

Playing with Time

**The Creative Embodiment of Knowledge in the
Performance of Baroque Flute Music**

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Abstract

Expressive microtiming in music is a highly interpretative and contentious matter that varies not only between musical genres and communities of practice, but also from performance to performance. While some performers regard temporal subtleties as entirely intuitive and subjective, inaccessible to academic scrutiny, research in performance science, by contrast, considers microtiming a matter for objective, empirical study. Adopting a different approach, this thesis argues that all interpretative decisions arise from *knowledge* of some sort. Exploring different epistemic forms and their interaction, the various strains of knowledge that influence temporal expressivity are examined, and the fundamental question of 'intuition' addressed: how do epistemically-rooted interpretative decisions masquerade as 'intuition'?

Focusing on a case study of Fantasia No. 7 for solo flute by Georg Philipp Telemann, this thesis interrogates the processes that underpin expressive timing decisions in the performance of Baroque flute repertoire, addressing specificities of Baroque performance practice, as well as overarching questions more widely relevant to performance studies. As a result of the subjective, experiential and covert qualities that inhere within the phenomena of my investigation, critical reflection on my own practice is an indispensable ingredient of my methodology. This is interwoven with a theoretical framework that draws on aspects of historical musicology, cognitive psychology, psychoanalysis, phenomenology, and embodied cognition.

Specifically, through lenses of 'attentional states' and 'embodiment', I examine the ways in which knowledge becomes internalised, transforms into 'intuition', is accessed during performance, and is externalised as an interpretative musical decision. In particular, drawing on the theory of 'image schemata' (a fundamental concern of recent research into embodied cognition), embodied shapes are revealed as a crucial form of knowledge that guides temporal expressivity. Overall, my research aims to map a holistic understanding of the experiential processes that underpin interpretative timing decisions in the performance of Baroque flute music.

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List of Examples

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<https://drive.google.com/open?id=1ZGSxhIP1jWMqZcerNrYLpMTa7OkkvTRW>

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Author's Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

Georg Philipp Telemann *Fantasien / für Flöte solo*

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Chapter 1. Introduction

1.1. The Impetus for My Research

Expressive microtiming in music is a highly interpretative and contentious matter: it varies not only between musical styles, genres, communities of practice and individual musicians, but also from performance to performance. In any case, when it comes to notated music, musicians *rarely* play *exactly* what is on the page. This is, of course, particularly true in many performances of Baroque repertoire: not only do tempos ebb and flow, but, in accordance with performance practice conventions of the time, rhythms and note lengths are also altered, and additional decorative notes added through ornamentation. Time as represented in notation is frankly not identical to its sonic counterpart. As a flautist of the Western classical tradition, specialising in the performance of Baroque repertoire on the modern flute, I often receive comments on the expressive temporal flexibility of my interpretations. These very remarks led me to question *why* I do what I do: from where exactly do my temporal interpretations arise? My research interest lies, therefore, in the processes that underpin expressive timing decisions in the performance of Baroque flute music.

Many musicians, perhaps rather conveniently, account for interpretative temporal subtleties by crediting intuition – a phenomenon so subjective and ineffable, they deem it inaccessible to academic scrutiny. This is evidenced by the following, indicative comments, from a range of performers, pedagogues, conductors and theorists: ‘it just happens’¹ – ‘the spontaneously recognised, the instinctively felt, delicate variations’² of timing arise ‘at will’³ ‘from the human heart’,⁴ thanks to ‘the passion of the moment’,⁵ and the performer’s ‘impulses, feelings’,⁶ ‘natural sensibility’⁷ and ‘natural

¹ Participant 3, in Daniel Bangert, ‘Doing without Thinking? Processes of Decision-Making in Period Instrument Performance’, (PhD dissertation, University of New South Wales, 2012), 125.

² J. Alfred Johnstone, ‘Some Essentials in Fine Piano-Playing: Illustrated by Features in the Art of Mme. Carreno’, *Musical Standard*, September 3, 1910, 146.

³ Théophile Lemaitre, in Richard Hudson, *Stolen Time: The History of Tempo Rubato*, new ed. (Oxford: Clarendon Press, 1997), 87.

⁴ Johnstone, ‘Some Essentials in Fine Piano-Playing’, 145.

⁵ Hudson, *Stolen Time*, 79.

⁶ Lewis Rowell, in Jonathan D. Kramer, *The Time of Music: New Meanings, New Temporalities, New Listening Strategies* (New York: Schirmer Books, 1988), 4.

⁷ Richard Wagner, *Richard Wagner’s Prose Works*, trans. William Ashton Ellis, vol. 3, *The Theatre* (London: Kegan Paul, Trench, Trübner & Co., 1907), 175.

inclination'.⁸ As author of *Shaping Time*, David Epstein, summarises, '[i]ntuition remains the ultimate resort for musical decisions'⁹ – a comment reinforced by renowned cellist Pablo Casals, who states '[a]ll I do is based on intuition'.¹⁰ At the other end of the spectrum, research in performance science considers microtiming a matter for objective, empirical study: as evidenced in Chapter 2 (Section 2.1.3), individual temporal variables are the subject of clinically methodical investigation.

Adopting a different approach, I contend that all interpretative decisions ultimately arise from *knowledge* of some sort. Thanks to the extensive field of music theory and a rich discourse on Baroque performance practice, both from music treatises of the time and from current debates on historically-informed style, there is undeniably a wealth of *explicit* information on issues of performance that relate directly, or indirectly, to timing. Examples include matters of metre and hierarchy, tempo and rubato, articulation and phrasing, rhythmic alteration and ornamentation. As a performer, however, I *know* that many additional factors, other than declarative knowledge alone, influence my expressive timing decisions. Intangible matters of subjective feeling, embodied experience and attentional focus certainly *also* come into play. My research therefore examines the various forms and guises of knowledge that influence temporal expressivity, interrogating the dynamic interaction between the different epistemic modes. Furthermore, by scrutinising the fluid ontological status of knowledge, by delving into the depths of embodied, tacit knowing, and by examining the relationship between knowledge and performers' cognitive states of attention, the fundamental question of 'intuition' is addressed: how do epistemically-rooted interpretative decisions masquerade as 'intuition'? This thesis may, therefore, be of particular relevance to performer-researchers who seek an understanding of the elusive, experiential processes that underpin interpretative decision-making in performance.

1.2. Scope and Methodology

In order to interrogate these interrelationships between expressive timing, epistemic interaction, cognitive states of attention, and intuition – phenomena that are inherently subjective, experiential and covert – critical reflection on my own practice is an

⁸ Hudson, *Stolen Time*, 150.

⁹ David Epstein, *Shaping Time: Music, The Brain, and Performance* (New York: Schirmer Books, 1995), 105.

¹⁰ Pablo Casals, in J. M. Corredor, *Conversations with Casals* (New York: Dutton & Co., 1956), 122-123.

indispensable ingredient of my methodological approach (highlighted by the inclusion of recorded examples within my thesis). This is interwoven with an interdisciplinary theoretical framework that draws on aspects of historical musicology, cognitive psychology, psychoanalysis, phenomenology, and embodied cognition. Specifically, this framework comprises three core pillars, as evidenced by Chapter 2 on 'Time in Performance', Chapter 3 on 'Attentional States in Performance', and Chapter 4 on 'Embodied Knowledge in Performance'. Whilst the relevance of 'Time', in situating explorations of expressive timing, is patent, 'Attentional States' and 'Embodied Knowledge' were identified (initially from my own experience as a flautist) as equally significant subject areas, salient in the creation of interpretation, its realisation in performance, and its manifestation as intuition. Admittedly enormous topics, far transcending the borders of this thesis, these pillars (grounded in a critical summary of the literature) expound the most pertinent concepts, forge new connections, incorporate reflections on practice, and offer original perspectives, together forming an indispensable theoretical underpinning for Chapter 5: a detailed case study of Fantasia No. 7 for solo flute by Georg Philipp Telemann.

Serving to introduce the phenomenon of 'time' in music – the very stimulus that lies at the heart of my thesis – Chapter 2 reveals the scarcity of current research into expressive timing in the performance of Baroque music, but also highlights the importance of this subject area. Temporal manipulation was indeed a central feature of the Baroque, as evidenced by performance practice conventions, comments from performer-pedagogues of the time, and the sheer discrepancy between notation and its realisation in practice. As well as discussing issues of tempo rubato, note length and musical punctuation, this chapter explores the manifestation of musical time as motion. Focusing, in particular, on musical motion as both 'goal-directed' and 'cyclic', the discussion draws in Mark Johnson's theory of 'image schemata' – a fundamental concern of research into embodied cognition that forms the centrepiece of Chapter 4 on 'Embodied Knowledge in Performance'.

Opening with a personal reflection, describing the practical impetus for my explorations of 'Attentional States', the following chapter begins to address the complexities of 'intuition'. As I contend that a musician's particular attentional focus determines the way in which knowledge is accessed and subsequently externalised as an interpretative decision that may appear 'intuitive', this chapter considers the different

cognitive states that a performer may enter. By exploring the ways in which the knowledge that underpins aspects of temporal expressivity is accessed reflectively or pre-reflectively during performance, as well as the process through which knowledge becomes engrained in one's subattention, a framework for understanding the phenomenon of intuition is proposed.

Chapter 4 on 'Embodied Knowledge' subsequently examines the nature of the epistemic forms that guide temporal interpretations. By exploring the ambiguous relationship between explicit and tacit modes and, in particular, the process by which declarative knowledge becomes embodied and gains an uncodifiable dimension, we reach an even deeper understanding of the phenomenon of 'intuition'. This significant relationship between intuition and embodiment is further clarified by examining the role of the body in interpretative decision-making. Drawing, in particular, on theories of 'image schemata' and 'mimetic participation' – central to the field of embodied cognition – I consider the significance of shapes felt viscerally when we play music, as well as overt shapes created by our bodies when we perform. These are revealed as crucial forms of embodied knowledge that guide temporal expressivity and are experienced as intuitive.

Indeed, in these three preliminary chapters, I endeavour, in the words of Franziska Schroeder, 'to "look sideways", to see things in an unusual fashion',¹¹ so that 'fresh connections and interpretations'¹² that 'transcend the borders of the disciplines and forms'¹³ can be made. Most importantly, however, these three cornerstones pave the way for Chapter 5. Perhaps the quintessence of my contribution, this case study of Telemann's Fantasia No. 7 draws together the many theoretical strands, further elucidating my discussions through a substantial critical reflection on my own practice. After all, engaging directly in the very process under scrutiny contributes unrivalled value and insight. As Heidegger states in his seminal work *Being and Time*,¹⁴ 'knowledge arises out of being absorbed in materials and processes'.¹⁵ Bruce Archer agrees that 'there are

¹¹ Franziska Schroeder, 'Bringing Practice Closer to Research – Seeking Integrity, Sincerity and Authenticity', *International Journal of Education through Art* 11, no. 3 (September 2015), 351.

¹² Mika Hannula, Juha Suoranta and Tere Vadén, *Artistic Research: Theories, Methods and Practices*, trans. Gareth Griffiths and Kristina Köhli (Helsinki; Gothenburg: Academy of Fine Arts; University of Gothenburg, 2005), 22.

¹³ *Ibid.*, 19.

¹⁴ Martin Heidegger, *Being and Time: A Translation of Sein und Zeit*, trans. Joan Stambaugh (Albany: State University of New York Press, 1996).

¹⁵ Schroeder, 'Bringing Practice Closer to Research', 347.

circumstances where the best or only way to shed light on ... a process or a function is ... to enact something'.¹⁶

It is important to note, at this stage, that whilst Chapter 5 reinforces the Baroque lens through which my research is undertaken, *all* musical practice is, of course, based on the interaction of knowledge, and nuances of timing are significant in all styles and genres. Many of my discussions are, therefore, widely relevant to performance studies. As explained in Chapter 2, however, there is a notable lack of research into expressive microtiming in Western classical music, and especially in the performance of *Baroque* repertoire – a period of music that is, in fact, inextricably entangled with issues of temporal manipulation and epistemic pluralism. To give just a couple of salient examples, rhythmic alteration and ornamentation are, of course, fundamental, temporally-expressive features of the genre, known implicitly through performance practice convention, explicitly through music treatises, and experientially through practice. Specific focus on this period, therefore, not only begins to address the gap in the literature, but also affords a detailed case study that exploits the wealth of explicit information from Baroque music treatises as it interacts with my own embodied experiences as a flautist, specialising in repertoire from this time. I do not endeavour to provide a comprehensive, historical archive of evidence that reveals how exactly performers of the Baroque ‘played with time’; nor do I wish to suppress the wonderfully subjective quintessence of expression, by promoting one approach to expressive timing over another and proposing interpretative ideals. Instead, I aim to develop a greater understanding of the phenomenological *processes* that underpin expressive timing decisions in performance, using Baroque repertoire as the stimulus.

Chapter 5 may, therefore, be viewed as the host of ‘practical’ perspectives, and Chapters 2 to 4 as largely ‘theoretical’ contributions. This ostensible segregation of theory and practice does not, however, reflect the synergetic essence of my research process. Indeed, throughout my explorations, a reciprocal dynamism occurred between theory and practice: the two domains not only coexisted, but constantly *interacted*, informing and clarifying one another. (A detailed critique of this entanglement of theory and practice is presented in Section 1.3). This methodological process is, of course, a reflection of the very same process it endeavours to investigate – that of epistemic

¹⁶ Bruce Archer, ‘The Nature of Research’, *CoDesign* 2, no. 11 (January 1995), 11.

interaction: as the phenomena of my investigation are both experientially explored and critically scrutinised by exploiting multiple forms of knowledge, the tacit and explicit synergise to reveal new, deeper understandings. Epistemic interaction is elucidated by its very own process. Whilst the linear structure of the thesis cannot always reflect this interactive approach, it affords clarity: in order to make sense of the cross-modal, interdisciplinary discussions within my case study, it is essential, firstly, to articulate the multiple, and indeed complex, theoretical avenues on which it draws. In any case, despite this manifestation of structural segregation, theoretical and practical perspectives inevitably colour every chapter, and salient themes and concepts are, indeed, referred to, cross-referenced, and interconnected throughout my thesis, highlighting the inherently interlinked essence of my work.

At this stage, it is interesting to note that the immersive and multidimensional quality of my research process could perhaps fall under Paul Freyerabend's proposition of an 'anarchistic' methodology.¹⁷ As Michael Billig elaborates, this approach is 'not to follow a preset programme, laid down in advance by a methodologist, but to gather up clues which can nudge the search one way or another'.¹⁸ Hannula, Suoranta and Vadén agree that 'there is no reason to present rigid methodical guidelines',¹⁹ because research into inherently creative and flexible phenomena should develop organically,²⁰ 'free from excessive formalities'.²¹ They too 'argue in favour of methodological anarchy',²² further clarified as an open and diverse approach²³ that embraces 'multi-directionality'.²⁴ Succinctly, they urge the researcher to take risks,²⁵ and to embrace 'a situation where you know roughly the direction of your journey but at the same time ... you can not be certain where your journey will take you'.²⁶ By gathering and connecting 'clues' from a number of avenues – synthesising aspects of historical musicology, cognitive psychology, psychoanalysis, phenomenology and embodied cognition, with musical analysis, creative

¹⁷ Paul Freyerabend, *Against Method: Outline of an Anarchistic Theory of Knowledge* (London: New Left Books, 1975).

¹⁸ Michael Billig, 'Methodology and Scholarship in Understanding Ideological Explanation', in *Social Research Methods: A Reader*, ed. Clive Seale (London and New York: Routledge, 2004), 15.

¹⁹ Hannula, Suoranta and Vadén, *Artistic Research*, 14.

²⁰ *Ibid.*, 13.

²¹ *Ibid.*, 5.

²² *Ibid.*, 14.

²³ *Ibid.*, 14, 17, 18, 20, 21, 36, 37, 42, 43.

²⁴ *Ibid.*, 60.

²⁵ *Ibid.*, 29, 50 54-55, 163, 169.

²⁶ *Ibid.*, 54-55.

practice and critical personal reflection – a multimodal, nonlinear research style characterises my methodological approach, reflecting the multifaceted and creative nature of both musical performance and epistemic interaction. As Jane Davidson states, ‘in addition to the skill of performing, having the capacity to use multiple methods, to consider broader theoretical contexts, and to document, analyse and reflect ... can only enhance one’s potential for new knowledge and insight’.²⁷

1.3. Situating the Practice-Theory Relationship

1.3.1. Resonance with ‘Practice Research’

My research therefore synthesises theory and practice – a methodological approach that has gained popularity and credibility over the last few decades. Indeed, a plethora of terms have recently emerged, in order to define research that ‘includes practice as an integral part of its method’.²⁸ As well as ‘practice-based’ research (whereby ‘a creative artefact is the basis of the contribution to knowledge’)²⁹ and ‘practice-led’ research (which ‘leads primarily to new understandings about practice’),³⁰ a number of other expressions, such as ‘Practice as Research’,³¹ ‘Action Research’,³² ‘research through practitioner action’,³³ and ‘Artistic Research’³⁴ have surfaced. Despite subtle distinctions, ‘many variations and overlaps’ persist:³⁵ delineations are nebulous and imbrications inescapable. As Franziska Schroeder, author of ‘Bringing Practice Closer to Research’, states, there is simply an ‘abundance of inconsistent terminologies that surround the discourse on practice and research’.³⁶ In order to eradicate these ‘unnecessary

²⁷ Jane Davidson, ‘Practice-based Music Research: Lessons from a Researcher’s Personal History’, in *Artistic Practice as Research in Music: Theory, Criticism, Practice*, ed. Mine Doğantan-Dack (Surrey: Ashgate, 2015), 104.

²⁸ Linda Candy, *Practice Based Research: A Guide: CCS Report: 2006-V1.0 November* (Sydney: Linda Candy CCS, 2006), 1, 3, 19, accessed Dec 19, 2015, <http://www.creativityandcognition.com/resources/PBR%20Guide-1.1-2006.pdf>.

²⁹ *Ibid.*, 1.

³⁰ *Ibid.*

³¹ Schroeder, ‘Bringing Practice Closer to Research’, 344-345.

