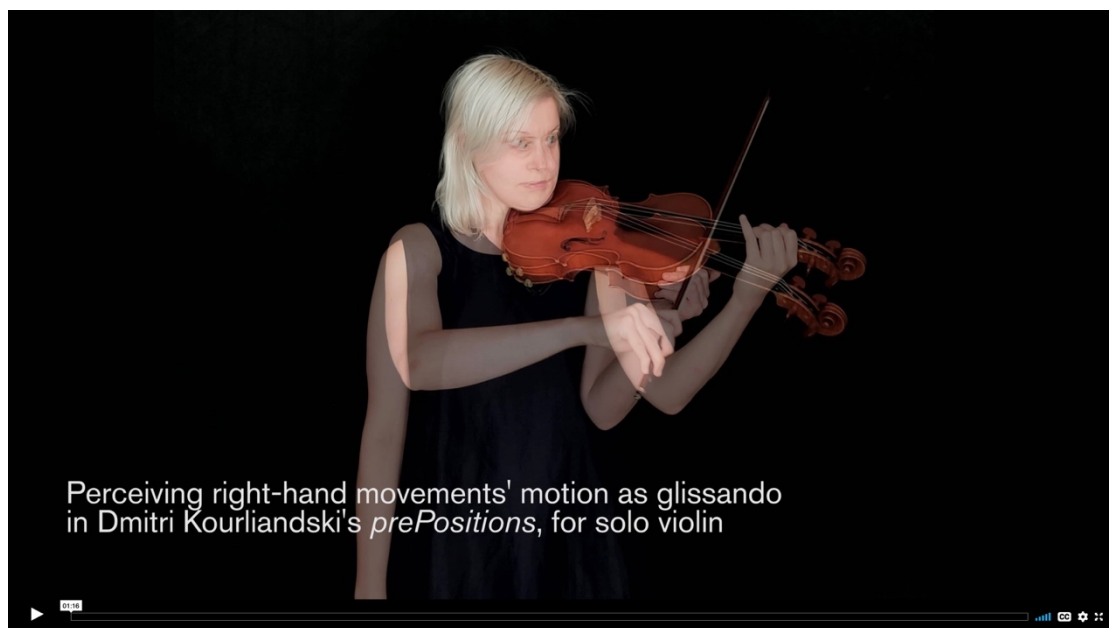


Figure 4.1.5: Perceiving right-hand motion as glissando (video also at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_4\\_fig\\_4\\_1\\_5.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_4_fig_4_1_5.html))

To arrive at as dense and as precise an execution as possible of all right-hand actions in a sequence, I approached the work by working one bar at a time and exclusively on the right hand. I would first decipher the gestural details each action occurrence demands. Each action occurrence would then be practised with four-time repetition. After the fourth repetition, the exercise continued by immediately passing to the next occurrence, which was then also repeated four times. I would continue like this until the end of the bar. The reason for the immediate repeating of the same action is to strengthen each action on its own, and not making pauses between the occurrences helps to keep the tension on the end of each occurrence (gesture), by having the direction towards the next action, thus creating a more accurate situation to the performance. After multiple repetition of a bar with four-repeat process, I would do the same but with only three repetitions of the action occurrence, then only two, until arriving at the execution as written. After each bar has been completed, this pattern of exercises is then applied in connecting two, and then three, and so on bars, until a full sequence. During the process of practising the right-hand actions, I would mute the strings, as the absence of sound allowed me greater focus on gesture and feeling in the body, further securing its embodiment from the physical sensation.

Once both hands had gone through their practising regimes for building their own separate and individual material, I started working on setting them in motion at the same time, as written in the score. I would then apply the same repetition model of practising from one bar to full sequence. The multiple repetitions also helped build up the physical stamina, focus, and concretion necessary for the performance. The

longest uninterrupted sequence of this kind of extreme actions (left and right hand independently) in the piece is eight bars long.<sup>226</sup>

The left-hand glissando sequences start to appear on page five of the piece (figure 4.1.2), with four 3-bar sections interspersed with one bar of the frantic material between each appearance. On page six, the glissando material becomes dominant, with eight 4-bar sections (with silent bar before each), after which it retreats during page seven through the same formation as when introduced. These sequences are a type of material that could be said to fall in the common left-right hand coarticulated gesture with a specific sound goal as the starting and ending point. While at first moment these passages might appear to have the expected sonic character for glissando, Kourliandski achieves an exciting poly-sonic outcome by use of individual, opposing direction for each of the notes in double-stop (only the first and the last note of each section is a single note). In this bi-directional glissando, with the separation of fingers from each other, there is a separation of gesture within the global movement of the hand. In addition, each note in the double stop has its own dynamic – one crescendo and the other decrescendo – requiring the right hand to create two different gestures within one movement. This bi-directionality and poly-sonic glissando outcome amplify the feeling of having different musicians playing at the same time.

Practising these sequences entailed:

- dividing each section in its five (3-bar sequence) or eight (4-bar sequence) notes and firstly practising each glissando separately
- adjustment of angle and pressure of the right hand to achieve double dynamic (crescendo and decrescendo) with a single bow stroke

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<sup>226</sup> Last two bars of the third page and following six on page number four.

- connecting ending of one double stop with beginning of the next with appropriate dynamic shading
- connecting each of these elements into a full sequence.

Even though there is a “normal” and “traditional” aspect to both writing and the sounding of the material in glissando sequences, the separation of fingers and dynamics within one movement conveyed gestural energy, density, and virtuosity, bringing two seemingly very different materials, this glissando with coarticulated actions of the left and the right hand and the sequences with separated left and right hand, as one whole. Working on the piece using the approach of focusing on embodying movements and gestures through their physical characteristics detached from their final sounding helped in navigating through the material with more confidence and conviction.





- actions of the right hand

The dynamics are also written under this stave.

- the second stave is dedicated to the finger spacing, with a five-degree scale of width:

‘1) very tight – as close together as possible

2) close spacing, with minimal space between the fingers

3) a natural, open hand position

4) an extended, open hand position, with reasonably wide spaces between the fingers; and

5) the widest possible spacing, extended as far as physically possible (to the point of becoming awkward and uncomfortable).

An effort should be made to keep finger spacing widths as consistent and repeatable as possible.<sup>227</sup>

- the third stave is a seven-line tablature system, with each line representing one of the seven positions for the left hand, that are to be employed throughout the interpretation. In the performance notes Cassidy writes:

The lowest staff indicates the movement of the hand up and down the fingerboard. Hand positions are indicated with upper-case Roman numerals and refer to the location of the first finger. The actual locations of the seven positions are at the discretion of the performer, though must remain consistent throughout the work. The most direct options for the locations of these hand positions are a) standard diatonic hand positions, b) positions which are equidistant from one another, or c) an invented scalar system. Position VII should always be at the octave. +/- indications refer to microtonal adjustments above and below the assigned hand position of between a quarter-tone and semitone. Note that arm movement should continue even when strings are not being depressed.<sup>228</sup>


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<sup>227</sup> Aaron Cassidy, *The Crutch of Memory*, for indeterminate string instrument (any bowed, non-fretted instrument with at least four adjacent strings), Self-published, SKU:200402 (2004), p.I.

<sup>228</sup> Aaron Cassidy, *The Crutch of Memory*, p.I.

One of the tools I used for disassociating the actions and movements of the hands from one exclusive sounding outcome was to consciously separate and practise each hand's actions and events individually. The goal was to expand the feeling of confidence in action and gestures themselves and strengthen ability to rely on the body's knowledge of the acoustic potentials the gesture carries.

Focusing on just the right-hand actions, with muting the strings with the left hand to eliminate open-string resonating, was the first step needed for detachment from one exact sounding outcome. However, as this kind of string dampening with the left hand also produces a sound of a specific timbre, in order not to link the right-hand action to a specific sounding outcome, I would mute strings in various undetermined holds when exercises were repeated. For each right-hand action-event, I would start by determining which gestures the movement for that specific bowing technique contains and what specific combination of point of contact, pressure, and speed produces the notated articulation and dynamic.<sup>229</sup> I found it especially important to go through the detailed process of examining the gestures within the movement for three specific actions (figure 4.2.2.):

- quasi-trillo: 

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<sup>229</sup> Besides the ordinary point of contact (area in and around the middle between the bridge and the fingerboard), Cassidy in this piece uses six more positions: *molto sul tasto* (abbreviation *mst*; widely exaggerated and well onto the fingerboard), *sul tasto* (abbreviation *st*; over the fingerboard), *poco sul tasto* (abbreviation *pst*; a very slight timbral modification in direction over the fingerboard), *molto sul ponticello* (abbreviation *msh*; on the bridge and nearly toneless bowing), *sul ponticello* (abbreviation *sh*; very close to the bridge but not on the bridge), and *poco sul ponticello* (abbreviation *psp*; a very slight timbral modification in the direction of the bridge). There are five bow pressures: (1) *molto flautando* (light, delicate, wispy); (2) *poco flautando*; (3) normal bow pressure; (4) *poco pesante*; and (5) *molto pesante* (a heightened degree of bow noise, particularly at the initial attack; nearing scratch tone).

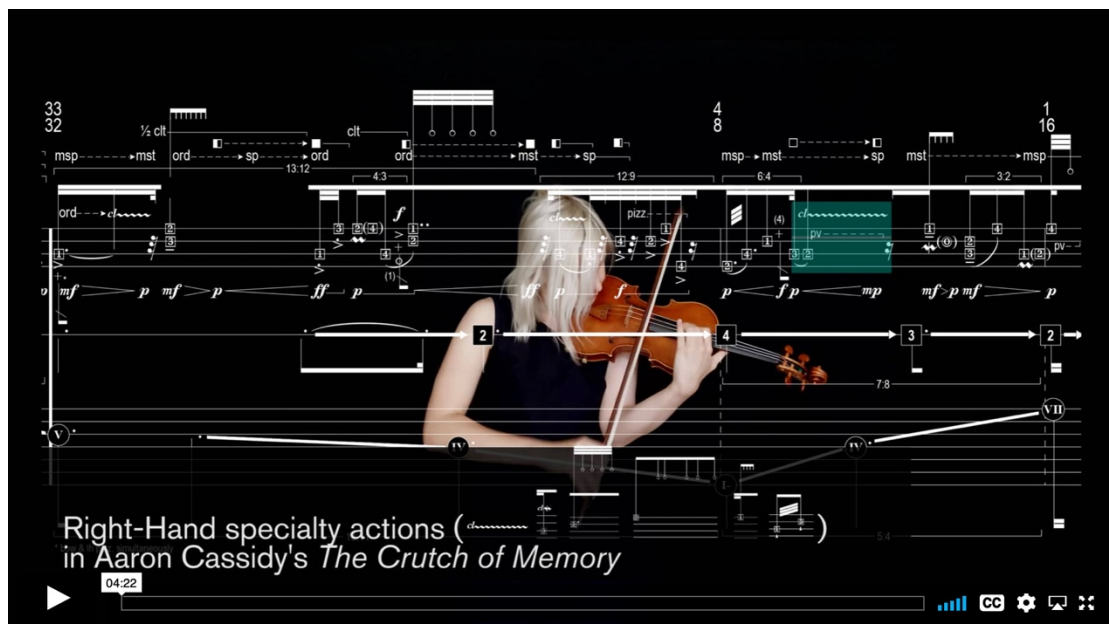
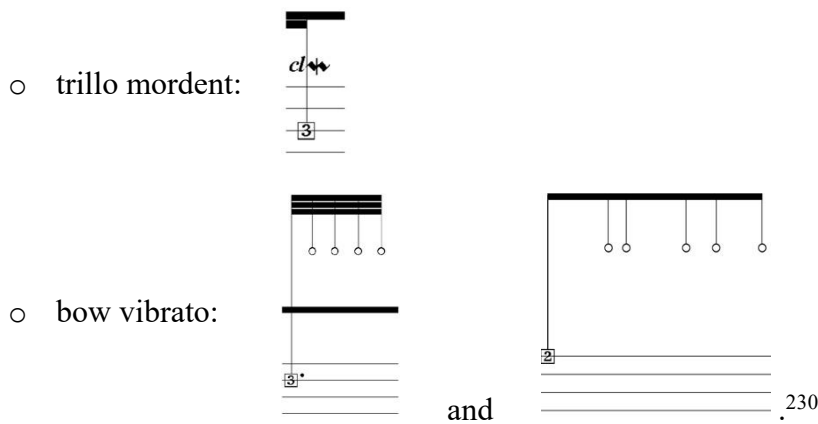


Figure 4.2.2.: Right-hand specialty actions in Aaron Cassidy's *The Crutch of Memory* (video: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_4\\_fig\\_4\\_2\\_2.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_4_fig_4_2_2.html))

Both bow-trill actions required finding a right balance and to adjust the bow hold in a way the thumb could rotate the bow between its hair and wood, with the ability to achieve controlling the outcome in a variety of speeds. Bow vibrato required changing back and forth bow pressure or speed during one bow stroke with the goal of creating an audible regular (notated in 32nds note value) or irregular (notated with eighth note value) pulsation in what would otherwise be continuous uninterrupted, “flat” sound.

<sup>230</sup> Aaron Cassidy, *The Crutch of Memory*, p.II

However, this type of work process was not useful only for these more special bowing techniques. In combination with the changes of point of contact during or mid-stroke, detailed dynamic and bow pressure prescriptions, all actions, including detachés, slurs, tremolos, or jetés had to be examined and fine-tuned for each of their event-specific balance of gestures within the movement. Practising in this way allowed me to find the quality of the “tone of the gesture” within the body and maintain each gestural identity not through aural but in-body experience. What I mean by the gestural identity of the sound when it comes to the right-hand actions is a combination of the physical sensation and changes in the body that happen with each specific action which will eventually result in specific sonic shaping of the sound.

The overall general fast pace of succession and changes of each of right-hand action-events creates a feeling that techniques are often melting into each other (figure 4.2.3). This is not quite the case, as each action must maintain its own clear identity. However, there are instances where different bowing techniques become grouped as one event, as in cases when different bow techniques are being executed on the same held stopped finger and there is no change of bow direction (figure 4.2.4). I found that the approach of practising the actions separately, in all their variations, and then slowly building combining each of these events into phrases, to be a useful process that facilitated better overall flow when interpreting the score. Learning this way, through understanding and embodying gestures within the movement in minute detail, also allows for better execution of seemingly contradictory combinations of dynamics and bow pressure, such as for example combining *molto pesante* (an increased pressure, nearing scratch tone) with *ppp* dynamics (figure 4.2.5).

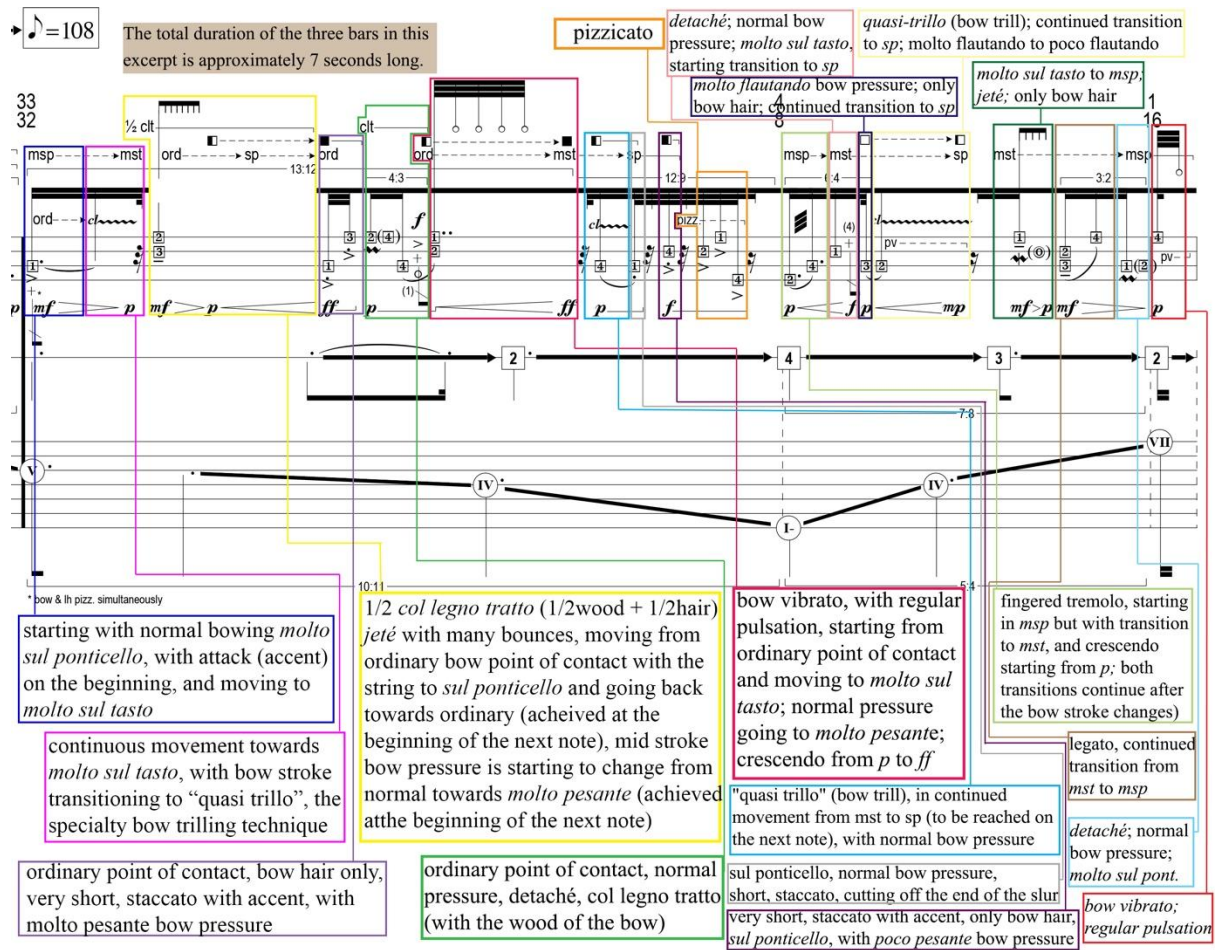


Figure 4.2.3: Aaron Cassidy's *The Crutch of Memory* – bars 11, 12, and 13; excerpt showing succession and changes of each of the right-hand action-events within a timespan of approximately 7 seconds

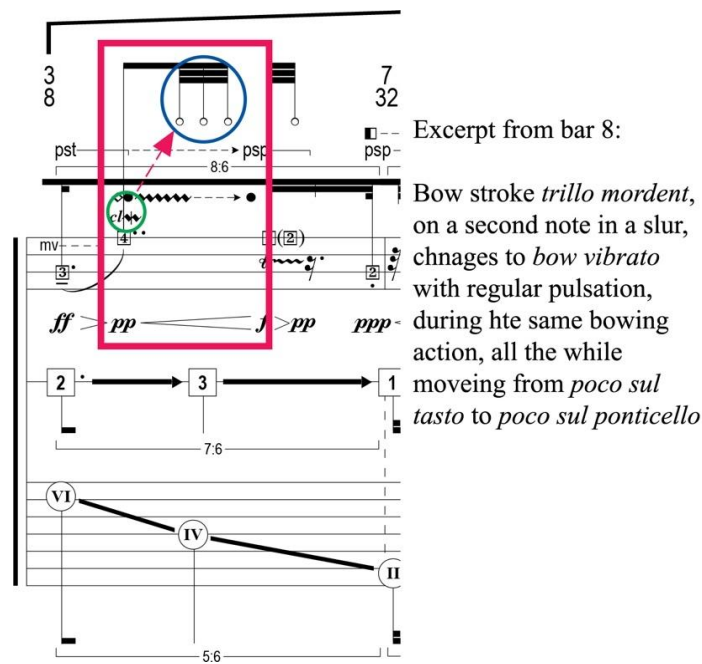


Figure 4.2.4: Aaron Cassidy's *The Crutch of Memory* – excerpt from bar 8: different bowing techniques merging in one event

[\* finger percussion much louder than bowed attack]

Figure 4.2.5: Aaron Cassidy's *The Crutch of Memory* – bar 42 (left) and bar 95 (right), examples of seemingly contradictory combinations of bow pressure and dynamics

All the right-hand actions, bowing strokes and techniques, provide a general frame to the sound each time in the same way but, as mentioned, because of how the left hand is used and with the instrument using scordatura tuning, the overall outcome is not guaranteed to sound in one expected same way in each interpretation. In *The Crutch of Memory*, the left hand is not being linked to a specific pitch. It is in constant gliding movement, applying two separate horizontal parameters of motion:

- the hand and arm are sliding up or down the fingerboard through seven positions (figure 4.2.1)
- the continuous change of openness or closeness of the hand: five degrees from very tight to widest possible spacing, as previously described.

The left-hand movement is to be uninterrupted and continuous even in moments when the right hand is not activated (figure 4.2.6).

The image shows a musical score for Aaron Cassidy's 'The Crutch of Memory', specifically bars 28 and 29. The score is divided into three sections by red vertical lines. The first section (bars 28-29) is marked with dynamics *p*, *mp*, and *p*. The second section (bars 30-31) is marked with *p* and *mp*. The third section (bars 32-33) is marked with *p* and *mp*. The score includes a piano part with fingerings (1, 2, 3, 4) and a violin part with fingerings (V, IV, VI) and bowing directions (sp, st). The score is annotated with various performance instructions and dynamics.

Figure 4.2.6: Aaron Cassidy's *The Crutch of Memory* – bars 28 and 29, example of continuous movement of the left hand during the pause in the right hand

Another parameter that must be taken in consideration is the vertical motion, the different pressures the fingers have when in contact with the string. There are three degrees for the finger pressure and two specialty left-hand finger action-events (figure 4.2.7) linked to pressure:


pressure

action-events

- ● : normal pressure
- ◇ : harmonic pressure
- ✕ : finger percussion

- ●◇ : rapid alternation between normal and harmonic finger pressure
- ✕◇ : rapid alternation between finger percussion and harmonic finger pressure.

From other left-hand finger-specific actions (figure 4.2.7), Cassidy also makes use of:

-  : triller, with adjacent finger





precision of movement of the left hand is aiming for accuracy of the pitch, which is achieved through exact mapping of the fingerboard – learning this very precise relationship between the trajectory of the left hand and the place where the finger must block the string in order to achieve the exact pitch. Whether I am learning fast-paced scale-like motives (figure 4.2.8) or jumping to a distant interval note (figure 4.2.9), all horizontal and vertical gestures of the left hand are part of one collective movement that has as its absolute goal a trajectory from clear point A to a clear point B in relation to the pitch mapping of the fingerboard.



Figure 4.2.8: Niccolò Paganini's *Caprice Op. 1 no. 5* (excerpt from the introduction)



Figure 4.2.9: Niccolò Paganini's *Caprice Op. 1 no. 9* (bars 60 to 64)

For *The Crutch of Memory*, I found that I had to think of the left hand in a somewhat different way. The “gliding” movement of the whole arm and the hand up and down the fingerboard, a movement closely resembling a glissando, is not just a means to reach a distant place on the fingerboard. I reached this notion because of the subset of movements, the widening and tightening of hand's scope, that are independent from the general position of the arm in relation to the fingerboard. What I found is that, for my understanding of the piece, this subset of movements created a notion that the sound is not in the instrument, but in the hand. Rather than the hand having a task of searching for the melody that is in the instrument and “located” on the fingerboard (and will be released by reaching a specific pitch), the sound of what is played is

trapped inside of the hand. As the hand is moving, widening and tightening, these physical actions control and release the physical melody into sound. For the fingers, as seen in figure 4.2.1, the fingerings have a fixed string they have to be on, but there is no exact determined pitch. The length of the fingerboard is mapped by the seven positions for the hand, but the widening and tightening of the fingers and continuous motion of the hand create a larger margin of indeterminacy regarding “precision”. Or, it demanded rethinking of how to achieve this specific kind of precision. In my work on the piece, I found that I must think of the stopped finger not directly and solely related to the location of the pitch-mapping of the instrument but its relative position within the frame of the moving hand. Meaning that the finger and palm are not leading the hand and arm, as in more standard, portamento-like position shifting when the goal is exact pitch but is just following the global hand position while being perceptible to the adjustments of specific widths.

The beginning phase of work was dedicated to training the hand for the seven-position fingerboard mapping. At first, getting to know the work, I worked on the piece using the standard diatonic seven position division, which also does not sound as standard when scordatura is taken in consideration. The immediate next phase of work was to devise and practise seven equidistant positions.<sup>231</sup> To do this, I would practise moving up and down on the fingerboard on one string at a time, starting from keeping the physical spacing between the first and the second finger at a distance of one whole tone (which would be equivalent to distance of the first and the second position). In standard notation and starting from the standard first position with first

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<sup>231</sup> This was a personal choice, as it seemed a more interesting, challenging, and musically enriching approach.

finger placed on A3 (220 Hz) note on the IV string, the mapping of the fingerboard would look approximately as seen in figure 4.2.10. The distance between each position is approximately 3 cm.<sup>232</sup>

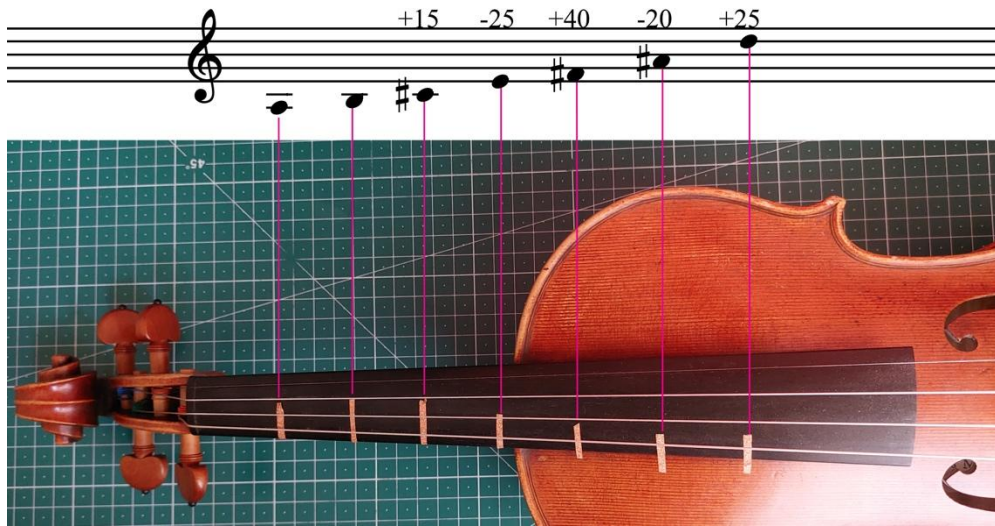


Figure 4.2.10: Example of mapping of the fingerboard in seven equidistant positions, on IV string, starting from first note being fingered at pitch equivalent to A3 (220 Hz) in standard tuning

An example of the exercises for getting the hand accustomed to feel and embody this kind of division of the fingerboard can be translated to standard notation as follows (figure 4.2.11):

<sup>232</sup> Considering lengths in cm when mapping the fingerboard comes from the experience and playing the piece “violin” by Robert Wannamaker, where, for the purpose of his piece, in the third movement he referred to the left-hand position along the length of the strings in cm measurements. Although not absolutely necessary to think in cm division of the fingerboard, having in mind also this way of mapping and retaining the distances inside the hand through thinking in cm, in my case has proven to be a useful additional tool. The piece is part of my performance repertoire and my research supplementary repertoire list.