³² Archer, ‘The Nature of Research’, 6.

Christopher Frayling, ‘Research in Art and Design’, *Royal College of Art Research Papers* 1, no. 1 (1993/4): 4.

³³ Archer, ‘The Nature of Research’, 10-12.

³⁴ Hannula, Suoranta and Vadén, *Artistic Research*.

Michael Schwab, ‘Editorial’, *Journal for Artistic Research*, accessed January 3, 2016, <http://www.jar-online.net/index.php/issues/editorial/491>; Orpheus Instituut, ‘About the Orpheus Institute’, accessed January 3, 2016, <http://www.orpheusinstituut.be/en/about-us>.

³⁵ *Ibid.*, 100.

³⁶ Schroeder, ‘Bringing Practice Closer to Research’, 343.

complications’,³⁷ Schroeder encourages us to ‘refer more resolutely to Practice Research’³⁸ – a lucid and all-embracing term, which I indeed favour and use in my own work when discussing practice-centred methodologies. After all, the fundamental premise, the very quintessence, of all guises of ‘Practice Research’, is, most simply, that ‘research ... emerge[s] out of practice’.³⁹

Whilst it could certainly be argued that, as my research also focuses heavily on theory, my methodology does not precisely fit the mould of ‘Practice Research’, my approach certainly resonates with its underlying ideologies. Not only is my work inspired and informed by my practice, but it also ‘values the individual experience’,⁴⁰ ‘take[s] a personal standpoint’,⁴¹ and embraces ‘a direct reflective connection with the practice’⁴² – fundamental ingredients of Practice Research itself.

1.3.2. Critical Considerations

My methodology is deeply rooted in self-reflection. Whilst this approach certainly bears a number of significant benefits, it simultaneously poses challenges and limitations, which generate popular debate. Self-centred methodologies are frequently criticised for their lack of objectivity: ‘reflective activities may be seen as too subjective and not sufficiently rooted in evidence’.⁴³ Indeed, in stark contrast to the rise of Practice Research, at the heart of which lies subjectivity and self-reflection, recent years have also witnessed a parallel flourishing of performance research that revolves around the scientific and objective study of empirical data. The *Empirical Musicology Review*, for example, was founded in 2004 and in 2006 began publishing research with ‘an emphasis on systematic methods, such as hypothesis-testing, modeling, and controlled observation’.⁴⁴

It is important to recognise that this thesis does not endeavour to reach definitively objective conclusions, such that could be deduced via empiricism. As

³⁷ Schwab, ‘Editorial’.

³⁸ Schroeder, ‘Bringing Practice Closer to Research’, 343, 345, 351.

³⁹ *Ibid.*, 345.

⁴⁰ Hannula, Suoranta and Vadén, *Artistic Research*, 70.

⁴¹ *Ibid.*, 48-49.

⁴² *Ibid.*, 100.

⁴³ L. Lawrence-Wilkes and A. Chapman, ‘Reflective Practice’, *BusinessBalls*, 2014-15, accessed April 10, 2017, <http://www.businessballs.com/reflective-practice.htm>.

⁴⁴ ‘Editorial Policies’, *Empirical Musicology Review*, accessed December 29, 2015, <http://emusicology.org/about/editorialPolicies#focusAndScope>.

Professor of Design Research, Bruce Archer, asserts in his article 'The Nature of Research', 'research through practitioner action must be recognised as very probably non-objective'.⁴⁵ In fact, he believes that 'there is no such thing as "objective" Humanities research',⁴⁶ and therefore that such pursuits need not rest on empirical data.⁴⁷ Whilst Robin Nelson, author of *Practice as Research in the Art*,⁴⁸ similarly insists that 'the organic nature of creative processes is not characteristically data-based',⁴⁹ Hannula, Suoranta and Vadén interestingly adopt a slightly different position, and challenge society's limited, traditional conception of 'data'. Fundamentally claiming that 'everything counts as empirical data ... as long as it generates thinking', and highlighting, for example, the value of 'experiential memories' as research material,⁵⁰ they contend that one's very 'own thinking, intuiting, reflecting and judging ... [can be] regarded as the primary evidences'.⁵¹ In order to advance understanding of the complex and subjective art that is performance, it appears essential to me, therefore, that one must trust the inherent value of critical, personal reflection of the phenomenological experience as a valid and incomparable resource.

Traditional, empirical research models have, in fact, been necessarily challenged since the rise of phenomenological thinking in the twentieth century, which 'pointed to the limits of scientific methods'⁵² – an issue indeed expressed in Hans Georg Gadamer's renowned *Truth and Method*.⁵³ Of course, with specific regard to musical practice, empirical results will undoubtedly change from one performance to the next, as a result of the inherent spontaneity of musical performance, the flexibility of interpretative possibilities, and the immense spectrum of expressive timing, all of which are contingent on situational and relational knowledge in the moment. Practice-led researcher Kathryn Whitney, who emphasises just 'how difficult performance is to grasp objectively or analytically',⁵⁴ indeed agrees that traditional empirical paradigms offer nothing but 'a

⁴⁵ Archer, 'The Nature of Research', 13.

⁴⁶ *Ibid.*, 9.

⁴⁷ *Ibid.*, 10.

⁴⁸ Robin Nelson, 'Supervision, Documentation and Other Aspects of Praxis', in *Practice as Research in the Arts: Principles, Protocols, Pedagogies, Resistances*, ed. Robin Nelson (Houndsmill: Palgrave Macmillan, 2013), 71-92.

⁴⁹ Schroeder, 'Bringing Practice Closer to Research', 345.

⁵⁰ Hannula, Suoranta and Vadén, *Artistic Research*, 72.

⁵¹ Clark Moustakas, *Phenomenological Research Methods* (Thousand Oaks: Sage, 1994), 59.

⁵² Archer, 'The Nature of Research', 4-5.

⁵³ Hans Georg Gadamer, *Truth and Method*, English translation (New York: The Seabury Press, 1975).

⁵⁴ Kathryn Whitney, 'Following Performance across the Research Frontier', in Doğantan-Dack, *Artistic Practice as Research in Music*, 107.

woeful position from which to explore the “magic” inside performance’,⁵⁵ which is inherently incompatible with the ‘normal imperatives of “objectivity” and “repeatability” that surround research’.⁵⁶ Music is at once changeable, experiential and multidimensional, and the reductionist nature of empirical objectivism fails to reflect this quintessence.

This controversial friction, epitomised by the divergence between scientific empiricism, on the one hand, and experiential Practice Research on the other, can perhaps be settled by acknowledging two different views of truth: ‘truth seen as universal (objective and rooted in evidence),’⁵⁷ and ‘truth seen as relative to place, time and context (subjective ...)’.⁵⁸ This distinction of course loosely alludes to theories of absolutism and relativism;⁵⁹ to Leibniz’ differentiation between ‘truths of reason’ and ‘truths of fact’;⁶⁰ to Hume’s division of ‘relations of ideas’ from ‘matters of fact’;⁶¹ and to Kant’s separation of ‘*a priori*’ and ‘*a posteriori*’ knowledge.⁶² Whilst these definitions are, of course, highly ambiguous, densely complex, and extensively debated, their mere existence implicitly substantiates the need for truth (and therefore research) grounded on subjective experience, as well as that based on objective, scientific proof. This is, of course, reinforced by the recognition of procedural, embodied ‘knowledge *how*’, based on personal experience, as equally important to propositional ‘knowledge *that*’⁶³ – a distinction explored in Chapter 4. Moreover, it is interesting to note that so-called ‘subjective knowledge’⁶⁴ gains evermore relevance with the growing acceptance that ‘nothing is known with such certainty that all possibility of future revision is removed. All knowledge is tentative’.⁶⁵ Indeed, with an increasing understanding that no research can

⁵⁵ Ibid., 112.

⁵⁶ Darla Crispin, ‘Artistic Research and Music Scholarship: Musings and Models from a Continental European Perspective’, in Doğantan-Dack, *Artistic Practice as Research in Music*, 70.

⁵⁷ Lawrence-Wilkes and Chapman, ‘Reflective Practice’.

⁵⁸ Ibid.

⁵⁹ Hans Kelson, ‘Absolutism and Relativism in Philosophy and Politics’, *The American Political Science Review* 42, no. 5 (October 1948): 906.

⁶⁰ F. H. Heinemann, ‘Truths of Reason and Truths of Fact’, *The Philosophical Review* 57, no. 5 (September 1948): 458.

⁶¹ David Hume, *Philosophical Essays Concerning Human Understanding* (London: A. Miller, 1748), 47.

⁶² Paul Guyer and Allen Wood, ‘Introduction’, in Immanuel Kant, *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen Wood (Cambridge: Cambridge University Press, 1998), 2.

⁶³ Gilbert Ryle, *The Concept of Mind*, 60th anniversary ed. (Abingdon and New York: Routledge, 2009), 14-47.

⁶⁴ Andrew H. Van De Ven and Paul E. Johnson, ‘Knowledge for Theory and Practice’, *The Academy of Management Review* 31, no. 4 (October 2006): 807.

⁶⁵ D. C. Phillips, ‘Subjectivity and Objectivity: An Objective Enquiry’, in *Educational Research: Current Issues*, ed. Martyn Hammersley (London: Paul Chapman Publishing, 1993), 59.

be 'free from the influence of background theories or hypotheses or personal hopes and desires',⁶⁶ and that all knowledge actually 'requires active, sophisticated subjective processes – such as perception, analytical reasoning, synthetic reasoning, logical deduction',⁶⁷ the idea that 'knowledge is built on an unshakeable foundation' has been abandoned.⁶⁸ Whilst it is of course essential that one does not synonymise 'objectivity' with 'unshakeable'⁶⁹ 'certainty' or absolute 'truth',⁷⁰ naively dismissing the spectral, ambiguous and debated nature of terminology, it is equally important that the omnipresent permeation of subjectivity is recognised and even more so that its value and affordances are not overlooked.

Musical performance is most certainly an unfixed, fluid, subjective and experiential activity, conditioned by 'temporal and local context'.⁷¹ It is 'situation-specific',⁷² its 'live experience acutely bound up with the dimension of time and its irreversibility'.⁷³ My research, therefore, does not seek to disconnect this multidimensional phenomenon into isolated variables, in order to reveal supposed objective and universal absolutes, but rather it embraces its changeable and subjective, moment-bound and interrelational complexity. Hannula, Suoranta and Vaden agree: we are

dealing with something irrepeatable and possibly unique. The phenomena of culture, such as artistic practices or works of art, can not be purified of all of their specific properties: potentially, all the specific shades of meaning are important. Furthermore, these phenomena can not always be analysed into parts or repeated at will.⁷⁴

⁶⁶ Ibid., 62.

⁶⁷ Carl Ratner, 'Subjectivity and Objectivity in Qualitative Methodology', *Forum: Qualitative Social Research* 3, no. 3 (September 2002): para 8, accessed April 14, 2017, <http://www.qualitative-research.net/index.php/fqs/article/view/829/1800>.

⁶⁸ Phillips, 'Subjectivity and Objectivity', 59.

⁶⁹ Ibid.

⁷⁰ Ibid., 60, 61, 62

⁷¹ Hannula, Suoranta and Vadén, *Artistic Research*, 47-48.

⁷² Archer, 'The Nature of Research', 11-12.

⁷³ Whitney, 'Following Performance across the Research Frontier', 115.

⁷⁴ Hannula, Suoranta and Vadén, *Artistic Research*, 42-43.

It is necessary, therefore, that in order to understand the act of performance, the subject matter 'is not cut up into pieces (into variables), but rather one tries to perceive the situation more comprehensively'.⁷⁵

Whilst the evidential value of empirical study must certainly not be dismissed, this methodological approach alone simply cannot satisfy the demands of this thesis. Indeed, my research explores and connects some of the co-existing phenomena that underpin musical performance, interrogating the complex and interrelated processes that lead to different musical outcomes. Understanding the underlying processes of such a volatile activity seems, to me, far more important than exclusively analysing the ephemeral and irreproducible products. In particular, with specific interest in phenomenological matters of experience, consciousness, image schemata and emotion, and in the largely unarticulated issues of intuition and knowledge interaction – all fundamental constituents of the interpretative process and unique to each individual – it is precisely the heart of subjectivity itself that I wish to explore. Whilst objective, scientific investigation could certainly reveal interesting information concerning the subpersonal, physical correlates of these processes, these results cannot capture the phenomenological essence of the activity. Objective paradigms fail to reveal the full story or grasp the bigger picture surrounding experiential phenomena.

As Fiona MacKeller puts it, 'there is no empirical way to get at what is going on inside someone's head'.⁷⁶ A self-reflective methodology, focusing, as Rennie and Schneider suggest,⁷⁷ on my own 'inner experience'⁷⁸ appears, therefore, wholly appropriate. After all, one must recognise that reflection is one of the most fundamental tools used in the very realms of practice and performance.⁷⁹ Such an approach is firmly advocated in the field of Practice Research, whereby 'self-reflective and self-critical

⁷⁵ Ibid.,93.

⁷⁶ Fiona MacKeller, 'Subjectivity in Qualitative Research', *EDUC 867 WEBSITE*, [n. d.], para 8, accessed April 14, 2017, <http://www.sfu.ca/educ867/hm/subjectivity.htm>.

⁷⁷ David L. Rennie, 'Human Science and Counselling Psychology: Closing the Gap between Research and Practice', *Counselling Psychology Quarterly* 7, no. 3 (1994): 240; Kirk J. Schneider, 'Multiple-Case Depth Research: Bringing Experience-Near Closer'. *Journal of Clinical Psychology* 55, no. 12 (December 1999): 1531-1540.

⁷⁸ Martin Drapeau, 'Subjectivity in Research: Why Not ? But...!', *The Qualitative Report* 7, no. 3 (September 2002): para 1, accessed April 14, 2017, <https://www.scribd.com/document/31661879/null>.

⁷⁹ Jim Butler, 'Professional Development: Practice as Text, Reflection as Process, and Self as Locus', *Australian Journal of Education* 40, no.3 (1996): 271, 277.

processes⁸⁰ are, in fact, defined as ‘the engine’.⁸¹ It is also important to recognise that, as Doğantan-Dack emphasises, such a personally-driven approach does not merely generate *supporting* material to accompany findings gained via rather more traditional or objective methods: it offers a unique and invaluable means of creating *new* knowledge that cannot otherwise be obtained.⁸²

In certain respects, my approach is close to that of performer-researcher Elisabeth Le Guin. The methodology she uses to investigate the felt, kinaesthetic experience of performance (in *Boccherini’s Body: An Essay in Carnal Musicology*) shares potent similarities with mine. Whilst asserting just ‘how difficult it is to unite performance and musicology into one discourse’, yet acknowledging that ‘insight ... can result from combining various methods’ (an approach to which I allude at the end of Section 1.2), Le Guin, like me, embraces the ‘be-right-here-right-now-ness of phenomenology’, utilising self-reflective techniques to fuel her explorations of performative experience.⁸³

Despite its ostensible suitability, it is important not to dismiss the challenges and complications of self-reflective methodologies, which are inherently characterised by an indivisible entanglement of researcher and “researchee”. Described by Darla Crispin as a ‘dual situatedness’, the practice-researcher is ‘both participant in their artistic activity and observer of it’,⁸⁴ simultaneously juggling so-called ‘insider and outsider perspectives’.⁸⁵ In such a ‘researcher-researched relationship’,⁸⁶ the participant can, of course, never fully escape the influence of his or her knowledge as researcher, and this could arguably disrupt the natural ecological conditions, consequently tainting or even directing the results. After all, it cannot be denied that an awareness of my research questions or newly acquired knowledge is likely to penetrate and colour my practice. One must remember, however, that, despite tendencies to polarise artistic practice and

⁸⁰ Ruth Leitch and Christopher Day, ‘Action Research and Reflective Practice: Towards a Holistic View’, *Educational Action Research* 8, no. 1 (2000): 10, 15, 18, 19, 20, 30, 42, 45, 58, 62, 90, 100.

⁸¹ *Ibid.*, 189.

⁸² Mine Doğantan-Dack, ‘The Role of the Musical Instrument in Performance as Research: The Piano as a Research Tool’, in Doğantan-Dack, *Artistic Practice as Research in Music*, 172-173.

⁸³ Elisabeth Le Guin, *Boccherini’s Body: An Essay in Carnal Musicology* (Berkeley and Los Angeles: University of California Press, 2006), 13, 11, 3.

⁸⁴ Crispin, ‘Artistic Research and Music Scholarship’, 56.

⁸⁵ Målfrid Råheim et al., ‘Researcher-Researched Relationship in Qualitative Research: Shifts in Positions and Researcher Vulnerability’, *International Journal of Qualitative Studies on Health and Well-being* 11 (2016): para 3, accessed April 14, 2017 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4910304/>.

⁸⁶ *Ibid.*

Linda Finlay, ‘Negotiating the Swamp: The Opportunity and Challenge of Reflexivity in Research Practice’, *Qualitative Research* 2, no. 2 (2002): 224.

research, experience does not 'naturally' segregate itself into these distinct compartments.⁸⁷ As both a flautist and academic, my research is simply an intrinsic part of my development as a performer, in the very same way that my performing informs and shapes my research. I am at once a performer who thinks and a thinker who performs, and this immersive, entangled perspective forms the foundation for my input.

This position of hybridity is, after all, shared amongst Practice Researchers, who agree that 'we cannot divide our being or practices into two worlds The researcher and the artist are in a continuous way part of the same flux of experience'.⁸⁸ Hannula, Suoranta and Vadén, for example, explicitly encourage this 'non-dualistic and non-binary dialogue between the areas of experience of art and research'⁸⁹ because, as they rightly elaborate, 'experientiality ... guides the theoretical formation of knowledge, and vice versa ... the theory born from reading, thinking and debate gives direction to artistic experience'.⁹⁰ This symbiotic relationship is most wonderfully encapsulated by Anthony Gritten who describes practice and research as 'porous entities': 'their identities are such that the one can be co-opted into the self-determination of the other'. Gritten goes on to promote the absolute indispensability of this 'contamination and porous free-flowing between practice and research, a spasm, agitation, oscillation and general boundary crossing'; this 'deterritorialisation'.⁹¹ Schroeder agrees that it is precisely in this dynamic interplay between practice and theorisation that we must be immersed.⁹² This reciprocal infiltration is, therefore, not only a normal characteristic of my practice, but also a particularly valuable asset.

In spite of my fervent confidence in this synergistic dynamism, some may conversely insist on a methodology that examines other performers and their experiences, reducing subjective bias and gaining objective credibility. Of course, as MacKeller reminds us, for many, 'subjectivity is something which must be limited to the greatest degree possible in order to be able to assert a degree of generalizability'.⁹³ This opposing viewpoint indeed fuelled an uncomfortable struggle for researcher-practitioner

⁸⁷ Hannula, Suoranta and Vadén, *Artistic Research*, 25-26.

⁸⁸ Finlay, 'Negotiating the Swamp', 61.

⁸⁹ Hannula, Suoranta and Vadén, *Artistic Research*, 25-26.

⁹⁰ *Ibid*, 59.

⁹¹ Anthony Gritten, 'Determination and Negotiation in Artistic Practice as Research in Music', in Doğantan-Dack, *Artistic Practice as Research in Music*, 88.

⁹² Schroeder, 'Bringing Practice Closer to Research', 352.

⁹³ MacKeller, 'Subjectivity in Qualitative Research, para 5.

Jane Davidson, who recounts the initial dichotomy she faced between her desire to research her own subjective practice, and a feeling that she ‘needed to focus on another artist in order to be able to give *objective* theoretical accounts’.⁹⁴ Davidson’s experience confirms the pressurising prevalence of ‘the “performer as lab rat” tendency identified by John Rink ... wherein performance and the performer are the focus of the study but the documentation is from the perspective of the listener-researcher’.⁹⁵

It is, of course, important to recognise that this alternative, ‘unbiased’ approach is not void of limitations but is, in fact, equally fraught with difficulties. As Martin Drapeau points out, many researchers feel that ‘distancing themselves from the subject ... only keeps the subject ... at a distance’,⁹⁶ and I argue that the very objectivity afforded by studying *others* – the particular feature that supposedly elevates this methodology as superior – can sometimes be a weakness. With a project such as mine, not only would observation of other performers fail to address covert issues of phenomenality, but even if my studies were based on other performers’ personal accounts of subjective experience, it is likely that their recollections would not be directed specifically to the phenomena I wish to investigate. Whilst I could of course prompt their reflections through directed questions, this involvement could be criticised as invasive and leading, unfairly influencing their performance behaviours and responses. Furthermore, it is unlikely that I would find other performers with the same, particular theoretical knowledge that, as part of the process of epistemic interaction, feeds into the very process my research aims to explore.

In any case, I can never enter another person’s mind and truly understand their experiences. On the other hand, of course, I can never escape my own mind. It seems, therefore, that for the study of phenomenological matters, a self-centred approach is crucial. In the words of conductor and artistic-researcher Bede Williams, my research is ‘reliant on me being the insider’.⁹⁷ Catherine Laws indeed agrees that, as subjectivity ‘is part and parcel of our experiences’,⁹⁸ phenomenological complexities simply ‘cannot be

⁹⁴ Jane Davidson, ‘Practice-based Music Research’, 97.

⁹⁵ Catherine Laws, ‘Embodiment and Gesture in Performance: Practice-Led Perspectives’, in *Artistic Experimentation in Music: An Anthology*, ed. Darla Crispin and Bob Gilmore (Leuven: Leuven University Press, 2014), 136.

⁹⁶ Drapeau, ‘Subjectivity in Research: Why Not ? But...’, para 1.

⁹⁷ Bede Williams, ‘Conducting Research with the Camera On’, (conference paper: Performing Knowledge Conference, Emmanuel College, University of Cambridge, April 25-26, 2016).

⁹⁸ Laws, ‘Embodiment and Gesture in Performance’, 132.

fully understood without the perspective of the musician, without considering ... subjective experiencing ... in action'.⁹⁹ She insists, therefore, that in such instances there can be 'no divorcing of subject and object. The veneer of objectivity has to be discarded'.¹⁰⁰ The lack of separation between researcher and participant is, therefore, not merely acceptable but favourable. In particular, having an increased knowledge and awareness of the research issues affords a useful thematic focus and an appropriate contextual framework for reflection, as reflective thought is, after all, naturally directed towards matters that have assumed attentional focus. As Mine Doğantan-Dack explains, when describing one of her own projects: 'the theoretical knowledge and insights I gained ... started to preoccupy me as a general experiential background in my practice, motivating further theoretical enquiry, from which further practice spiraled out'.¹⁰¹ It is evident, therefore, that as an informed self-reflector, phenomenological experience can be examined in relation to the fundamental research areas of the thesis.

⁹⁹ Ibid., 133.

¹⁰⁰ Ibid., 138.

¹⁰¹ Doğantan-Dack, 'The Role of the Musical Instrument in Performance as Research,' 193.

Chapter 2. Time in Performance

2.1. Introduction

2.1.1. Time and Music: Its Interrelationship

'Music unfolds in time. Time unfolds in music'.¹⁰² Encapsulating the rudiments of the interrelationship between music and time, these ostensibly simple words opening Jonathan Kramer's momentous work, *The Time of Music*, introduce a subject at once so manifestly fundamental to music and yet so incomprehensibly complicated. David Epstein, author of *Shaping Time*, agrees: despite its 'overarching importance' and 'continual presence',¹⁰³ 'the phenomenon of time in music is infinitely complex It is a stingy creature evading our grasp, proving difficult to pinpoint with precision'.¹⁰⁴ Of course, time is intangible. It 'is not perceived by the five usual senses. We cannot see it, hear it, touch it, much less smell or taste it'¹⁰⁵. As such, 'the question "What is time?" ... has never been answered to general satisfaction, nor is it likely to be'.¹⁰⁶ Whilst a plethora of terms endeavour to categorise time (into 'chronometric' 'clock' time, or 'internal' 'subjective' time, for example),¹⁰⁷ such delineations are ambiguous, their meanings and value debated. As Kramer surrenders, "'Time" must ultimately be taken as undefinable'.¹⁰⁸

In any case, music *is* inherently and inescapably temporal. It is experienced in and through time; its constitutional ingredients – such as rhythm, pulse, metre, beat, bar (measure) and phrase – both divide and shape time. Music cannot exist without it. In the words of Leopold Mozart, 'time is the soul of music'.¹⁰⁹ Kramer, elaborates that it is 'the essential component of musical meanings and the vehicle by which music makes its deepest contact with the human spirit'.¹¹⁰

¹⁰² Kramer, *The Time of Music*, 1.

¹⁰³ Epstein, *Shaping Time*, xi.

¹⁰⁴ *Ibid.*, 3.

¹⁰⁵ *Ibid.*, 6.

¹⁰⁶ Kramer, *The Time of Music*, 2.

¹⁰⁷ *Ibid.*, 97, 99.

¹⁰⁸ *Ibid.*, 6.

¹⁰⁹ Leopold Mozart, *A Treatise on the Fundamental Principles of Violin Playing* [1756], 2nd ed., trans. Editha Knocker (Oxford and New York: Oxford University Press, 1951), 30.

¹¹⁰ Kramer, *The Time of Music*, 2.

2.1.2. The Scope of the Chapter

In order to gain a deeper understanding of why and how performers ‘play with time’, the phenomenon of ‘musical time’ must, of course, be examined. After a consideration of research to date in this field, the chapter explores the significance of timing in performance and its phenomenological complexities. Moving to a focus on tempo selection in Baroque music, and noting the relative lack of research into subtler issues of temporal nuance, the chapter subsequently examines specificities of microtiming.

As Robert Donington states, ‘[o]ne of the most stubborn modern misconceptions concerning Baroque music is that a metronomic regularity was intended’.¹¹¹ Whilst one might argue that Donington’s comment (from 1954) is less pertinent to musical culture today, it remains essential for this chapter to evidence the existence of expressive microtiming during the Baroque. While not in itself the principal objective of my thesis, this historical exploration provides a necessary foundation for my work. The salient elements of expressive microtiming in the Baroque are, therefore, outlined, primarily in terms of the temporal manipulation of note length and the temporal implications of phrases.

The focus of this chapter then turns to the manifestation of musical time as *motion* – a central theme in David Epstein’s book, *Shaping Time*, and a fundamental concern of my research. I contend that a performer’s very experience of musical time as motion is inextricably linked to his or her expressive timing decisions: musical motion both gives rise to, and is partially created by, temporal expressivity. Focusing, in particular, on musical motion as both goal-directed and cyclic, as well as on its embodied foundations, the discussion draws in Mark Johnson’s theory of image schemata – a central concern in the field of embodied cognition, and a cynosure of my own research – which elucidates the embodied, and indeed epistemic, roots of our experiences of musical motion and corresponding expressive timing decisions.

2.1.3. An Overview of the Research Field

In the late 1980s, when writing his book, Kramer noted that musical time was not yet recognised as an autonomous subject of enquiry. Of course, *temporal issues*, such as

¹¹¹ Robert Donington, ‘Baroque Interpretation’, in *Grove’s Dictionary of Music and Musicians*, vol. 1, 5th ed., ed. Eric Blom (London: Macmillan & Co., 1954), 447.

rhythm, metre and musical syntax, had long been recognised as core pillars of music theory, and had been written about extensively;¹¹² yet, these contributions served primarily as theoretical frameworks for understanding music's inherent structures and distinct components, rather than specific explorations of the rather more elusive and flexible phenomena of musical 'time' and 'timing'. Since the end of the twentieth century, however, a number of seminal works, including *Shaping Time* by David Epstein and *Stolen Time* by Richard Hudson, have formed a literary core. Conferences dedicated exclusively to the subject have taken place,¹¹³ and empirical musicology has witnessed a recent surge of scientific research into issues such as rhythm perception and microtiming. As evidenced by his article 'The Perception of Expressive Timing in Music',¹¹⁴ Eric Clarke, for example, has conducted a number of empirical studies that investigate the ability of listeners to detect small-scale timing modifications in musical sequences. Davies et al., as well as Frühauf, Kopiez and Platz,¹¹⁵ similarly prioritise the status of the listener, as they examine the influence of microtiming on the perception of 'groove' – 'the sensation of movement or wanting to move'.¹¹⁶ This emphasis on time *perception* is further reflected

¹¹² They were indeed central topics of most eighteenth-century music treatises. Whilst epitomic examples include Johann Mattheson's discussions of 'rhythmpoëia' or 'poetic feet' (as explored by Georg Houle in his 1987 book *Meter in Music, 1600-1800*), as well as Johann Philipp Kirnberger's chapter 'Tempo, Meter, and Rhythm' in *The Art of Strict Musical Composition*, most of the Baroque treatises referenced in this thesis do, in fact, address these subject matters, a useful summary of which can be seen in William Caplin's 'Theories of Musical Rhythm in the Eighteenth and Nineteenth Centuries'. These issues also received significant attention in discourse of the twentieth century on music theory. Particularly seminal contributions include *The Rhythmic Structure of Music* by Grosvenor Cooper and Leonard Meyer, *The Stratification of Musical Rhythm* by Maury Yeston, and *A Generative Theory of Tonal Music* by Fred Lerdahl and Ray Jackendoff.

George Houle, *Meter in Music, 1600-1800: Performance, Perception, and Notation* (Bloomington: Indiana University Press, 1987), 68, 135, 136, 137; Johann Philipp Kirnberger, *The Art of Strict Musical Composition* [1771], trans. David Beach and Jürgen Thym, with Introduction and Explanatory Notes by David Beach (New Haven and London: Yale University Press, 1982); William Caplin, 'Theories of Musical Rhythm in the Eighteenth and Nineteenth Centuries', in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 657-694; Grosvenor Cooper and Leonard Meyer, *The Rhythmic Structure of Music* (Chicago: University of Chicago Press, 1960); Maury Yeston, *The Stratification of Musical Rhythm* (New Haven: Yale University Press, 1976); Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge: The MIT Press, 1983).

¹¹³ As an example, the conference titled 'Making Time in Music' took place at the University of Oxford in September 2016.

¹¹⁴ Eric Clarke, 'The Perception of Expressive Timing in Music', *Psychological Research* 51, no.1 (June 1989): 2-9.

¹¹⁵ Matthew Davies et al., 'The Effect of Microtiming Deviations on the Perception of Groove in Short Rhythms', *Music Perception: An Interdisciplinary Journal* 30, no. 5 (June 2013): 497-510; Jan Frühauf, Reinhard Kopiez and Friedrich Platz, 'Music on the Timing Grid: The Influence of Microtiming on the Perceived Groove Quality of a Simple Drum Pattern Performance', *Musicae Scientiae* 17, no. 2 (2013): 246-260.

¹¹⁶ Davies et al., 'The Effect of Microtiming Deviations on the Perception of Groove in Short Rhythms', 497.

in recent theoretical explorations of metre, evidenced, for example, by the very title of Justin London's book, *Hearing in Time: Psychological Aspects of Musical Meter*,¹¹⁷ as well as by Danuta Mirka's preoccupation with 'the perceptual effect of ... metric manipulations on ... listeners',¹¹⁸ in her book *Metric Manipulations in Haydn and Mozart*. Whilst these examples present just a mere snapshot of studies into musical time, they are certainly representative of the wider body of literature in terms of its notable bias towards the listening experience.

Indeed, very little research deals with time and performance. Moreover, that which does often makes sweeping generalisations. For example, in tracing the evolution of rubato throughout history, Hudson focuses on identifying general trends rather than exploring the subtle nuances and phenomenological complexities of interpretative temporal expressivity. At the opposite end of the spectrum, empirical studies isolate individual aspects of performer's timing from the wider, ecological musical context, in order for it to be examined objectively and measured rigorously. This somewhat clinical dimension is, to some extent, reinforced by the computational systems often used to collect, create and analyse musical data. For example, in a study carried out by Gingras et al. into the relationship between melodic expectation, expressive performance timing and perceived musical tension, the entropy and expectedness of the melody was determined by the computational model IDyOM (Information Dynamics of Music) and the performers' 'expressive timing' was reduced to note onsets, offsets and interonset intervals that were calculated via technology¹¹⁹ – a widely-used method in studies of musical timing, particularly popular in investigations of synchronisation. Whilst this study undeniably draws valuable connections between pertinent elements of musical structure, performance and perception, and whilst the affordances of technological advancements must certainly not be dismissed, such scientific approaches alone are not sufficient for understanding expressive timing. Indeed, the study of performance and its temporal identity as an *object*, with the computerised creation and analysis of data, neglects the phenomenological quintessence of both performance and timing, failing to

¹¹⁷ Justin London, *Hearing in Time: Psychological Aspects of Musical Meter* (New York: Oxford University Press, 2004).

¹¹⁸ Danuta Mirka, *Metric Manipulations in Haydn and Mozart: Chamber Music for Strings, 1787-1791* (New York: Oxford University Press, 2009), ix-x.

¹¹⁹ Bruno Gingras et al., 'Linking Melodic Expectation to Expressive Performance Timing and Perceived Musical Tension', *Journal of Experimental Psychology: Human Perception and Performance* 42, no. 4 (April 2016): 594-609.

deal authentically with the performer's experiential relationship with musical time. Time is nebulous, flexible, subjective and experiential: the research must acknowledge, accommodate and ultimately reflect these characteristics.

2.2. Time and Performance

Whilst recent works, such as *Music in Time: Phenomenology, Perception, Performance* (published in 2016)¹²⁰ and *Time and Performer Training* (published earlier this year)¹²¹ have begun to address the gap in the literature, the relationship between time and musical performance is evidently underrepresented in scholarship and demands further study. It is, after all, undoubtedly more complex than the relationship between time and musical notation or even recordings, in which the representation of time is somewhat fixed into an object. Musical performance, on the other hand, is the live unfurling of sonic shapes in real time – shapes characterised by subtle temporal nuances that are unique to that given moment. Not only does the spontaneity and intrinsically irreproducible quality of 'liveness' account for the elusiveness and perplexity of timing in performance, but it has also been proven that 'performers cannot play in perfect metronomic time'.¹²² As Kramer states, 'no musical performance rigidly adheres to metronomic invariance of tempo',¹²³ and 'performers do not render even the simplest of rhythms exactly as notated'.¹²⁴ This issue has been investigated by researchers such as Seashore, Bengtsson and Gabrielsson, who have shown that 'it is humanly impossible to perform the exact rhythmic ratios even a simple score may demand'.¹²⁵ These 'rhythmic irregularities that musicians naturally – indeed, unavoidably – introduce'¹²⁶ undoubtedly add to the complexity of studying timing in performance.

Nonetheless, it is these very irregularities that also distinguish one performance from the next and create the uniqueness, ineffability and magic of expression in

¹²⁰ Suzannah Clark and Alexander Rehding, ed., *Music in Time: Phenomenology, Perception, Performance: Essays in Honor of Christopher F. Hasty* (Cambridge: Harvard University Press, 2016).

¹²¹ Mark Evans, Konstantinos Thomaidis and Libby Worth, ed., *Time and Performer Training* (Abingdon and New York: Routledge, 2019).

¹²² Hudson, *Stolen Time*, 440.

¹²³ Kramer, *The Time of Music*, 99.

¹²⁴ *Ibid.*, 73.

¹²⁵ *Ibid.*, 76.

¹²⁶ *Ibid.*, 73.

performance. As Epstein believes, 'time is *the* critical element in performance'.¹²⁷ He continues to explain:

in many cases [it is] the factor that separates the merely capable from the distinguished. More often than not ... performance shortcomings seem connected to the domain of time. Tempos may not be quite right; the music does not flow as it should; accents seem excessive, distorting if not impeding that flow; rhythms appear misconstrued; rubati do not work.¹²⁸

Timing is, therefore, not only an omnipresent and inextricable ingredient of performance, but a most crucial factor in its expressive, affective and communicative potential. As Epstein states in the conclusion of his book, '[i]f we can grasp these mechanisms [of timing], understand how they work, we move some steps closer to that goal of serious musicians – the most refined shaping of music; the ever-better performance'.¹²⁹

So what really *is* time in performance? Epstein reminds us that as a result of the extreme intangibility of time – a phenomenon that cannot itself be experienced by our five physical senses – 'numerous elements of the sonic world of music ... are drawn upon as the means of marking the temporal world'.¹³⁰ The way in which durational and articulatory issues of rhythm, note length, stress and silence (for example) are combined and presented in performance, gives rise to rather more implicit, correlating matters of hierarchy and demarcation (including accent, metre, beat, hyperbeat, bar (measure), hypermeasure, phrase, periodicity and punctuation), as well as to aspects of pacing (such as tempo, *accelerando*, *rallentando* and rubato). All of these features, and more, are encompassed within the overarching term 'time' in performance. Time is, therefore, not one thing: it 'can be many things, and it can be them at once'.¹³¹

¹²⁷ Epstein, *Shaping Time*, 3.