\* added cents to represent the equivalent equidistant physical spacing between the fingers.

- the gliding/glissando between two fully pressed points should be done with light (harmonic) pressure.
- attention to elbow (moving towards the body) and palm (turning more towards the fingerboard) should be maintained throughout, as this gesture is a needed element once all fingers are in play and playing the piece.

Figure 4.2.11: Example of exercises for training equidistant seven-position mapping of the fingerboard, example on IV string, starting from first note being fingered at pitch equivalent to A3 (220 Hz) in standard tuning

I would repeat these exercises on all strings. The focus and attention were always on the feeling in the hand, arm, and the elbow. The exercises would then be repeated starting from selecting one pitch between what is in standard tuning G eight-tone-sharp and A three-quarter-sharp (and notes on parallel positions to these on the other strings) as the beginning note. I would choose different physical interval distance between fingers, creating a different mapping outcomes. Although the performance notes do not explicitly say that the first position must remain in the lowest register, I always approached devising the positions from this point as it allows for a greater overall range in the piece. Disassociating positions from the standard diatonic

mapping of the fingerboard opened a wider range of freedom and independence for the hand, thus allowing for inventing my own seven-position mapping to occur in a later phase of work. The exercises facilitated a possibility to have different variations that are maintained in the hand as “work in progress” and then, once a performance date approaches, I would decide on one specific seven-position approach to work with focus. Illustration of different approaches can be seen in figure 4.2.12.



Figure 4.2.12: Illustration of different approaches to left-hand position and tuning in Aaron Cassidy's *The Crutch of Memory* (video also at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_4\\_fig\\_4\\_2\\_12.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_4_fig_4_2_12.html))

Although the piece does not employ fast scale-like passages in the style of those seen in figure 4.2.8, there is a need for fast, agile reaction of fingers and dexterity of actions. To extend all the mechanical parameters of the fingers, I devised separate finger exercises (figure 4.2.13) which I found helpful in developing comfort and confidence in each of the five hand-frames. Their goal was to extend the embodied feeling of finger distances between fingers from the diatonic and microtonal interval pitch-related spacing and strengthen the feeling that simply relies on the physical

distances felt in the hand. Besides the four fingers that are in movement, during practising of these exercises a special attention is to be given to the thumb movement and hand's natural turning towards the fingerboard as the finger spacing becomes wider. This is an element that, in combination to elbow, create a more relaxed state for the hand and allow for wider stretching without creating too much stress or injury, which is particularly important in the fifth finger spacing.

**Variations for practicing**

\*Finger Spacing:

- finger spacing 1: very tight — as close together as possible;
- finger spacing 2: close spacing, with minimal space between the fingers;
- finger spacing 3: a natural, open hand position;
- finger spacing 4: an extended open hand position, reasonably wide spaces between the fingers;
- finger spacing 5: the widest possible spacing, extended as far as physically possible (to the point of becoming awkward and uncomfortable).

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\*\*Finger actions:

- only one, indicated, finger at a time is on the string;
- lower fingers remain on string;
- in B and C: a) only one finger at the time; b) the “skipped” finger is placed together with the adjacent higher (example: after the first finger, the second and third are placed together, second being already in place for its appearance as the third note).

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\*\*\*To be practiced on all strings, in all positions, and in microtonal variations of positions.

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\*\*\*\*The exercise should be done without the bow. The ties indicate the acceleration of fingers, as if it would be in the case when using the bow and gradually adding speed, until all 24 notes are played on one bow. Same can be achieved practicing with the metronome, adding groups to one predetermined bpm, focusing to strengthen inner pulsation.

Figure 4.2.13: Exercises for the mechanical parameters of finger spacing

In the first round of practising, I would play the exercise with a bow, where greater concentration is placed in *feeling* the gesture inside the body and using the sound only as supplementary control. Then the exercise would be repeated without the bow and in as many repetitions as needed until the feeling settles in. After the sensation of the first width would start to feel comfortable, I would repeat the same exercise for the second degree of width, and so on until I would go through all five degrees of finger spacing. Once finishing the cycle, I would move to the next position and then next string, as each position and string need a slightly different angle of the hand. After practising for a while in order starting from first to fifth width, I would make small patterns, still within one position but with random changes of width. After the hand has gotten accustomed to all five hand-widths, I would practise hand-width changes in their respective rhythm taking one phrase at a time from the piece (figure 4.2.14), and building until rounding up the whole piece.



Figure 4.2.14: Example of a phrase from Aaron Cassidy's *The Crutch of Memory*, bars 11 to 16 (The image has blurred material, to emphasise what was the focus for practising)

Just like with exercises for finger spacing changes, I would apply the same approach of working only on the material from the first and the third stave one at a time, with its rhythm and as appearing in the piece. After practising exercises that allowed for fine tuning of my left hand's sensitivity and sensibility in relation to the fingerboard mapping, hand position, and finger spacings, I would work on first two (finger spacing/width and hand position) and then all three (fingering, finger spacing/width,



and hand position) aspects of the left-hand movements together. This was the stage in which I would only work with the material from the piece, taking smaller segments and phrases, and practising without the bow. The added element of difficulty is that each of the left-hand actions has its own rhythm, hence creating a nested polyrhythmic gesture within a movement. In my approach I interpreted this through thinking of rhythm as local and global speed, where local speed is the speed of changing the finger spacing from the second stave and vertical finger-actions coming from the top stave, and the global speed is the gesture of hand changing positions.

The dynamics in the piece are notated and intended in a conventional way, as Cassidy emphasises in the score and in the work sessions, but the structure of the piece inspired me to look for another way of thinking about the application of dynamics and volume. When all the parameters come together, within each hand individually and between the left and the right hand, they can have seemingly opposing and even impossible meanings and outcomes. In my reading of the piece, and as means of facilitating bridging the difficulties of so many individual parameters in play, I explored understanding the dynamics not only as volume of the loudness of the sound, but also the volume of the imagined sound vibration that is contained in the hand and manifests itself as the intensity of the gesture. Thinking of the volume also as the indication of the intensity of action, for me had a soothing mental effect that reinforced all the gestural sensations embodied through practising and, without putting to the second plane the aim to interpret the dynamics in their traditional meaning, allowing the volume of sounding, the loudness and softness, to become natural byproduct of the treatment of gesture, and the interaction between the technology of the body and the instrument.

In addition to all the mentioned technique and gesture related aspects of the piece that I must take into consideration when playing, there is another technical parameter related to the instrument and the timbre – the tuning. I have approached the suggestions for tuning in some performances literally following the suggested tuning, but bearing in mind Cassidy’s indication that ‘other tunings are possible’ if specific guidelines are followed, I have also explored alternative ways to broaden the range and timbre of my instrument.<sup>233</sup> To do this I have used D’Addario’s octave (low) violin strings and explored stringing the instrument only with one set of strings at a time or mixing normal and octave-low strings.<sup>234</sup> Using different types of strings created different string tensions and resulted in different responses of the string when playing. Embodying the material through physical sensations of gestures within the body and linking them with their sonic outcome, as well as thinking of volume of intensity of gesture, all created greater control, sensitivity, and ability to react and adjust to situations and circumstances that are related to the technology of the instrument prompted by the scordatura.

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<sup>233</sup> Cassidy, p.I

<sup>234</sup> Combining different types of strings, and then applying retuning, included: octave low G in place of standard G string, octave low A in place of standard D, standard A and E; octave low D in place of standard G, standard G in place of standard D, standard A and E; octave low G in place of standard G, octave low A in place of standard D, octave low E in place of A, and standard E.

### 4.3 Physicality Interpreted as Material in Dario Buccino's

#### *Finalmente il tempo è intero n° 16*

When I first encountered Dario Buccino's *Finalmente il tempo è intero n° 16* in December 2019, I was already engaging with pieces and submerged in developing my approach to performance practice where there was need for separation of physical movements that are more commonly considered to go together. Nevertheless, *Finalmente il tempo è intero n° 16* still managed to bring new insights regarding understanding a depth of physicality through its exploration of polyphony of gestural interactions and intentions.

		Tempo	A							
		Spazio	CLOSE!							
			MUTE Action	MAGICAL Contr.	BACK Voice	TAIL Piece	VOICE	PAD	SCRIBBLE	MULTI Voice
RH	<b>Right Hand</b>	ACTION								
		PRIN								
		ORD								
		DYNAMICS								
LH	<b>Left Hand</b>	ELVIN								
		TRCIN								
		FINGER								
		DYNAMICS								
EC	GRATIA									
	Tacet									
	Vocal									
	Body									

Figure 4.3.1: Dario Buccino's *Finalmente il tempo è intero n° 16*, page 1

While I will expand on different processes of work on this piece in chapter 5.2, I will focus here on my consideration and mental conceptualisation of one unit of gesture in this work as an ecosystem consisting of atomic, subatomic, and meta-atomic matter. Godøy calls individual events like ‘note onsets, pitch changes, timbral evolution’ as sound ‘atom events’ that overlap each other and are fused through contextual smearing into what we perceive as a sound, sometimes at the expense of losing their individual features.<sup>235</sup> Drawing from Godøy’s idea of atom events and following my approach to unwrap a movement into units of gesture, while working on *Finalmente il tempo è intero n° 16* and with its specificities for each individual element of movement Buccino prescribes (figure 4.3.1), I began approaching these individual elements as singular units, a kind of smallest gesture-entity that I call atomic matter. The concept of atomic matter allows thinking about the gesture that is between the body of the performer and the body of the instrument. These are the gestures made by the limbs (hand, finger) which are in direct relation with the instrument (right arm with the bow and the left arm with the violin). More commonly, and rather simplified, the right hand will pull or push the bow inherently adjusting every gesture of its movement (parameters as speed, pressure, angle, point of contact), dependent on the sound it must produce. Buccino does not have in mind a sound the performer has to play, but he devises and gives each individual gesture of the right hand its own individual value. Furthermore, Buccino often connects parameters that are counterintuitive to the more common movements a violinist does when aiming to achieve a sound, thus reinforcing individual features of each parameter. Through adjusting and exploring each of the parameters, the sound is discovered but not memorised. It is the gesture that must be memorised, as the sounding outcome is only

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<sup>235</sup> Godøy, p.71.

a byproduct of the combination that happened in that one moment (see chapter 2.1.1 for the general overview of the piece). Taking as an example column “PAD” from figure 4.3.1. the right hand (reading from top down) must independently explore yet activate at the same time following actions:

- discontinuous sound, which is achieved with a contact action that can become silent (i.e. interrupt the sound with silence) even without it coming to arrest. This parameter is applied to horizontal and vertical actions of the bow
- contact: two indications: alternate between lifting the bow vertically off the string and having a deep contact and the same action but with maximal intention, then explore the range between the two indicated values, including the starting and ending value. The exploration can go back and forth between the two values, there is no "left-to-right" direction for reading the notation
- portion of the bow: two sixths of the bow, in the lower region starting from the frog, are to be used and explored
- the angle of the bow: the tip of the bow going towards the head to a maximal angle of  $-40^\circ$ ; elbow is away from the body
- point of contact: explore area, including, *sul tasto* and *molto sul ponticello*
- dynamics, volume: explore the volume range between as piano as possible and molto piano, in a fluid manner. Alternate this exploration of the range of values with a single value of exceeding energy. The transitions to and from single value must be done in a cut and clean manner.

The left hand is treated with an equal approach of division and separation of movements and a high level of specificity for each of its gestures.

Buccino asks from the performer to explore and employ gesture within the gesture itself actively seeking from the performer, and the audience, to not consider only the “heard” in a music piece but to be attentive for the “felt”. Thinking of gesture as subatomic matter is setting a mental state in which splitting of a gesture and subdividing the action within the body into receiving and emitting part of the action can occur. Although this kind of subdivision within the gesture is still going to result in contact with the instrument on the atomic and global movement level, the subatomic matter of gesture is not in direct relation to the instrument, but it is related to coordinating actions within the gesture itself. In the piece this subatomic level primarily manifests itself through parameters of intention and affection of gesture, which is found in both right- and left-hand DYNAMICS. The Parameter for dynamics is divided into two layers: motion and touch. While both layers can share instructions for the volume of the sound, that includes common denotations such as *piano* and *forte*, there is a division within each of these parameters:

- movement: speed and affection
- touch: intensity(pressure) and affection.

While speed and pressure reflect the direct physical action, “affection” can be here interpreted as conversation between the part of the gesture whose actions is reaction to feeling the instrument and actions that are supposed to cause a change to the instrument. The difference between physical action for touch and affection could be explained as:

- physical action = I explore the movement/touch with action being the intention

- o affection = I relate and explore if the body of the instrument is doing the action and moving my body or if my gesture is to do something to the instrument.

	MUTE Action ≅	MAGICAL Contr ≅	BACK Voice ≅	TAIL Piece ≅	VOICE ≠	PAD ≠	SCRIBBLE ≅	MULTI Voice ≅
ACTION	⊗	⊗	[A]	[A]	⊗	⊗	⊗	⊗
Bow	HN	HN	HN	HN	HN	HN	HN	HN
	ORD	ORD	ORD	ORD	ORD	ORD	HN	HN
String PRIN	TST!	HN	HN	HN	HN	PTC	PTC PTC!	HN
DYNAMICS	⊗	⊗	⊗	⊗	⊗	DNMC	DNMC	DNMC DNMC!
	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗

Figure 4.3.2. Dario Buccino's *Finalmente il tempo è intero n° 16*, excerpt from page 2

These indications can come in almost infinite combinations. Observing an example from figure 4.3.2., some possible combinations that can be found in the score are speed of the movement and affection of the touch (column MUTE action, blue rectangle), only physical actions for speed (column VOICE, magenta rectangle), or using indications for affection for both movement and touch (column MULTI Voice, green rectangle). It is this subtle division between the intention and the affection that happens and stays within the body that deepens the action and creates a subatomic matter within one gesture that will have an influence on the outcome.

In his piece, Buccino uses specific symbols within the endocorporeal parameter (section in green rectangle in figure 4.3.1) to draw attention to actions within the body, as mean to make conscious the origin of one gesture or a movement beyond an instruction given by the brain for the outer limbs (arms or legs) to reach from point A to point B (, and make an effort to control or change the origin. To be able to address this aspect of the piece, I considered this aspect of gesture as meta-atomic matter,

which is a contemplation on where is the origin and from which location within the body gesture and movement is sourced. Through tryouts and practising with this kind of thinking and engaging the brain to use a different area within the body (stomach or chest, for example), I came to an understanding that, while at times it can be very subtle in the outcome, this approach has power to change the way gesture will conduct itself and be executed by the outer limbs of the body, and in the relation to the instrument. With the employment of Buccino's endocorporeal indications, the focus on location inside of the body from which the initiation of a gesture is used precedes any gestural action, even if for a millisecond of action taking place. As a performer, even before thinking of setting a gesture in motion, I must think of the source from which the gesture's driving force will come and only then have to be articulated into the action of the gesture itself. One example is seen in figure 4.3.3 in the SCRIBBLE column. Here, the indication is to explore the range between two polarities, relaying on alternating sourcing the outer limb movements as thinking they are being put in motion from the chest and the stomach area of the body. Each one of these sources will trigger a different nuance of each action, sculpting the outcome, sometimes audibly sometimes only felt, from the core of the gesture. The endocorporeal parameter has many different approaches and values that can come into play and construct a practically infinite number of instructions and outcomes, as it can be deducted from the overview of the structure of the piece and symbol explanation as described in chapter 2.1.1.

In exploring and working on developing better understandings and control of all the endocorporeal parameters, as well as the chain reactions they can create in the outer-limb parameters, I drew inspiration both from Steve Paxton's practice and movement



study ‘Material for the Spine’,<sup>236</sup> and also from the release technique dancers in contemporary dance explore when they contemplate the origins and executions of movement and gesture.<sup>237</sup> These exercises are based on “unwinding” a body part extremely slowly, through focusing on the flow of energy and very gradually moving from one segment of a body part to the next – think of the spine and its vertebrates for example, but then apply the same idea to a finger or hand or whole arm; or the same but with an added element of thinking about sending or receiving energy – meaning that the movement can suddenly change directionality.

		Tempo	[CLOSE! CLOSE!]							
		Spazio	MUTE Action ≈	MAGIC! Cont. ≠	BACK Voice ≈	TAIL Pece ≈	VOICE ≈	PAD ≠	SCRIBBLE ≈	MULTI Voice ≠
RH	ACTION	X	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	PRIN	HN	HN	HN	HN	HN	HN	HN	HN	HN
	ORD	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]
	String PRIN	TST!   PTC!	HN	[diagram]	[diagram]	TST	HN	[diagram]	TST   PTC!	TST   PTC!
DYNAMICS		[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]
LH	ORNT	HN	HN	HN	HN	HN	HN	HN	HN	HN
	ELVN	HN	HN	HN	HN	HN	HN	HN	HN	HN
	TRCTN	HN	HN	HN	HN	HN	HN	HN	HN	HN
	FINGER	2 2 4 1	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]
	STRING	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]
	RANGE	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]
DYNAMICS		[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]	[diagram]
EC	GRATA	HN	HN	HN	HN	HN	HN	HN	HN	HN
	Tacet	HN	HN	HN	HN	HN	HN	HN	HN	HN
	Vocal	[diagram]	HN	[diagram]	HN	HN	HN	HN	HN	HN
IGNIN		HN	HN	[diagram]	[diagram]	ie   ie!	HN	[diagram]	[diagram]	[diagram]

Figure 4.3.3. Dario Buccino’s *Finalmente il tempo è intero* n° 16, page 9

<sup>236</sup> Paxton, Steve, ‘Material for the Spine’ (2019) <<https://www.materialforthespine.com/en/intro>> ; The release technique, that mainly helps to develop movement efficiency, I discovered and worked on through Marta Coronado, who is a contemporary dancer, choreographer and educator.

<sup>237</sup> Since 2015 I have worked and collaborated with dancers/choreographers Liza Penkova and Marta Coronado, and it was through these creations and collaborations that I first got to know and experience dancer’s approach to movement and gesture. Liza Penkova is a dancer and choreographer currently based in Gothenburg, who as a dancer worked with the Gothenburg Opera Ballet (SE), Anne Teresa De Keersmaeker's dance company Rosas (BE), Compagnie Michele Noiret (BE). Marta Coronado is a dancer, choreographer, and educator; member of Anne Teresa De Keersmaeker's dance company Rosas (BE) and founder of choreographic centre La Factoria in Pamplona (Spain). In 2002 she was awarded with a Bessie Award (New York Dance and Performance Award) for sustained achievement as a performer.

Another parameter of physicality that needs mentioning is the inverted left hand (figure 4.3.4). This is a rather macroscopic physical movement which drastically changes everything about position of the body, instrument hold, their relation and influences every gesture and movement that follow. Understanding units of gesture and all the microscopic investigations of physicality of the body allows for this movement to become a comfortable part of the musical gestural vocabulary, facilitating control and application of all the nuances of each of the microscopic gestural prescriptions to be carried out in the moment of performance.



Figure 4.3.4: Inverted left hand  
[left: hcmf// 2021 in Huddersfield, photo by Brian Slater;  
right: Prima Vera Contemporanea 2022 in Palermo, photo by Alessandro D'Amico/Curva Minore]

#### 4.4 Conclusions as New Openings

In performance, it is never possible to completely separate violinists' physical action from the resulting sound. In pieces with unstable acoustic results due to the nature of the complex demands of the writing, as is the case in *prePositins*, *The Crutch of Memory*, or *Finalmente il tempo è intero n° 16*, adopting an idea that the physicality of gestures and movements can be the source of musical interpretation is a tool that

facilitates surpassing the challenges a more common approach to playing, where actions are technique to produce imagined sound, can pose. In my approach to interpreting and navigating within the uncertainties while achieving the minute detail, I would focus on the gestures themselves in the work process which enabled embodying the piece through the physical sensation of gestures in a way that allows for continuous musical flow in the performance even when the actions' results are sonically unexpected. The 'active tension/perturbation' and the intensive situation of performance that 'joins together separation and inseparability (the stable and the unstable)',<sup>238</sup> demands from the performer to through their preparation expand the tools for thinking about the effect every parameter of each gesture within a movement makes. When a gesture *becomes* the musical material and not only an action with the goal of producing imagined sound, the habitual tendency of coarticulated anticipatory movement towards 'smooth transitions and as homogenous a quality of a tone as possible' is lost.<sup>239</sup> Or perhaps it would be more accurate to say that the *understanding* of the goal must be adjusted, as well as questioning the "quality of tone" of the gesture and not only sound. The need for coarticulation and for anticipation remains necessary in performing pieces where physicality and gesture can be interpreted as material, but the source of imagination does not have a designated sound to aim for, because in the context of this way of thinking, the gesture itself *is* the tone. This is a state of mind in which the performer must internalise music through embodying the physical sensation inside the body the movements create when in pursuit to interpret the musical text, regardless of the sounding tone. Gesture in this approach does not seek sound in order to exist but

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<sup>238</sup> Einarsson, 'Desiring-Machines', p. 6.

<sup>239</sup> Thomas E. Jerde, Marco Santello, Martha Flanders, and John F. Soechting, 'Hand movements and musical performance', in *Music, Motor Control and the Brain*, ed. by Eckart Altenmüller, Mario Wiesendanger, and Jurg Kesselring (Oxford: Oxford University Press, 2006), pp. 79–90.

*exists* and *is* internalised music that through the independent left- and right-hand actions and in contact with the instrument brings the piece to life.

It might seem that thinking of gestures as material would imply that any performer, a non-violinist, could replicate the gesture. There is an aspect to these pieces, with the weight and importance of movement as such placed in them, for which this could be for a moment considered. But thinking and taking the holistic perception of the music, these gestures do not come just from movement as such. They are an extension of exploring and deepening the gestures within the embodied spectrum of ‘movements determined by the canonic demands’ and then extruding their inner nuances to the surface.<sup>240</sup> This material and movements are not random, they are organised sequences with a high level of unpredictability once they enter into the system of coarticulation with their neighbouring events in pieces that are composed ‘ ”against the idiom” in order to forge extremely individuated modes of expression that run contrary to habitual expectations’.<sup>241</sup> Because of demands that have frequent contradictions and the resulting sound is unpredictable or sometimes even absent, developing a specific set of performative awareness, alertness, attention, and agility is necessary. In that respect, before and in addition to its concepts of sounding gesture and musical gesture as added value to perception of the performance, when performing pieces with complex overlaid demands, it is important to expand the vocabulary of understanding physicality and include thinking of gesture as material.

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<sup>240</sup> W. Luke Windsor, ‘Gestures in Music-making: Action, Information and Perception’, p.49.

<sup>241</sup> Ian Pace, ‘Notation, Time and the Performer’s Relationship to the Score in Contemporary Music’, in *Unfolding Time: Studies in Temporality in Twentieth-Century Music*, ed. by Darla Crispin (Leuven: Leuven University Press, 2009), p.165

## CHAPTER 5 Learning Methods, Rehearsal Processes, and Memorising Unfixed States

*'People get really upset about form if it doesn't quite cohere. Unity and stuff like that. There's no sound that anyone can make that really upsets anyone. We've heard all the sounds. But form really upsets people: if it doesn't make sense, if it doesn't cohere. It was perhaps tongue in cheek, but Christian Wolff said to me once that his definition of form was "one damn thing after another".'* – Philip Thomas<sup>242</sup>

In this chapter I will focus on the third *challenge area*, process and memory, that impelled me to find new rehearsal methodologies for how the mind and body can be trained to remember and embody complex and densely superposed material in music. The main discussion will be based on Dario Buccino's *Finalmente il tempo è intero n° 16*, which is a piece without a predetermined fixed form and therefore *becoming* only in the moment of the performance. In the final portion of the chapter, additional observations and examples will be drawn from the work on pieces by John Cage (*Freeman Etudes*), Miika Hyttiäinen (*Impossibilities for Violin*), and Evan Johnson (*Wolke über Bäumen*).

*Finalmente il tempo è intero n° 16* is a piece that does not have its one performance version and form, and all the material in it stands equal to each other. It is only in the moment of the performance, with philosophy and concept of *hic et nunc* (HN system), where the material starts to mould itself and one performative iteration of the piece emerges.<sup>243</sup> In my own process of learning it, the piece demanded that I reshape my approach to practice so that every detail of its rich but complex nature

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<sup>242</sup> Barry, Robert, *Visceral Communication, interview with Philip Thomas* (February 4, 2020) <<https://van-us.atavist.com/visceral-communication>> [accessed 25 May 2023].

<sup>243</sup> HN system has been explained in detail in chapter 2.1.1.

would still be present without any gaining dominance, where ‘the point is not to render ideas less complex – the point is to make the complex clear’.<sup>244</sup> The first encounter with the score of *Finalmente il tempo è intero n° 16* raised questions for me of where to start the working process, and it even became clear that I would also have to address the issue of how to begin the piece in performance.

Buccino developed a specific notation that facilitates his non-hierarchical material to remain free of fixed form, while still managing to give a frame within which the performer can begin to act. The notation and symbols are not events or specific sounds, but rather circumstances and states that will lead to the emergence of those events and sounds out of their combinations created in the moment of the performance.<sup>245</sup>

		Tempo	Spazio							
			CLOSE! CLOSE!							
			MUTE Action ≅	MAGICAL Cont. ≠	BACK Voice ≅	TAIL Piece ≅	VOICE ≅	PAD ≠	SCRIBBLE ≅	MULTI Voice ≠
RH	ACTION		X	↑	*	*	⊂	⊂	⊂	⊂
	PRIN		HN	HN	HN	HN	HN	HN	HN	HN
	Bow		HN	HN	HN	HN	HN	HN	HN	HN
	ORNT		HN	HN	HN	HN	HN	HN	HN	HN
	Strng PRIN		TST! PTC!	HN	HN	HN	TST	HN	TST! PTC!	TST! PTC!
	DYNAMICS		□!	cm! cm	cm! cm	cm! cm	cm! P! P ee!	F!	P! P	P!
LH	ORNT		HN	HN	HN	HN	HN	HN	HN	HN
	EVYN		HN	HN	HN	HN	HN	HN	HN	HN
	TRCN		HN	HN	HN	HN	HN	HN	HN	HN
	FINGER		2 2 4 1	III II	IV	IV	IV	IV	IV	IV III II I
	STRNG		IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I
	RANGE		ff	ff	ff	ff	ff	ff	ff	ff
	DYNAMICS		PZNT! DNMC DNMC! ee!	cm	PZNT! DNMC	DNMC! ee!	cm	D V!	V V!	P! □!
EC	GRATA		HN	HN	HN	HN	HN	HN	HN	HN
	Tacet		HN	HN	HN	HN	HN	HN	HN	HN
	Vocal		HN	HN	HN	HN	HN	HN	HN	HN
	IGNTN		HN	HN	HN	HN	HN	HN	HN	HN
	Body		HN	HN	HN	HN	HN	HN	HN	HN

Figure 5.1: Dario Buccino’s *Finalmente il tempo è intero n° 16*, page 9

<sup>244</sup> bell hooks, *Remembered Rapture: The Writer at Work* (New York: Henry Holt and Company, LLC, 1999), p.40.