¹²⁸ *Ibid.*, 4.

¹²⁹ *Ibid.*, 483.

¹³⁰ *Ibid.*, 7.

¹³¹ Kramer, *The Time of Music*, 3.

2.3. Time and Baroque Repertoire

2.3.1. An Overview of the Literature

2.3.1.1. The Predominance of 'Tempo' as a Research Topic

It is important to acknowledge the relative rarity of Baroque repertoire in studies of musical time. Indeed, due to the overly romanticised aesthetics of the nineteenth century – a musical era characterised by exaggerated expression, emotion and flexibility – as well as the highly theorised tempo-structural forms of the Classical period, and the revolutions of the twentieth and twenty-first centuries which challenged established musical representations of time, Baroque repertoire is significantly underrepresented in the literature. Whilst there are, of course, a number of important explorations of 'tempo' in Baroque music – such as Ido Abravaya's significant contribution, *On Bach's Rhythm and Tempo*,¹³² Bernard Sherman and Klaus Miehling's discussions of 'Bach's Notation of Tempo',¹³³ and Ralph Kirkpatrick's presentation of 'Eighteenth-Century Metronomic Indications'¹³⁴ – these studies focus on historical indications of overall tempi (for whole pieces, movements and sections), rather than more subtle issues of expressive temporal nuance.

Admittedly, Abravaya does 'attempt to clarify what musicians of former generations thought about tempo'¹³⁵ rather than 'assigning "right" tempi'¹³⁶ and he, interestingly, explores different philosophies of tempo from the eighteenth century, proving that 'contrasting opinions have existed not only in different eras, but simultaneously, within each period and style'.¹³⁷ He compares, for example, at the one extreme, the mechanical, numerical school of the 'Chronométristes', who specified exact tempi by means of a pendulum,¹³⁸ or those (such as Saint Lambert and Quantz) who proposed more general tempi based on less precise calculations, such as 'the steps of a

¹³² Ido Abravaya, *On Bach's Rhythm and Tempo* (Kassel: Bärenreiter, 2006).

¹³³ Bernard D. Sherman, 'Bach's Notation of Tempo and Early Music Performance: Some Reconsiderations', *Early Music* 28, no. 3 (August 2000): 454-466; Klaus Miehling and Bernard Sherman, 'Bach's Notation of Tempo', *Early Music* 29, no. 1 (February 2001): 153-155.

¹³⁴ Ralph Kirkpatrick, 'Eighteenth-Century Metronomic Indications', *Papers Read by Members of the American Musicological Society at the Annual Meeting (1938)*: 30-50.

¹³⁵ Abravaya, *On Bach's Rhythm and Tempo*, 2.

¹³⁶ *Ibid.*, 2.

¹³⁷ *Ibid.*, 157.

¹³⁸ *Ibid.*, 120.

man walking'¹³⁹ or 'the pulse beat at the hand of a healthy person',¹⁴⁰ with, at the other extreme, those (such as Rousseau, Kirnberger, Mattheson, Marpurg and Leopold Mozart) who regarded tempo as 'a subjective and flexible entity',¹⁴¹ a phenomena 'equated with the affects'.¹⁴² The latter approach is reflected in the use of non-metronomic terms (such as '*Bewegung*',¹⁴³ '*Mouvement*',¹⁴⁴ and '*Tempo Giusto*'¹⁴⁵) to describe 'the natural tempo' of the music,¹⁴⁶ 'divine[d] from the piece itself',¹⁴⁷ and in the term '*Gemüthsbewegung*' (meaning 'passions or affections'¹⁴⁸) which is closely related to tempo, as evidenced by the semantic correlation with '*Bewegung*'. Kirnberger clarifies that '*tempo giusto* is determined by the meter and by the longer and shorter note values of a composition', and that epithets (tempo words), such as '*largo, adagio, andante, allegro, presto*, and their modifications *larghetto, andantino, allegretto, and prestissimo* [simply] add to or take away from the fast or slow motion of the natural tempo'.¹⁴⁹ Leopold Mozart similarly explains that,

even if the composer endeavours to explain more clearly the speed required by using yet more adjectives and other words, it still remains impossible for him to describe in an exact manner the speed he desires in the performing of the piece. So one has to deduce it from the piece itself.¹⁵⁰

For these musicians and theorists, the natural motion of the piece is inherently implied by the musical text itself.

¹³⁹ Monsieur de Saint Lambert, *Principles of the Harpsichord* [1702], ed. and trans. Rebecca Harris-Warrick (Cambridge: Cambridge University Press, 1984), xv, 24, 43, 44.

¹⁴⁰ Johann Joachim Quantz, *On Playing the Flute: The Classic of Baroque Music Instruction* [1752], 2nd ed., ed. and trans. Edward R. Reilly (London: Faber and Faber Limited, 1985), 283.

¹⁴¹ *Ibid.*, 3.

¹⁴² *Ibid.*, 133.

¹⁴³ Kirnberger, *The Art of Strict Musical Composition*, 376.

¹⁴⁴ Abravaya, *On Bach's Rhythm and Tempo*, 121.

¹⁴⁵ Kirnberger, *The Art of Strict Musical Composition*, 376-377.

¹⁴⁶ *Ibid.*, 376.

¹⁴⁷ Mozart, *A Treatise on the Fundamental Principles of Violin Playing*, 33.

¹⁴⁸ Kirnberger, *The Art of Strict Musical Composition*, 376.

¹⁴⁹ *Ibid.*, 377.

¹⁵⁰ Mozart, *A Treatise on the Fundamental Principles of Violin Playing*, 33.

It is important to note, at this stage, that, despite the evidence of differing attitudes towards tempo in the eighteenth century,¹⁵¹ the distinctions are not clear-cut, and individual composers of the time often alluded to multiple ‘philosophies’. Quantz, for example, gives detailed instructions regarding tempo selection for particular time signatures and epithetical movement titles based on his ‘human metronome’ – the ‘pulse beat’.¹⁵² However, he also notes that, as ‘epithets are often used by many composers more out of habit than to accurately characterize the matter itself, ... cases may occur in which they are not at all times binding, and [so] the intention of the composer must be discovered instead from the content of the piece’¹⁵³ – an allusion to Kirnberger’s theory of ‘*tempo giusto*’. Indeed, just as Abravaya acknowledges, ‘[t]he theories of Kirnberger look like the antithesis of Quantz’s, but ... much of the seeming difference may result from their different conceptions, or ways of description, of the same musical reality’.¹⁵⁴ He concludes, ‘authors of the past had just the same difficulties and ambiguities in verbal discussion of music as we do today’.¹⁵⁵

The implications of time signatures, epithets, rhythms and note values on the determination of tempo in Baroque repertoire is a subject that pervades both eighteenth-century sources and current discourse. Whilst these temporal concerns are, of course, of utmost importance in allowing performers to make informed decisions, as Abravaya acknowledges, performance practice ‘was by definition never unified or tightly knit, nor free of contradictions, ambiguities and discrepancies, abounding in local, national and individual differences of taste and opinion’.¹⁵⁶ As reflected, to some extent, by the contrasting yet coexistent schools of thought in the eighteenth century, ‘tempo finally depends on the performer’s will and taste’.¹⁵⁷ This subjectivity of Baroque tempo also manifests itself in the work of current researchers and performers, who quote and interpret ‘the same 17th- and 18th-century sources ... again and again, each time with

¹⁵¹ It should be noted, here, that, even though my case study focuses on the High Baroque, I draw on primary source information from the late seventeenth to late eighteenth centuries. Changes in style and thought happen gradually. Ideas from the Early Baroque set the foundations for the High Baroque, which, in turn, influenced the Classical Period. The relevance of treatise information therefore extends both ways, reflecting the influence of earlier practices, whilst also pointing forward.

¹⁵² Quantz, *On Playing the Flute*, 285-287.

¹⁵³ *Ibid.*, 129.

¹⁵⁴ Abravaya, *On Bach’s Rhythm and Tempo*, 129.

¹⁵⁵ *Ibid.*, 161.

¹⁵⁶ *Ibid.*, 173.

¹⁵⁷ *Ibid.*, 1.

entirely different conclusions'¹⁵⁸ because, as Abravaya recognises, 'tempo is involved with the instinctive feeling of the scholar, performer or listener ... [who] inevitably ends up trying to justify his/her personal taste and conviction'.¹⁵⁹ Ralph Kirkpatrick agrees that 'the laws of tempo ... seem peculiarly subject to personal taste and mood',¹⁶⁰ and Robert Donington, too, concurs: 'the right tempo for a given piece of music is the tempo which fits, as the hand fits the glove, the interpretation of that piece *then being given* by the performer'.¹⁶¹

It is, however, most important to note that temporal subjectivity is neither a new nor undesirable phenomenon. As early as 1611, Agostino Pisa stated that 'the one who controls the music governs it at his will, making it slow or fast as he likes',¹⁶² and Quantz, some 140 years later, similarly insisted that the soloist be granted 'complete freedom to select his tempo as he sees fit'.¹⁶³ At the end of the day, as insisted throughout Baroque music treatises, interpretative decisions come down to the performer's 'taste'. Subjectivity, taste, will, and, by association, 'intuition', are, therefore, evidently important phenomena that infiltrate temporal decision-making in Baroque repertoire. What's more, as Abravaya rightly acknowledges, 'addressing the problem [of tempo] in a detached, quasi-objective manner would strike us as "mechanistic" or "dryly scientific" and thus would seem even less convincing'.¹⁶⁴ Tempo is, after all, an inherently elusive, multifaceted and experiential matter of interpretation.

2.3.1.2. The Scarcity of 'Expressive Microtiming' as a Research Topic

Whilst tempo selection itself is an undoubtedly important and inherently complex subject – inextricably entangled with issues of metre, rhythm, epithet and affect, and fraught with contradiction and subjectivity – it dominates the literature on 'time' in Baroque repertoire at the expense of explorations of more subtle issues of interpretative temporal nuance, such as temporal fluctuations within a movement, phrase, musical gesture, or even a single note. Stephanie Vial perhaps makes one of the most valuable contributions

¹⁵⁸ Ibid., 159.

¹⁵⁹ Ibid.

¹⁶⁰ Kirkpatrick, 'Eighteenth-Century Metronomic Indications', 30.

¹⁶¹ Robert Donington, *Tempo and Rhythm in Bach's Organ Music* (London: Hinrichsen, 1960), 12.

¹⁶² Agostino Pisa, in Abravaya, *On Bach's Rhythm and Tempo*, 122.

¹⁶³ Quantz, *On Playing the Flute*, 280.

¹⁶⁴ Abravaya, *On Bach's Rhythm and Tempo*, 159.

to the study of ‘moment-by-moment inflections’ in Baroque music,¹⁶⁵ in her book *The Art of Musical Phrasing in the Eighteenth Century*, which explores notated and unnotated musical punctuation in eighteenth-century repertoire.¹⁶⁶ However, her contribution is somewhat of an anomaly: indeed, there remains a substantial lack of research into *expressive microtiming* in Baroque repertoire. Neil Todd, in his article of 1985, ‘A Model of Expressive Timing in Tonal Music’,¹⁶⁷ exclusively analyses music from Mozart onwards, and the musical examples in Epstein’s book range from Haydn (1732-1809) to Debussy (1862-1918).¹⁶⁸

With specific regard to *empirical research* into expressive microtiming, again only a few studies relating to Baroque repertoire exist. The aforementioned study by Gingras et al. (see Section 2.1.3) does, in fact, focus on Louis Couperin’s *Prelude non mesuré* No. 7 because, as the authors themselves state, the lack both of a rigid metrical framework and of specified note lengths – features that characterise this semi-improvisatory form of Baroque music – ‘allows for a much wider variability in terms of expressive timing’.¹⁶⁹ In spite of this, however, the spectrum of ‘expressive timing’ that is examined is, as previously mentioned, strictly limited and considered only in relation to ‘melodic expectation’ and listeners’ ‘perceived musical tension’. Schubert and Fabian similarly focus on the realm of the listener in their explorations of ‘performed’ and ‘perceived’

¹⁶⁵ Stephanie D. Vial, *The Art of Musical Phrasing in the Eighteenth Century: Punctuating the Classical “Period”* (Rochester: University of Rochester Press, 2008), ix.

¹⁶⁶ It is important to acknowledge Stephanie Vial’s book as a significant contribution to the subject of expressive timing in Baroque music. Her work, however, differs from mine substantially in its perspective. Whilst Vial does make some reference to her own experience, she focuses predominantly on the collation of historical evidence, alongside musical analysis, specifically to illuminate issues of eighteenth-century musical punctuation. My research, on the other hand, draws heavily on my own practice, in conjunction with aspects of embodied cognition, cognitive psychology, psychoanalysis, and phenomenology (as well as music history and analysis) to explore the *broader* subject of ‘expressive microtiming’. Drawing on issues of punctuation merely as one aspect, and using eighteenth-century repertoire as a case study (albeit a central, most important and thoroughly detailed one), my primary focus centres on interrogating the rather more elusive, phenomenological and embodied complexities of temporal expressivity, such as issues of subjectivity, intuition and epistemic interaction. My study of phrasing and punctuation is, therefore, always guided by, and related to, these broader research questions.

¹⁶⁷ Neil Todd, ‘A Model of Expressive Timing in Tonal Music’, *Music Perception: An Interdisciplinary Journal* 3, no. 1 (Fall 1985): 33-57.

¹⁶⁸ Epstein, *Shaping Time*.

¹⁶⁹ Gingras et al., ‘Linking Melodic Expectation to Expressive Performance Timing and Perceived Musical Tension’, 597.

dotted rhythms in Baroque music, which delve into the depths of rhythm perception.¹⁷⁰ With specific regard to *performance*, a notable example of empirical investigation is Dirk Moelants' study of 'The Performance of Notes Inégales',¹⁷¹ which primarily examines the effect of tempo on the ratio of inequality. Nonetheless, overall the body of research into microtiming in performance is markedly dominated by genres such as jazz, funk and samba, which appear more immediately relevant, thanks to their distinctive rhythmic elements (such as swing, backbeat, polyrhythms and irrational rhythms) and their intimate relationship with movement or dance. In his article 'Embodied Mind, Situated Cognition, and Expressive Microtiming in African-American Music', Vijay Iyer indeed engages in a detailed discussion of the different facets of expressive timing that feature prominently in the performance of African-American music, such as 'asynchrony', 'streaming', 'spreading', 'swing', and 'backbeat delay'.¹⁷² Western classical Baroque repertoire craves this same level of attention.

2.3.2. Expressive Microtiming

2.3.2.1. Rubato

My own scrutiny of historical material confirms the existence of expressive microtiming in musical performance of the Baroque period. Firstly, it must be recognised that the very origins of the term 'tempo rubato' – a term, meaning 'robbed' or 'stolen' time, that lies at the heart of 'expressive timing' – can be traced back to Pier Francesco Tosi in 1723, when he used the phrase '*rubare il tempo*'.¹⁷³ Tosi indeed stated that

[w]hoever does not know how to steal the Time in Singing, knows not how to Compose, nor to Accompany himself, and is destitute

¹⁷⁰ Dorottya Fabian and Emery Schubert, 'Musical Character and the Performance and Perception of Dotting, Articulation and Tempo in 34 Recordings of Variation 7 from J. S. Bach's *Goldberg Variations* (BWV 988)', *Musicae Scientiae* 12 no. 2 (Fall 2008): 177-206; Dorottya Fabian and Emery Schubert, 'A New Perspective on the Performance of Dotted Rhythms', *Early Music* 38 no. 4 (November 2010): 585-588; Dorottya Fabian and Emery Schubert, 'Performance and Perception of Dotting: A Comparison of Responses to Dotted Rhythms in 6/8 by Experienced and Inexperienced Baroque Music Listeners', *European Society for the Cognitive Sciences Of Music*, accessed March 2, 2016, <http://www.escom.org/proceedings/ESCOM2002/sources/Pdf/Session/Fabian.pdf>.

¹⁷¹ Dirk Moelants, 'The Performance of Notes Inégales: The Influence of Tempo, Musical Structure, and Individual Performance Style on Expressive Timing', *Music Perception: An Interdisciplinary Journal* 28, no. 5 (June 2011): 449-460.

¹⁷² Vijay Iyer, 'Embodied Mind, Situated Cognition, and Expressive Microtiming in African-American Music', *Music Perception: An Interdisciplinary Journal* 19, no. 3 (Spring 2002): 387-414.

¹⁷³ This is translated by Mr. Galliard, in his English translation of 1743, as 'to steal the Time'. Pier Francesco Tosi, *Observations on the Florid Song; or, Sentiments on the Ancient and Modern Singers* [1723] trans. Mr. Galliard [1734] (William Reeves: London, 1967), 156.

of the best Taste and greatest Knowledge. The stealing of Time ...
is an honourable Theft in one that sings better than others.¹⁷⁴

John Ernest Galliard, who in 1743 provided the English translation of Tosi's treatise with additional comments of his own, not only alludes to the importance of tacit knowledge in the execution of rubato, noting that 'Experience and Taste must teach it', but he also elaborates:

speaking of stealing the Time, it regards particularly the Vocal, or the Performance on a single Instrument ... ; when the Bass goes an exactly regular Pace, the other Part retards or anticipates in a singular Manner, for the Sake of Expression, but after That returns to its Exactness.¹⁷⁵

In doing so, he confirms the definition of what is now termed 'earlier' or contrametric rubato, whereby melody notes are prolonged, shortened, anticipated or delayed 'whilst the accompaniment maintains strict rhythm'—an act of borrowing or lending distinct from the so-called 'later' rubato, which conversely refers to 'flexibility of the entire musical substance' and was particularly popular during the late Romantic period.¹⁷⁶ Indeed, the very existence of 'earlier' rubato in the Baroque is confirmed by a number of eighteenth-century writers, including Johann Joachim Quantz, who not only explicitly uses the term 'rubato' within his treatise,¹⁷⁷ but also describes moments in which 'the player of the principal part retards several notes in order to give some grace to the execution', whilst the accompaniment is 'secure in the tempo'.¹⁷⁸

At this stage, it is interesting to note that, whilst the term 'rubato' first appeared in the eighteenth century, its principles existed beforehand: its usage simply preceded its explicit codification. As Sandra P. Rosenblum explains in her article 'The Uses of Rubato in Music, Eighteenth to Twentieth Centuries', 'Zacconi's singing "dopo il tatto" or "behind the tactus," described already in 1596, falls into this category of [earlier] *tempo rubato*'.¹⁷⁹ As well as recognising the inherently 'secondary' nature of terminology –

¹⁷⁴ Ibid.

¹⁷⁵ Mr. Galliard, in Tosi, *Observations on the Florid Song*, 156.

¹⁷⁶ Richard Hudson, 'Rubato', in *Grove Music Online*, accessed April 17, 2018, <http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000024039>.

¹⁷⁷ Quantz, *On Playing the Flute*, 174, 252.

¹⁷⁸ Ibid., 252.

¹⁷⁹ Sandra P. Rosenblum, 'The Uses of Rubato in Music, Eighteenth to Twentieth Centuries', *Performance Practice Review* 7, no. 1 (Spring 1994): 34.

merely the product of an articulation process that explicitly codifies otherwise tacit or undefined elements of practice that *already exist* – it is also important to acknowledge its somewhat *misleading* nature. Indeed, despite the well-known differences between the two main categories of rubato, their distinction is, in fact, far less clear-cut and chronological than the opposing and sequentially suggestive terms ‘earlier’ and ‘later’ imply. As alluded to both by Rosenblum and Hudson, the definitions and practices of rubato across the centuries are varied, multifold, often subject to a musician’s particular taste and idiosyncratic practice.

Indeed, despite the evident *prominence* of contrametric rubato in the eighteenth century, key ingredients of the so-called ‘later’ rubato do in fact penetrate ‘early’ music. As Rosenblum herself notes, ‘the accelerating or slowing down of all the parts together’ is, in fact, a ‘centuries-old practice’ that has simply ‘varied in degree of use in different musical styles’.¹⁸⁰ Hudson agrees that its existence can be traced ‘probably from the beginnings of music’.¹⁸¹ As an example, Rosenblum offers the use of ‘the letters *c* for *celeriter* (quickly), *t* for *trahere* (to drag out) or *tenere* (to hold), and *x* for *expectare* (to retard)’¹⁸² in the ninth-century Codex of St. Gall – the very same tempo-modifying terms to which Hudson also makes explicit reference. Indeed, in his chapter titled ‘Background of the Later Rubato’ – itself a patent indication of the nonlinear evolution of rubato and the omnipresent entanglement of its many features and forms – Hudson highlights the prominence of tempo freedom in music as early as Gregorian Chant. Not only does he note the temporal implications both of different letters (as explained above) and of different neume shapes, but he also draws our attention to writing from the tenth century that describes ‘acceleration’ and ‘hasten[ing]’, as well as ‘gradual retards’ and ‘slowing for phrases’. Hudson then goes on to highlight similar suggestions of *ritardandi* at the end of medieval motets and conductus.¹⁸³

As we step forward into the sixteenth and seventeenth centuries, patent allusions to temporal flexibility typical of ‘later’ rubato continue. To offer a mere handful of examples, Nicola Vicentino in 1555 insists that music should be performed like an expressive oration – ‘more slowly and more quickly ... [giving] movement [to] the beat’;¹⁸⁴

¹⁸⁰ *Ibid.*, 43.

¹⁸¹ Hudson, *Stolen Time*, 3.

¹⁸² Rosenblum, ‘The Uses of Rubato in Music’, 3.

¹⁸³ Hudson, *Stolen Time*, 4-7.

¹⁸⁴ Nicola Vicentino, in Fausto Razzi, ‘Polyphony of the “Seconda Prattica”’: Performance Practice in Italian Vocal Music of the Mannerist Era’, *Early Music* 8, no. 3 (July 1980), 302.

Giulio Caccini advises that his madrigals could be performed ‘not submitting to strict time’ and ‘without measured rhythm’;¹⁸⁵ and Thomas Mace, in his treatise of 1676, *Musick’s Monument*, speaks of the way in which Masters ‘take Liberty ... to Break Time; Sometimes Faster, and Sometimes Slower, as we perceive the Nature of the Thing Requires’.¹⁸⁶ In the eighteenth century itself, the coexistence of ‘earlier’ and ‘later’ rubato is highlighted in correspondence between Wolfgang Amadeus Mozart and his father. Whilst W. A. Mozart states that ‘in tempo rubato ... the left hand should go on playing in strict time’¹⁸⁷ – in clear support of the earlier contrametric type – a letter from his father commenting on cellist Joseph Reicha and pianist Ignaz von Beecke ‘dragging the time ... [and] holding back the whole orchestra’¹⁸⁸ confirms that aspects of ‘later’ rubato were also a reality. This is reinforced by multiple descriptions of ‘quickening or slowing of the tempo’ in Daniel Gottlob Türk’s treatise of 1789,¹⁸⁹ as well as by the inclusion of tempo-modifying terms (such as *ritardando*) in the music of Haydn and his Classical contemporaries.¹⁹⁰ General tempo fluctuations typically associated with ‘later’ rubato seem, therefore, to be a perennial feature of performance, certainly exploited in the Baroque period alongside the contrametric style of ‘earlier’ rubato. Indeed, as Hudson summarises, ‘techniques involved in both types of rubato actually existed’.¹⁹¹

These mere snapshots into the complex world of ‘tempo rubato’ confirm the ambiguity of its terminology, the plurality of its definitions, the subjectivity of its application, the subtlety and nonlinear complexity of its evolution, and indeed the coexistence of its multiple forms. Most importantly, however, they prove that the fundamental principle of expressive timing – the constant, underlying essence of rubato – existed in the Baroque, both in theory and in practice. Despite this compelling evidence, however, it is most essential not to dismiss contradictory primary source information that, in fact, suggests a *lack* of temporal flexibility in Baroque performance. Indeed, a recurrent feature of many Baroque music treatises is the insistence on keeping time.

¹⁸⁵ Giulio Caccini, in Rosenblum, ‘The Uses of Rubato in Music’, 43.

¹⁸⁶ Thomas Mace, *Musick’s Monument; or, A Remembrancer of the Best Practical Musick, Both Divine, and Civil, That Has Ever Been Known, to Have Been in the World* (London: T. Ratcliffe and N. Thompson, 1676), 81.

¹⁸⁷ Wolfgang Amadeus Mozart, in Emily Anderson ed., *The Letters of Mozart and His Family*, 3rd ed., rev. Stanley Sadie and Fiona Smart (London: Palgrave, 1985), 340.

¹⁸⁸ Leopold Mozart, in Anderson, *The Letters of Mozart and His Family*, 455.

¹⁸⁹ Daniel Gottlob Türk, *School of Clavier Playing; or, Instructions in Playing the Clavier for Teachers and Students* [1789], trans. Raymond H. Hagg (Lincoln & London: University of Nebraska Press, 1982), 362.

¹⁹⁰ Hudson, *Stolen Time*, 4.

¹⁹¹ *Ibid.*, 3.

Mace, for example, who on the one hand explicitly encourages rubato (as indicated by the above quotation), on the other hand, asserts that ‘True Time-keeping ... is one of the most Necessary, and Main Things, in Musick’.¹⁹² Even Tosi, the very figure associated with the conception of the term ‘rubato’ itself, states: ‘I cannot sufficiently recommend to a Student the exact keeping of Time If I do not advise a Student to imitate several of the *Moderns* in their Manner of singing *Airs*, it is from their Neglect of keeping Time’.¹⁹³ Whilst this comment shows the *existence* of temporal fluctuation, it most certainly also shows Tosi’s distaste for it. Quantz uses the very term ‘rubato’ within his essay,¹⁹⁴ refers to players ‘retard[ing] several notes’¹⁹⁵ and ‘rest[ing] at a caesura’,¹⁹⁶ and comments negatively on performers who are ‘afraid to undertake anything ... with boldness and freedom’.¹⁹⁷ He nevertheless explains that ‘if a piece is to be effective, it must ... be played ... in the same tempo from beginning to end, not faster at one place, slower at another’.¹⁹⁸ Not only does he highlight the importance of ‘becom[ing] truly secure in holding the tempo’¹⁹⁹ but he also warns students against the tutor ‘who does not know how to observe tempo with the greatest strictness’.²⁰⁰ How do we make sense of these contradictions?

At this point it is enlightening to recall the primary objective of Baroque music treatises. Indeed, in the Preface of his essay, Quantz states ‘I have tried to teach clearly and from the first rudiments everything required for the practice of this instrument’.²⁰¹ Amongst frequent references to ‘beginners’, he continues, ‘I do not pretend ... to prescribe rules for those musicians who have acquired general approbation either in composition or in performance’.²⁰² As teaching material, Quantz’s treatise serves to set out the fundamental ground-rules for ‘good musical execution’.²⁰³ It is most plausible, therefore, that his insistence on strict temporal accuracy simply reflects the importance

¹⁹² Mace, *Musick’s Monument*, 81.

¹⁹³ Tosi, *Observations on the Florid Song*, 99.

¹⁹⁴ Quantz, *On Playing the Flute*, 174, 252.

¹⁹⁵ *Ibid.*, 252.

¹⁹⁶ *Ibid.*, 264.

¹⁹⁷ *Ibid.*, 253.

¹⁹⁸ *Ibid.*, 279.

¹⁹⁹ *Ibid.*, 24.

²⁰⁰ *Ibid.*, 16.

²⁰¹ *Ibid.*, 7.

²⁰² *Ibid.*, 7-8.

²⁰³ *Ibid.*, 7

of establishing a reliable foundation. After all, as Hudson explains, rubato, 'in order to be effective ... [needs] to be surrounded by music in strict time'.²⁰⁴

On a rather more rudimental and practical level, one cannot deny that there are many common performative tendencies that often transpire unintentionally, particularly amongst amateurs, and perhaps Mace, Quantz and Tosi are simply warning the performer against these. When Tosi expresses his disapproval of temporal inconsistency, he speaks of a 'hastening of Time ... [that] in the Beginning is hardly perceptible, yet in the Progress of the Air becomes more and more so'²⁰⁵ – a clear condemnation of ending a piece faster than it started – of rushing – rather than a disregard of meaningfully expressive temporal nuances. In a similar vein, Quantz acknowledges that 'hurrying of passage-work may occur, particularly in ascending notes, if the fingers are raised too quickly',²⁰⁶ and that a performer often 'rush[es] the easy passage-work and then cannot manage the difficult',²⁰⁷ therefore playing the section 'that is difficult for him more slowly and that which is easy more quickly, thus not ending the piece as he began it'.²⁰⁸ He also recognises that, 'if in a melancholy piece he loses himself so much in the sentiment that he forgets the tempo',²⁰⁹ the performer is often 'beguiled into dragging'.²¹⁰ It is perhaps with these ineffective, undesirable and largely inadvertent tendencies in mind that Quantz insists that the performer 'must be sure in tempo, not rushing at one moment and dragging the next',²¹¹ and his persistence is perhaps fuelled by his awareness that 'many musicians are still not secure in their time ... and play haphazardly'.²¹²

The connotations of arbitrariness implied by Quantz's use of the word 'haphazardly' confirm that many of these distasteful occurrences of tempo fluctuation are simply indiscriminate matters rather than meaningful or intentional, expressive nuances – a distinction Türk himself explicitly makes when he explains that 'intentional quickening or hesitating should not be mistaken for ... faulty hurrying'.²¹³ In her chapter 'Aspects of Performance Practice', in *Eighteenth-Century Keyboard Music*, Eva Badura-

²⁰⁴ Hudson, *Stolen Time*, 150.

²⁰⁵ Tosi, *Observations on the Florid Song*, 99.

²⁰⁶ Quantz, *On Playing the Flute*, 130.

²⁰⁷ *Ibid.*, 279.

²⁰⁸ *Ibid.*, 304.

²⁰⁹ *Ibid.*, 279.

²¹⁰ *Ibid.*, 252.

²¹¹ *Ibid.*, 301.

²¹² *Ibid.*, 278.

²¹³ Türk, *School of Clavier Playing*, 360.

Skoda forms a similar interpretation of Wolfgang Amadeus Mozart's analogous comments on tempo. Describing the musical imperfections of young pianist Nannette Stein, Mozart said 'she will never acquire the most essential, the most difficult and the chief requisite in music, which is rhythm [time], because from her earliest years she has done her utmost not to play in time'.²¹⁴ Badura-Skoda concludes that Mozart's reference to 'play[ing] in time' 'surely meant [performing] with a steady rhythm and in a tempo that does not slow down at difficult places and rush elsewhere'.²¹⁵

It seems highly plausible, therefore, that the insistence, in Baroque music treatises, on playing in strict time simply serve as rudimental instructions, aimed at beginners, for learning the basic foundation of 'good music execution' – the ability to maintain a constant, unwavering pulse, without inadvertently rushing or dragging. This very supposition is, in fact, confirmed by Mace himself. In explaining that his instructions are 'especially for a Beginner', he clarifies:

[t]hat, although in our First Undertakings, we ought to strive, for the most Exact Habit, of Time-Keeping, that possible we can attain unto, (and for several good Reasons), yet, when we come to be Masters, to that we can command all manner of Time, at our own Pleasures; we Then take Liberty, (and very often, for Humour, and good Adornment-sake, in certain Places) to Break Time; Sometimes Faster, and Sometimes Slower, as we perceive the Nature of the Thing Requires, which often adds, much Grace, and Luster, to the Performance.²¹⁶

Playing in time is undoubtedly an essential skill for beginners to learn – an important basis for effective music-making. This foundation can, however, then be manipulated, through

²¹⁴ Wolfgang Amadeus Mozart, in Eva Badura-Skoda, 'Aspects of Performance Practice', in *Eighteenth-Century Keyboard Music*, 2nd ed., ed. Robert Marshall (New York: Routledge, 2003), 39.

²¹⁵ Badura-Skoda, 'Aspects of Performance Practice', 39.

²¹⁶ Mace, *Musick's Monument*, 81.

rubato, for meaningful and expressive effect, just as the ‘Masters’ of the Baroque themselves did.²¹⁷

2.3.2.2. Preludial Forms, Cadenzas, Recitative

Having identified the use of tempo rubato in the Baroque, it is important to acknowledge a number of other manifestations of expressive timing that do not necessarily fall under this heavily theorised term. Indeed, the very quintessence of the many popular preludial forms of the time, such as toccatas, capriccios, fantasias and unmeasured preludes, epitomise tempo freedom. Originally spontaneous creations, these musical movements, boasting improvisatory qualities, are characterised by ‘a relative lack of organised structure and a free sense of rhythm’.²¹⁸ François Couperin himself explains, in his *L’Art de Toucher le Clavecin*:

[a] Prelude is a composition in which the fancy can free itself from all that is written in the book. But it is all too rare to find those talents who are capable of producing this effect on the spot. It is necessary to those who will resort to the regulated preludes to play them freely without attaching too much precision to the movement.²¹⁹

A similar flexibility can also be seen in the cadenza, which Quantz defines as the ‘extempore embellishment created, according to the fancy and pleasure of the performer

²¹⁷ It is also important to make brief reference to Baroque dance practice, which, whilst falling beyond the focus of this thesis, has much to do with issues of tempo regularity. It is, after all, difficult to reconcile the complex steps and gravitational imperatives of Baroque dance with temporally free music. Therefore, whilst various forms of temporal flexibility undoubtedly belonged to historical practice, it is essential to recognise that strict tempo was required as more than a mere skill for the beginner. When accompanying dance, playing in time is crucial. Nonetheless, this is not a primary concern of this thesis, which focuses on solo flute music rather than dance accompaniment, specifically using Georg Philipp Telemann’s Fantasia No. 7 in D major as a case study.

For more information on Baroque dance music, see Meredith Little and Natalie Jenne, *Dance and the Music of J. S. Bach*, expanded ed. Bloomington: Indiana University Press, 2001.

²¹⁸ Hudson, *Stolen Time*, 9.

²¹⁹ François Couperin, *L’Art de Toucher le Clavecin: The Art of Playing the Harpsichord [1716-1717]*, ed. & trans. Margery Halford (New York: Alfred Publishing, 1974), 70.

Davitt Moroney’s translation of this quotation, in his article ‘The Performance of Unmeasured Harpsichord Preludes’, is perhaps even clearer than Halford’s: ‘A prelude is a free composition in which the imagination gives rein to any idea which presents itself. But it is rather rare to find geniuses capable of producing them on the spur of the moment, and so those who resort to these non-improvised preludes should play them in a free and easy style, not adhering too closely to the exact rhythm’.

Davitt Moroney, ‘The Performance of Unmeasured Harpsichord Preludes’, *Early Music* 4, no. 2 (April 1976): 145.