<sup>245</sup> For more on Buccino’s approach and concepts see: Dario Buccino, ‘Writings: Articles’, (2006-2009), <http://www.dariobuccino.com/creative/works-eng/writings-eng/articles-eng.html>

This approach is a sharp departure from a more conventionally written western classical violin pieces with the highest level of difficulty, there is a linear passing and sequencing of events that makes for graspable development of coarticulated gestures, anticipation, and performative holistic perception of the flow of the piece. For example, in some of the fiendishly demanding solo pieces from the standard repertoire such as Paganini's caprices, or the Chaconne from Bach's D major Partita, or Ernst's *The Last Rose of Summer*, even the trickiest of passages have their left- and right-hand actions linked to a common goal of expressing pitch-based melodies. The material flows in a forward-moving linear direction. Sections of works that have to be extracted for honing their execution, once practised and perfected, fit within the whole piece, in the exact same state and sounding the same way as when they were practised. The directionality of the music allows for memorisation and anticipation of exact sequences of hand actions and of the sounding results of those actions (pitch and sound quality and characteristics combined) in a linearly constructed interpretation and enables linear memorisation of the piece as a whole. The more complex and excessively dense writing encountered in my focus repertoire (in the works by Johnson, Cage, Cassidy, and Ferneyhough) already presents a challenge to coherent construction of the sequencing, and thus to memory, given the unpredictability of the outcome once interpretative actions are put in motion. Construction of sequencing and anticipation of events through memorisation of the whole performative outcome, becomes infinitely more difficult once even the linear passing of events is removed from the structure (as in the case of Buccino, but also Hyytiäinen). The "unpredictability of outcome" in all these cases relates to the relationships between techniques of playing and sounding, mapping of the instrument and positions, and gestures.

While works of Cage, Hyytiäinen, and Johnson present challenges to process and memory to those accustomed to the more standard repertoire, it is still possible to find a hierarchy of material within each of the pieces. This greatly helps in how the process is guided, and how — although there are unpredictable elements that can influence the outcome in the moment of the performance — understanding the hierarchy serves as a safety net. In the following part of this chapter to further probe the challenges of pieces in which there is no hierarchy of the material I will focus on Dario Buccino's piece *Finalmente il tempo è intero n° 16*.

## 5.1 Process

With *Finalmente il tempo è intero n° 16*, Dario Buccino sets up a hovering web of possibilities. The score does not provide information for only one way to play the piece but contains a super-abundance of information that must be always held in mind when performing. Predetermining a specific sounding result is not possible, as relations between material, instrument and performer do not rely on an embodiment of actions linked to a specific sounding result. The score does not include fixed pitch material and the left-hand relation to the instrument is susceptible to change through principles of the HN system, obscuring the more conventional mapping of the instrument based on pitch location. Furthermore, Buccino creates an extreme situation of decoupling the hands, their independence from each other, of the hands from the body, and the separation of actions within each hand, all further destabilise the process of embodying. These aspects hinder almost any possibility to imagine the outcome prior to its actual sounding, as discussed in chapter 2.1., but importantly



they also radically change the approach to the learning process and memorisation.

The score of *Finalmente il tempo è intero n° 16*, rather than representing one fixed whole, is a state charged with potentials that with each interpretation become a unique whole. The fine distinction between the “possibility” and the “potential” is also important here. There are infinite number of possibilities for each identity and how their parameters can be combined and played, which makes it possible for any combination to surface in any of the performances.<sup>246</sup> As a result, the process of learning and preparing the work must be a process of recreating the performance situation. This state of mind goes against “practice room training”.

Practice room training relies on learning through repetition self-critique (invoking what I term a practice-brain) to fix and determine the best solutions (technical and of aesthetic interpretation) that will, in the moment of the performance, be placed in motion. The performance state of mind (the performance-brain) trusts the process the practice-brain did, and in the moment of the performance does not dwell on technical issues and possible imperfections but utilises all the pre-fixed and practised material to deliver the current best possible interpretation. Unlike the practice-brain, which is trained to highlight any mistake or even potential mistakes, and demands from the player to stop, examine, evaluate, repeat, and iron them out, the performance-brain will even consciously give extra effort to hide any shortcomings and, relying on embedded coarticulation and anticipation, deliver the practised interpretation.<sup>247</sup> Rolf

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<sup>246</sup> On what constitutes identity in this case, see chapter 2.1.1.

<sup>247</sup> In linguistics, David A. Rosenbaum explains coarticulation through the example of ‘anticipatory lip rounding’ to ‘illustrat[e] a general tendency that any theory of serial ordering must account for – the tendency of effectors to coarticulate’; he continues to define coarticulation as ‘the simultaneous motions of effectors that help achieve a temporally extended task’. David A. Rosenbaum, *Human Motor Control* (San Diego: Academic Press, 1991), p.15.

Inge Godøy gives further context to coarticulation in music performance practice by listing principles that includes ‘anticipatory cognition’ as a principle of ‘both planning ahead and of actually moving effectors in place before they do their job’,<sup>248</sup> Godøy also speaks about the ‘goal postures or keyframes’ that are specific action trajectory targets related to producing sound and playing music, and ‘contextual smearing’, which implies that there are no clear boundaries between ‘the atom events are made unclear both in the gestures and in the sound, or both in the production and in the perception’.<sup>249</sup> Coarticulation and anticipation that are key elements in preparation and interpretation of most music are, however, absent in Buccino's concept of *hic et nunc* music-making.

With *Finalmente il tempo è intero n° 16* there was a need to develop a third type of mental state, *a state of perpetual process of the performative situation*. Different from the improvisation state of mind, although also characterised by the necessity for high alertness, this is a state where mind and body know in advance each parameter that must go into the performance but must also consciously refrain from any planning, decision making, and anticipation not only prior to the exact moment of performance and throughout the performance. In this mindset it became possible to be ready to present a form without ever experiencing it prior to the performance.

It is, simultaneously, crucial for the performer to clearly refrain from succumbing to an improvisational mindset. Although the outcome of each performance can be completely different, everything about the piece is fixed through the instructions set

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<sup>248</sup> Godøy, pp.72-73.

<sup>249</sup> Godøy, pp.72-73.

up in the score. Once completely embodied, the moment of the performance is organic, and thus can appear and evoke for the audience the impression of improvisation. Buccino is aware of this effect and considers it the moment when the performer starts to reach the full potential of interpreting his works. Playing *Finalmente il tempo è intero n° 16* is therefore a process where *practice ≠ rehearsal ≠ performance*.

Considering that my approach to the piece advocates for a continuous process, describing how I achieved it needs to be laid out through steps as they were occurring. To be able to create and work within a perpetual process of performative situation, I firstly had to fully understand the score, its purpose, and all the symbols of Buccino's specific notation.

I received the first version of the score on 9 December 2019; the final score arrived on 14 December 2019. The premiere of the piece was scheduled for 25 February 2020. During the first day of working with the score, I first had to understand how Buccino uses space and time as parameters, which I previously encountered only as concepts in the initial two-day exploratory working session with Buccino.<sup>250</sup> In *Finalmente il tempo è intero n° 16*, time is a parameter of the non-hierarchical structure that is defined but non-fixed or binding. To this, Buccino adds space as a parameter with a similar behaviour.

The space as parameter is present in the piece in three forms:

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<sup>250</sup> The initial two-day working session took place in Milano (Italy), Buccino's city of residence, on 10 and 11 April 2019. The work with Dario Buccino comprised of conversations about his compositional practice and process, notational language and symbols he has developed, ideas and directions for the piece. Furthermore, our practical work during this session was based on initial explorations of two pages of material he has prepared for this occasion but also already deferring from them. Thus, already from the very first contact the "going beyond of the score" principle was established as a norm.

1. The score is spatially organised (see chapter 2.1.1.)
2. Spatialisation of the body:
  - a. Spatialisation of performer's inner body on the level of notated (in HN style) distribute of centre for sourcing energy and peripheral (the limbs)
  - b. Spatialisation of the instrument itself: mapping of the instrument, both the violin and the bow, in relation to points that can be sound sources
  - c. Spatial relations of the performer's body and the body of the instrument understood as one collective body
3. Use of physical space in which the performance is taking place as a musical element and participant in construction of the form of the piece.

The temporal element is conceived in a similarly non-linear way. Whilst Buccino gives rough lengths of time per page, the durations of identities within the page and the sequence of their appearance are subject to HN and the moment of performance. Buccino adds that these durations can also be influenced by HN if the performance situation leads to it. It is also possible to come in and out of the same identity multiple times within the bar. Lastly, Buccino adds that it could also be possible to jump back and forth between pages (again if HN determinants this occurrence in the moment of the performance).<sup>251</sup>

With a better grasp of the basics of the score and with an understanding of the fundamental concept of *hic et nunc* (HN), the next imminent step in my work process

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<sup>251</sup> This is further information that has been repeated in almost every conversation and work session with the composer, but also given as explanation during a seminar-lecture about the piece we jointly gave on 2 April 2022, in Conservatorio di Palermo in Italy.

was to learn the meanings of the score's many idiosyncratic symbols. The initial score didn't include a legend, and it became evident in conversation with the composer that it would take a while for this list to be compiled for the final score<sup>252</sup>, so my next step was to compile the list of symbols myself (see figure 5.1.1), using my notes from the initial working session and the score.

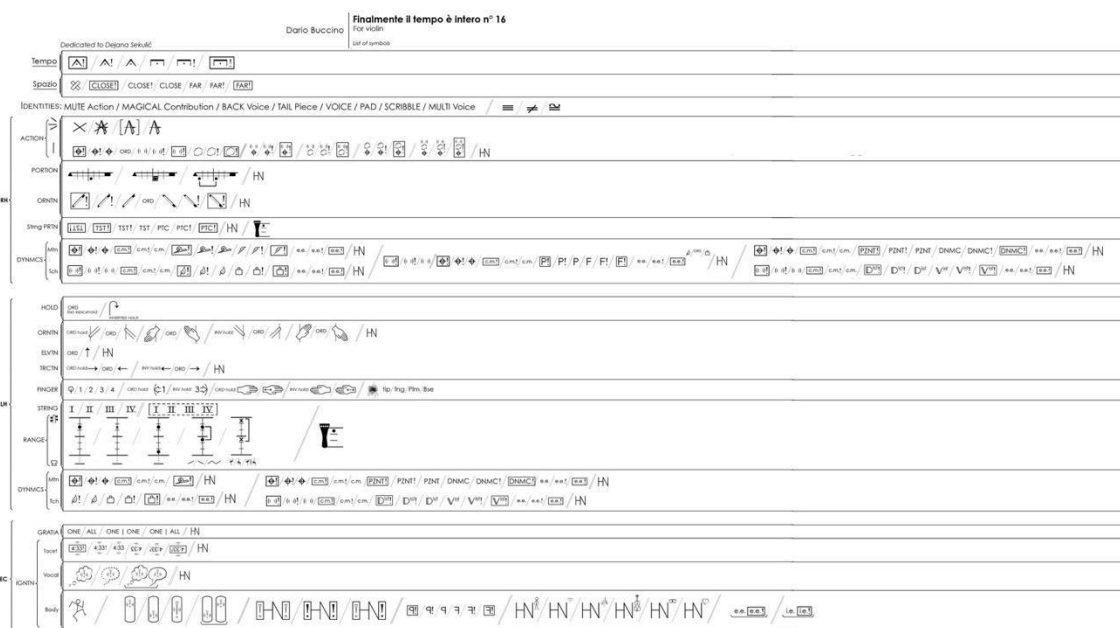


Figure 5.1.1: self-compiled list of symbols used in preparation of the piece, December 2019

As it can be seen in the example of page 9 (figure 5.1), the HN symbol can appear in almost any parameter of any sub-bar. Each HN stands for all the potentials and gradations of that specific parameter. Full table list of definitions of symbols I derived from the notes from the two work sessions with the composer and subsequent conversations has been presented in chapter 2.1.1, and can be seen in figure 2.1.1.2.

<sup>252</sup> The three-hour working session took place on 23 December 2019, via Skype.

Learning Buccino's specific notation was a necessary microscopic investigation into the piece, but it also set off a change in macroscopic perception of the piece's material, its potentials, and how to approach the challenge of interpretation. As George Armitage Miller writes, 'in our perception there is a transformation or "re-coding" of complex sensory information into overviewable units, reducing the memory load and enhancing our ability to cope with large amounts of information', and this was exactly the effect my first step in the process, decoding of meanings of the symbols, achieved.<sup>253</sup>

To further help me navigate the score in practising, I chose to colour-code the score. This is a practice I employ often, especially in contemporary music pieces, and is a widespread practice in which each performer creates their own 'structured colour code' system.<sup>254</sup> Although I try to be consistent with a general colour system applicable across different pieces for the sake of fast recognition (for example, green will often be used for *sul ponticello* bow placement, orange for *sul tasto*, while light blue would be assigned to area of *ordinario* bow placement), tuning the general system to the necessities of a specific piece amplifies the impact. With the number of particularities and detail in *Finalmente il tempo è intero n° 16*, I also realised that having too much colour would diminish the purpose of using this method for visual organisation. It was also important in this case colour-coding that did not start to place more importance on some information than others, thus creating hierarchy.

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<sup>253</sup> George A. Miller, 'The Magic Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing information', *Psychological Review*, 63.2 (1956), pp.81–97.

<sup>254</sup> Ine Vanoeveren, 'Confined Walls of Unity: The Reciprocal Relation Between Notation and Methodological Analysis in Brian Ferneyhough's Oeuvre for Flute Solo' (unpublished doctoral thesis, UC San Diego, 2016), p.87.

The solution I came up with was to use some general markings with ballpoint pen and thin highlight, and to give thick highlighted stripes to the parameter of left- and right-hand DYNAMICS. I found that the level of detail in respect to dynamics being applied individually to speed of motion and touch, volume, and affection of motion and touch was more unfamiliar, thus I found that this approach created an equal balance with aspects that felt more graspable. The code I created was:

- Red ballpoint: diverse specifics including time and space, and also details about the orientation of the hand position, when traction or playing with the finger under the string was determined, glissandos
- Thin orange highlight: bow portion
- Thin yellow highlight: endocorporeal, with use of red ballpoint when need arises
- Thick green highlight: dynamics–movement–speed for both right and left hand
- Thick pink highlight: dynamics–touch–weight/pressure for both right and left hand
- Thick yellow highlight: dynamics–volume for both right and left hand
- Thick green-orange highlight: dynamics–movement–affection for both right and left hand
- Thick pink-orange highlight: dynamics–touch–affection for both right and left hand.

The result of this process can be seen in Figure 5.1.2.

Tempo	6 T.U. ≈ 2'							
Spazio	CLOSE FAR, 4° ↔ 5°							
	MUTE Action ≈	MAGIC Cont. ≈	BACK Voice ≈	TAIL Piece ≈	VOICE ≈	PAD ≈	SCRIBBLE ≈	MULTI Voice ≈
RH	ACTION	⊕ ON 3°	Cont. Act.	Act. 30	1°	Int. Arch.	Int. Act. 2°+3°	Int. Act. 1°+2°
	Bow	OD → KA	KA Tel.	OD → KA	HN	OD → ORD	OD Tel.	OD → ORD
	String PRIN	TST PTC!	HN	ILSL 4°	HN	TST 1°	TST PTC!	TST 1°
	DYNAMICS	P! 1°	cm, cm	cm, cm	cm, cm	cm, F?	cm, cm	F! 2°
LH	ORNT	HN	HN	HN	HN	HN	HN	HN
	ELVIN	HN	HN	HN	HN	HN	HN	HN
	TRCN	HN	HN	HN	HN	HN	HN	HN
	FINGER	IV III II I	HN	HN	HN	HN	HN	HN
	RANGE	IV III II I	HN	HN	HN	HN	HN	HN
DYNAMICS	PENT PENT	cm!	PENTONIK	HN	2°+3°	PENT PENT	3°+2°	PENT PENT
EC	GRATA	HN	HN	HN	HN	HN	ONE ONE	HN
	Tacet					EE:7		
	Vocal					A BIT Audible		
IGNIN	Body				HN			

Figure 5.1.2: Colour-coded page (no.6) of Dario Buccino's *Finalmente il tempo è intero n° 16*

The next step in the process of work was finding a system for practising in which each of the parameters could be explored sonically, gesturally, and with regard to the parameters of energy distribution, but without this leading to a fixed pattern or melody that would be memorised. While Buccino speaks about his music being based in a melodic concept, this melody is not inherent nor hidden in the piece itself. It is the concept of melody and *melos*<sup>255</sup> that he desires each performer to seek. This hidden melody is revealed to the performer in the moment of performance through how the material is interacting among itself (different identities) and with the space

<sup>255</sup> Dario Buccino uses the word *melos* to explain his approach and his own understanding of in what way his music is melodic. He pairs *melos* with melody in his explanation and emphasises that of course *melos* in a musical context means melody, but that that meaning came later in history. His liking for the word as a good container to explain his approach is due to its ancient Greek meaning of 'limb' or 'body part'. This in turn has its origins in the Proto-Indo-European root *\*mel-*, which stands for 'part of a whole', and which relates to the notion of combining such parts. The later coincidence of meaning between *melos* and 'melody', he says, is only a plus.



and with it shaping the form. It is then that the performer must pursue the melody and its development in eight different ways through individual development of each of the identities and through the overall flow of the piece. In this sense, the process of practising is not a process of learning a melody but of preparing oneself to continuously seek a conceptual melody, enacting *melos*.

What this means for the technique of playing and practice is that even if the outcome might be perceived with the elements of ‘mass-spring systems’ and of ‘contextual smearing’,<sup>256</sup> ‘where the sounds of successive excitations linger on and fuse into more composite sonic objects’,<sup>257</sup> every atom event must remain clearly individual, unattached to the other, keeping its own full spectrum of characteristics and always ready to change. This resulted in developing sets of mechanisms for small individual components to be explored, to be “practised”, but in a way whereby none of these components gets fixed nor becomes dominant. Arriving at a dominant component would lead to hierarchisation of the material, and with any sign of this the intention of the piece falls apart.

In my approach I relied on the following set of mechanisms:

- Practising each parameter through all of its degrees, as a separate variable to grasp some of its potentials and to ensure independence of hands from each other and from the body. My experience has proven that there is always more potential that can be individually anticipated; there is always some novel or

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<sup>256</sup> In describing coarticulation principles in music, Rolf Inge Godøy talks about contextual smearing and mass-spring models. The former is as a happening where the borders between individual actions of production and perception of sound become blurred and these individual atom events lose many of their individual characteristics and features. The latter refers to uneven use and distribution of energy when producing sound.

<sup>257</sup> Godøy, pp.72-73.

different outcome that appears in the moment of performance from unexpected connections between these parameters. This mechanism was applied on each element of the right hand separately, on elements of the left hand, and elements of the endocorporeal actions separately. Some practising was also done without an instrument, but soon it became clear that was not a good approach. Even if only working on inner endocorporeal energy influences, having the instrument in the hands changes the body itself. The instrument is part of the body as much as the body becomes part of the instrument. Recording in figure 5.1.3 shows an example of working on moving the right hand by not focusing on mentally sending energy directly to the outer limbs to move but rather focusing on inner body, a stomach area, as the source that would eventually create and result in some movement.

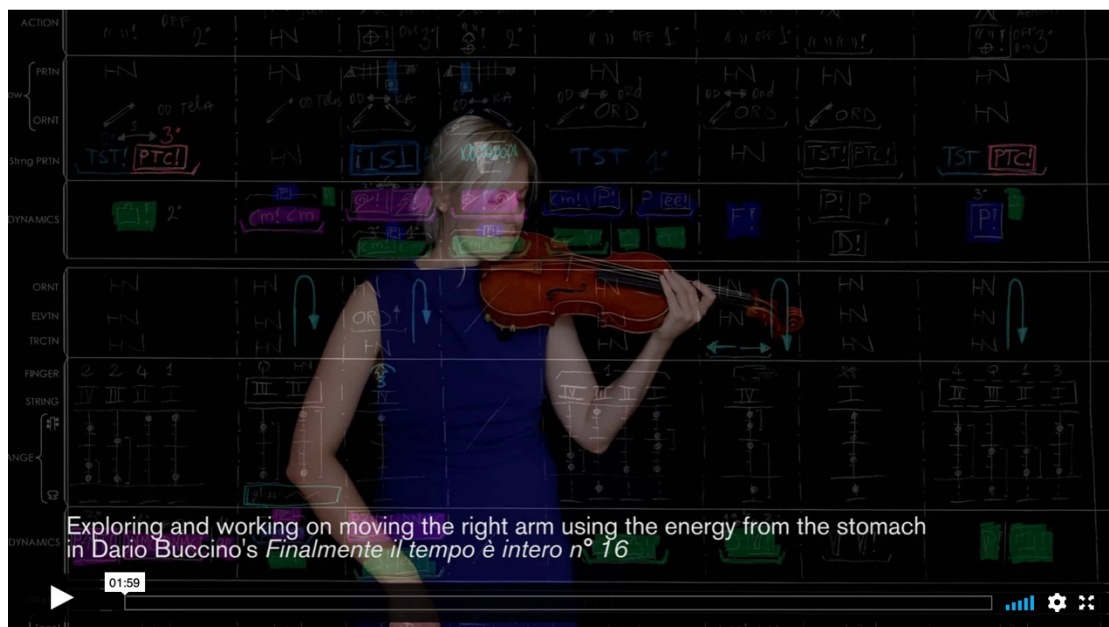


Figure 5.1.3: Exploring and working on moving the right arm using the energy from the stomach (video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_5\\_fig\\_5\\_1\\_3.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_5_fig_5_1_3.html) )

The only parameter that is truly not possible to explore on one's own is the GRAZIA parameter, as this parameter demands people to be present. I

resorted to try-outs that included imaginary people and imaginary energy exchanges (especially in the next phases with mechanisms working on sub-bars/identities, bars/pages, and piece-runs), but always with understanding that this is not the real effect nor experience – and my performances have proven this to be correct. The following recordings (figure 5.1.4 and 5.1.5) are examples of two of the processes in practising. The parameters in these examples are:

- in 5.1.4: Right Hand – Action – Vertical:  $\textcircled{\circ} / \textcircled{\circ}! / \boxed{\textcircled{\circ}!}$
- in 5.1.5: Left Hand – Dynamics – Touch – Weight/Pressure:  $\textcircled{\circ} / \textcircled{\circ}! / \boxed{\textcircled{\circ}!}$ ,

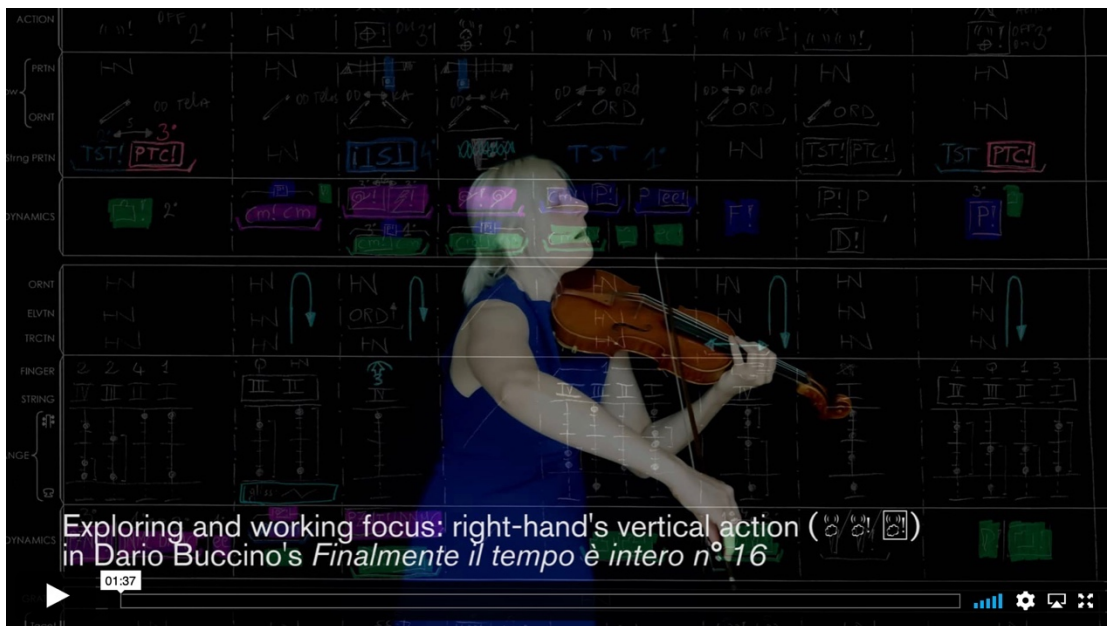


Figure 5.1.4: Exploring and working focus: vertical action in the right hand (video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_5\\_fig\\_5\\_1\\_4.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_5_fig_5_1_4.html))



Figure 5.1.5: Exploring and working focus: left-hand touch, weight/pressure (video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_5\\_fig\\_5\\_1\\_5.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_5_fig_5_1_5.html) )

- Practising individual sub-bar (identity) separately, as found in the score, without application of Tempo (duration). There is a gradation in practising with this mechanism:
  - Start by practising the sub-bar (identity) only by activating fixed parameters
  - Add HN parameters for one area at a time, while keeping the others intact
  - After playing for some time the sub-bar with all fixed and HN parameters active, introduced a change of only one parameter
  - Try to consciously return to the state before the change of one parameter and then change another one
  - After playing for some time the sub-bar with all fixed and HN parameters active, start changing one by one all the HN parameters

- After playing for some time the sub-bar with all fixed and HN parameters active, start changing one or multiple HN parameters
- Practise the same identity from another non-consecutive page, with different parameters. Concentrate on understanding and registering the differences and nuances; think about whether there is a noticeable progression gap in what could have happened in the pages skipped.
- Attempt going from the beginning to the end only with one identity, applying Tempo (duration) proportions but not full durations. It is important not to plan or anticipate a melody line, but to notice how it builds on its own from whatever the active parameters and HN bring in the moment.
- Conscious “non-memorisation”: consciously avoiding memorising combinations of possibilities that sounded or felt good revealed itself as an important element in the process. It was especially important to train non-memorisation of relations between the appealing sounding result and gesture that produced it in the moment. What I tried to internalise were the sensations and experiences of how certain sounding elements and timbres *felt* and embodying that feeling as if it was sound. And separately internalising the feeling and sensations of energy and its potentials in relation to the feeling of thinking a gesture and making a gesture.

## 5.2 Memory

In the perpetual process and situation of everything in between, ‘without any fixity to hold on to, with no common grounds’,<sup>258</sup> in *Finalmente il tempo è intero n° 16* memory and memorisation also became a challenge. If there is no fixed form and everything is equally important, everything must be memorised without any order, but with the ability to create orders when triggered by the HN system.

The realisation that the form is a *potential of becoming*, and not one fixed iteration that must be learned, had at first a destabilising effect on my confidence in how to actually perform this work. However, through the processes of dealing with the material I established through working on the piece, I clarified that this in-between state created by non-fixities must be understood in fact as an armature that will hold and carry through all these unexpected aspects of the piece. Furthermore, this understanding brought the realisation that *Finalmente il tempo è intero n° 16* is like a maze. However, I cannot memorise one path through the maze, because there are multiple paths to take; I have to memorise the maze. Thinking about the piece with this approach brought back the needed confidence for performing the piece.

Because of its organic flow, hearing and seeing one performance of the piece does not fully portray the extent of this superabundant web of possibilities nor why “memorisation” is a challenge. The following examples show a fraction of the potentials, by examining combinations that arise from only three identities of one page. The examples in figures 5.2.1. to 5.2.3. work with MAGICAL Contribution, Voice, and Scribble from page 9.

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<sup>258</sup> Einarsson, ‘Desiring-Machines’, p. 15.