... at the close of a piece'.²²⁰ Asserting 'the impromptu invention of cadenzas is my principal concern', Quantz devotes a whole chapter of his essay to this matter, and explains that, as they must unfold 'as something unexpected', 'regular metre is seldom observed, and indeed should not be observed, in cadenzas'.²²¹ This disregard of strict tempo is further embodied in one of the central components of Baroque vocal music, the recitative, the very essence of which is its speech-like flexibility. As Quantz states, when delivering a recitative, 'the singer does not always adhere to the tempo, and has the freedom to express what he is to execute quickly or slowly, as he considers best, and as the words require'.²²²

It is important to consider, at this stage, the relevance of temporal expressivity to less obviously free forms of the Baroque. Indeed, as Louis Adam wrote in 1804/5, '[s]ome have wanted to make playing out of time fashionable and to play every type of music as a fantasy, prelude, or capriccio'.²²³ Whilst the different purposes, requirements, and affordances of different musical forms should certainly be acknowledged, Hudson notes not only that 'tempo fluctuation may occur even in metrically strict forms', but also that 'music in general ... is not to be performed mechanically and without regard for the sense of the sounds'.²²⁴ This is indeed confirmed by Türk, in his *School of Clavier Playing* of 1789, when he states:

[i]n addition to free fantasies, cadenzas, *fermatas* and the like, those passages marked *recitativo* must be played more according to feeling rather than meter. Some passages of this sort are found ... in sonatas, concertos, and the like Such passages would have poor effect if they were played strictly according to the specified values of the notes (measured).²²⁵

Moreover, it is essential to recognise that temporal flexibility is encouraged, whatever the piece, by the notational modesty and ambiguities of the score – a subject discussed in the ensuing paragraphs of Section 2.3.2.3.

²²⁰ Quantz, *On Playing the Flute*, 179.

²²¹ *Ibid.*, 185-186.

²²² *Ibid.*, 292.

²²³ Louis Adams, in Hudson, *Stolen Time*, 151.

²²⁴ Hudson, *Stolen Time*, 7, 11.

²²⁵ Türk, *School of Clavier Playing*, 359,

2.3.2.3. *The Notation is Not the Music*:²²⁶ Ambiguities of Note Length

As Haynes comments, '[a]nyone who has ever tried to convey a musical idea by means of notation knows how approximate it is Musical notation is always under-determined; imprecise and incomplete There are always important performance variables missing from the page'.²²⁷ He confirms that 'these pages with black dots ... [are] mere reminders of a myriad of indications too subtle to notate'.²²⁸ Whilst no detail of notation can ever account for every variable, in comparison to musical scores of later centuries, in which rhythmic figures are precisely notated and expressive nuances (of dynamic, articulation and tempo) explicitly indicated, those of the Baroque are, of course, notably rudimental – a blank canvas affording interpretative possibility, coloured both by the un-notated stylistic conventions of the time and by the subjective, expressive desires of the performer.²²⁹ As encapsulated by the title of Barthold Kuijken's book, 'the notation is not the music'.²³⁰ With specific regard to *time*, its fixed, objectified manifestation in notation is often dissimilar to its corresponding sonic externalisation. The temporal realisation of notes is as dependent (if not more so) on metric position, dance steps, intervallic content, national style, *Affekt*, gestural shape and subjective interpretation, as it is on its written duration. After all, in some cases, the written note values within a bar fail to correspond to the time signature, confirming the temporal ambiguity and importance of interpretative timing in Baroque music: an example of this is presented in Chapter 5, Section 5.3.2.3.

One of the most salient temporal issues of Baroque repertoire is perhaps that notes of identical written duration are often performed dissimilarly. As Quantz states,

²²⁶ Barthold Kuijken, *The Notation is Not the Music: Reflections on Early Music Practice and Performance* (Bloomington: Indiana University Press, 2013).

²²⁷ Bruce Haynes, *The End of Early Music: A Period Performer's History of Music for the Twenty-First Century* (New York: Oxford University Press, 2007), 105.

²²⁸ *Ibid.*, 90.

²²⁹ This relationship between notation and performance is explored extensively by Haynes. He comments, in particular, on the 'thin' notation of Baroque scores, which 'rarely included marks to indicate phrasing gestures, ... flexibility of tempo, and subtlety of rhythm', not only because of the implicit knowledge of performance practice (which rendered detailed notation unnecessary), but also because such thinness 'accommodated spontaneous input from the performers' – subjective, interpretative freedom. It is also important to note that this very relationship between 'score' and 'performance' is fundamental to broader, philosophical debates concerning the ontological status of a musical 'work' – a subject area at the heart of which lies Lydia Goehr's book *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music*.

Haynes, *The End of Early Music*, 2, 4; Lydia Goehr, *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music* (New York: Oxford University Press, 1992).

²³⁰ Kuijken, *The Notation is Not the Music*.

‘you must ... give each note greater or less stress’²³¹ even when ‘they ... have the same [written] value’.²³² On the most foundational level, a note positioned on a strong beat of the bar is likely to have a longer sonic duration (agogic accent) than an equivalent note value in a weaker metric position. Of course, as Epstein notes, ‘[h]ierarchy is essential to time structure in music’,²³³ and as Kramer elaborates, ‘[i]f we consider *every* level in the metric hierarchy, no two beats in a piece have exactly the same accentual quality’.²³⁴ Notions of metre and beat hierarchy are indeed complex and fascinating issues that pervade the literature on musical time, and whilst their temporal implications, of course, infiltrate many periods of Western classical music, their salience in eighteenth-century repertoire is unequivocal. As Daniel Gottlob Türk states in his treatise of 1789, ‘each meter has strong and weak beats, although according to their external value or duration, they are equal to each other’.²³⁵ He continues to explain that ‘strong beats are ... said to be internally long, or are called struck or accented beats’ and that ‘[w]eak beats are ... called internally short, passing or unaccented beats’²³⁶ – a matter that Johann Joachim Quantz indeed elaborated upon, some thirty to forty years earlier in his book *On Playing the Flute*:

I must make a necessary observation concerning the length of time each note must be held. You must know how to make a distinction in execution between the *principal notes*, ordinarily called *accented* or in the Italian manner, *good* notes, and those that *pass*, which some foreigners call *bad* notes. Where it is possible, the principal notes always must be emphasized more than the passing.²³⁷

Johann Philipp Kirnberger, who clearly explains the accentual properties of metre in his treatise of 1771, not only effectively summarises that ‘[m]eter determines the accents in addition to the length and brevity of the notes and the lighter or more emphatic delivery’,²³⁸ but he also provides aesthetic justification for such agogics. Indeed,

²³¹ Quantz, *On Playing the Flute*, 172.

²³² *Ibid.*, 123.

²³³ Epstein, *Shaping Time*, 137.

²³⁴ Kramer, *The Time of Music*, 94.

²³⁵ Türk, *School of Clavier Playing*, 90.

²³⁶ *Ibid.*, 91.

²³⁷ Quantz, *On Playing the Flute*, 123.

²³⁸ Kirnberger, *The Art of Strict Musical Composition*, 375.

he notes that ‘a melody in which all the notes are presented with the same intensity or stress, and in which they have the same length or duration ... would be comparable to a monotonously flowing stream’.²³⁹ He then explains that the way in which this ‘mere stream of notes’ is transformed into an affective and meaningful expression is ‘in part by accents that are given to a few notes, and partly by the difference of their durations’.²⁴⁰

The agogic implications of metre and beat hierarchy in eighteenth-century music are patent. It is important to recognise that they are further highlighted by musical forms such as the Baroque Dance Suite, in which each movement enjoys an idiosyncratic agogic framework that often reflects the movement of the dancer, and by rhythmic devices, such as the hemiola, which manipulates metric subdivisions, shifting the typical, expected agogic emphasis in a way that alters the sense of motion, often in advance of a cadence. Thanks to an understanding of these stylistic conventions, the performer is inspired to lengthen and shorten written note values in a way that highlights the metrical hierarchy, dance steps and hemiolic patterns.

At this point, it is interesting to note that temporal discrepancies between note length *as represented in notation* and note length *as realised in performance* arise not only from structural matters of metre, hierarchy, and dance forms, but also from a range of melodic, harmonic, national and affective influences. In terms of intervallic content, for example, ‘the tones of skips in general have a more pronounced staccato than the tones in intervals progressing by step’,²⁴¹ even if their written duration is identical. This is confirmed both by C. P. E. Bach – ‘[i]n general, detached notes appear mostly in leaping passages’²⁴² – and Quantz, who insists that ‘[s]ustained and flattering notes must be slurred to one another, but gay and leaping notes must be detached and separated from one another’.²⁴³ This very practice of lengthening and shortening notes – a fundamental ingredient of articulation – is, in fact, a prominent device used in Baroque performance to create emotion and affective contrast. Quantz, who dedicates a whole chapter of his treatise to ‘the Use of the Tongue in Blowing upon the Flute’, explaining the technical and expressive features of a range of different ‘tongue strokes’, indeed urges that ‘the tongue ... must animate the expression of the passions in pieces of every sort, whatever they may

²³⁹ *Ibid.*, 381.

²⁴⁰ *Ibid.*, 382.

²⁴¹ Türk, *School of Clavier Playing*, 343.

²⁴² Carl Philipp Emanuel Bach, *Essay on the True Art of Playing Keyboard Instruments* [1753 and 1762], trans. and ed. William J. Mitchell (New York and London: Norton, 1949), 154.

²⁴³ Quantz, *On Playing the Flute*, 123.

be: sublime or melancholy, gay or pleasing'.²⁴⁴ Fundamentally, he summarises: 'whether majestic or flattering, gay or bold, the subject can always be made sensible to the ear in a different manner by the liveliness or moderation of the movements of the tongue, chest, and lips'.²⁴⁵ With specific regard to harmony and its well-documented affective properties, note length (as well as dynamic) can successfully satisfy Baroque instruction that '[d]issonances ... always require special emphasis' and 'must ... be struck more forcefully than the consonances'.²⁴⁶

In terms of more heavily theorised issues of rhythmic alteration, one cannot dismiss the well-known French practice of *notes inégales*, in which notes of equally-written duration (such as a succession of quavers) are played unevenly, in an expressive manner somewhat reflective of the language itself, in order to give the notes 'more grace'.²⁴⁷ Furthermore, the notion of the 'the variable dot'²⁴⁸ affords temporal flexibility for dotted rhythms, offering a wide range of ratios to accommodate a variety of musical characters and rhythmic expectations of particular movements, such as the bold and majestic opening of the French Overture. Finally, the significance of embellishment must be acknowledged: both essential graces and performers' free ornamentation – central features of Baroque performance practice that serve a largely emotive function – alter the duration of written notes values, once again changing time as represented in rhythmic notation. In any case, it is undeniable that the manipulation of note length – a response to metric, melodic, harmonic, national, characterful, and ornamental influences – is a fundamental means of expressive timing in the performance of Baroque repertoire, exploited to create meaningful and affective expression.

2.3.2.4. Phrases: Punctuation and Motion

As we expand our focus from individual notes to larger musical groupings, we must consider the temporal implications of 'phrases'. As the equivalent of clauses or sentences, musical phrases are inextricably entwined with issues of 'punctuation' – a fundamental

²⁴⁴ Ibid., 71.

²⁴⁵ Ibid., 133.

²⁴⁶ Ibid., 277, 258.

²⁴⁷ Saint Lambert, *Principles of the Harpsichord*, 46.

²⁴⁸ Richard Rastall, *The Notation of Western Music: An Introduction*, 2nd rev. ed. (Leeds: Leeds University Press, 1998), 223.

element of tempo-structural delineation and, of course, effective communication.²⁴⁹ Indeed, the very affinity between music and language is a popular and immensely vast topic that has been studied extensively in recent decades. The cross-modal parallels were explicit even in the Baroque, as principles of rhetoric pervaded musical thought of the time. To give an example, Johann Philipp Kirnberger, who draws many connections between music and language throughout his treatise of 1771, states that ‘a complete musical statement ... is equivalent to a full sentence in speech, after which a period is placed.’²⁵⁰ He elaborates: ‘[e]ach period generally consists of a larger or smaller number of phrases that are not completely cut off or separated from one another yet are somewhat detached by smaller rest points’, such as commas, semicolons and colons.²⁵¹ For Kirnberger, music, just like ‘common speech would become partly incomprehensible and completely disagreeable ... if the phrases and sentences were not differentiated by [these] rest points’.²⁵²

Whilst Kirnberger (like many other eighteenth-century writers, such as Friedrich Wilhelm Marpurg)²⁵³ draws particular attention to punctuation as expressed in musical *composition* – for example through the use of different types of cadence to represent various punctuation marks with distinct levels of ‘rest’ or ‘repose’²⁵⁴ – the *performer’s* involvement in punctuating musical speech cannot be dismissed. After all, punctuation marks are redundant if the performer (orator or musician) does not respond to or externalise them effectively. Jean-Jacques Rousseau says it perfectly:

[a] composer, who punctuates and phrases well, is a clever fellow; a singer who feels, marks well his phrases and their accent is a man of taste: but he who can only see, and render the notes, the tones, times, and intervals, without entering into the sense of the

²⁴⁹ As previously mentioned, this subject is explored in depth by Stephanie Vial, in her book *The Art of Musical Phrasing in the Eighteenth Century: Punctuating the Classical “Period”*.

²⁵⁰ Kirnberger, *The Art of Strict Musical Composition*, 404-405.

²⁵¹ *Ibid.*, 375.

²⁵² *Ibid.*, 408.

²⁵³ Friedrich Wilhelm Marpurg’s comments on musical punctuation can be seen in ‘Appendix A’ of Stephanie Vial’s book: she provides a translation of Marpurg’s ‘Lessons on Musical Punctuation’, from his *Kritische Briefe über die Tonkunst*, vol. 2.

Vial, *The Art of Musical Phrasing in the Eighteenth Century*, 233-259.

²⁵⁴ Kirnberger, *The Art of Strict Musical Composition*, 114.

phrases, however sure, however exact he may be, in every other respect, he is no more than a sapskull.²⁵⁵

François Couperin confirms: '[j]ust as there is a great difference between grammar and Eloquence, there is the same infinity between notated music and music played well'.²⁵⁶ He clarifies: 'it is the difference between those who read everything straight through, and those who pause at the full stops'.²⁵⁷ Indeed, the very means by which 'rest points' are realised, the very essence of punctuation itself, is *timing* – the tool through which speech (vocal and musical) becomes comprehensible, expressive, and convincing. Kirnberger himself agrees that a lack of performative punctuation amounts to 'a lifeless delivery [which] would make the most beautiful speech sound no better than the letter-by-letter reading of children'.²⁵⁸ Making explicit reference to musical performance, he notes: '[i]t is immediately apparent to everyone that the most moving melody would be stripped of all its power and expression if one note after another were performed ... without rest points'.²⁵⁹ The structuring and shaping of a musical speech through punctuation – a matter of timing – is therefore a fundamental ingredient of expressive performance.²⁶⁰

It is interesting to note, at this stage, that the very notion of 'rest points' (as advocated by Kirnberger) or musical 'full stops' (as suggested by Couperin) has, in fact, emerged in more recent writing on musical timing. Indeed, in his article 'A Model of

²⁵⁵ Jean-Jacques Rousseau, *A Complete Dictionary of Music: Consisting of a Copious Explanation of All Words Necessary to a True Understanding of Music*, 2nd ed., trans. William Waring (London: J. Murray, 1779), 317.

²⁵⁶ François Couperin, in Haynes, *The End of Early Music*, 102.

²⁵⁷ François Couperin, *Pièces de Clavecin: Troisième Livre*, ed. Kenneth Gilbert (Paris: Heugel, n. d.), ix.

²⁵⁸ Kirnberger, *The Art of Strict Musical Composition*, 375.

²⁵⁹ *Ibid.*

²⁶⁰ It is interesting to note that the importance of performative punctuation was indeed so great in the eighteenth century, that some composers even felt the need to use symbols to indicate rest points between musical clauses and phrases: commas can, for example, be seen clearly in music from François Couperin's *Troisième livre de pièces de clavecin*; the use of the symbol 'h' in Michel Blavet's flute sonatas not only indicates where the flautist should breathe, but also clarifies phrasal delineation; and Johann Mattheson, in his *Kern Melodische Wissenschaft*, presents a *Minuetta* that is heavily annotated with different punctuation marks, which can be seen in Stephanie Vial's book. These explicit punctuation markings are, however, rare. As Heinrich Christoph Koch states, 'resting points affect our feeling enough that there is no need to use special signs to indicate them'. Indeed, the performer's responsibility in recognising and responding to music's phraseology is confirmed by Johann Joachim Quantz, who explains that one 'must separate those ideas in which one musical thought ends and a new idea begins, even if there is no rest or caesura'. For a list of primary sources that mention musical punctuation, see Vial's 'Appendix B: Chronological Chart of Punctuation References'.

Couperin, *Pièces de Clavecin: Troisième Livre*, ix, 6, 7; Michel Blavet, *Sonates Pour la Flûte Traversière, Avec la Basse* [1732] (Firenze: Studio per Edizioni Scelte, 1981); Johann Mattheson, in Vial, *The Art of Musical Phrasing in the Eighteenth Century*, 208; Heinrich Christoph Koch, in Vial, *The Art of Musical Phrasing in the Eighteenth Century*, 102; Quantz, *On Playing the Flute*, 122; Vial, *The Art of Musical Phrasing in the Eighteenth Century*, 260-278.

Expressive Timing in Tonal Music’, Todd recognises ‘[t]he use of pauses as a major boundary marker between and within sentences’, as he notes that ‘[s]peakers tend to draw breath at the end of large conceptual units such as sentences and clauses’.²⁶¹ The correlations between ‘full stops’, ‘boundary markers’, ‘rest points’ and ‘pauses’ are self-evident.

Furthermore, Todd makes connections between ‘boundary markers’ (or punctuation marks) and the notion of ‘phrase-final lengthening’ – the tendency to slow down at a boundary – a phenomenon not only identified in speech, but also in birdsong, insect chirps, and music.²⁶² This very observation firmly resonates with Hudson’s discussions of phrasal *ritardandi* in music from the tenth century onwards, and more pertinently, with his specific recognition of the so-called ‘cadential retards’ of the Baroque.²⁶³ It also corresponds with results from Christopher M. Johnson’s more recent, empirical investigation, ‘The Performance of Bach: Study of Rhythmic Timing by Skilled Musicians’, which confirmed that ‘conclusions of a musical idea were marked by a noticeable deceleration’.²⁶⁴

More significantly, however, the notion of ‘phrase-final lengthening’ highlights the undeniable relationship between musical phrases and *motion* – a central concern of this thesis, explored, in particular, in Section 2.4. Not only does motion tend to relax in advance of a ‘boundary marker’ or ‘rest point’, but there is also an inherent drive towards the climax of a phrase. Whilst Haynes suggests that ‘long line or “climax phrase”’ shaping is a feature of the Romantic and Modern styles of performance – one that disregards the nuances of the smaller gestures that make up Baroque music²⁶⁵ – the potency of phrasal motion in eighteenth-century music cannot be denied. It is indeed embodied in the melodic contours and harmonic foundations of the music itself: the music moves towards and away from the tonic, drives towards dissonant harmonies, and relaxes into consonant resolutions – trajectories that are further supported by the tension and release of the balance schema, the goal-directedness of the pathway schema, and the arched contour of the cycle schema. (More detail on the relationship between musical motion and Mark Johnson’s theory of image schemata can be found in Section 2.4.2 of this chapter as well

²⁶¹ Todd, ‘A Model of Expressive Timing in Tonal Music’, 35.

²⁶² *Ibid.*, 34-35.

²⁶³ Hudson, *Stolen Time*, 5, 7, 8.

²⁶⁴ Christopher M. Johnson, ‘The Performance of Bach: Study of Rhythmic Timing by Skilled Music’, *Bulletin of the Council for Research in Music Education* no. 141 (Summer 1999): 66.

²⁶⁵ Haynes, *The End of Early Music*, 184-186.

as in Chapter 4). Moreover, C. P. E. Bach himself alludes to the temporal, performative externalisation of such climax-directed, phrasal shapes when he explains that certain passages ‘can be effectively performed by gradually and gently accelerating and immediately thereafter retarding’.²⁶⁶ Indeed, whilst it is vital not to overlook the gestural subtleties of Baroque repertoire, it is also important to respond to the broader trajectories of longer musical sentences. After all, thanks to the ‘nesting’ of musical shapes of different lengths, one within another (a notion explained in Chapter 4, Section 4.5.3), numerous climaxes and temporal trajectories exist simultaneously, on multiple levels. Both gestures *and* phrases can, and indeed should, therefore, be shaped. Even Haynes himself acknowledges that, by ‘thinking in phrases as well as gestures ... fragmentation is avoided, and gestures give the impression of leading somewhere’.²⁶⁷

In any case, phrases, a central feature of Baroque repertoire, act as a means of structuring, dividing and shaping time, influencing both temporal punctuation and musical motion. Having considered the significance of the correlations between music and language, the permeation of rhetorical principles in eighteenth-century music, our embodied knowledge of effective communication, and the potency of musical shapes (melodic contours, harmonic progressions, dissonance-consonance relationships, and cadences), I contend that salient aspects of expressive timing in the performance of Baroque repertoire include the temporal punctuation of ‘rest points’, motional drive towards phrasal climaxes, and relaxation into boundary markers (phrase-final lengthening). Such temporal delineations and motional trajectories are, after all, not only observed in performance (as evidenced in the case study, Chapter 5), but they are also reinforced by fundamental principles of embodied image schemata (introduced in Section 2.4.2 and explored in greater detail in Chapter 4, Sections 4.5 and 4.6).

2.3.2.5. Section Summary

Expressive microtiming in Baroque repertoire is evidently an extensive, multi-faceted and complex phenomenon of utmost significance. It encompasses a plethora of issues concerning note length (including practices of *notes inégales*, the variable dot and ornamentation), punctuation (including ‘rest points’ and ‘boundary markers’), and motion (including ‘phrase-final lengthening’) – issues that that are inextricably

²⁶⁶ Bach, *Essay on the True Art of Playing Keyboard Instruments*, 161.

²⁶⁷ Haynes, *The End of Early Music*, 195.

interrelated with matters of metre, hierarchy, articulation, harmony, melody, national style, *Affekt*, language and rhetoric. Despite the inherent convolutions, however, these issues are united by their common functions: as discussed in Chapters 4 and 5, each temporal nuance helps to create musical shapes and trajectories, to convey musical characters and emotions, and to communicate in a convincing and expressive manner. In short, expressive timing in Baroque music cannot be separated from the doctrine of affections and principles of rhetoric which pervaded musical thought of the period.²⁶⁸

Finally, it must be noted that all explorations of timing in Baroque music should acknowledge the persistent references, in eighteenth-century treatises, to the performer's 'taste', rather than to strict mathematical precision, which confirm that the very niceties of temporal interpretations are left largely to the discretion of the performer. On multiple occasions throughout *School of Clavier Playing*, Türk explains that '*tempo rubato* ... should be left to the sensitivity and insight of the player',²⁶⁹ and summarises that such nuances 'must be felt by the player himself, for who is able to demonstrate every possible case?'²⁷⁰ The complexity of time in Baroque repertoire therefore necessarily extends to incorporate the phenomenological subjectivity of the performer. Nevertheless, there remains a notable dearth of research into expressive microtiming: in performance generally, in this genre of music specifically, and with particular regard to the phenomenology of the interpretative experience. It is this very gap that my research aims to address.

2.4. Time as Motion

2.4.1. 'Motion is the Very Stuff of Time Itself'²⁷¹

Given the focus of my research on Baroque repertoire – a genre of music in which the tensions and releases of functional harmonic progressions and the rise and fall of tonal melodies create a powerful sense of direction towards climaxes and cadences – my thesis examines 'time' primarily in terms of its relationship with, or indeed its manifestation as, goal-directed linear motion. It can be argued that *all* music is, to some extent, linear,

²⁶⁸ *Affekt* and rhetoric are central issues in scholarship on Baroque performance practice. More information can be found in Tim Carter, 'The Search for Musical Meaning', in *The Cambridge History of Seventeenth-Century Music*, ed. Tim Carter and John Butt (New York: Cambridge University Press, 2005), 158-196.

²⁶⁹ Türk, *School of Clavier Playing*, 363.

²⁷⁰ *Ibid.*, 328.

²⁷¹ Epstein, *Shaping Time*, 8.

given that it ‘exists in time ... and is therefore initially heard as a temporally ordered succession’.²⁷² Nonetheless, in certain styles of music – such as minimalism, pieces in ‘moment form’, immersive sonic installations, or ‘vertical’ music in which ‘layers of sound’ create a ‘stretched out’ present, a ‘potentially infinite “now”’ – other temporalities such as ‘stasis’, ‘discontinuity’ or ‘timelessness’ dominate, surpassing, or at least in dynamic relation with, linearity.²⁷³ In Baroque repertoire, however, ‘linear progressions (harmony, rhythmic, voice-leading) [that] move the music towards goals’,²⁷⁴ such as phrasal high points, dissonant climaxes, stable resolutions and cadential endings, are central, epitomic features of the music and fundamental constituents of its unfolding temporal trajectory. My thesis, therefore, examines the aforementioned temporal aspects of performances (such as rhythm, note length, stress, hierarchy and phrase) under this overarching lens of goal-directed linear motion. After all, Epstein confirms that these ostensibly discrete temporal elements are, in fact united by their common goal: ‘the support and control of motion’.²⁷⁵ Epstein reiterates, ‘[a]llways these matters are related to motion’,²⁷⁶ and, as he so simply yet perfectly summarises, ‘motion is the very stuff of time itself’.²⁷⁷ ‘[t]he essence of temporal experience is movement, or motion, through time’.²⁷⁸ Therefore,

[t]o speak of time is virtually to speak of motion, for motion is time’s intrinsic correlate. We live, and consequently move, within time and through time ... time is only experienced, and thus understood, through motion. Motion is thus the quintessential property of time.²⁷⁹

The remainder of this chapter examines the relationship between time and motion in more detail, in order to map out the relationships that underpin the embodied experience and articulation of time in the performance of Baroque music. In particular, the discussion leads towards a consideration of both the embodied foundations and historical manifestations of proportional tempo.

²⁷² Kramer, *The Time of Music*, 62.

²⁷³ These issues are discussed by Kramer.

Kramer, *The Time of Music*, 282, 367

²⁷⁴ *Ibid.*, 332.

²⁷⁵ Epstein, *Shaping Time*, 14.

²⁷⁶ *Ibid.*, 57.

²⁷⁷ *Ibid.*, 8.

²⁷⁸ *Ibid.*, 5.

²⁷⁹ *Ibid.*, 8.

2.4.2. Motion as Felt: An Exploration of Embodied Image Schemata

2.4.2.1. An Introduction to the Embodied Foundations of Motion

Motion is deemed by many to be ‘the essence of life itself’.²⁸⁰ As Epstein explains:

[l]iving organisms move. They move within the world; they contain motion within themselves, in the circulation of blood, air, nerve impulses. Flora, though they are rooted to one place, also move, bending to the wind, absorbing nutrients by osmosis, housing the internal chemical actions of photosynthesis. Motion pervades the microworld through Brownian and other modes of molecular motion, through the orbiting motion of electrons around their atomic nucleus, and the like.²⁸¹

Importantly, in the context of this thesis, Epstein’s words highlight the embodied essence of motion: it is experienced and known in and through our bodies – a deep-rooted form of embodied knowledge. This is supported by Julius Thomas Fraser’s comment that ‘time is not independent of experience’²⁸² and Epstein’s acknowledgement that ‘we indeed do *feel* motion’²⁸³ (italics added for emphasis).

With regard to music, ‘[m]ost musicians would grant that we sense, indeed experience, movement in music’, be it ‘the sense of forward movement or lack of it’.²⁸⁴ Epstein confirms that this is ‘immediately felt, felt moreover in bodily, indeed visceral modes’.²⁸⁵ He continues to explain that ‘our sense of musical motion is felt in part physically (muscularly) and partly psychologically, in terms of tension and release’.²⁸⁶ This recognition of both bodily and cognitive involvement in our perception of musical motion is indeed supported by research into mimetic participation and image schemata, which helps to explain why and how musical motion is *felt*, by drawing on aspects of neuropsychology. Fundamentally, the theory of image schemata (explored in detail in Chapter 4, Sections 4.4 and 4.5) explains that, as our mind and body interact, similarities are forged between the multitude of everyday sensory and perceptual, embodied

²⁸⁰ Ibid.

²⁸¹ Ibid.

²⁸² Julius Thomas Fraser, *Of Time, Passion, and Knowledge: Reflections on the Strategy of Existence*, 2nd ed. (Princeton: Princeton University Press, 1990), 45.

²⁸³ Epstein, *Shaping Time*, 9.

²⁸⁴ Ibid., 13, 456.

²⁸⁵ Ibid., 134.

²⁸⁶ Ibid., 457.

experiences, in such way that a particular pattern or ‘image schema’ is formed. These schemata, arising from embodied knowing, allow us to categorise and understand our experiences.²⁸⁷

2.4.2.2. Balance and Pathway Schemata

Particularly pertinent is Epstein’s reference to tension and release: ‘tension/release may indeed be the essential factor, conveying the sensation of movement, of motion, in the absence of true physical motion in space’.²⁸⁸ He talks, for example, of ‘tension and releases of tension [that] drive the music forward’²⁸⁹ and, in particular, of the ‘forward moving’ character of ‘unresolved tensions’.²⁹⁰ Tension and release are, of course, terms that flood music literature and are particularly prominent in discourse on Baroque repertoire. The correlations between dissonance and tension, and between resolution and release, for example, are well-established. This transdisciplinarity of the terms ‘tension’ and ‘release’, as both musical and bodily phenomena, can be explained by the cross-modal quality of image schemata (explored in relation to embodied knowledge in Chapter 4, Section 4.5.2) and in this particular case, by the balance schema, which forges connections between our multifarious experiences of stability and instability, uniting them as one overarching image schema. Relating the balance schema explicitly to musical *motion*, Epstein asserts: ‘[p]assage *from* a stable base, or from instability *toward* a base of stability/repose, is the essence of musical motion’.²⁹¹ This is elaborated upon by Candace Brower, whose work specialises in the synthesis of music theory and cognitive neuroscience. She explains that, as we approach a musical ‘goal’, ‘we tend to move toward it with increased speed, tension, and anticipation. Upon reaching the goal, we tend immediately to seek its opposite – stability, relaxation, and the slowing and/or stopping of motion’.²⁹² (Brower’s comment is explored from an embodied, epistemic perspective in Chapter 4). Kramer likewise talks about music ‘mov[ing] toward ... goal[s]

²⁸⁷ The theory of image schemata was developed by Mark Johnson.

Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason* (Chicago and London: University of Chicago Press, 1987), 65-100.

²⁸⁸ Ibid.

²⁸⁹ Ibid., 27.

²⁹⁰ Ibid., 35.

²⁹¹ Ibid., 39.

²⁹² Candace Brower, ‘A Cognitive Theory of Musical Meaning’, *Journal of Music Theory* 44, no. 2 (Autumn 2000): 332.

of resolution and stability'.²⁹³ All of these descriptions, and in particular the words 'from', 'towards', 'approach' and 'goal', suggest *directional* movement, as does the word 'motion' itself, which inherently invokes a sense of travel or journeying. As such, the 'source-path-goal' (or as I term 'pathway') schema – which 'organizes our experience of motion, specifically goal-directed motion'²⁹⁴ – is implicated.

Not only is there a close congruence between the balance and pathway schemata (as discussed in Chapter 4, Sections 4.5 and 4.6.3, and demonstrated in the case study, Chapter 5) but the notion of 'goal-directed motion' (the aforementioned lens through which my research is carried out) pervades discourse on musical time. A large proportion of Kramer's book, *The Time of Music*, for example, focuses on 'goal directedness' and, in particular, 'the goal-oriented tonal system'.²⁹⁵ Whilst discussing the goal-directed nature of harmonic motion (and in doing so implicitly alluding to both the balance and pathway schemata), Kramer states:

[t]he temporal form of a tonal piece typically consists of a move towards a point of greatest tension that is usually remote from the tonic, followed by a drive back towards the tonic. The return of the tonic is ... a point of resolution, the goal.²⁹⁶

He further clarifies that '[s]ince the tonic is endowed with ultimate stability, tonal relationships conspire toward [it] ... Thus tonal motion is always goal-directed'.²⁹⁷ This trajectory (of movement from stability to an unstable climax and back to stability) is, of course, more broadly reflected in the so-called 'dramatic curve' structure upon which much of Western art is founded. Making specific reference to literature, William Barrett elaborates:

[t]he classical tradition ..., deriving from Aristotle's *Poetics*, tells us that a drama (and consequently any other literary work) must have a beginning, middle, and end. The action begins at a certain point, rises toward a climax, and then falls to a dénouement. One can diagram a classical plot of this kind by means of a triangle

²⁹³ Kramer, *The Time of Music*, 138.

²⁹⁴ *Ibid.*, 331.

²⁹⁵ *Ibid.*, 263, 169.

²⁹⁶ *Ibid.*, 25-26.

²⁹⁷ *Ibid.*, 25.

whose apex represents the climax with which everything in the play has some logical and necessary connection.²⁹⁸

The existence of goal-directed dramatic curves in both Western classical music and literature hints at the prevalence of such a construct in Western culture. Kramer, in fact, alludes to the very embodied foundations upon which our perception of goal-directed motion is based: '[i]deas of cause and effect, progress, and goal orientation have pervaded every aspect of human life in the West'.²⁹⁹ It is, of course, not hard to recognise 'a sense of direction in our daily lives',³⁰⁰ a multiplicity of causal actions saturating our everyday routines, and broader progressive trajectories in our personal and professional lives. Moreover, Kramer draws explicit parallels between these 'many goal-directed processes in Western life' and the notion of 'linearity', which he defines as 'the temporal continuum created by a succession of events in which earlier events imply later ones and later ones are consequences of earlier ones'.³⁰¹ Once again, he acknowledges our embodied knowledge of processive activity thanks to 'the predominant linearity of external life'.³⁰² Amidst broad statements that 'Western thought has for centuries been distinctly linear', Kramer not only uses our 'language' and 'analytic thinking' as specific examples of linear constructs,³⁰³ but reminds us that

[w]e in Western culture live by the clock and by causality. For us, music *does*, therefore, unfold linearly. Each event of a composition clearly succeeds another event, and ... there is a sense that earlier events lead to, or imply, later events.³⁰⁴

He notes, in particular, tonal 'functionality' and 'stepwise pitch connection' as important linear processes that propel musical motion forward.³⁰⁵ Whilst Kramer does also necessarily discuss *nonlinearity* ('nonprocessive' and 'unchanging' qualities)³⁰⁶ in music and argues that '[t]he history of Western music in the past three centuries has seen a gradual increase in the importance of nonlinearity',³⁰⁷ he reiterates the dominance of

²⁹⁸ William Barrett, *Irrational Man: A Study in Existential Philosophy* (New York: Anchor Books, 1962), 50.

²⁹⁹ Kramer, *The Time of Music*, 23.

³⁰⁰ *Ibid.*, 168.

³⁰¹ *Ibid.*, 25, 20.

³⁰² *Ibid.*, 45.

³⁰³ *Ibid.*, 23, 21.

³⁰⁴ *Ibid.*, 11.

³⁰⁵ *Ibid.*, 181, 171.

³⁰⁶ *Ibid.*, 20, 43.

³⁰⁷ *Ibid.*, 62.

linearity in tonal music, given ‘the quintessential expression of linearity [in music] is the tonal system’.³⁰⁸ It is evident, therefore, that with its pronounced phrases, constituted of tonal melodic shapes and harmonic progressions that move the music from stable moments of repose to points of increased tension and back, Baroque repertoire embodies the goal-directed linear motion of the pathway schema, as defined above – a phenomenon that is recognised and indeed felt, thanks to our deep-rooted, multifaceted experience of it in different aspects of our lives and culture.