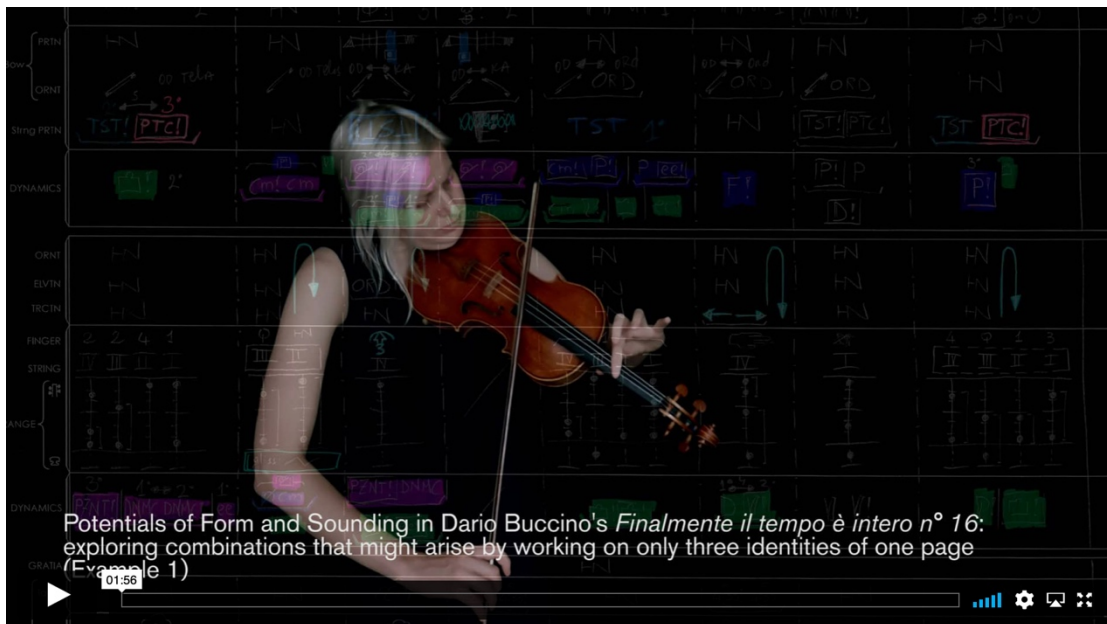


Figure 5.2.1. Exploring potentials of Form and Sounding in Dario Buccino's *Finalmente il tempo è intero n° 16*, on three identities of page 9 – example 1; video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_5\\_fig\\_5\\_2\\_1.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_5_fig_5_2_1.html)

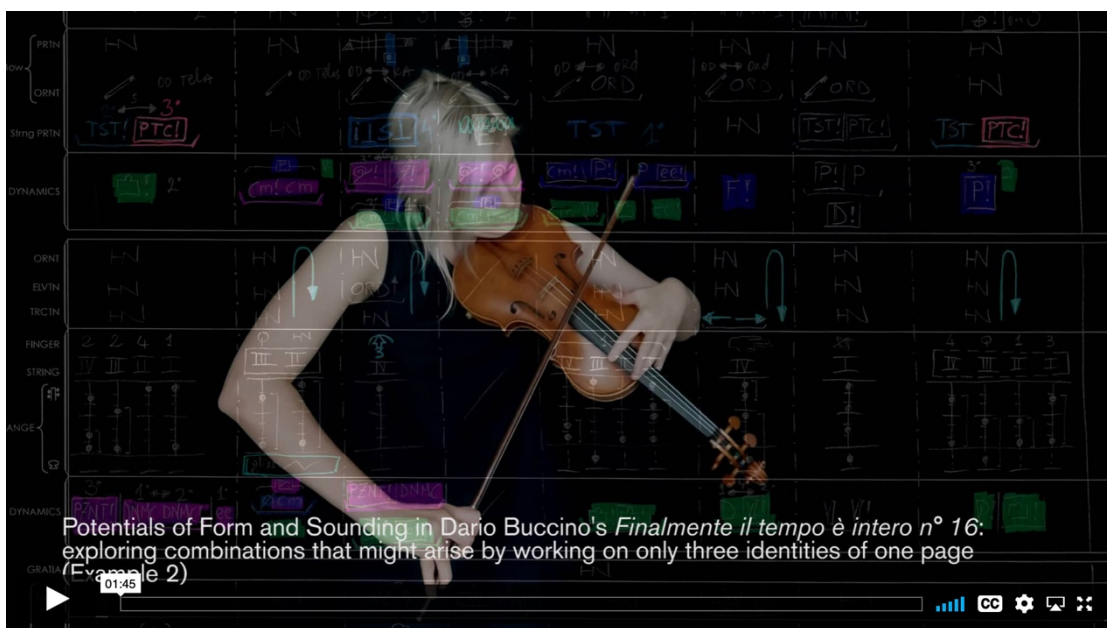


Figure 5.2.2. Exploring potentials of Form and Sounding in Dario Buccino's *Finalmente il tempo è intero n° 16*, on three identities of page 9 – example 2; video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_5\\_fig\\_5\\_2\\_2.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_5_fig_5_2_2.html)

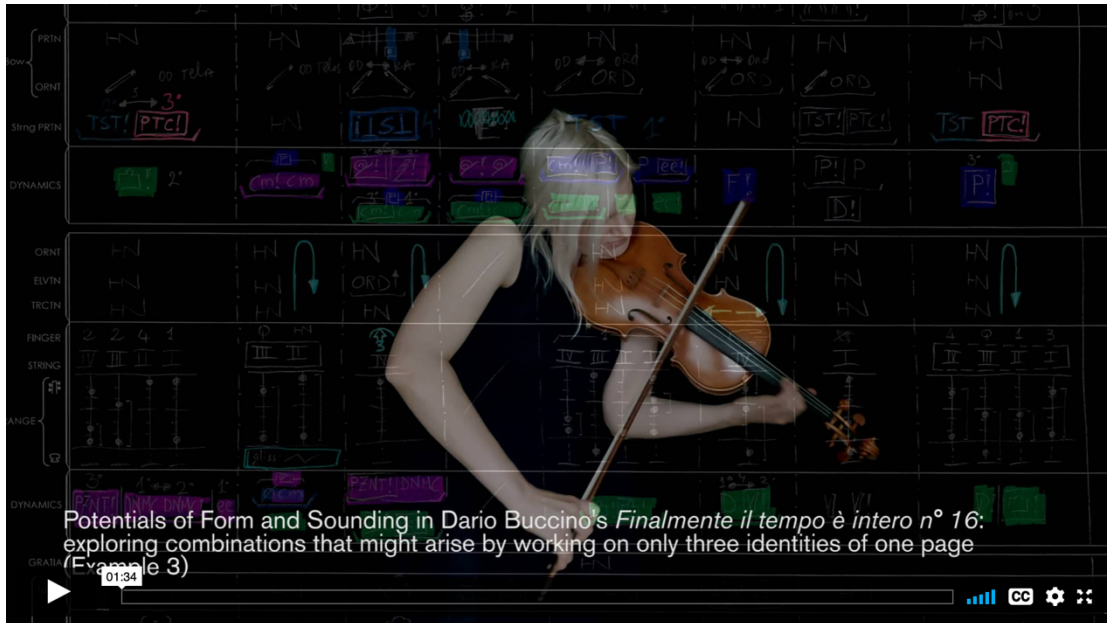






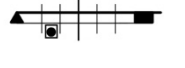


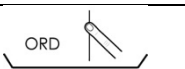

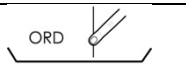
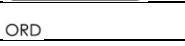
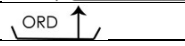
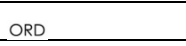
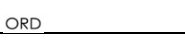

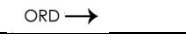





Figure 5.2.3. Exploring potentials of Form and Sounding in Dario Buccino's *Finalmente il tempo è intero n° 16*, on three identities of page 9 – example 3; video at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/chapter\\_5\\_fig\\_5\\_2\\_3.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/chapter_5_fig_5_2_3.html)

As can be seen in the videos, in example 1 (figure 5.2.1) the order of sub-bars/identities is **MAGICAL Contribution**, **Voice**, and **Scrubble**, in example 2 (figure 5.2.2) **SCRIBBLE**, **Voice**, and **MAGICAL Contribution**, and in example 3 (figure 5.2.3) **Voice**, **SCRIBBLE**, and **MAGICAL Contribution**. Besides the different order of identities, the parameters used in place of **HN** were also different:

		<b>Example 1</b>	<b>Example 2</b>	<b>Example 3</b>
<b>MAGICAL Contribution</b>	Action(contact)	⊕	⊕!	⊙!
	RH Bow portion			
	RH String portion	PTC TST!	TST TST!	TST!
	LH orientation		ORD	
	LH elevation	ORD ↑	↑	↑
	LH traction	← →	ORD	ORD
	EC Body			
<b>Voice</b>	RH Bow portion			
	LH orientation		ORD	
	LH elevation	↓	ORD	ORD



	LH Traction			
	LH hand orientation			
<b>SCRIBBLE</b>	RH Bow portion			
	LH orientation			
	LH elevation			
	LH Traction			
	LH hand orientation			

Although these examples truthfully demonstrate the potentials and the challenges at hand, they must also be regarded as misrepresentations. The recordings were made on the first attempt, without prior practising, but the orders of identities and all HN parameters were determined explicitly and in advance. In performance, it is the ‘hic and nunc’, the organic flow of the here and now that guides when and how material follows each other. This “unknowing” multiplies the difficulty of memorisation. It would not be impossible to think that a performer could, during the process of practice, decide and memorise a structure that can be repeated from one performance to another, but this approach would not do justice for the intention of the piece. Buccino often says that the only way to play his music correctly is to play it incorrectly.<sup>259</sup> However, any pre-fixed final structure is in case of HN-composition the highest level of untruthful interpretation, and that is the incorrect way of playing incorrectly. What Buccino means is that the content in the score is the starting point. For it to sound *correctly incorrect* the performer must go beyond everything that is written by using everything that is there as well as everything that is not there but that is contained in the HN. The angst of unknowing but trusting to find *is* one of the

<sup>259</sup> Dario Buccino has repeated this in every conversation we had, as well as in public talks.

driving energies which allows the HN system to enter the equation of *chance performance*.

Buccino does not specifically insist that his HN-based works are performed from memory, however the context of the piece strongly implies it. In fact, it needs it, as I will demonstrate through the experience of the premiere performance in the later part of the text.

In a piece of music in which there is only a *conceptual melos*, which itself is a forever present-melody ‘in a continuum of apprehension continua’,<sup>260</sup> where there is never nor could there be a retained melody that can act as a ‘re-presented melody’,<sup>261</sup> I had to reexamine *what* and *how* I retain the specificities of the score and channel their appearance ‘in a now’ and ‘all at once’ of perceivable ‘temporally extended content—the so-called spacious present’.<sup>262</sup> It was also challenging to retain or rely on any sense of sequenced and consistent gestural memory and mimetic memorisation. It is not only that there is no concrete and absolute return of sounding that is linked to a specific gesture, but there is also no fixed, choreographic trajectory between gestures themselves. The gesture itself is not linked to a fixed pitch; the energy and origins of a gesture can mutate, so it is also difficult to rely on mapping out the instrument (and here I mean both my body and my violin as individual instruments, and my body and violin as one combined whole). Furthermore, in a score with this amount of surplus of information, which is simultaneously fixed and

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<sup>260</sup> Edmund Husserl, ‘On The Phenomenology of the Consciousness of Internal Time’, in *Collected Works Volume 4*, trans. by John Bannett Brough (Dordrecht: Kluwer Academic Publishers, 1991), p.38.

<sup>261</sup> Edmund Husserl, p.38.

<sup>262</sup> Husserl, Edmund, *The Phenomenology of Internal Time-Consciousness*, ed. by Martin Heidegger, trans. by James S. Churchill, 2nd print edn (Bloomington: Indiana University Press, 2019), p.29.

not fixed, even “chunking” – a ‘relationship between continuity and discontinuity in our minds’ – becomes insufficient as a tool for comprehension since, in practice, when performed this piece relies on intentional, continuous, and unplanned discontinuation of material.<sup>263</sup>

As described in chapter 2.1.1, one page is considered equal to one bar. The bar is subdivided in eight sub-bars, each being an idiosyncratic identity. The order of sub-bars/identities on the page is always the same: MUTE Action, MAGICAL Contribution, BACK Voice, TAIL, Voice, PAD, Scribble, and MULTI Voice. Further to this, the four sub-bars/identities of the left side of the page/bar belong to the introvert aesthetics and the four sub-bars on the right side to the extrovert (figure 5.2.4). Buccino’s instructions state that the execution of identities does not and should not be performed in reading left to right (or right to left), but this order should be governed by the *hic et nunc*. The consistency in representation on the page that Buccino has proven to be beneficial in memorisation of the piece.

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<sup>263</sup> Godøy, p. 68.

The image shows a handwritten musical score for 'Finalmente il tempo è intero n° 16'. The score is organized into a grid with columns for 'Introvert / Disappearance' and 'Extrovert / Hyper Appearance', and rows for various musical elements like 'Tempo', 'Spostato', 'Action', 'RH', 'LH', and 'IC'. A yellow box highlights the first column, labeled 'SUB-BAR (identity)'. Red arrows point to 'vertical dash-dot sub-bar dividers' in the 'ORD' row. The word 'BAR' is written at the top in a purple box.

Figure 5.2.4: Overview of *Finalmente il tempo è intero n° 16* on the example of the first page

The solution I found, after the process of learning the language and symbols, was to employ photographic memory as a method to retain the score. The process of training photographic memorisation consisted of three main stages:

- Memorisation of each identity per page and the page as a whole
- Working with a page as a whole and memorisation of pages in order
- Refreshers.

The first two segments were carried out by creation of a memory game, each with its own set of cards. First, each identity is memorised on a page. The memory card set for this segment of work consists of one control card, which is the actual page, the placing-map, and the training cards. The training cards are the cut-outs of each sub-bar/identity column, but the name of the column is left out. The section of the page which contained the frame with identity names became the placing-map. Initially, I

thought that I would need two sets of sub-bar/identity cards for a mini-matching game to help memorise each sub-bar. However, isolating each sub-bar brought further clarity on how clear and individual each identity is. The final set (figure 5.2.5) for this first phase thus included the control card (figure 5.2.6), a placing-map (figure 5.2.7), and only one set of cut-outs (figure 5.2.8). The control card would be facing down or be out of sight. I would set the placing-map in front of me and mix and place facing down the sub-bar/identity cards. Drawing one at a time, the goal was to achieve as fast a recognition as possible upon flipping the card and then placing it on the map, in its correct slot (figure 5.2.9). Only after all identities were placed, the control card would be turned for verification.

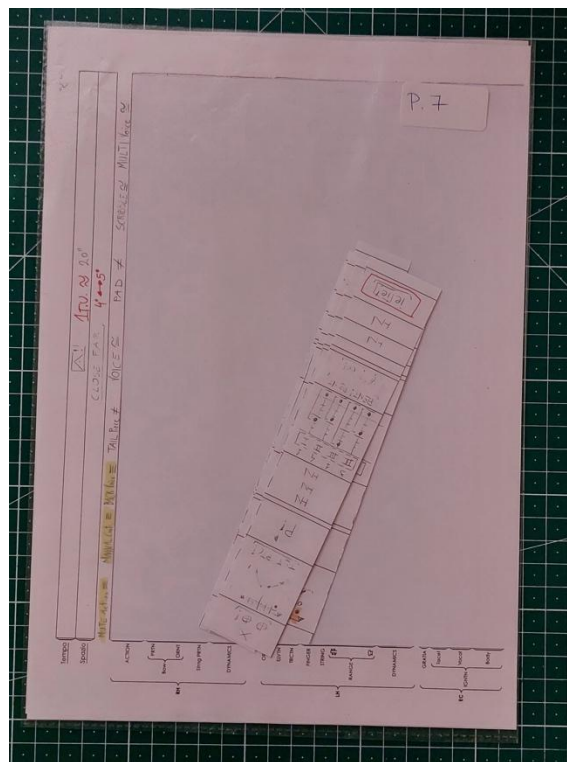


Figure 5.2.5: Memorisation package: a plastic folder (with page number written on it) containing the control card (under), the placing-map, sub-bar identity column cut-outs; on example of page 7

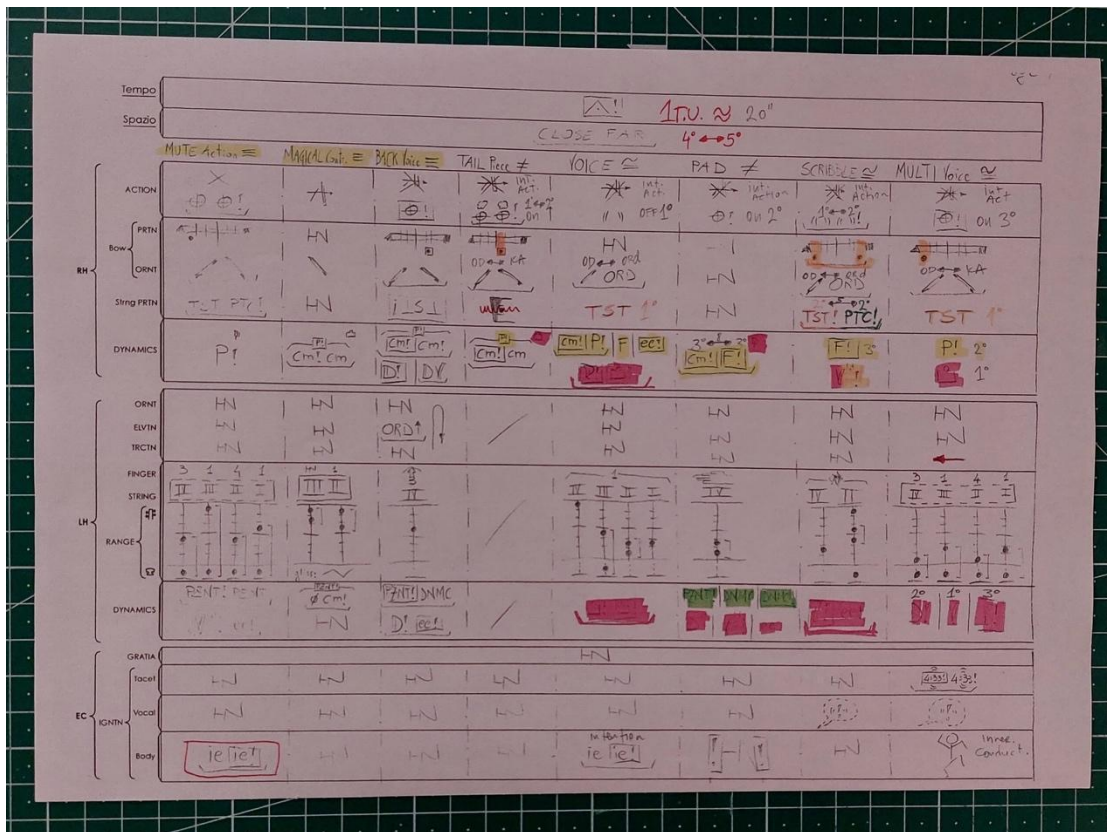


Figure 5.2.6: Example of page 7, control card

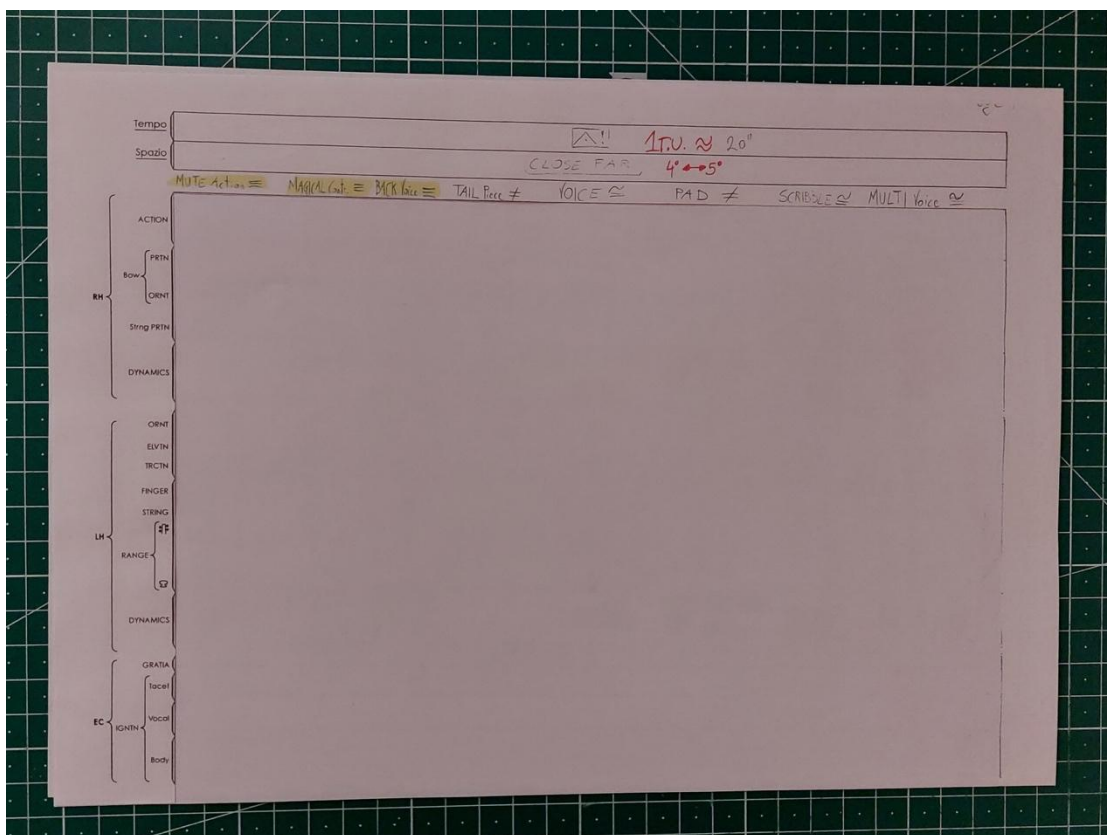


Figure 5.2.7: Example of page 7, placing-map



After working with this process for each of the 12 pages, I moved on to working with whole-page cards and memorisation of pages in order. The working set for this stage included 24 cards, each page with a double, with dimensions approximately 15x11cm. Page numbers were removed from the top right corner of each set of cards; they were kept in envelopes, featuring a “control” page with the number (figure 5.2.10).

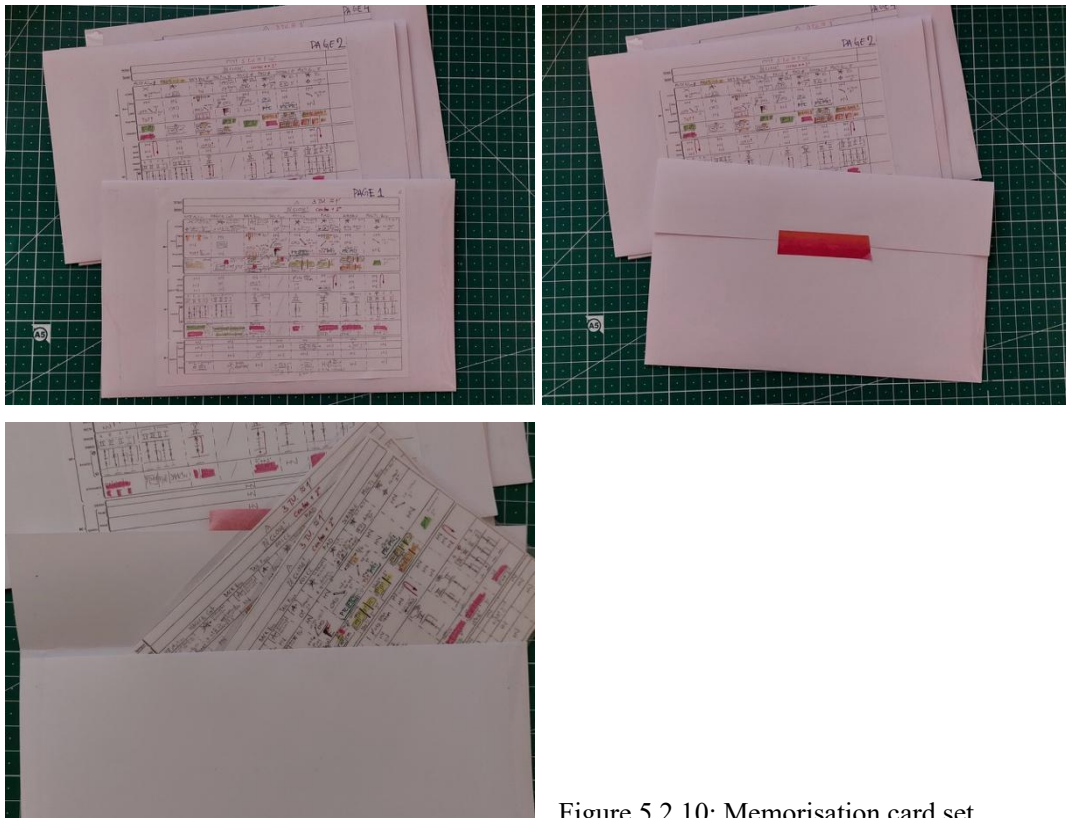


Figure 5.2.10: Memorisation card set

I would start this segment of memorisation by working with only two randomly selected pages at a time. Then the number of pages per turn grew until all 12 pages would be in play. In the first part of this process, in working with two and up to ten pages, the order of pages was random. I would first place the selected cards facing up (figure 5.2.11.a) and observe them, and then proceed to flip them to face down (figure 5.2.11.b). The playing set of cards would be mixed and then cards would be drawn and placed on top of its match (figure 5.2.12).





Figure 5.2.11: Memorisation setup: left (a): 4-page round, observation; right (b): 4-page round

In the final stage, using all pages, all control cards were facing down from the start, and they were placed in correct order. From a mixed stack of playing cards, one card at a time was drawn and placed on its match. The goal was to recognise the page in the shortest possible time and place the cards correctly in order. Control is done by flipping the control cards after all the playing cards have been arranged.

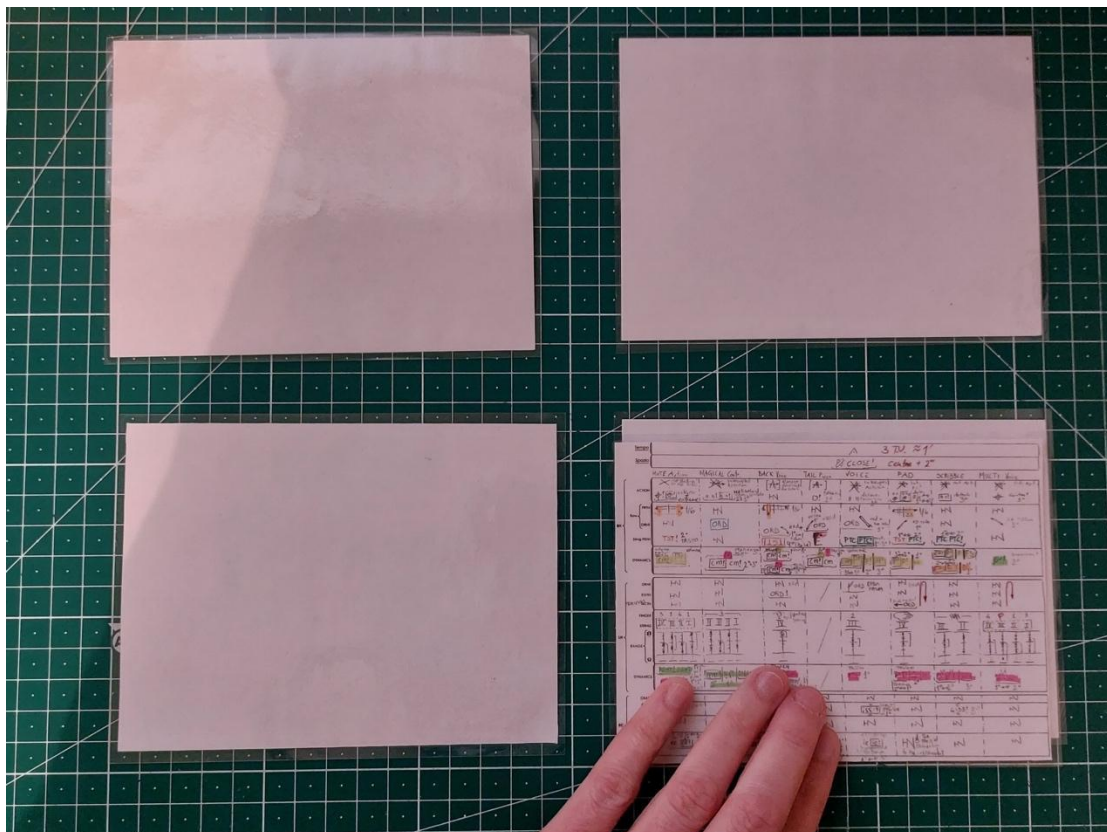


Figure 5.2.12: Matching

The last segment of memorisation, “refresher”, is a recurring segment. “Refreshers of memory” entail going through the last memory-game cycle leading to the day of the performance, followed by a final page by page run-through (reading from my original score) before the performance begins. When possible, I would also place the score in a circle, as it appeared to set the mood of spheric dispersion of the time-space setting that is used in the performance (figure 5.2.13).

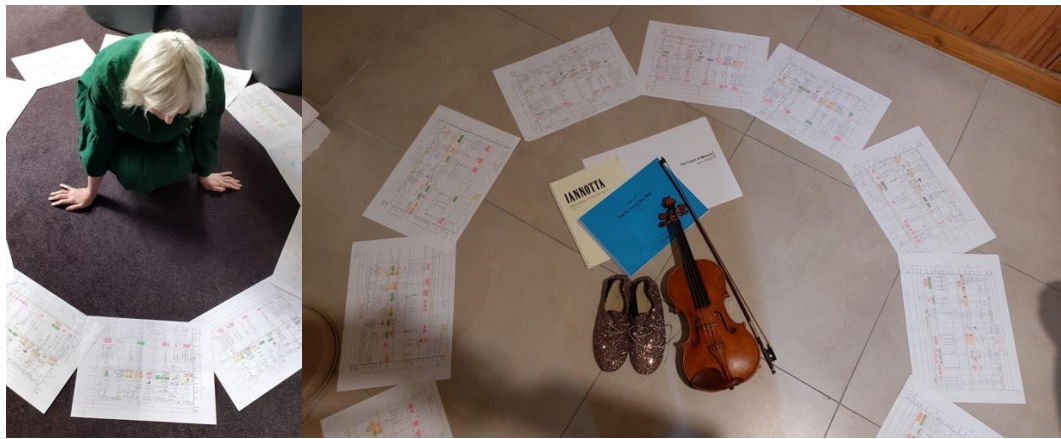


Figure 5.2.13: Pre-performance review of the score

Left: at Unerhörte Musik, 24 May 2022 (Berlin, Germany), photograph by Dario Buccino Right: at Prima Vera Contemporanea, 2 April 2022 (Palermo, Italy), photograph by author

At this point it is unclear what effect time will have on the memory: whether a pause in engagement with the piece would cause significant loss of information and material,<sup>264</sup> or whether the distance would have a more strengthening effect because of the specificity of the work and long, continuous, and intense working period spent with it. It is, however, certain that this memorisation process has opened a different way of learning and navigating densely written musical material. I cannot recite or sing the identity of a page in the way that I would be able with a difficult piece of a

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<sup>264</sup> From the first encounter with the piece and during the research period, I have kept the piece actively in the repertoire and performance circulation. Even with the pause in performances during the pandemic period, the work on the piece did not stop.

more common notation, learned through a more common process, but once the image of a page is in my head, I know that I *know* the piece.

Buccino remarked in our various conversations and in his public talks about the fact that there is often a two- or three-year period of preparation before performances of his pieces occur. In the case of *Finalmente il tempo è intero n° 16*, I had two months and a week to internalise and then “forget” about the score; to surpass it and perform the piece in the way Buccino intendeds HN pieces to come in the moment of the performance. Although the premiere of the piece went well as a whole, the shortness of time between receiving the piece and the performance can certainly be observed in post-premiere performance analysis. Two main elements that I identify as contributors to this observation are the fear of letting go of the score and the fear of “unknowing” the beginning.

The fear of not knowing how the piece is even going to start became apparent the more the day of the premier was closing in. Out of a desire to portray and present this piece with the justice and gravity I knew it deserves, I have naively fallen to a thought that it could be good to plan out at least some sort of back-up structure on how to begin once I am on stage. This back-up, which was there in case nothing came on its own, disabled me to let go to the moment and start with whatever material of the first page felt right; I was not truly in the here and now. The mind subconsciously went to one of the back-up ideas.

The fear of letting go of the score comes from the abundance of information it holds and the fact that all information must be always held at an equal state of alertness. In

conversations leading up to the premiere, Buccino re-confirmed that the piece does not have to be played from memory and that the score can be present, as it almost always is in performances of his music. My main concern was that although dispersing sheets of the score around the space can be seen as an element of scenography added to the performance, it has a counter effect on the organic movement in the space guided by the HN. To lessen this boundary, my solution was to spread multiple copies of the same page in various directions of the space, and in accordance with the Spazio indications (figure 5.2.14).

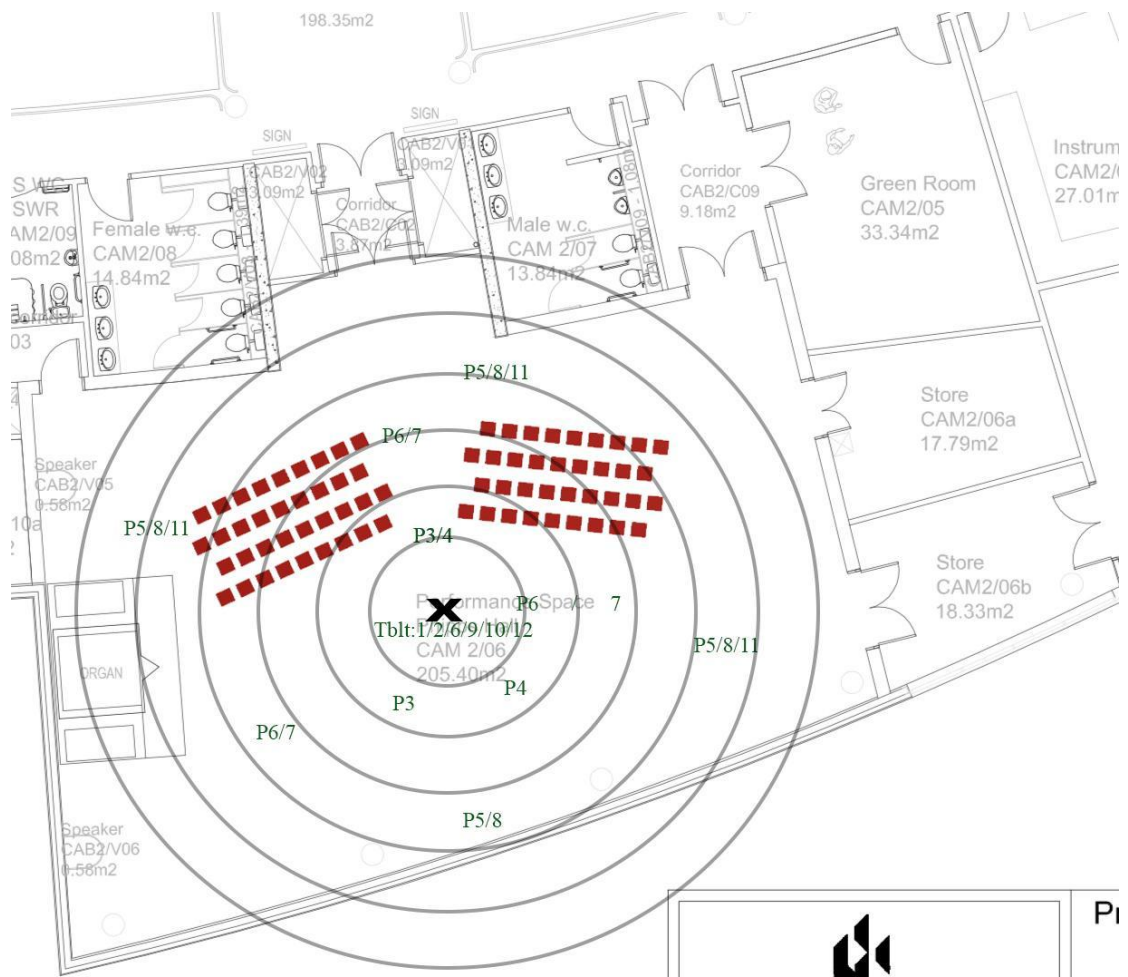


Figure 5.2.14: Diagram of the space and score placement

The idea was that this would allow me to “stumble” upon the right page in whichever direction I would move during the performance. However, even with this, once the performance started, I felt stuck and unable to *be* in the here and now. With the physical presence of the score, even if there only as a backup, it became apparent that the mind was automatically trying to find it, cling to it, and focus on the determinate, non-HN, elements present in it – therefore suddenly enacting hierarchy. There was no natural and organic flow. This internal struggle, which was not the conversation and engagement with HN but a real personal struggle that practically isolated me from my own performance, lasted for some minutes into the performance. Feeling that things were not going well, with strength innate through all the work invested, I finally let go and plunged to see what will happen. Buccino was not able to be present at the premiere but watching the recording he recognised this moment as a clear, real, beginning of the piece.<sup>265</sup> The “back-up” beginning and having the score present were false safety nets, and they created a reality that was far from genuine, and was extremely disorienting. Letting go of them allowed me to truly step into the piece. The performer in Buccino’s HN compositions in any case does not have the full power of their own decision; it is the conscious decision of letting go before entering the performance space that changes the dynamics, a moment which allows for the *hic et nunc* to happen. Every subsequent performance I did was done without a score present in the space and without any “back-up” beginning plan.

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<sup>265</sup> The recording of the premier can be seen in Artistic Portfolio, reference: AP3.1.

### 5.3 Conclusions as New Openings

Dario Buccino's *Finalmente il tempo è intero n° 16* is a simultaneously determinate and indeterminate piece of music. It is a determinately indeterminate form, which contains fixed elements that must not be fixed but interact freely, and only in the moment of performance result in one momentary fixed musical time-space. What this meant for me and my practice is that I had to build on Buccino's compositional process, compositional beliefs of *hic et nunc*, and chance composing. I have approached this performance practice as a chance performance.

The approaches discussed above allowed me to give multiple successful performances and make the recording featured on the CD.<sup>266</sup> However, after the premiere of the piece in February 2020, it was clear that this was just the beginning, only scratching the surface of this work. Therefore, in addition to three remote working sessions between March 2020 and July 2021, a correspondence continued with the composer.<sup>267</sup> What further crystallised in this period is that Buccino considers his notational language equally alive as his pieces. Rovelli says that 'fluctuation does not mean that what happens is never determined. It means that it is determined only at certain moments, and in an unpredictable way'.<sup>268</sup> In a work that considers "here and now" its core foundation, it is fitting that Buccino strives to

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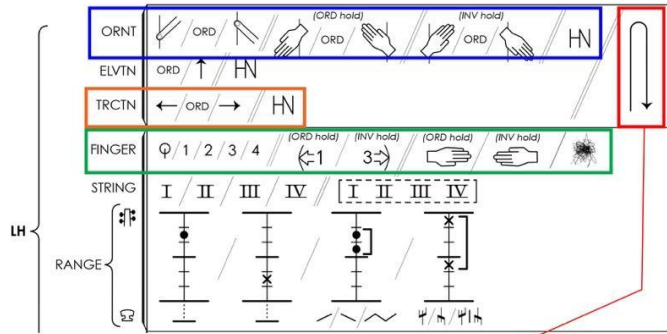
<sup>266</sup> CD "Temporality of the Impossible" featuring works from the research was released by Huddersfield Contemporary Records on 11 February 2022 (HCR26).

<sup>267</sup> It should be said that five days after the premiere took place, the pandemic of 2020 and lockdowns worldwide started. This meant no planned performances took place during the 2020 and almost the whole 2021. The recording of the piece for the CD was made in July 2021. Mentioned working sessions were done via skype in 2021, on 15 February, 20 June, and 8 July via Skype.

<sup>268</sup> Carlo Rovelli, *The Order of Time*, p.95.



From list of symbols by Dario Buccino (April, 2022)



From self-made list of symbols (December, 2019)

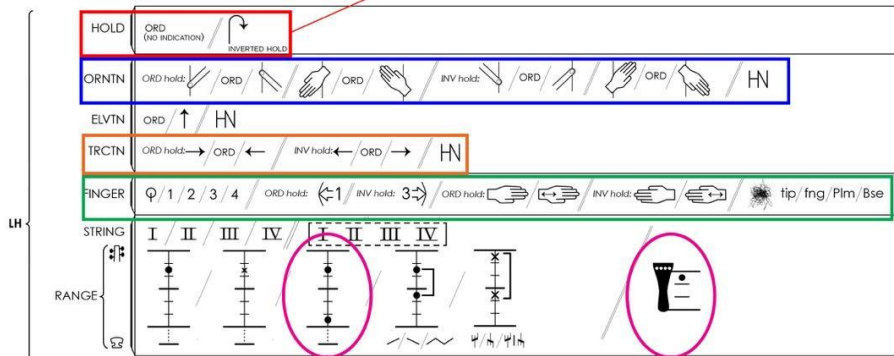
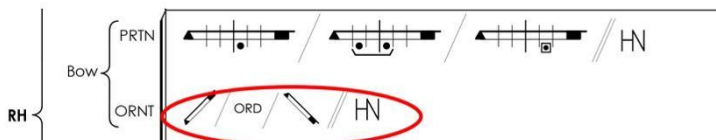


Figure 5.3.2: From left-hand list of symbols, December 2019 and April 2022

From list of symbols by Dario Buccino (April, 2022)



From self-made list of symbols (December, 2019)

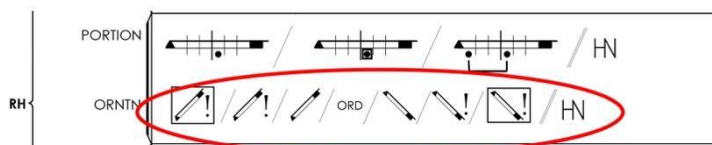


Figure 5.3.3: From right-hand list of symbols, December 2019 and April 2022



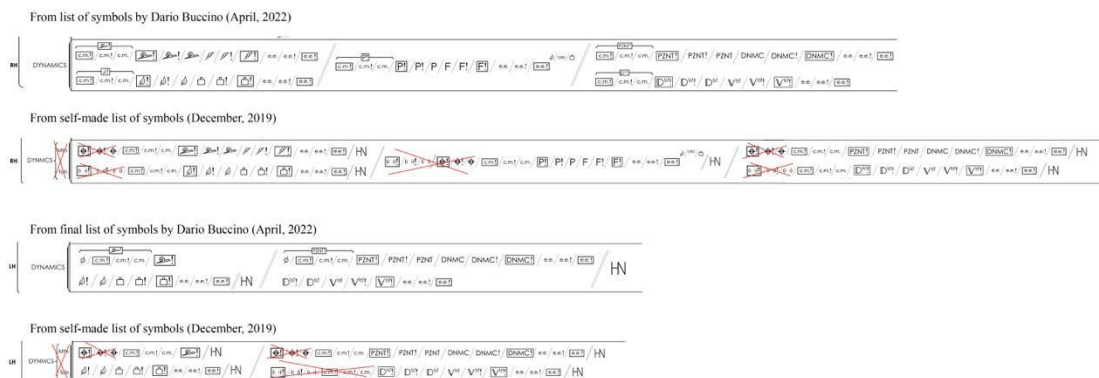


Figure 5.3.4: From Dynamics list of symbols, December 2019 and April 2022

The differences were not major, but they were many (figures 5.3.2, 5.3.3, and 5.3.4). The main change was that Buccino decided to combine certain symbols to allow their potentials to be less determined yet still present. One easily graspable example of this can be seen is the symbol for the use of the palm. Buccino reduced the two symbols (prescribing palm and base of the hand respectively) to only one symbol (as seen in the green square of the figure 5.3.2). Another example is the bow orientation (figure 5.3.3). Although in the score of the piece the symbol always appears in its one degree, in my list I have decided to include all the degrees of bow's angle as discussed in working sessions, as a reference to the available range for this action.

Perhaps the most significant difference was in the Body stave of the Endocorporeal section (figure 5.3.5). The range Buccino presented in our work sessions was somewhat broader than what appeared in the list he provided in April 2022.

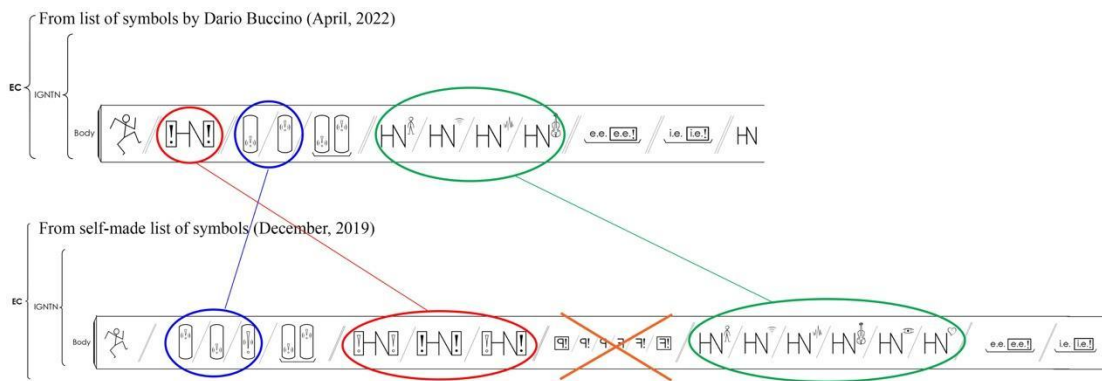


Figure 5.3.5: From Endocorporeal list of symbols, December 2019 and April 2022

Lastly, I turn to the topic of symbols for DYNAMICS of the left and the right hand. For both hands there are two layers of dynamics, one applied to movement and the other to touch. As can be seen in figure 5.3.4, there are further sub-layers to dynamics: speed of the movement, volume of the movement, affection of the movement, pressure/weight of the touch, volume of the touch, and affection of the touch. Buccino does not signify movement and touch in his list of symbols, and he explained in conversation<sup>269</sup> that, although it is correct to think of all these parameters being applied to movement and touch, he prefers not to make this classification in the score and in the list of symbols so that each performer would come to this conclusion on their own while engaging with the score and through working with him.

<sup>269</sup> A video call between Buccino and the author that took place on 13 April 2022

## 5.4 Coda: Memory and Score as a Prompter

Dario Buccino's *Finalmente il tempo è intero n° 16* demanded rethinking the process of work and especially rethinking how and *what* to memorise. This is not an isolated case in respect of challenges to process and memory. Works by John Cage, Evan Johnson, and Miika Hyytiäinen also provoked reflection on the matter of process, memory, and memorisation.

Much like Buccino's piece, Miika Hyytiäinen's *Impossibilities for Violin* cannot be practised in advance in its final form. The score for this piece is a two-channel video, which is generated right before the performance and projected for the performer in the moment of the performance, with the audience already present. For the material in the piece, Hyytiäinen uses excerpts from difficult pieces from violin repertoire dating from Biber to present time. In addition to excerpts from music pieces, there are various non-musical materials: text, images, gifs, and mems, and changes of clothing. The performer does not know the final selection of materials that will appear in the moment, nor the order or contextualisation they might have been assigned. The performer discovers the score for the first time, in real-time, together with the audience. The piece unfolds by the performer being besieged by two projection screens each with its own material (figure 5.4.C.1). The material rapidly and independently changes on each screen and the performer must react immediately, without any prior knowledge or practice of the exact sequence of events. While I have played through years almost all of the pieces from the already existing violin repertoire from which excerpts are quoted and used in the piece, some recently but some of them have not been actively on my repertoire for even six or

seven years, there would also appear material that was not previously mentioned and represent a complete surprise. What I found particularly valuable and elucidating playing *Impossibilities for Violin* was the realisation of “movement memory”, a layer of memory within the body that functions almost like reflex when prompted by seeing a specific score excerpt. In rehearsals and try-outs carried out with Hyytiäinen, I realised that in any run of material we did, even with a split second of thinking about which piece the excerpt belongs to, the reaction would be too late. However, leaving the body to react to all the visual aspects of a score (characteristics of Bach’s score, of Cage’s score, and so on), it would not only react in time, but it would also execute the actions taking in consideration the original context of the piece. This piece has opened an extended understanding of the corpus of accumulated embodied knowledge and the corporeal archive each performer builds through their performance practice and career.



Figure 5.4.C.1: Miika Hyytiäinen’s *Impossibilities for Violin*; stills from the video, available at: [https://temporalityoftheimpossible.com/research/Figures\\_And\\_Excerpts/coda\\_C1.html](https://temporalityoftheimpossible.com/research/Figures_And_Excerpts/coda_C1.html)

While presence of the score in performing Buccino's *Finalmente il tempo è intero n° 16* was a distraction, in performing both John Cage's *Freeman Etudes* and Evan Johnson's *Wolke über Bäumen* the score can be seen as a prompter<sup>270</sup>.

In Cage's *Freeman Etudes*, the relationships between text, thought, and execution are part of material present<sup>271</sup>. As elaborated earlier the unpredictability of the outcome here comes due to the fast succession of sound events with quite distant sets of properties. However, in *Freeman Etudes*, unlike in Buccino's piece, even when things do not sound out quite as expected (by how possibly it could sound in much slower tempo) the intention of the performer shines through. It is the presence of this intention, combined with as accurate an execution as possible, that is the attainable attitude that has to be learned and adopted during the process. However, it is a straining and mind-challenging process to completely memorise the piece because there is no direct link between its sounding events. The score will be in the moment of the performance in memory, but it is the presence of the score as an object that will trigger the actions.

In *Wolke über Bäumen*, Johnson works with minute detail, sometimes superposing almost opposing articulations and musical character. There is a linearity and even two quite discernible lines, one of frantic character (figure 5.4.C.2) and one of calm character (figure 5.4.C.3). The challenge for processing and memorising this work mostly comes from one crucial aspect used as musical material: tuning the violin during the piece. Turning the peg in small increments is an action that has an element of surprise: the peg can move more or less than expected. When moving the pegs to adjust the tuning of gut strings while playing at the same time, there is a high

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<sup>270</sup> This could be said also for many other pieces of complex character, and especially from the so called new-complexity genre.

<sup>271</sup> For more detailed discussion on the relation between text, thought and execution in Cage see Chapter 1.2



written.<sup>272</sup> My approach was to firstly work in a way that would help in blurring the expectations of pitch that come as a result from the placement of the finger on the fingerboard, while still keeping the mapping relationship between the fingerboard and the hand.

The first phase of the process was to isolate the more densely written material (as example in figure 5.4.C.2) into motive-like units. Each figure was then practised for its rhythmical structure in regular tuning, to establish the initial mapping of the instrument. In order to train my mind and ear to not anticipate music based on the sounding pitch that comes from the place the finger is placed on the fingerboard, but still to retain the mapping of the violin, I would practise:

a) with earplugs, thus enhancing the focus on hand movements and touch, and their relationship with the fingerboard

b) in random tuning so as to strengthen the location of the finger separated from the pitch. I used the random tuning as a way to anticipate unpredictable string tuning that could occur during the performance as a result of possible non-responsiveness or unplanned unwinding of the peg.

Throughout all these exercises, a goal was to consciously focus and expand the inner feeling of the hands trajectory and distances travelled. Additionally, I would consciously focus on creating better visual mapping from the player's point of view. I would also use a mirror for external control, as well as consulting video recordings of myself without sound. I applied the same processes of work to the material with the extended slow-moving character, shown in figure 5.4.C.3. In this slow-changing character, the glissando has horizontal and vertical gestures. Horizontal gestures are the trajectory the left hand must make from point A to point B and the vertical

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<sup>272</sup> Johnson, *Wolke über Bäumen*, Performance Notes, p. ii.

moment is the change of finger-pressure. The vertical movement has been discussed in more detail in chapter 4.1, as I found this aspect of the movement to be more related to the sonification and timbre of the sound. However, I worked on the horizontal movement in the above-mentioned principles not only for retaining the mapping of the fingerboard separated from pitch, but also focusing on tactile reactions between the string and the fingertips and then listening to minute changes in sound.

Exercises that were intended to strengthen the disconnection of left-hand actions from pitch expectation were firstly practised with regular bow pressures. I would dedicate the next phase of work to pursuit of appropriate sonic identities and interpretation, through combining the layers and details of right- and left-hand actions. I found that, for my performance practice, through these processes of work each of these elements of the piece becomes embodied and will be in memory, but in the moment of performance the presence of the score acts as a prompter and enables details and intentions to come out in more detail and nuance.



## CONCLUSION      **Conclusions as New Openings: Practice as a Leap of Faith**

*'... if work only has identity through performance, if the score really is only one element in a conversation and nothing more, then it seems to me that the study of performance is an invaluable means for us to engage with [...] music.'* – Philip Thomas<sup>273</sup>

As I was concluding the research, reviewing experiences and all my thoughts through the work done, and the knowledge gathered in the process, moving forward meant knowing that the search and research will continue. Interpretation of music with multidimensional difficulties is an ongoing process. In this process, each phase unfolds a new layer, and each of these layers feeds back into the previous ones, creating a continuous loop of information, additions, and ever-expanding knowledge. While this is not applicable only to pieces from my focus repertoire, it is certainly intensified due to their complex nature.

In these works, the composers' writing challenges the performer 'physically as well as cerebrally, to set in motion a separation from familiarity, to force the performer into creativity, a creativity understood as pure risk, effort, and struggle at one's limits'.<sup>274</sup> There is an exigency to unlearning and then learning anew imposed by the break with familiarity. Unlearning, relearning, and learning anew creates a complex network of relations between each aspect of the piece, all its inner material and challenges for their execution.

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<sup>273</sup> Philip Thomas, 'Fingers, Fragility and Freedom – Christian Wolff's Pianist: Pieces', *Divergence Press*, 5 (2016) at <<http://divergencepress.net/2016/10/24/2016-10-27-fingers-fragility-and-freedom-christian-wolffs-pianist-pieces/>> [accessed 24 May 2023].

<sup>274</sup> Einarsson, 'Desiring-Machines', p. 21.

In the beginning of my research, and this thesis, I outlined three questions that served as the initiator and a guide in my pursuit:

1. What are the components of musical material that make these pieces so difficult?
2. What are the physical and mental conditions that are necessary in order to negotiate the demands of preparing the performance of pieces with highly determined and multi-layered or extreme amounts of information?
3. How does the moment of performance — the change in setting from “preparation” to “performance” — function as one of the components of musical material in these pieces, in a way that has a substantial effect on the final form of the piece, and what kinds of methodologies can be developed and assimilated into practice in order to negotiate the material in this new setting?

The process of work and research brought about the realisation that, much like the pieces themselves, these questions are linked and in order to find the answers, I had to think of them as a complex intertwined web of causes and effects, always in a bi-directional relation. The second question already had the clue to answering the first one. Individual components of a piece (for example difficult notation, or techniques of playing, or timbral tendencies, or complex rhythmical structures) do represent specific difficulties, but it is the fact of all the extreme demands within each component being combined and placed in a multi-layered compound that finally pushes them to appear as *extremely* difficult, but not impossible. While all elements in a piece are bound to influence one another through their interactions, the complexity of interpreting a piece of music with multidimensional difficulties comes from not allowing any of those elements, any of the composer’s demands to be placed in the background, nor creating one fixity out of convenience. Each element of the piece should ‘keep not just its autonomy but also its essential quality even as it accustoms

itself to the essential qualities and differences of others'.<sup>275</sup> In this way, for each performance there is space to recalibrate relations between the material and arrive at another outcome. While these realisations and work on answering this first question was going on, it demanded simultaneously addressing the remaining two questions. Focusing on relations within the work, but also performer's relation with each performance allows for the piece to continue to grow and consequently create 'the resulting relationship, which then changes them all over again'.<sup>276</sup> I am of the strong conviction that in repertoire with such 'psychological obscurities directed at the player in the hope of waking him up',<sup>277</sup> where a possible interpretation is revealed only at the exact moment of the performance, the piece has its existence within the interacting agencies that are *composer—piece—performer* and *performer—piece—performance*, and their relationships. Each interpretation is a glimpse into just one portion from all the potential, and with their changing nature, the experience for the performer becomes 'of being part of music being made, rather than something which is 're-played'.<sup>278</sup> Within this setting, music demands from the performer to adopt an approach of performance as state of continuous process. A performance practice where all the elements of the piece must be profoundly embodied through preparation, but where the moment of performance must be understood not as moment of displaying a "final product" of that work but rather as an opportunity to discover further potentials hiding in almost infinite number of outcomes.

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<sup>275</sup> 'One World in Relation: Conversation with Édouard Glissant aboard the Queen Mary II', dir. by Manthia Diawara (2009).

<sup>276</sup> Édouard Glissant, *Poetics of Relation* (Ann Arbor: University of Michigan Press, 1997), p.172.

<sup>277</sup> Cardew, p.23.

<sup>278</sup> Christian Carey, 'CageConcert: An Interview with Philip Thomas', 15 May 2020, <<http://www.sequenza21.com/2020/05/cageconcert-an-interview-with-philip-thomas/>>, last accessed [accessed 1 June 2020].

This body of work contributed particularly to developing knowledge of how to *unlearn* and *rebuild* aspects of performance practice triggered out of the necessity to deal with pieces that are especially complexly and densely written, whose form and sounding are unstable and where common connections and reliance between the performer and their instrument do not apply. The layered understanding of virtuosity in contemporary solo violin pieces, that is, virtuosity not solely as techniques and “tools to impress” or as a collective goal towards one specific fixed sound result but virtuosity as a physical feature of the body incorporating the performer as musical material in the piece, was for me a crucial guidance in the process of finding described methods and approaches. However, again, the practising methods that were developed do not exclusively have to be used only to interpret this repertoire, as they can aid general development of musicians' understanding and connection between their body, their instrument, and the body of work they engage with.

Through identifying my three areas of challenge, I created a map and a filter through which I can continue to examine future pieces and my future practice. What I carry forward, after working through consciously engaging with material through these three areas of challenge, is a set of different ways to listen to the physical actions and reactions of the body — and its movements — when in relation with the sound and the instrument, and the individual and collective agencies each of these parameters can carry in the creation of a performance. The understanding that ‘every single mark

that you have is not an answer but another question,<sup>279</sup> the importance of open mindedness not only in trying to find the next *answer* and *question* from the context of the *now*, but to understand the possible more distant aims a composer might still be searching for in order to express themselves. Somewhere in between these temporalities a temporary answer to a current challenge can be found but that will also likely open new challenges. In training this mindset of continuous search and self-alterations in approach to performance, I carry on the notion never to forget to keep being a ‘responsible performer,’<sup>280</sup> but also not to be afraid to make the leap of faith and seek ‘but with assurance that you will find.’<sup>281</sup>

This research and thesis are therefore just one temporality which momentarily came to a state of a rest, to ‘leave a trace’ on a journey that is already continuing.<sup>282</sup>

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<sup>279</sup> Aaron Cassidy in a conversation with the author, during a supervision meeting in Huddersfield (2018).

<sup>280</sup> Philip Thomas in a conversation with the author, during a supervision meeting in Huddersfield (2019).

<sup>281</sup> Rebecca Saunders in a conversation with the author, January 2020 in Berlin.

<sup>282</sup> Rovelli, p.145.



*'Yet if they would carefully observe how they become conscious of these limits,  
they would find in the very consciousness of the limits the faculties to  
transcend them.'* – Rudolf Steiner<sup>283</sup>

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<sup>283</sup> Rudolf Steiner, *Anthroposophical Leading Thoughts: Anthroposophy as a Path of Knowledge*, trans. by George and Mary Adams (Sussex: Rudolf Steiner Press, 1973), p.14.





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- Hartikainen, Jarkko, *EMBODIED: violin solo*, Music Finland MF33234 (Espoo: Music Finland, 2018)
- Harrison, Bryn, *Receiving the Approaching Memory*, for violin and piano, self-published (2014)
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- Hyttiäinen, Miika, *Impossibilities for Violin*. Self-published (2019/2020)
- Iannotta, Clara, *dead wasps in the jam jar (i)*, for solo violin, Edition Peters EP14268 (London: Peters Edition, 2014-2015)
- Johnson, Evan, *clutch*, for violin, Self-published (2005)
- Johnson, Evan, *Line of Wreckage*, for string quartet, Self-Published (2005)
- Johnson, Evan, *L'art de toucher le clavecin, 2* for piccolo with violin, Self-Published (2009)



- Johnson, Evan, *L'art de toucher le clavecin, 3*, three sequences for piccolo with violin and percussion, Self-Published (2011)
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- King, John, *Four Etudes for prepared violin*, Self-published (1984)
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- Kreidler, Johannes, *BOW*, for violin, audio and video playback, Self-published (2020)
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- Lachenmann, Helmut, *Pression, for one cellist*, Edition Breitkopf & Härtel EB9221 (Wiesbaden: Breitkopf & Härtel, 1969/2010)
- Lachenmann, Helmut, *Toccatina*, study for violin alone. Edition Breitkopf & Härtel EB9408 (Wiesbaden: Breitkopf & Härtel, 1986)
- Lachenmann, Helmut, *Tanzsuite mit Deutschlandlied, Music for Orchestra with String Quartet*, Edition Breitkopf & Härtel Partitur-Bibliothek EBPB5114 (Wiesbaden: Breitkopf & Härtel, 1989-1990)
- Ledoux, Claude, *Ajma ou 'Le plaisir du geste'*, for solo violin, Self-published (1990)
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- Lim, Liza, *The Su Song Star Map*, for solo violin. Ricordi Sy.4794 (Berlin: Ricordi, 2018)
- Finnissy, Michael, *All the trees they are so high*, for solo violin, Verlag Neue Musik NM2912 (Berlin: Verlag Neue Musik, 1977)
- Mahnkopf, Claus-Stefen, *Wladimir 2, Variante zu 87 Takten Violine 1 der Kammer-symphonie (Spiel-partitur 5+7 Blatt)*, Bärenreiter Verlag BA7450 (Kassel: Bärenreiter, 1994)
- Mahnkopf, Claus-Stefen, *The Courier's Tragedy*, for solo cello, Sikorski SIK8646 (Berlin: Sikorski, 2001)
- Makan, Keril, *Mu*, for violin or viola. PSNY Schott ED30057 (New York: PSNY Schott, 2007)
- Milliken, Cathy, *Crie*, for solo violin and voice, Self-published (2018)

Perini, Alessandro, *On that day my left ear became a frog*, for violin with amplified custom-made bow, Self-published (2018)

Saunders, Rebecca, *Hauch*, for solo violin, Edition Peters EP14345 (London: Peters Edition, 2018)

Saariaho, Kaija, *Nocturne*, for solo violin. Chester Music Ltd (London: Chester Music Ltd, 1994)

Sergeant, Matthew, *bet denagel*, for solo baroque violin, Self-published (2013)

Sergeant, Matthew, *[Kiss]*, for violin with twine bow, Self-published (2014)

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Xenakis, Iannis *Ergma*, pour quatuor à cordes, Editions Salabert EAS19252 (Paris: Editions Salabert, 1994)

Zafra, Jacques, *for Violin (beta)*, Self-published (2016)

## Appendix A: *Primary Repertoire*

- Dario Buccino: *Finalmente il tempo è intero n° 16* (2019), for violin or viola
  - Self-published
  - Available via: <http://www.dariobuccino.com/>
- John Cage: *Freeman Etudes, Etude XVIII* (1977-80+1989-90), for solo violin
  - Publisher: Edition Peters
  - Catalogue Number: Books 1/2: EP66813AB; Books 3/4: EP66813CD
- Aaron Cassidy: *The Crutch of Memory* (2004), for indeterminate solo string instrument
  - Self-published
  - Available via: <http://aaroncassidy.com/product/the-crutch-of-memory/>
- Miika Hyytiäinen: *Impossibilities for Violin* (2019/2020)
  - Available via: <https://www.miika.info/impossibilities/>
- Clara Iannotta: *dead wasps in the jam-jar (i)* (2014/2015), for solo violin
  - Published: Edition Peters
  - Catalogue Number: EP14268
- Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)
  - Self-published
  - Available via: <https://www.evanjohnson.info/>
- Liza Lim: *The Su Song Star Map* (2018), for solo violin
  - Publisher: RICORDI Berlin
  - Catalogue Number: SY4794
- Rebecca Saunders: *Hauch* (2018), for solo violin
  - Published: Edition Peters
  - Catalogue Number: EP14345















## Appendix B: *Supplementary Reference Repertoire*

In this comprehensive list, pieces written in **green** are the part of the last “Focus List” of works, included here for complete overview of the repertoire for reference.




- Georges Aperghis: I.X. pour violon seul (2002)
- Richard Barrett: Air (1993)
- Luciano Berio: Sequenza VIII, for violin (1976)
- Pierluigi Billone: Equilibrio. Cerchio. (2014)
- Pierre Boulez: Anthèmes I, for violin (1991)
- Wojtek Blecharz: Phenotype (2011)
- Dario Buccino: Finalmente il tempo è intero n° 16 (2019)**
- John Cage: Freeman Etudes, for solo violin (1977-80+1989-90)**
- John Cage: String Quartet in Four Parts (1950)
- John Cage: 59 1/2" for a String player (1953)
- John Cage: 26'1.1499" for a string player (1953-55)
- John Cage: Violin solos from Piano Concerto (1957-1958)
- John Cage: 30 Pieces for String Quartet (1983)
- John Cage: Eight Whiskus for solo violin (1985)
- John Cage: One6 (1990)
- John Cage: One10 (1992)
- Aaron Cassidy: The Crutch of Memory, for solo violin (2004)**
- Aaron Cassidy: “the green is where”, for solo violin (2002)
- Aaron Cassidy: String Quartet (2001-2002)
- Aaron Cassidy: Second String Quartet (2010)
- Samuel Cedillo: Monologo I: Laja del tiempo, for solo violin (2007)
- Samuel Cedillo: Estudio de contrapunto I (2015-2016)
- George Crumb: Four Nocturnes, for violin and piano (1964)
- George Crumb: Black Angels (1971)
- Baudoin de Jaer: Sonata nr.2 “Jamais de l’Abime”, for solo violin (2002)
- James Dillon: Del Cuarto Elemento (1988)
- James Dillon: Traumwerk, for two violins (1995)
- Franco Donatoni: Argot, for violin (1978/1979)
- Einar Torfís Einarsson: Negative dynamics I(a/b), for solo violin (2011)
- Brian Ferneyhough: “Intermedio alla ciaccona” (1986)
- Brian Ferneyhough: “Unsichtbare Farben” (1999)
- Brian Ferneyhough: String Quartets Nr.1-6
- Jarkko Hartikainen: EMBODIED, for solo violin (2018)
- Bryn Harrison: Receiving the Approaching Memory (2014)
- Wiland Hoban: Bakensammler (solo cello) (2000)
- Klaus K. Hübler: “Dialektische Phantasie” (1982-1984)
- Miika Hyytiäinen: Impossibilities for Violin (2019/2020)**
- Clara Iannotta: dead wasps in the jam jar (i) (2014-2015)**
- Evan Johnson: Wolke Uber Baumen (2016)**
- Evan Johnson: inscribed, in the center: '1520, Antorff' for string quartet (2014)
- Evan Johnson: L'art de toucher le clavecin, 2 for piccolo with violin (2009)
- Evan Johnson: clutch (2005)
- Evan Johnson: Line of Wreckage for string quartet(2005)
- Evan Johnson: sunk: one for string quartet (2002)
- Dmitri Kourliandski: prePositions, for solo violin (2008)

- John King: Four Etudes for prepared violin (1984)
- Garth Knox: Violin Spaces, for solo violin (to be included upon completion and publication, expected in 2018-2019)
- Helmut Lachenmann: Toccata, for violin (1986)
- Helmut Lachenmann: Gran Torso, string quartet (1972)
- Helmut Lachenmann: Tanzsuite mit Deutschlandlied (1989-80)
- Helmut Lachenmann: Pression (solo cello) (1969/2010)
- Liza Lim: Philtre, for violin (1997)
- Liza Lim: The Su Song Star Map, for solo violin (2018)
- Michael Finnissy: All the trees they are so high (1977)
- Claus-Steffen Mahnkopf: Wladimir 2 (1994)
- Claus-Steffen Mahnkopf: The Courier's Tragedy (2001) for solo cello
- Keeril Makan: Mu (2007)
- Cathy Milliken: Crie (2018)
- Alessandro Perini: On that day my left ear became a frog, for violin with amplified custom-made bow (2018)
- Rebecca Saunders: Hauch, for solo violin (2018)
- Kaija Saariaho: Nocturne, for violin (1994)
- Matthew Sergeant: [kiss] (2014)
- Matthew Sergeant: bet denagel (2013)
- Giacinto Scelsi: L'Âme Ailée; L'Âme Ouverte for violin solo (1973)
- Salvatore Sciarrino: 6 Capricci, for violin (1976)
- Zach Seely: Personal Gravity, for solo violin (2016)
- Zach Seely: S, for solo vocalising violinist (2021)
- Simon Steen-Andersen: Study for String Instrument #1 (2007)
- Robert Wannamaker: violin (2001)
- Iannis Xenakis: Mikka, for violin (1971)
- Iannis Xenakis: MikkaS, for violin (1976)
- Iannis Xenakis: String Quartets


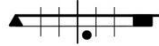
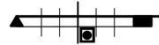
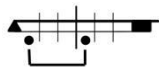




**Appendix C:** Full self-made list of meanings of symbols for Dario Buccino's *Finalmente il tempo è intero n° 16* (using notes and comments from working with the composer)

Area	Applied to	Symbol	Meaning
Bar-Tempo	Duration of the page	 /  /  /  /  / 	approx.: 20" / 40" / 60" / 80" / 100" / 120"
Spazio (Space)	Performance area	 /  /  /  /  /  / 	The X represents the centre of the performance space (not necessarily just the stage!), or chosen area of the space in which you can move and it remains the reference of the centre throughout the performance. The following six indications represents six degrees of distancing away from the centre in concentric circles, with the first being the closest to the centre to the last being the furthest
Sub-Bar, or Column (Identities)	MUTE Action	/	There should be no intentionally produced sounds. Accidental sounds are welcome
	MAGICAL Contribution	/	The overall sound and volume and its quality and aura has to evoke magical, unreal, otherworldly sound presence
	BACK Voice	/	The bow is always in the area of the fingerboard on the other side of the left hand, and therefore on the "back" side of the sound
	TAIL Piece	/	Playing on the tailpiece
	VOICE	/	Playing with vocal quality (one voice)
	PAD	/	The base of the palm is used for interacting with the strings and, with application of all the surrounding characteristics and parameters (pressure/speed/affection)
	SCRIBBLE	/	A continuous flow of frenetic and irregular movements.
	MULTI Voice	/	The bow always plays at least two strings simultaneously
Column	Identities		Same as the column (identity) on the previous bar (page) for all right- and left-

			hand parameters; Endocorporal (EC) parameters can be the same or different.
		ir	Like the column (identity) on the previous bar (page); the difference will appear in the right-hand dynamics, and left-hand range, and the Endocorporal (EC) parameters can be the same or different.
		≠	Completely different to anything in the column (identity) on the previous bar (page).
General		HN	Symbol standing for <i>hic et nunc</i> . It can appear in any identity for any parameter. It activates use of any of the possible degrees from spectrum of said parameter in a freely spontaneous, in “here and now”, way. It can even it allow for the parameter to be forgotten.
Right Hand	Action – horizontal and lateral		<p>Mute action, can include moving and stillness, but should never intentionally produce sound</p> <p>/</p> <p>Discontinuous action (intentional sound producing action) that can become silent even without stopping to be active</p> <p>/</p> <p>Almost continuous action (intentional sound producing action) that sometimes comes close to becoming silent but immediately bounces back to having an audible output</p> <p>/</p> <p>Continuous action that produces uninterrupted sound</p>
Right Hand	Action – vertical		<p>Interrupt the sound by pressing the bow on the strings as much as possible (or with the greatest possible intention) (the action remains internally active and +/- immovable)</p> <p>/</p> <p>Interrupt the sound by pressing a lot (or with a lot of intention) the bow on the strings (the action remains internally active and more/less immovable)</p> <p>/</p> <p>Stop the sound by pressing the bow on the strings (the action remains internally active and more/less immobile)</p> <p>/</p> <p>ordinario</p> <p>/</p>

			<p>Interrupt the sound by lifting the bow from the strings (the action remains internally active and +/- mobile)</p> <p>/</p> <p>Interrupt the sound by lifting the bow a lot (or with a lot of intention) from the strings (the action remains internally active and +/- mobile)</p> <p>/</p> <p>Interrupt the sound by lifting the bow from the strings as much as possible (or with the greatest possible intention) (the action remains internally active and +/- mobile)</p> <p>/</p> <p>The bow always runs over, but it produces some breathy, disappearing voices</p> <p>/</p> <p>The bow always runs over, but it produces a lot of breathy, disappearing voices</p> <p>/</p> <p>The bow always runs over, but it produces the maximum possible of breathy, disappearing voices</p>
		<p>Alternate between the interruption (lifting) and pressed bow</p> <p>/</p> 	<p>Alternate the two previous modes: with more intention or more pressure</p> <p>/</p> <p>Alternate the two previous modes: lift or press as much as possible (or with the greatest possible intention)</p>
			<p>Alternate between the interruption (lifting) and breathy (disappearing) voice</p> <p>/</p> <p>Alternate the two previous modes: with more intention or breathy (disappearing) voice</p> <p>/</p> <p>Alternate the two previous modes: lift or most breathy voice as much as possible (all with the greatest possible intention)</p>
			<p>Alternate between the breathy (disappearing) voice and pressed bow</p> <p>/</p> <p>Alternate the two previous modes: with more pressure or breathy (disappearing) voice</p> <p>/</p> <p>Alternate the two previous modes: press as much as possible or most breathy voice (all with the greatest possible intention)</p>




			<p>Alternate between three modes in normal degree</p> <p>/</p> <p>Alternate between the three modes with each being done with a lot of intention</p> <p>/</p> <p>Alternate between three modes: each done in its extreme</p>
Right Hand	Bow portion		Use the whole area of the indicated portion of the bow
			Use only the smallest area of the indicated portion of the bow
			Explore the indicated portions of the bow, but also the whole area between the two portions indicated with the dot. There is no temporal preference in succession of explorations of the entire area of the bow
Right Hand	Bow orientation		<p>Tip of the bow going inwards, as if towards the face; maximum angle 40°</p> <p>/</p> <p>Ordinario – normal, bow parallel to the bridge, orientation of the bow</p> <p>/</p> <p>Tip of the bow going outwards, towards the head of the violin; maximum angle 40°</p>
Right Hand	Bow location on the string		Bow on the other side of the left hand: between the fingers and the nut
			<p>Sul tasto++: bowing as extreme and as far as possible on the fingerboard, almost on/over the left hand</p> <p>/</p> <p>Sul tasto+: bowing significantly far over the fingerboard</p> <p>/</p> <p>Sul tasto: bowing close to the beginning and slightly over the fingerboard</p>
			<p>Sul ponticello: bowing towards the bridge</p> <p>/</p> <p>Sul ponticello+: bowing very close to the bridge</p> <p>/</p> <p>Sul ponticello++: bowing on the bridge or as close to the bridge as possible</p>













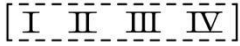

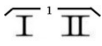
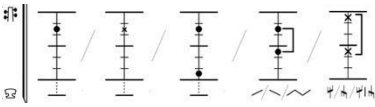




			<p>/</p> <p>as above, but imperceptibly less, thus more present: the idea of noticeable affection is beginning to emit</p>
		'c.m.!' / c.m.!' / c.m.	<p>Magical contribution<sup>++</sup>: articulate the bow in its interaction with the string with affection of carrying and in such a patient way that it is not certain that there will be any reaction of string</p> <p>/</p> <p>Magical contribution<sup>+</sup>: as above, but in imperceptibly less patient way</p> <p>/</p> <p>Magical contribution: as above, but in imperceptibly less patient way</p>
		'PZNT!' / PZNT!' / PZNT,	<p>Affection of contact in the most patient way possible; there is an immediately perceivable lowest level of being in motion</p> <p>/</p> <p>Very patient</p> <p>/</p> <p>Patient</p>
		'DNMC' / DNMC!' / DNMC!'	<p>Dynamic affection of contact (dynamic is not representing musical dynamics, but aspects of the sound articulation as a whole).</p> <p>/</p> <p>Very dynamic.</p> <p>/</p> <p>As dynamic as possible</p>
		'e.e.' / e.e.!' / e.e.!'	<p>Exceeding energy: as dynamic as possible but with even more motor and volitional energy than necessary; unleashing the maximum possible dynamism through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding energy<sup>+</sup>: as above but with additional excess energy</p> <p>/</p> <p>Exceeding energy<sup>++</sup>: as above but with the maximum excess energy</p>
Right Hand	Dynamics: Touch – Weight	'(( ))!' / (( ))!' / (( ))'	<p>Contactless touch<sup>++</sup>: excessively energetic gentleness of light weight, touching the air that is just over the string, and pushing it down to the string</p> <p>/</p> <p>Contactless touch<sup>+</sup>: energetic gentleness of light weight, touching the air that is just over the string, and pushing it down to the string</p>

			<p>/</p> <p>Contactless touch: gentle contact of light weight, touching the air that is just over the string, and pushing it down to the string</p>
		c.m.!/c.m.!/c.m.	<p>Magical contribution++: exerting such light pressure that it is uncertain whether the bow is touching the string(s)</p> <p>/</p> <p>Magical contribution+: as above, but imperceptibly heavier</p> <p>/</p> <p>Magic contribution: as above, but imperceptibly heavier</p>
		ϕ! / ϕ! / ϕ,	<p>Feather pressure++: As light as possible; with barely perceivable but perceivable touching of the strings</p> <p>/</p> <p>Feather pressure+: Very light</p> <p>/</p> <p>Feather pressure: Light</p>
		⊠ / ⊠! / ⊠!	<p>Heavy</p> <p>/</p> <p>Really heavy</p> <p>/</p> <p>As heavy as possible</p>
		e.e./e.e.!/e.e.!	<p>Exceeding energy: as heavy as possible but with even more motor and volitional energy than necessary; the maximum possible pressure through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding energy+: as above, but with additional excess energy</p> <p>/</p> <p>Exceeding energy++: as above but with the maximum excess energy</p>
Right Hand	Dynamics: Touch – Affection	(⊙)! / (⊙)! / (⊙),	<p>Contactless++: the conception of contact with affection, in furthest distance</p> <p>/</p> <p>Contactless +: the conception of contact with affection, in close distance</p> <p>/</p> <p>Contactless: the conception of contact with affection, in immediate distance</p>
		c.m.!/c.m.!/c.m.	<p>Magical contribution++: caress/pamper the string with the bow so delicately that it is</p>






			<p>practically not apparent/perceivable that it is being touched</p> <p>/</p> <p>Magical contribution+: as above, but with imperceptibly less delicate bowing</p> <p>/</p> <p>Magical contribution: as above, but with imperceptibly less delicate bowing</p>
		$\boxed{D^{lef!}}$ / $D^{lef!}$ / $D^{lef}$	<p>Caress/cuddle the string with the most delicate and patient bowing possible; there is a faintest, but immediate perception of the bow is in motion</p> <p>/</p> <p>Very delicate</p> <p>/</p> <p>Delicate</p>
		$V^{Inf}$ / $V^{Inf!}$ / $\boxed{V^{Inf!}}$	<p>Violent (emotionally, personally; “violence” as overwhelming power, not aggression: extremely intense emotion-brutalness, ferociousness, fierce, wild, powerful)</p> <p>/</p> <p>Very violent</p> <p>/</p> <p>As violent as possible</p>
		$e.e.$ / $e.e.!$ / $\boxed{e.e.!$	<p>Exceeding energy: make contact with the string with exuberating most violent affection possible, with even more physical and volitional energy than necessary; affection in the most excessive way possible through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding energy+: as above but with additional excess energy</p> <p>/</p> <p>Exceeding energy++: as above but with the maximum excess energy</p>
Right Hand	Dynamics: Volume	$\boxed{(c)}$ / $(c)!$ / $(c)$ // $\boxed{\Phi!}$ / $\Phi!$ / $\Phi$	<p>Imperceptible resonance++: the volume inside the idea of physical vibration, happening, but only on outskirts of mind</p> <p>/</p> <p>Imperceptible resonance+: as above, but getting closer</p> <p>/</p> <p>Imperceptible resonance: as above, but close to become a real though of resonance</p> <p>//</p> <p>Volume-less volume++: the idea of resonance and sound volume is clearly present in thought and internal energy is</p>

			<p>generated to produce sound, that is yet to be materialised</p> <p>/</p> <p>Volume-less volume+: as above, but slightly closer to sounding</p> <p>/</p> <p>Volume-less volume: as above, but approaching further the common-world sounding</p>
		c.m.!	<p>Magical contribution++: producing the sound at a volume so low that it is not sure to be heard</p> <p>/</p> <p>Magical contribution+: as above, but imperceptibly more audible.</p> <p>/</p> <p>Magical contribution: as above, but imperceptibly more audible.</p>
		P!	<p>As softly as possible: the first degree of immediate perception of hearing of the sound</p> <p>/</p> <p>Very soft</p> <p>/</p> <p>Soft (in area of common piano volume)</p>
		F / F! / F!	<p>Loud</p> <p>/</p> <p>Very loud</p> <p>/</p> <p>As loud as possible</p>
		e.e. / e.e.!	<p>Exceeding energy: playing as loud as possible but with even more physical and strong-willed energy than necessary; achieve the loudest possible volume through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p> <p>Exceeding energy+: as above, but with additional excess energy</p> <p>/</p> <p>Exceeding energy++: as above, but with the maximum excess energy</p> <p>** a coefficient of bow weight/pressure (feather/ordinario/heavy) can be applied to volume</p>
Left Hand	Holding the instrument	<p>ORD (NO INDICATION)</p>  <p>INVERTED HOLD</p>	<p>Ordinary (normal) hold (inherent; no special symbol in the score)</p> <p>/</p>

			Inverted hold: left hand holding/touching/interacting with the fingerboard/instrument from the left side
Left Hand	Orientation		Finger orientation in normal hold: finger exploring angles of point of contact with the string (with horizontal rotations of hand/wrist/arm/elbow)
			Palm orientation in normal hold: palm exploring angles of point of contact with the string (with horizontal rotations of hand/wrist/arm/elbow)
			Finger orientation in inverted hold: as in normal hold, just everything inverted
			Palm orientation in normal hold: as in normal hold, just everything inverted
Left Hand	Elevation		Elevation of the wrist (ORD=normal position)
Left Hand	Traction		In normal hold: horizontal bending of the string from left to the right / ORD=neutral / from right to the left)
			In reversed/inverted hold: as in normal hold, just inverted
Left Hand	Finger	☉ / 1 / 2 / 3 / 4	Thumb / First finger / Second finger / Third finger / Fourth finger
			Placing the finger under the string (the fingertip is directly in contact with the fingerboard and the nail is touch the strings form “underneath”
			Palm / base of the hand
			Scribble: an expression of hyper alertness; frantic and energetic actions of volume, tension, melody of movement, melody of sound-of fingertips (but also fingers, palm, base of the hand); never chaotic
Left Hand	String	I / II / III / IV	










			I=E/mi string, II=A/la string, III=D/re string, IV=G/sol string. Play only one string at a time
			Always play at least two strings simultaneously. Whenever possible, even three or four strings simultaneously
			Play two indicated strings simultaneously
			Use the same finger for all the individual strings indicated
Left Hand	Range of the string		The string is portioned out in equal segments, counting from the nut to the bridge. The area of the string to be used is marked with the symbols for finger action type placed in the area respectively. “●” – explore given area without lifting of the finger(s); when two or more areas are marked, explore each area and jump between them, but do not explore the space in between; when the areas marked are also connected with the bracket, explore all range of each area and everything in between. “x” - explore given area with restless finger(s), touching the string portions; when two or more areas are marked, explore each area and jump between them, but do not explore the space in between; when the areas marked are also connected with the bracket, explore all range of each area and everything in between.
			Portion of string between the end of the fretboard and the bridge.
			Held motion (appears in the MAGICAL Contribution and the BACK Voice); static motion; exceptionally slow, always happening in specified direction without interruption
			Move through a series of narrow, non - tempered intervals: ascending / descending / freely alternating ascending and descending
			Play/explore with the bow the portion of the tailpiece indicated. “●” signifies the area, not only one spot.









Left Hand	Dynamics: Movement – Speed		Motion-less movement <sup>++</sup> : excessively energetic stillness, immobility; movement inside of the body as if the finger is moving / Motion-less movement <sup>+</sup> : as above but energetic stillness, immobility / Motion-less movement: as above but present stillness, immobility
			Magical contribution <sup>++</sup> : the most magical contribution possible; movements of the finger/hand/arm is so slow and delicate that it is not completely sure whether there is any motion happening / Magical contribution <sup>+</sup> : as above, but imperceptibly faster / Magical contribution: as above, but imperceptibly faster
			Moving as slow as possible, but with the movement being still immediately perceivable
Left Hand	Dynamics: Movement – Affection		Deliberate intention of a non-moving motion; transfer of energetic affection towards the instrument, for the instrument to feel / As above, but imperceptibly less, thus more present: the idea of noticeable affection is not perceivable but is present / As above, but imperceptibly less, thus more present: the idea of noticeable affection is beginning to be felt
			Magical contribution <sup>++</sup> : articulate the finger in its interaction with the string with affection, extreme carrying and in such a patient way that it is not certain that there will be any pitch/timbre audible response but only the inner recognition of the birth of vibration of the string / Magical contribution <sup>+</sup> : as above, but in imperceptibly less patient way / Magical contribution: as above, but in imperceptibly less patient way

		<p><math>\boxed{\text{PZNT!}}</math> / PZNT! / PZNT,</p>	<p>Affection of contact in the most patient way possible; there is an immediately perceivable lowest level of being in motion /</p> <p>Very patient /</p> <p>Patient</p>
		<p><math>\text{DNMC} / \text{DNMC!} / \boxed{\text{DNMC!}}</math></p>	<p>Dynamic affection of contact (dynamic is not representing musical dynamics, but aspects of the sound articulation as a whole). /</p> <p>Very dynamic. /</p> <p>As dynamic as possible</p>
		<p>e.e. / e.e.! / <math>\boxed{\text{e.e.}}</math></p>	<p>Exceeding energy: as dynamic as possible but with even more motor and volitional energy than necessary; unleashing the maximum possible dynamism through an exaggerated involvement of the body and will, as if going beyond the limit of reality /</p> <p>Exceeding energy+: as above but with additional excess energy /</p> <p>Exceeding energy++: as above but with the maximum excess energy</p>
Left Hand	Dynamics: Touch – Weight	<p><math>\emptyset!</math> / <math>\emptyset</math> /</p>	<p>Feather touch+: very light-weight touch; but never harmonic – the flesh of the body always must be present, intertwined with “flesh” of the string /</p> <p>Feather touch: light-weight touch</p>
		<p><math>\boxed{\text{H}}</math> / <math>\boxed{\text{H!}}</math> / <math>\boxed{\text{H!}}</math>,</p>	<p>Heavy /</p> <p>Really heavy: extreme weight, as if the flesh of the body will melt into the instrument /</p> <p>As heavy as possible: as if the fingertip/flash of the performer has melted into the instrument</p>
		<p>e.e. / e.e.! / <math>\boxed{\text{e.e.}}</math></p>	<p>Exceeding energy: as heavy as possible; the maximum possible pressure through an exaggerated involvement of the body and will, as if going beyond the limit of reality /</p> <p>Exceeding energy+: as above, but with additional excess energy</p>

			<p>/</p> <p>Exceeding energy++: as above but with the maximum excess energy</p>
Left Hand	Dynamics: Touch – Affection	<p><math>\boxed{(( ))!} / (( ))! / (( )) /</math></p>	<p>Contactless++: the conception of contact with affection, in furthest distance</p> <p>/</p> <p>Contactless+: the conception of contact with affection, in close distance</p> <p>/</p> <p>Contactless: the conception of contact with affection, in immediate distance</p>
		<p><math>\boxed{c.m.!} / c.m.! / c.m.,</math></p>	<p>Magical contribution++: caress/pamper the string with the bow so delicately that it is practically not apparent/perceivable that it is being touched</p> <p>/</p> <p>Magical contribution+: as above, but with imperceptibly less delicate finger-string contact</p> <p>/</p> <p>Magical contribution: as above, but with imperceptibly less delicate finger-string contact</p>
		<p><math>\boxed{D^{let!}} / D^{let!} / D^{let},</math></p>	<p>As delicate as possible: make contact with the string in a most delicate, carrying, cuddling way; there is a faintest but immediate perception of the contact happening</p> <p>/</p> <p>Very delicate</p> <p>/</p> <p>Delicate</p>
		<p><math>\boxed{V^{int!}} / V^{int!} / \boxed{V^{int!}}</math></p>	<p>Violent (emotionally, personally; “violence” as overwhelming power, not aggression: extremely intense emotion-brutalness, ferociousness, fierce, wild, powerful)</p> <p>/</p> <p>Very violent</p> <p>/</p> <p>As violent as possible</p>
		<p><math>\boxed{e.e.} / e.e.! / \boxed{e.e.!}</math></p>	<p>Exceeding energy: make contact with the string with most exuberating affection possible, with even more physical and volitional energy than necessary; affection in the most excessive way possible through an exaggerated involvement of the body and will, as if going beyond the limit of reality</p> <p>/</p>

			Exceeding energy+: as above but with additional excess energy / Exceeding energy++: as above but with the maximum excess energy
Endocorpo real	Gratia (Giving)	ONE / ALL	Gratitude <i>for</i> : sending to one person in the audience, but through that person to all; intaking from one person of the audience, but through that person from all
		ONE   ONE	Gratitude <i>for</i> : to one by one
		ONE   ALL	Gratitude <i>for</i> : alternating between to one, to all audience, to one, to all, ...
Endocorpo real	Ignition: Tacet (Silence)		Make silence resonate; gradation of durations; 4'33''=Cage reference
Endocorpo real	Ignition: Vocal		Participate with “mentalised” voice as intensively as you can (but it is not audible)
			A little bit audible (the “(( ))” stands for resonance )
			Explore the areas indicated, and the whole area between them. The order the symbols of the areas appear does not imply their temporally linear interpretation: the moving through them can be in any direction.
Endocorpo real	Ignition: Body		Inner conductor
			Origin of action: Upper body (chest) / lower body (stomach) / whole body
			Explore the areas indicated, and the whole area between them. The order the symbols of the areas appear does not imply their temporally linear interpretation: the moving through them can be in any direction.
			Dance of intention/Dance of invention; Not too much quantity, but involvement;
			Dance of intention/Dance of invention

	/ [H]N!		Dance of intention/Dance of invention
	/ HN 		Prescription of perception not action; do what you feel is right, just focused more on the body
	HN 		Prescription of perception not action; do what you feel is right, just focused more on the audible sound
	HN 		Prescription of perception not action; do what you feel is right, just focused more on the string vibration
	HN 		Prescription of perception not action; do what you feel is right, just focused more on the tactile connection with the instrument
	HN 		Prescription of perception not action; do what you feel is right, just focused more on being present in the space (look)
	HN 		Prescription of perception not action; do what you feel is right, just focused more on your feelings
	e.e. [e.e.]		Exceeding energy: explore the areas indicated, and the whole area between them. The order the symbols of the areas appear does not imply their temporally linear interpretation: the moving through them can be in any direction.
	i.e. [i.e.]		Exceeding intention: explore the areas indicated, and the whole area between them. The order the symbols of the areas appear does not imply their temporally linear interpretation: the moving through them can be in any direction.

**Appendix D:** List of Selected Performances, Presentations, and Broadcasts Related to the Research

2022/10/29	Temporality of the Impossible performance with pieces by Dario Buccino, Aaron Cassidy, John Cage, Clara Iannotta, Cathy Milliken, Liza Lim, and Rebecca Saunders at Lisboa Incomum (Lisbon, Portugal)
2022/05/24	Temporality of the Impossible performance, with pieces by Clara Iannotta, Evan Johnson, Rebecca Saunders, Cathy Milliken, Aaron Cassidy, Liza Lim, and Dario Buccino at Unerhörte Musik, Berlin (Germany)
2022/04/03	Temporality of the Impossible performance with solo violin works by Dario Buccino, Aaron Cassidy, Clara Iannotta, and Liza Lim at the Festival Prima Vera Contemporanea by Associazione per la Music Contemporanea Curva Minore (Palermo, Italy)
2022/04/02	presentation of the research Temporality of the Impossible and seminar about Dario Buccino's Finalmente il tempo è intero, with Dario Buccino, at the Conservatorio di Musica Alessandro Scarlatti (Palermo, Italy)
2022/03/05	Liza Lim's The Su Song Star Map from the CD Temporality of the Impossible was presented by Kate Molleson in New Music Show, broadcasted on BBC Radio 3
2022/03/02	Performance featuring works by Clara Iannotta and Einar Torfi Einarsson (from supplementary repertoire list), Phipps Hall (Huddersfield, UK)
2022/02/11	Release of the CD Temporality of the Impossible by Huddersfield Contemporary Records, HCR26
2021/11/22	hcmf// shorts, with solo violin pieces from the "Temporality of the Impossible" project: Dario Buccino's "Finalmente il tempo è intero n° 16" and Liza Lim's "The Su Song Star Map", at St Paul's Hall (Huddersfield, UK)
2021/10/24	Temporality of the Impossible: performance+talk session, with works for solo violin with music by Anahita Abbasi, Liza Lim, Cathy Milliken, Rebecca Saunders, and Alyssa Weinberg at ArtBase (Brussels, Belgium)
2021/09/12	Temporality of the Impossible performance with solo violin by Clara Iannotta, Liza Lim, Cathy Milliken, Rebecca Saunders, and Zach Seely at die naTo (Leipzig, Germany)
2021/09/10	Temporality of the Impossible performance with solo violin by Clara Iannotta, Liza Lim, Cathy Milliken, Rebecca Saunders, and Zach Seely at Kraftwerk (Chemnitz, Germany)
2021/07/21	presenting Temporality of the Impossible project and pieces by Dario Buccino, Evan Johnson, and Aaron Cassidy as a tutor at Sommerakademie für Gegenwartsmusik 2021 at Kulturzentrum Wilde Rose (Melle – Niedersachsen, Germany)
2020/11/27	presenting research “Temporality of the Impossible” at RCA London Research Conference Day
2020/09/23	performance with works by Cage, Bandoh, Sciarrino, and Tasca at (Brussels, Belgium)
2020/02/25	"Front. In. Behind. Here. Now." from the "Temporality of the Impossible" series, featuring solo violin pieces by Buccino, Cassidy, Hyytiäinen, Iannotta, and Saunders, at Phipps Hall (Huddersfield, UK)
2019/10/31	performance with James Dillon's Trumwer Book 1, for two violins (with Irine Roesnes, Huddersfield/UK)
2019/06/03	Concert-Cité with pieces for solo violin by Miika Hyytiäinen and Jarkko Hartikainen at la Cité internationale des arts (Paris, France)
2019/04/28	Temporality of the Impossible: Performance+Talk Sessions: Time-Travelling Stargazer, with pieces by John Cage, Haukur Þór Harðarson, Clara Iannotta, Evan Johnson, and Liza Lim at ArtBase (Brussels, Belgium)
2019/03/14	Postgraduate Research Showcase, performing James Dillon's Trumwer Book 1, for two violins (with Irine Roesnes)
2019/03/07	Temporality of the Impossible: multi-voiced poetics, featuring pieces by Liza Lim, Lucio Tasca, and Robert Wannamaker

2018/12/17	Temporality of the Impossible: performance with pieces by Haukur Hardarson and Salvatore Sciarrino at Kamiel D'Hooghe Hall, Koninklijk Conservatorium Brussels (Belgium)
2018/11/01	Postgraduate Research Showcase: Temporality of the impossible: How could you rise anew if you have not first become ashes?, performing music for solo violin by Samuel Cedillo, Clara Iannotta, Haukur Þór Hardarson and Dmitri Kourliandski at St Paul's Hall (Huddersfield, UK)
2018/07/23	Temporality of the Impossible: VIOLIN+, feature pieces by Wojtek Blecharz, Clara Iannotta, Keeril Makan and Robert Wannamaker at Darmstädter Ferienkurse 2018 (Germany)
2018/07/20	Contemporary Insights: Zachary Seely's "Personal Gravity" at Darmstädter Ferienkurse 2018 (Germany)
2018/07/18	Temporality of the Impossible: Sounding Gesticulation, with pieces by Aaron Cassidy, Samuel Cedillo and Dmitri Kourliandski at Darmstädter Ferienkurse 2018 (Germany)
2018/06/01	Temporality of the Impossible: Performance+Talk Session VIOLIN+, with music for prepared violin/bow, by Wojtek Blecharz, Clara Iannotta, John King, Helmuth Lachenmann, Keeril Makan, Robert Wannamaker at HAEKEM Brussels (Belgium)
2018/04/14	Temporality of the Impossible Performance+Talk Session, with music John Cage, Aaron Cassidy, James Dillon, Brian Ferneyhough, Clara Iannotta and Salvatore Sciarrino at ArtBase Brussels (Belgium)
2018/01/07	Temporality of the Impossible: Performance+Talk Session #5: VIOLIN+ - Music for prepared violin/bow, with Wojtek Blecharz, Clara Iannotta, John King, Helmuth Lachenmann, Keeril Makan, Robert Wannamaker at ArtBase Brussels (Belgium)
2017/06/11	"Temporality of the Impossible" Session #3: with music by John Cage, Aaron Cassidy, Dmitri Kourliandski, Helmuth Lachenmann, Salvatore Sciarrino, and Zach Seely at ArtBase, Brussels (Belgium)
2017/04/30	"Temporality of the Impossible" Session #2: with music by Yuta Bandoh, John Cage, Aaron Cassidy, Baudoine de Jaer, Helmuth Lachenmann, and Salvatore Sciarrino at ArtBase, Brussels (Belgium)
2017/03/05	"Temporality of the Impossible" Session #1: with music by John Cage, Aaron Cassidy, Samuel Cedillo, Baudoine de Jaer, Helmuth Lachenmann, and Salvatore Sciarrino at ArtBase, Brussels (Belgium)

## Appendix E: Score Examples

Here included performance notes and first pages from:

- Dario Buccino's *Finalmente il tempo è intero n° 16* (2019), for violin or viola
- Aaron Cassidy's *The Crutch of Memory* (2004), for indeterminate solo string instrument
- Clara Iannotta: *dead wasps in the jam-jar (i)* (2014-2015), for solo violin
- Evan Johnson's *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)
- Liza Lim's *The Su Song Star Map* (2018), for solo violin, manuscript
- Rebecca Saunders: *Hauch* (2018), for solo violin (only performance notes)

Scores for John Cage's *Freeman Etudes*, Clara Iannotta's *dead wasps in a jam-jar (I)*, and Rebecca Saunders' *Hauch* are available from Edition Peters. Liza Lim's *The Su Song Star Map* is available from Ricordi.

Score for Miika Hyytiäinen's *Impossibilities for Violin* is a video score generated before each performance, example of the score can be seen in the video from the Portfolio (AP3.3).  
[https://temporalityoftheimpossible.com/research/artistic\\_portfolio.html](https://temporalityoftheimpossible.com/research/artistic_portfolio.html)



## Finalmente il tempo è intero n° 16

For violin or viola

Dario Buccino

### INTRODUCTION

The composition is written with the HN@ System, a system for structuring exocorporal and endocorporal performative processes. The system starts from an assumption: the body is animated by a profound intelligence capable of making decisions without forewarning the consciousness. The brain, in fact, works on many levels, some of which are unconscious and are at one with physicality. When we cry out in joy or fear, is it the brain or the body that cries out?

The HN score is not to be played but used: through the physical and experiential conditions and suggestions notated on the page the performers can and must express themselves with intensity, freedom and authenticity.

The HN notation does not represent an objective form of sound, nor is it a protocol of explicit motor instructions (or much less, gestures; gesture is either the outer shell of the act or constitutes only its moral intention, these being fundamental dimensions only if they are not abstracted from the broader process of which they are a part).

The HN page, in short, does not simply prescribe what to do, but stimuli and limits within which to release one's energy, to concentrate one's sensitivity, avoiding as far as possible to conform to pre-constituted ideas regarding the desired outcome or what behaviour to adopt.

The performers' goal, therefore, is not the music itself but the expression of one's entire being: it is through this expression that the listeners have the opportunity to hear hidden parts of themselves expressed.

Every action must be carried out with the participation of the entire body, indeed, the entirety of the body: every act – sonorous or silent – must arise from internal impulses that involve, in unfractured unity, the multiplicity of what one perceives inside one's own body.

The listeners, thanks to the *Spazio* parameter, can find themselves just a few millimetres away from the performer during the performance: this helps them identify with the performer and experience the phenomenon of *experiential contagion*, which is fundamental in HN works.

In spite of the "beyond-musical" vocation of this work, or perhaps because of it, it can be said – with a provocative overstatement – that it is a melodic piece, intending the term in an emotional sense (the outpouring of self), in a musical sense (the inspired creative impulse in the modulation of *sensuality* and the voice of sound, and the use of the different COLUMNS/IDENTITIES – see below – as transit points of an overall *melos*) and in a sonic sense (meaning that both the *vocality* – in the broadest sense – and the *materiality* of the instrument's sound are important, but that which should be pursued are not the sound qualifies themselves).

In reality, in HN music there is no clear distinction nor any hierarchy between emotional, musical, and motor forces; each is lost in the other and everything has equal dignity, especially when it springs forth in ways that are not even intended by the performer.

The performance that strives to be "right" in an objective sense is "wrong". The HN spirit – *hic et nunc*, i.e. here and now – must prevail in every aspect of the performance. Also "wrong", on the other hand, is an approach in which the sole purpose of the performers is to relish in themselves. Every single bodily and mental act must be exploited by the musicians to plunge, yes, into themselves, but with the aim to spring out again in order to dive towards others and become one with the surrounding human and material world.

Others exist and space exists together with us, here and now. Reality exists, external and internal to us. Playing the score would be a waste. The HN System provides too many seemingly inessential indications to the sonic outcome and seemingly too few relating to the outcome itself; this intentional overload and this programmed gap reveal that the crucial issue lies elsewhere[\*]: the performers, using HN music, have the task of igniting a poignant perception of existence.

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[\*] **N.B.** It is not about the typical, paradoxical and apparent conflict between playability and unplayability, but between playing the music and playing oneself. HN's music extends from being totally unplayable, because there is no "true" version of it suspended in an abstract dimension and waiting to be dragged into reality, to being perfectly playable, because every single written detail is by its very definition radically adaptable to the unthoughtable subjectivity of the performer.

Dario Buccino: *Finalmente il tempo è intero n° 16* (2019), for violin or viola  
 First page from the score, annotated by the present author.

Tempo	A 3 TU. 21'							
Spazio	CLOSE! Centre + 2°							
	MUTE Action	MAGICAL Contr.	BACK VOICE	TAIL Piece	VOICE	PAD	SCRIBBLE	MULTI VOICE
ACTION	<del>prolonging</del> increase effort	<del>interrupted</del> action	[A] Almost contour Action	[A] Almost contour Action	integrated Action	integrated Action	integrated Action	integrated Action
PRIN	HN	HN	HN	HN	HN	HN	HN	HN
ORNT	HN	ORD	ORD	ORD	ORD	ORD	HN	HN
String PRIN	HN	HN	HN	HN	HN	HN	HN	HN
DYNAMICS	volume [cm] [m] [p]	volume [cm] [m] [p]	volume [cm] [m] [p]	volume [cm] [m] [p]	volume [cm] [m] [p]	volume [cm] [m] [p]	volume [cm] [m] [p]	volume [cm] [m] [p]
ORNT	HN	HN	HN	HN	HN	HN	HN	HN
EVIN	HN	HN	HN	HN	HN	HN	HN	HN
TRIN	HN	HN	HN	HN	HN	HN	HN	HN
FINGER	3 1 4 1	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I
STRING	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I	IV III II I
RANGE	4	3	2	1	1	1	1	1
DYNAMICS	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]	PENT. PENT [cm] [m] [p]
GRATA	HN	HN	HN	HN	HN	HN	HN	HN
face	HN	HN	HN	HN	HN	HN	HN	HN
Vocal	HN	HN	HN	HN	HN	HN	HN	HN
Body	HN	HN	HN	HN	HN	HN	HN	HN

# Aaron Cassidy: *The Crutch of Memory* (2004), for indeterminate solo string instrument

## Performance notes

### The Crutch of Memory (2004) for indeterminate string instrument

With great thanks to Carter Williams for his assistance and support.

#### Instrumentation

This work may be played by any four-stringed, non-fretted, bowed instrument. Clearly, it is primarily intended for violin, viola, or cello, but it is conceivable that a variety of other instruments might be used. (On instruments with more than four strings, it is completely acceptable to simply choose four adjacent strings.)

The following sample *scordatura* are given as suggestions for violin, viola, and cello.


Other tunings are possible, following these general guidelines (arranged in hierarchical order of importance):


1. The chosen tuning should be *dark* though still resonant.
2. All strings should be tuned down by varying degrees. The intervallic relationships between strings should be individually unique and asymmetrical.
3. Open strings should include microtonal tunings. These need not be equally-tempered quarter-tones.
4. The chosen tuning must not resemble any easily-identifiable diatonic, functional chord.
5. Finally, performers should choose tunings that emphasize possible microtonal melodic motion between stopped and open strings (in particular in the final section of the work).


#### notes for performance


1. This work employs a detailed tablature system which prescribes the motion of the arm/hand/fingers across the fingerboard of the instrument, notated on three staves. These are best explained from bottom to top:
    - a. **Hand Position:** The lowest staff indicates the movement of the hand up and down the fingerboard. Hand positions are indicated with upper-case Roman numerals and refer to the location of the *first finger*. The actual locations of the seven positions are at the discretion of the performer, though must remain consistent throughout the work. The most direct options for the locations of these hand positions are a) standard diatonic hand positions, b) positions which are equidistant from one another, or c) an invented scalar system. Position **VII** should always be at the octave. *+/-* indications refer to microtonal adjustments above and below the assigned hand position of between a quarter-tone and semitone. Note that arm movement should continue even when strings are not being depressed.
    - b. **Finger Spacing:** The middle staff indicates the amount of space between the fingers on a five-point scale. 1) very light — as close together as possible; 2) close spacing, with minimal space between the fingers; 3) a natural, open hand position; 4) an extended, open hand position, with reasonably wide spaces between the fingers; and 5) the widest possible spacing, extended as far as physically possible (to the point of becoming awkward and uncomfortable). An effort should be made to keep finger spacing widths as consistent and repeat-able as possible.
    - c. **Fingerings (& bowing)** The tablature of the top staff indicates both the string which is to be depressed (**IV** on the bottom, **I** on top) and the finger used to depress that string (shown with boxed numbers, 1-4). All bowing information is also shown on this staff and is notated in the conventional manner (slurs, articulation, dynamics, etc.). Open strings are indicated with a circled 0.
  2. Several special symbols and abbreviations are used:
    - a. **bow position**
      - mst.: molto sul tasto (widely exaggerated, well onto the fingerboard) / st.: sul tasto / pst.: poco sul tasto
      - nsp.: molto sul ponticello (on the bridge) / Neatly (orless bowing) / sp.: sul pont. / psp.: poco sul pont
      - "poco" indications suggest a very slight limbral modification; "molto" indications suggest an extreme bow position which allows the sound to fragment, becoming unstable and unpredictable, at times dissolving into noise
    - b. **bow pressure**
      - : molto flautando (light, delicate, wesp); ◻: poco flaut.; ■: ord.; ■: poco pesante; ■: molto pesante (a heightened degree of bow noise, particularly at the initial attack, nearing scratch tone)
- Note that the seemingly contradictory combinations of dynamics and bow pressure (e.g., pp/pesante or f/flautando) are entirely intentional. In these situations it is *bow speed* which is altered (in the first example, a very slow bow speed, in the second, an extremely rapid speed).
- c. **other abbreviations**
    - mv.: molto vibrato (quite extreme and exaggerated) / pv.: poco vibrato / sv.: senza vibrato
    - cb.: col legno battuto / col.: col legno tratto


# Aaron Cassidy: *The Crutch of Memory* (2004), for indeterminate solo string instrument (Performance notes)


- d. special bowing techniques
- 


quass-tullo: a continual, rapid alternation between c.l. and ord. bowing. At slower speeds, this will in essence be performed as a cut bowing with the regular addition of the bow, at faster speeds, a less predictable bouncing between wood and hair is desired.
  - 


trillo mordent: a single, rapid alternation between hair and wood, sustain using hair only
  - 

tremolo spiccato
- e. special symbols
- 

harmonic finger pressure. Resulting pitch content will often be obscured, fragmented, and unstable as this finger pressure is rarely used on exact harmonic nodal points.
  - 

finger percussion. In certain hand positions, this will be much more of a physical gesture than an audible one—this tension is intended.
  - 

normal finger pressure (cancels the above indications)
3. Additional general symbols and special instructions:
- a. All trills, tremolandi, and grace notes are to be played as quickly and evenly as possible, regardless of their notated spacing on the page.
  - b. Vibrato should not be used except where otherwise indicated.
  - c. Bracket/transition
    - 

a gradual transition from one performance indication to another
    - 

continue dynamic/articulation instruction for duration of bracket. With regard to timbral modifications above and below the staff, "ord." or "norm." is implied following the close of the bracket if not followed by a new modification instruction. The same is true regarding pizzicato brackets (always dotted brackets and always on the m staff); "arco" is implied.
4. Duration is approximately 4'30". If tempi are adjusted, they should all be reduced proportionately.

"vibrato" - as in the Baroque string bowing technique, a pulsation produced via slightly increased and decreased bow pressure or bow speed. Always shown using spatial notation - 32nd note ligatures indicate regular pulsation, 8th note ligatures indicate irregular pulsation

Note that the number of jets attacks is approximate - nevertheless, it is desirable that a distinction is made between low/some/many bounced attacks

rapid alternation between normal and harmonic finger pressure

rapid alternation between finger percussion and harmonic finger pressure—quite dramatic and aggressive

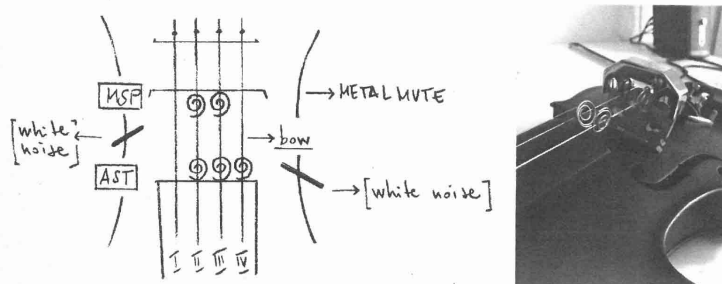
left hand pizzicato

left hand pizzicato behind fingered pitch



Clara Iannotta: *dead wasps in the jam-jar (i)* (2014-2015), for solo violin  
 Performance notes.  
 Published Score is available from Edition Peters.

PREPARATION:



- Put on the strings II - III - IV a small, circular, metal paperclip (see the picture above).
- Put on the 5<sup>th</sup> finger of the left hand a metal thimble.

• **AST** = alto and tasto

RIGHT HAND

- ┌ = almost no pressure of the bow
- = normal pressure
- ▒ = more pressure, noisy sound
- = overpressure.

- The whole piece should be played as legato as possible.
- NB: Amplification is highly recommended!

Duration : ca. 3'



Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
 Performance notes

### Performance Notes

#### Instrument

*Wolke über Bäumen* was written for a modern violin strung with gut strings and played with a Baroque bow.

It is in theory performable on a modern instrumental setup as well, albeit with certain modifications of technique; consultation with the composer is recommended.

♯

#### Tuning Procedure

The instrument is retuned over the course of the piece (see "Notation: Tuning", below); each string is tightened eight times by a small, (very) approximately constant amount. The "ideal" tuning achieved at the end of the piece—though it is of course impossible to actually meet this goal with any degree of precision—is the standard G-D-A-E.<sup>1</sup>

To that end, the instrument should be tuned before performance in the following manner:

- Begin by tuning to the standard G-D-A-E.
- Loosen each string by turning the peg down eight times, by an approximately consistent, small amount – the amount that will be "undone" over the course of the piece in each of the 32 tuning actions.
- Normalize the resulting tuning to a pattern of fifths, using any string(s) as a point of reference.

The score is notated at fingered pitch throughout, and therefore will never sound as written, though the amount and nature of the discrepancy will vary over the course of the piece. Where there is significant ambiguity, strings are specified.

<sup>1</sup> A slightly lower or higher "target tuning" in fifths may be chosen at the discretion of the performer, in the interests of the stability of the instrument.

### Notation

Most of *Wolke über Bäumen* is notated with a "main staff" with, generally speaking, left-hand (pitch) information, and an area above the staff devoted to the specifics of bow technique.

Occasionally, especially in the opening pages, this layout is modified: this occurs in the service of a material type wherein bow articulation is the primary focus of the structure and rhetoric: examples are mm. 2-3 and 7-9. There, pitch information (and other "subsidiary" left-hand information, like finger pressure) is given in reduced form beneath a full-size staff indicating bow accents, the engagement and disengagement from particular strings, etc. The pitch material of these passages is inevitably very simple—generally long, slow glissandi.

In other passages—e.g. m. 30—the staff temporarily disappears, to show the relative stability of pitch (here as well: a long, slow glissando) and to starkly differentiate the gestural and affective world of these passages from the more rhetorical, more "ornamental" surroundings.

#### General Symbols

( )

Pitches, ornaments, articulations, other indications, and occasionally entire gestures appear in parentheses; these are to be presented with a notable *lack* of emphasis, energy and attention. In particular, ornaments in parentheses should be minimal and quite slackly executed. Double parentheses—even more so! (Parentheses may be nested.)

→

Arrows: a smooth transition from one state to another. This is used primarily for changes in left-hand finger pressure (see below).

⤿

Slurs are *not* indications of bowing (see below). They are more general phrase and expression indicators, markers of gestural allegiance. They have no one concrete performative meaning.

⌋

Headless stems: a repetition of the information of the immediately previous notehead (in terms of pitch and finger pressure—see below), used both for reasons of space and clarity and for a slight sense of quasi-ornamental gestural "subordination."

⌋

A gentle, "broad" accent—not at all sharp, and without an unduly pronounced attack. Closer to a *tenuto* mark than to a traditional accent. Although they occur on the main staff, these are more likely to be executed as a matter of bow pressure, although they may be contradictory to other simultaneous bow actions (see below).



Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
 (Performance notes)

(Notation: General Symbols, cont'd.)

Ornaments

Many ornamental signs, particularly "mordents" (as here), have no specified meaning. They should be executed more or less spontaneously, *ad lib.*, with reference to the gestural and technical situation, in approximate correspondence to their traditional signification.



Specific ornamental notations are as follows:



Trill to a different pitch above or below the main note, but as close as possible to that main note. The change in pitch should be as "indistinct" as possible (particularly in lower positions).



Trill or "mordent" between finger-pressure states (see below).



Vibrato.

Left Hand

Pitch and Glissandi

Accidentals apply only to the notes to which they are immediately affixed; the only exception is the stemless notehead (see above).



Quarter- and eighth-tones. Precision in eighth-tone intervals is not of the utmost importance—they are more inflectional, more the result of local distortions, than the quarter-tones, which are reflective of the fundamental pitch structure of the work.



The highest possible pitch—used only without any other stopped pitches, and therefore *absolutely* as high as possible: the finger against the bowhair!  
 (Half-filled: half-harmonic finger pressure. Q.v. m. 97.)

(Notation: Left Hand: Pitch and Glissandi, cont'd.)



Small upward and downward arrows at the end of glissandi: the glissando in question should be as *small as possible* in the given direction.

"Bare" accidentals at the end of glissandi, in combination with the direction of the glissando, specify the ending point without a notehead where context demands.



A "locked" double-stop glissando: two beginning pitches are given, and one ending pitch; the relative position of the fingers stays fixed during the glissando, with the resultant interval between pitches changing slightly.



Many glissandi are partially silent, i.e. they should proceed (in terms of finger placement) even while the string in question is not being bowed. It is important that these glissandi continue "uninterrupted" during the dotted-line silences. Do *not* abandon the slow physical motion and then restart!



Finger Pressure



Noteheads indicating finger pressure: normal, between normal and harmonic, harmonic, and less than harmonic pressure, respectively. "Less than harmonic": the result should be a fuzzy, indistinct tone, with (if held long enough) a noticeable admixture of the open string.

Often, these symbols will be used in situations where there is no notehead to which they can be applied: during glissandi, for example, or as the endpoint of transitions (see below). In these cases, the symbols are given as small independent graphic elements alongside the glissando, at the end of the arrow, etc.




Transitions between finger-pressure states are very common and should be executed as smoothly as possible.


These transition arrows can also lead to an open string (i.e. the finger should be gradually removed from the string altogether). These slanted arrows are distinguishable from glissandi by being thinner and terminating in arrowheads.

This symbol is sometimes also used to signify a removal of finger pressure altogether as the beginning or endpoint of a transition.

Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
 (Performance notes)


(Notation: General Symbols, cont'd.)


 Double or multiple noteheads: begin the event with the first notehead's finger pressure, then switch "immediately" (i.e. after a grace note's duration, more or less) to the finger-pressure state specified by the second (and subsequent) notehead(s). Where the stem is attached to a notehead other than the first of such a group, the previous noteheads occur before the beat.

 The equivalent of a doubled notehead, as an ornamental event during a held pitch or glissando: a momentary application of the first finger-pressure state followed immediately by the second.

Other Symbols


 A small bracket joining two noteheads: both are to be stopped on the same string.

 A momentary, and fundamentally *ornamental*, interruption in the sound of an ongoing event (held pitch or glissando)—the execution is left unspecified, but if possible should *not* involve a change or interruption to the bowing motion of the right arm.

 Left-hand pizzicato—with the nail, if possible. Delicate and dry—q.v. m. 32.

Right Hand (Bowing)

Bowing motions

 These symbols have their accustomed meaning of downbow and upbow, respectively.


In general, with a great deal of discretion allowed to the performer, bowstrokes should be as "full" as possible—in other words, the temporal distance between bow changes should correlate, broadly speaking, with bow speed, to the degree possible given the material, and each bowstroke should "attempt" to use the whole bow.


Thus: rapid changes of bow (as seen primarily in the "passaglia" sections) should result, generally, in almost frantic, potentially almost out-of-control bowing—even with relatively heavy bow pressure. The athleticism of this extreme situation is a defining characteristic of the "passaglia" passages.

Occasionally, part of a bowstroke will be "manually" labeled *slow* or *slow bow*, as contrasted with *norm.*—i.e. with the situation described above, where most bowstrokes should tend towards use of the whole bow.

(Notation: Right Hand (Bowing): Bowing motions, cont'd.)

Bowing patterns are then specified by giving the beginning and ending of the bow motion above the main staff (see "Staff Layout", above), and connecting them with a horizontal line. These lines above the staff serve the function of slurs in normal string notation.

 Tremolo. The initial direction of bow movement is given by the symbol above (and slightly to the left of) the other. Also noted in the traditional fashion on the stems of events on the main staff.

 **Beams** (whether they are present above or below the staff) are also used to indicate the presence of bowing action, whether there is sounding activity on the main staff or not.<sup>2</sup>

Bowing pressure

The line indicating bowing—hereafter the "bow line"—can be solid, dashed, dotted, or some combination thereof.


————— Solid line: "normal" amount of bow pressure relative to the dynamic.


- - - - - Dashed line: reduced bow pressure, such that occasional breaks in the sound are present.

. . . . . Dotted line: *extremely* reduced bow pressure, such that sound is only occasionally present.

- . - . - . - . - . - . Dotted and dashed line: intermediate between the previous two states.

These states are given graphically, without specific rhythmic information. To the degree possible, they should be thought of not primarily as alternations of the dynamic level but rather as means of introducing flickering and unpredictable "internal silences" to the events they cover.

 A thickening of the line: a degree of overpressure, tending towards "scratch tone" at the thickest point. The actual emergence of scratch tone may be left somewhat uncontrollable and dependent on the specific geometry of the bow.

 Occasionally, when two strings are being played, two bow lines are used. The relatively fine distinctions of pressure between simultaneously played strings are undoubtedly somewhat fanciful, but the extra attention to a miniature, intermittent, internal dialogue must be taken seriously.

<sup>2</sup>The only exceptions to this rule are isolated tuning actions (e.g. m. 139). This beam usage is clear in context, in part through the absence of a bowing line.

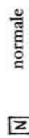
Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
 (Performance notes)

(Notation: Right Hand (Bowing), cont'd.)

Sometimes different components of bowing-related information—bow pressure and dynamics, for instance, or bow action and silence—may be in apparent contradiction. Resolution of those dilemmas is left to the performer and her intuition of the phrasal, gestural, and rhetorical context.

*Bowing location*

The point on the string at which the bowing takes place is given by boxed abbreviation above the bow line.



normale



poco sul tasto; sul tasto; molto sul tasto; at the fingerboard (i.e. as high as possible towards the stopping finger(s))



poco sul ponticello; sul ponticello; molto sul ponticello; al ponticello (i.e. just short of the bridge, such that pitch content is severely compromised); on the bridge (pitchless)

*Silent bowed actions*

There are three types of silent bowed actions:



bowing on the bridge, as mentioned above (under "Bowing location")



"vertical" bowing: the bow is shifted lengthwise along the string, with beginning and ending points given as in "Bowing location" (above) in a boxed figure, connected by an arrow; the duration of the event is given on the main staff, to which the box is connected by an extended stem.

The strings engaged are given with small Roman numerals accompanying the box, along with any changes in string involvement as the vertical-bowing gesture proceeds.



a "vertical" action involving a small, private "oscillation" around a central axis, defined by the bowing location at the beginning of the action (which is parenthetically resumed at the end).

(Sometimes these vertical actions overlap a notated change in bow direction, which is obviously a contradiction, physically speaking; in these instances, the bow change should be mentally "prepared" during the vertical action and the resumption of normal bowing should be "as if in mid-bowstroke.")

Generally, these actions should be smoothly incorporated into the surrounding activity; this tendency is to be emphasized where small leading and/or trailing slurs are present accompanying the box describing the motion. This means that the transition between normal ("horizontal") and "vertical" bowing should not be jerky or sudden but rather part of a generally fluid and "expressive" bowing motion.

(Notation: Right Hand (Bowing): Silent Bowed Actions, cont'd.)



Muting with the left hand. [The position of the left hand is unspecified; it may be chosen for maximal ease of connection with the (sounding) material on either side.]



The strings involved are sometimes specified, particularly if they are *not* merely those engaged in sounding material before and after this event.



Strings may be added or removed from muted actions; specific rhythms are not given.

(In general, the sound of left-hand muting should be distinguished from that of the other two types of silent bowed action by a relative "sharpness" of cutoff and resumption of sounding activity.)

*Interruptions of bowing*

The bow is used continually throughout most of the piece; as a result, events where the bow is *not* engaged form a rhetorically important subset of the material of the piece, with their own vocabulary and syntax. Interruptions in bowing action take the following forms:



Where there is **no beam** and **no bow line**, the bow is not engaged with the string.



Where these gaps are relatively brief, the bow should remain more or less in playing position, but the bow may be gently and naturally lowered away from the instrument for the occasional longer pause (including timed fermatas).



Where a rest without a beam above, or below is *accented*, the bow should be completely and somewhat "forcefully" removed from playing position—not theoretically, not artificially, but with some degree of athletic force. (See the note on page 3.)



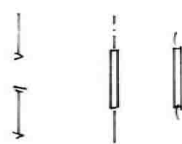
The opposite of the accented rest is the use of small leading and trailing slurs in the bow line: here the bowing action should continue, with the bow lifted slightly off the string but the transverse motion proceeding uninterrupted. The removal and replacement of the bow should be as gradual, as "graceful," as possible—never sudden or energetic!



**Beams over rests with bow line present:** perform the *absolute minimum* possible displacement to prevent the instrument from sounding; this could be a question of pressure, speed, a combination thereof, or other factors. The physical removal of the bow from the string, if it is necessary at all, should be as subtle as possible, and ideally imperceptible to the audience. An extreme version of the interrupted bow line with slurs.

Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
 (Performance notes)

(Notation: Right Hand (Bowing): Interruptions of bowing, cont'd.)



**Hash marks** in the bow line indicate an abandonment of the otherwise continuous back-and-forth motion: the bow is removed and replaced to begin a new bowstroke in the same direction as the previous.

**An empty rectangle:** freeze the bow in place, potentially with a great deal of physical tension.

Where the rectangle is accompanied by leading or trailing slurs, the bow should slow smoothly (though perhaps quickly) to a stop, and restart in the same fashion; otherwise, where there are no leading/trailing slurs, the "freeze" should begin/end suddenly.

**Balzandi**

A variety of balzando-related techniques occur, in various contexts: at the beginning or the end or the middle of bowstrokes, etc.

Some of these events are more awkward, unnatural, or uncontrollable than others, and the specified action may in some cases not be reliable or straightforwardly achievable.

They may also begin before, or continue after, notated events on the main staff, in which case the string should be muted by any convenient method before or after the sounding event with which the action is affiliated (see below).

These events, even when not parenthesized, should **never** be strongly energetic, or dramatically percussive: they are ornamental, gentle, as significant for the silences they introduce as the intermittent sound.

Specific types of balzando technique are as follows:



a normal balzando



Parenthesized: (as elsewhere) with a notable lack of energy, even compared to the relatively gentle normal state (double parentheses: even more so).



Forcibly interrupt the balzando, after the graphically-indicated number of attacks, by abrupt adoption of a normal bowstroke.



A very slow, "broken" balzando; relatively "destructive" to the durations and rhythms on the main staff, which may not be heard as such because of the intermittency of the attacks.

(Notation: Right Hand (Bowing): Balzandi, cont'd.)



Balzandi that occur mid-bowstroke have a small leading slur.

Generally, the disruption to the larger bowstroke action should be as small as possible: the horizontal motion of the bowstroke should continue despite the small, momentary displacement of the bow away from the string.



Balzandi that begin just before a sounding event indicated on the main staff will have their first vertical stroke connected to a "mute" indication, as here.

**Tuning**

As described in the Performance Notes (above), the instrument is tuned down before performance and gradually, firmly and approximately returned to a (more or less) normal tuning over the course of the piece. This transformation is accomplished by the tightening of the tuning pegs at specified points by a small, generally consistent amount (to be determined experimentally by the performer); each peg is tightened eight times.



These tightening actions are designated by double-boxed Roman numerals indicating the string, followed by a +.

The resulting pitch is unspecified, although the difference from the previous state should be relatively small. It is also acceptable for the action to "fail" and for the peg not to move at all—especially where the duration allotted to the action is very brief (see below)—although of course a "successful" action should always be attempted.

Mechanical "friction" noise—pops, squeaks—resulting from this action should not be avoided, and are in fact encouraged.

**N.B.** These actions are given rhythmic durations, which while very precisely notated due to context and rhythmic procedure may be taken as relatively general guidelines in this case. Some of the durations allotted are very brief. *Minor* dilations of the specified durations, and *extremely short* gaps before and after, are acceptable—but where tuning actions occur with other actions immediately before and/or after, the physical action should be frantic, intense, and potentially messy!

In general, the allotted durations should be taken as guides to the intended *franticness* and *violence* of the resulting action, even though the precise rhythmic information is not transmittable to the audience.



Tuning actions are sometimes specified while the bow is being used (on an open string, and/or on the bridge). If possible, the tuning action in these instances should be undertaken with the left hand without interrupting the bowing; if that is impossible, the interruption should be *absolutely* as brief and smoothly incorporated as possible.

Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
*(Performance notes)*

*(Notation, cont'd.)*

**Rhythmic Notation**

The rhythmic language of *Wolke über Bäumen* is based on the superimposition of rhythmic layers, each of which comprises sets of interrupted, nested, often incomplete tuplets.

In order to facilitate the reading of the score, it is laid out with a constant proportional relationship between metrical duration and horizontal space: **one sixteenth note = 16 mm** throughout (with the exception of certain extremely sparse measures).

**Tuplet Notation**

Several specific notations are used to manage the superimposition and other modification of standard tuplet structures:



A standard tuplet.



"Nested" tuplets, in which a tuplet of shorter overall duration exists in reference to a pulse already modified by an "outer" tuplet, are connected in the score by a curved bracket. Tuplets that are stacked vertically but *not* so connected refer to different simultaneous rhythmic layers in a manner made clear by context.



"Incomplete" tuplets are always given with a double hash mark at the end. The ratio governing the tuplet is in parentheses.



Parenthesized numbers, without ratios, indicate a regular division of the duration between two attacks in different rhythmic layers.

**Other Rhythmic Notation**



A note whose duration is cut off by an event in another rhythmic layer is indicated by a horizontal line terminating in a single hash mark.



A rest whose duration is not straightforwardly notatable, but whose duration is made clear by context (almost always filling out a measure).



Grace notes need not necessarily be performed absolutely as fast as possible; they signify, more generally, a quite rapid, light, "tossed-off" sub-gesture.



A grace note event on one string simultaneous with a longer event on another may be given with an angled stem, thus.



**Grace notes on open strings**, especially those with parenthesized noteheads: as brief as possible, only glancing contact with the bow, *ad libitendo!*. These are quasi-ornamental articulations, not fully defined events in their own right, and only upon the accumulation of these events and their relation to other material ought it to become clear that they are an intended part of the instrumental vocabulary.



**Fermatas**: short or of moderate length, respectively, where a duration (or range of durations) in seconds is not given.



These unspecified fermatas are often accompanied by a boxed *ad lib.* indication: these are fundamentally both optional and extensible, based on the performer's (ideally, spontaneous!) sense of the phrasal and expressive context. These numerous events may be considered little durational cadenzas.

Evan Johnson: *Wolke über Bäumen* (2016), for violin (with gut strings and Baroque bow)  
 First page from the score, annotated by the present author.

commissioned by the Kultur Festival for Klein Wolkwitz

*Wolke über Bäumen*

for violin with gut strings and Baroque bow

EVAN JOHNSON (Solo)

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Liza Lim: *The Su Song Star Map* (2018), for solo violin  
*Performance Notes*  
Published Score is available from RICORDI Berlin.



Two versions of the score are provided:

- i) The first one is transposed to show fingered pitches on the fourth string with sounding pitches indicated on the small staff above (p. 1)
- ii) The second version is written at pitch (composer's handwritten autograph score) (p. 19)

**Performance Notes**

Various kinds of distortion are indicated in the score: in relative order of intensity, they are poco distort, husky, throaty, distort. In general, all distortions are of a vocal, emotional type, like a singer's catch in the throat or a veil of whisky and cigars over the sound.

h.sul pont: bring out many different harmonics by adjusting bow speed and relative position to the bridge



Various other non-standard harmonics are used in the context of a flowing line alternating between fully depressed and lightly pressed notes on the fourth string. Here, the intention is to create a fluid '3-dimensional' quality as one rapidly shifts across different timbral spaces.

Nested and interlaced repeat signs are found throughout the piece. In the case of a repeat that is fully bracketed by another repeated section, the enclosed repeat is played twice on each iteration, eg: bar 1. In the case of more complex interlaced repeats, each bracket is played twice (or if indicated, 3 times) without being triggered again on any further passes, eg: bar 4. Dynamics such as crescendi and diminuendi that extend across a repeated section apply to the entire passage of repeated material, ie: the dynamic does not 'reset' on the repeat.

*Duration: approx. 12 minutes*





Rebecca Saunders: *Hauch* (2018), for solo violin  
*Performance Notes.*  
 Published Score is available from Edition Peters.

**Hauch** (2018)

**General - a note for the performer**

*Hauch* is a study exploring pianissimo timbral nuances at the top of the lower strings. Fragments of a two-part melody are fragile, intimate and expressive. They are mostly played *sempre molto flautando*, either *al sul ponticello* or *al sul ponticello*, and each fragment is framed in silence.

Silence is the canvas – all threads of sound surface out of, and disappear into, silence. The silences should be carefully weighed - they are never static and always in motion.

*Hauch* has eight sections, each tracing a fragmented melody, and each with an upper and lower line.

A palette of timbres explore specific modes of vibrato, articulation, timbre, and dynamic.

Every detail is important! - carefully trace and shape each fragment, exploring exact timbral nuance, differentiation and extremes.

There are no time signatures. The few barlines frame the melodic fragments. The graphics of the score shows the proportions of durations.

For the preparation of the study and only as a guideline, very approximate durations are given in brackets beneath the end of each section - do not adhere to this exactly!

Tempo 52 is the initial and central tempo, but it is only a guideline. The basic pulse can vary from section to section. Minimum tempo should be 42.

Further faster tempi are necessary: move on to reinforce the phrasing of the gestures. Keep the pulse always in motion, never stagnant! - timeless, but avoid melancholy.

Explore the melodies to find your own tempo and interpretation.

Dynamic, although very quiet, explore extreme contrasts. Please note at *mp* the sound opens, is no longer so intimate and should be projected to the very back of the hall.

**Legende**

**Bow contact point** - the extremes of timbre *sp+* and *st+* are notated exactly and should be clearly differentiated, even at *ppp*.

*molto flautando sempre* - Bow flowing, never stuttering, adding bow changes as often as you need throughout the piece.

*Sul tasto extreme sempre flautando*: bow over fingerboard as near to half-way node as possible - hollow, floating, beautiful. LH fingers can be relatively flat for a darker sound, and also to facilitate double-stop 5ths.

*st+* - Try practicing *st+* phrases just once with a wooden mute! - to hear the fragile dark *st+* timbre you need to aim for.

*st* - *Sul tasto: st+* automatically becomes *st* at dynamics *mp*, also less *flautando* bow.

*sp+* - *Sul ponticello extreme molto flautando*: bow flowing, never stuttering. *sp+* is specifically applied to two vibrato effects: *m.vib* quasi-glisando effect and the *subito* tight fast vibrato. *s. vibrato* notes below.

*sp* - *Sul ponticello*: bring out some overtones, but written tones of melodies still heard - flowing and expressive.

*ord.* - *Ordinario*: for louder clear moments.

**Vibrato** - the different degrees of vibrato should be very clearly differentiated from each other.

*n.v.* - Senza vibrato.

*m. vib.* - *p.vib.* Poco vibrato.

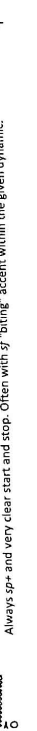
*molto vibrato* taken to extreme: increase LH/arm movement to a very fast glissando back and forwards within given interval (upper note notated to the right of the stem). Always *sp+*.



Less LH finger pressure with glissando.

**Subito** tight fast vib. in clear rhythm, with small amplitude of max. ca. 1/4 tone - Very light LH finger.

Always *sp+* and very clear start and stop. Often with *sf* "biting" accent within the given dynamic.





**Articulation:**



Crescendo out of, or decrescendo into, silence very gradually. Trace border between sound and silence.

Take time!



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**Pauses** - remember silence is always in motion. Pauses are never static, stagnant or boring - moving on!  
A little more than a comma.  Short, like a breath, ca. 2 - 3 beats.  Long fermata, ca. 4 - 6 beats.

**Further Notation:**  
 Raised or lowered by 1/4-tone chiefly an expressive function and need not be exact.  
 Glissando.  
*II, IV*  
Melodic fragments are primarily on third and fourth strings. There are some exceptions on *II*. Change strings a little too if you need, but maintain the special timbres of this palette.

**Duration** very approximately 8 - 8 1/2 minutes.  
RS, Berlin, June 2018 / Jan 2019