At this stage, it is important to note the difference between ‘goal-directed and nondirected linear motion’.³⁰⁹ As Kramer explains, if music is linear (or processive) but *nondirected*, ‘we cannot feel where the music is ultimately heading’.³¹⁰ In contrast, there is ‘an unmistakable sense of ... motion toward definable goals’ in goal-directed linear music.³¹¹ As the ‘goals are predictable ... we therefore *can* feel where the music is heading’.³¹² The notion of expectation – an important element of goal-directed linearity and of musical time more generally – is evidently implicated. Indeed, as Kramer elucidates, ‘[e]vents can and do imply later events; probabilities do exist for what will follow a given sequence of events. It may not be possible to calculate these possibilities objectively but we do feel their force’.³¹³ He continues:

[a]s we listen to a tonal composition, for example, each pitch event (individual note, chord, or motive) colors, to a small or great extent, our expectations of what will follow. We hear subsequent events in the context of these expectations, which are fully or partially satisfied, delayed, or thwarted.³¹⁴

As previously mentioned, Baroque repertoire – with its somewhat predictable phrasal structures, tonal melodies, and harmonic movement – positively revolves around goal-directed linearity and Kramer, in fact, confirms that ‘[n]ondirected linearity would have been unthinkable, even self-contradictory, in earlier Western music’.³¹⁵ Indeed, in such processive, tonal repertoire, the harmonic, melodic and rhythmic linear progressions

³⁰⁸ *Ibid.*, 23.

³⁰⁹ *Ibid.*, 183.

³¹⁰ *Ibid.*, 183.

³¹¹ *Ibid.*, 196.

³¹² *Ibid.*, 183.

³¹³ *Ibid.*, 23.

³¹⁴ *Ibid.*, 20-21.

³¹⁵ *Ibid.*, 40.

clearly move the music towards goals which we can certainly sense, anticipate, and indeed *feel*. To summarise, thanks to a dynamic epistemic interplay of embodied experience, expectation, and musical features (such as consonance and dissonance, harmonic progressions, and tonal melodic phrases), time in Baroque music can be understood primarily in relation to our embodied knowledge of the balance and pathway schemata, as dramatic curves of goal-directed linear motion with inherent tensions and releases. This very understanding, of course, inspires expressive timing in performance, guiding matters such as note length and tempo fluctuation in a manner that reflects and indeed enhances the musical shapes and motional trajectories – temporal performative implications that are discussed in detail in Chapter 4, Section 4.6, and in the case study, Chapter 5.

2.4.2.3. Cycle Schema

Reflected in the very contour of the dramatic curve itself, with its inherent sense of rise and fall, the ‘cycle schema’³¹⁶ – an image schema closely affiliated with both the balance and pathway schemata – is also manifest in both music and embodied experience: its purpose, according to Brower, is ‘to organize our experience of time’.³¹⁷ Recognising the homogeneity of ‘cyclicity’ and ‘periodicity’, Epstein defines the latter as ‘the cyclic recurrence of an event at regular intervals’.³¹⁸ It should be clarified that, thanks to their shared quintessential properties – namely recurrence and regularity – the terms ‘cyclicity’ and ‘periodicity’ will be used somewhat interchangeably in this discussion, though my preference for the former stems from the added connotation of motion and, of course, the evident association with the ‘cycle schema’. Furthermore, when used specifically in relation to music, these terms are employed primarily to describe the quality of *repeated time structures* (such as pulse, beat, bars, phrases) rather than the repetition of thematic material, as would be implied by the term ‘cyclic music’, which tends to describe music based on colotomic structures, such as the gong cycles that underpin Gamelan music.

Having clarified my use of terminology, we should note that, according to Epstein, ‘[m]usic is ... regulated by a cyclic periodic principle’.³¹⁹ Whilst this broad statement,

³¹⁶ Johnson, *The Body in the Mind*, 119-121.

³¹⁷ Brower, ‘A Cognitive Theory of Musical Meaning’, 328.

Once again, these ideas return in Chapter 4, under an embodied, epistemic lens.

³¹⁸ Epstein, *Shaping Time*, 135.

³¹⁹ *Ibid.*, 136.

implicitly defining *all* music as cyclic and periodic, could perhaps be criticised for its sweeping generality, it is certainly true of Baroque repertoire. Periodicity and cyclicity are embodied in the temporal structures of Baroque music, thanks to its rather conventional use of metre, beats, bars and phrases – regularly occurring units that provide a tempo-structural framework. Epstein draws our attention to ‘the periodic repetition of a pulse’,³²⁰ and Kramer highlights the ‘cyclic’ quality of meter and bars (termed ‘measures’).³²¹

More pertinently, however, Epstein recognises the embodied omnipresence of cyclicity pervading bodily and earthly realms – a subject also considered in Chapter 4, Section 4.5.3. In acknowledging that ‘periodicity itself is a prime feature of life’, Epstein not only recognises its centrality in ‘the temporal functioning of the physical world’, offering ‘waves in the sea, the ordered changing of the seasons, the rhythms of day and night’ as examples, but he also draws our attention to the ‘biological clocks functioning in numerous aspects of the nervous system, that serve as periodic regulators for all manner of bodily processes’.³²² In particular, he notes circadian ‘cycles of wakefulness and sleep’, as well as ‘the periodic firings of neurons’, and the cyclic functioning of our cardio-vascular, cardio-renal, alimentary and glandular systems.³²³ He encapsulates the multidimensional ubiquity of cyclicity by stating:

much of the world displays periodic movement, from electron spin in the subatomic universe to the revolutions of the planets on their axes within their orbits. Between these extremes are the numerous periodicities of life itself, many of them controlled by biological rhythms that in turn relate to macro- and microrhythms of the larger world.³²⁴

Indeed, as theorist Joseph Riepel noted as early as 1755, periodicity is simply ‘implanted in our nature’.³²⁵

Having recognised our embodied experiences, and indeed basic structural musical manifestations, of cyclic periodicity, it is essential to consider its significance with regard to timing in performance. Firstly, Epstein notes that ‘biological mechanisms are proposed

³²⁰ Ibid.

³²¹ Kramer, *The Time of Music*, 83.

³²² Epstein, *Shaping Time*, 139, 136, 110, 10.

³²³ Ibid., 139-142.

³²⁴ Ibid., 9.

³²⁵ Joseph Riepel, in Epstein, *Shaping Time*, 136.

as a major basis by which we ... control time and timing in music'.³²⁶ He continues to clarify that '[t]he periodic manner in which our biological timing mechanisms function is seen as the quintessential factor that controls our sense of pulse. And pulse is the prime aspect of tempo'.³²⁷ Indeed, 'few of us doubt that the pulse that underlies our performance lies within our bodies'.³²⁸ This view has, in fact, existed for centuries: William Gardiner, in his book *The Music of Nature*, linked our sense of pulse, tempo and timekeeping to 'our manner of walking', which he believes is, in turn 'governed by the action of the heart' – 'equal and regular'.³²⁹

This very embodied quality of pulse, periodicity and cyclicity is particularly pertinent when performers have to make ostensibly subjective decisions regarding temporal relationships, for example at sectional transitions where the juxtaposition of contrasting material lacks explicit temporal direction from the composer. Examples of this can be seen in Telemann's *Fantasia in D major for Solo Flute*, which forms the case study of this thesis. Indeed, as argued in detail in Chapter 5 (Section 5.4.1), the inherent continuity of the cycle schema – namely the regular and repetitive quality of its intrinsic periodicity – can play a significant role in governing metric modulations, such as those in *Fantasia in D*. Developing Leonard B. Meyer's statement that 'once a patterned process is begun it tends to be continued',³³⁰ it could indeed be argued that our embodied knowledge of persistent oscillations – gained through experiencing a multiplicity of bodily and worldly manifestations of the cycle schema – generates a deep-rooted inclination towards continuing patterns. With specific regard to metric modulation, therefore, it is certainly plausible that we are predisposed to '[t]empo relationships [that] are largely proportional, based upon a steady, continuous, and thus common pulse'.³³¹ Whilst this supposition of course requires verification from rigorous, scientific investigation that lies beyond the scope of this thesis, its premise certainly offers a possible *embodied* explanation for the 'theory of continuous pulse' (or 'proportional tempo'), which 'suggests that in works of multiple movements, or in single-movement works with different tempos (a Classical overture, for example, with slow introduction and

³²⁶ Epstein, *Shaping Time*, 136.

³²⁷ Ibid.

³²⁸ Ibid.

³²⁹ William Gardiner, *The Music of Nature* (Boston: J. H. Wilkins and R. B. Carter, 1841), 174.

³³⁰ Leonard B. Meyer, *The Spheres of Music: A Gathering of Essays* (Chicago and London: The University of Chicago Press, 2000), 126.

³³¹ Epstein, *Shaping Time*, 12.

subsequent allegro, [such as that present in Telemann’s Fantasia in D]), all tempos are intrinsically related via a common pulse’.³³² Thanks to their shared quintessence – continuity – there is, therefore, an undeniably intimate congruency between the theory of continuous pulse and the cycle schema.³³³

Widening our focus from the temporal implications of metric, beat-sized cycles (which underpin pulse and tempo) to those of broader hypermetric cycles (which outline musical phrases), I contend that the inherently delineating nature of cycles – the very feature that enables a musical speech to be structured into segments and experienced as a flow of phrases – inspires the performer’s punctuation of musical clauses and sentences. Indeed, as guided by the inherent boundary markers of the phrasal cycles themselves, the performer uses time and timing for syntactic effect, as discussed in Sections 2.3.2.3 and 2.3.2.4. This becomes particularly interesting when the hypermetric cycles ‘depart from their “normative” ... lengths to compress or expand’.³³⁴ Not only does Kramer make reference to the ‘irregularities’ or ‘[a]lterations of metrically delineated timespans, through such common mechanisms as extensions, contractions, or overlaps’,³³⁵ but Epstein, who also recognises that ‘phrase expansions are a common technique’, indeed acknowledges that such modifications alter ‘the pacing of the music, in essence its motion’.³³⁶ (These considerations feed into the case study, in which Sections 5.4.1.3 and 5.4.1.4 relate cyclic expansion and phrasal irregularity to issues of expressive timing.)

2.5. Proportional Tempo: A Musical Manifestation of the Cycle Schema

2.5.1. A Universal Perspective?

The notion that we have an innate or ‘natural’ predisposition for proportional tempo is fervently advocated by Epstein, who believes in ‘the predilection of human beings to prefer periodic and integral relationships’:³³⁷ ‘proportional tempo may be universal, its basis the presumably consistent, universal nature of human neurobiology’.³³⁸ In ‘The

³³² Ibid., 101.

³³³ Section 2.5 develops a critical discussion of ‘Proportional Tempo’ from a variety of perspectives, whilst Chapter 5 (Section 5.4.1) explores the *practical* implications of its relationship with the cycle schema.

³³⁴ Epstein, *Shaping Time*, 34.

³³⁵ Kramer, *The Time of Music*, 350.

³³⁶ Epstein, *Shaping Time*, 52, 55.

³³⁷ Dave Headlam, review of *Shaping Time: Music, the Brain, and Performance*, by David Epstein, *Theory and Practice* 20, (1995), 196.

³³⁸ Ibid., 107.

Musical Mind in Context’, John A. Sloboda, too, proposes that there may be ‘some underlying features which typify most music’ that are ‘related to some universal cognitive basis for music which transcended individual cultures’.³³⁹ Moreover, Sloboda posits periodicity as one of the ‘possible musical universals in the temporal domain’.³⁴⁰

Such speculations on ‘natural predilections’ are appealing, not least since they seem to fit with my performance tendencies, but such claims need critical consideration. Most reviews of *Shaping Time*, while overall highly laudatory, identify Epstein’s suggestion of ‘a universal tendency’ towards proportional tempo in music as both one of the most interesting but also controversial features of his book.³⁴¹ Gary Wittlich argues that ‘there is no experimental evidence’ to support claims of such a predilection,³⁴² while Bruno Repp highlights Epstein’s ‘disregard of conventional statistical procedures’ and a consequent lack of ‘any hard data’.³⁴³ This lack of methodological rigour extends to Epstein’s somewhat narrow choice of musical examples: as Repp notes, Epstein’s ‘own preferred tempos surely influence, and perhaps constitute, what he considers to be “commonly heard”’. Thus, it is perhaps not too surprising that example after example yields impressive support for the proportional theory’.³⁴⁴

³³⁹ John A. Sloboda, ‘The Musical Mind in Context: Culture and Biology’, in *The Musical Mind: The Cognitive Psychology of Music* ed. John A. Sloboda (Oxford: Clarendon Press, 1985), 253.

³⁴⁰ *Ibid.*, 257.

³⁴¹ As an example, see Headlam, review of *Shaping Time*, 198.

³⁴² Gary E. Wittlich, review of *Shaping Time: Music, the Brain, and Performance*, by David Epstein, *Indiana Theory Review* 17, no. 2 (1996): 139.

³⁴³ Bruno Repp, review of *Shaping Time: Music, the Brain, and Performance*, by David Epstein, *Haskins Laboratories Status Report on Speech Research* 119/120 (1994-1995) 289, 286.

³⁴⁴ *Ibid.*, 286-287.

Dave Headlam is similarly critical of Epstein’s approach, which ‘includes a subjective choice of “good performances”’, and ‘unconvincing hermeneutic “explanations” of an extremely subjective nature quite appropriate for private consumption but irrelevant for formal presentation’.
Headlam, review of *Shaping Time*, 199, 200.

In claiming universality, ethnography is also of the essence.³⁴⁵ Due to enculturation itself – the very process through which culture permeates and shapes our understanding and experiences – it is surely challenging to disentangle aspects of ‘human disposition’ from learned cultural behaviours that have become so deep-rooted that they manifest themselves ostensibly as ‘natural’ or innate. Indeed, the line that separates inborn proclivity from tacit knowledge gained via enculturation is certainly hazy. Universal claims must, therefore, be grounded in meticulous and comprehensive transnational research that suitably takes account of music as a heavily cultural construct.³⁴⁶

Likewise, although the evolution of musical style and tastes across history is of great significance here, as Dave Headlam notes, Epstein ‘gives little attention to historical or style change in his discussions’, comparing, for example, Mozart with Bach.³⁴⁷ The absence of twentieth-century repertoire in Epstein’s book is hugely problematic. As Headlam says:

[r]hythm in this century has been characterized by a liberation
from the periodicity of meter Unless much of the art music of

³⁴⁵ A recent example of cross-cultural research into microtiming is Jakobwski, Polak and Jacoby’s paper ‘Aesthetic Preferences and Perceptual Discrimination of Microrhythmic Variations in Music: A Comparative Study across Three Cultures’, which was presented at the Together in Music Conference 2018. The study compares the behavioural responses of participants from the UK, Mali, and Uruguay, to original and temporally-manipulated musical examples from each of the represented cultures (jazz representative of the UK, jembe drumming from Mali, and candombe drumming of Uruguay). In particular, the research investigates ‘the similarities and differences in perceptual judgements and aesthetic preferences between the three cultural groups’, once again focusing on the realm of the listener.

Kelly Jakobwski, Rainer Polak and Nori Jacoby, ‘Aesthetic Preferences and Perceptual Discrimination of Microrhythmic Variations in Music: A Comparative Study across Three Cultures,’ (conference paper, Together in Music: Expression, Performance and Communication in Ensembles, National Centre for Early Music, York, April 12-14, 2018).

³⁴⁶ Admittedly, Epstein’s inclusion, in Chapter 9, of case studies based on music from Botswana, Tibet, Nepal, Venezuela and New Guinea, indicates an attempt at cross-cultural consideration. Nonetheless, his statement, in a mere footnote, that ‘[n]o claim is made in this study to “understand” these musical examples from other cultures as would a musical practitioner from that culture, who would be sensitive to numerous nuances and traditions that undoubtedly escaped this Western observer’ insinuates negligence. After all, as music is such a cultural construct – a phenomenon that projects and introjects, influences and is influenced by, culture in such a way that the two are so intimately bound together – the ‘nuances and traditions’ that Epstein overlooks, are, in fact, matters of utmost salience. Epstein, *Shaping Time*, 545.

³⁴⁷ Headlam, review of *Shaping Time*, 195.

Whilst it is most important not to overlook Epstein’s chapter titled ‘Proportional Tempo: Historical Aspects’, the entirety of which is dedicated to historical evidence of proportional tempo from the Renaissance through to the Romantic period, the implications of stylistic evolution and epochal ‘taste’, particularly on enculturation and ostensible predilection, should perhaps be foregrounded as a more pertinent issue throughout his discussion.

this century (or, looking back, the complex rhythmic language of fourteenth-century) is viewed as an aberration (a view certainly held by some), Epstein's claims of universality and human physiology need to account for more recently musical developments.³⁴⁸

As part of its continual evolution, art pushes boundaries and diverges from the norm, disrupting convention, confronting conformity, challenging expectation, and sparking innovation. By resisting or subverting established tendencies (culturally-engrained or indeed biological), music makes powerful statements, paving the way for change and revolutionising style. As musical taste is redefined and a new 'norm' becomes engrained through enculturation, the status of innate predilection is called into question. Claims of universality must, therefore, consider changes in musical style or aberrations from stylistic 'norms', and address the interrelationships between historical taste, seemingly 'innate' predilection, and profound tacit knowledge gained through enculturation.

Taking all these considerations into account, it is evident that Epstein's broad ecological claim of universality requires further critical investigation that lies beyond the scope of this thesis. Nevertheless, not only the key observations with regard to the embodied, cross-modal experiencing of pulse, periodicity and cyclicity, but also my specific experience of playing Baroque repertoire – an experientially and historically situated practice – support the case for the significance of proportionality, based on matters of periodicity and continuity. It corresponds not only theoretically, with the defining properties of the cycle schema and with the way in which Baroque music appears to structure time, but also, perhaps most importantly, with my own experience of performing this music (particularly as evidenced by my discussion of metric modulations, in Sections 5.4.1.1 and 5.4.1.2 of the case study).

2.5.2. An 'Intuitive', Embodied Perspective

Whilst reiterating my caution towards grand, unsubstantiated claims of universality and acknowledging that my research is firmly situated in Western culture and practice (which provides inherent limitations³⁴⁹ to my discussion) I do wish to argue, to an extent following Epstein, for a predilection towards proportional tempo grounded in our deep-

³⁴⁸ Headlam, review of *Shaping Time*, 202.

³⁴⁹ The limitations of my research are considered more critically and in greater depth in Chapter 6.

rooted, embodied experiences of periodicity. The notion of ‘predisposition’, with connotations of ‘naturalness’, ‘instinctiveness’ and ‘automaticity’, inherently implicates the phenomenon of ‘intuition’ – a related and equally complex matter of debate which is interrogated, in detail, in Chapter 3 (Sections 3.5.2 and 3.7.4). However, there is a twofold danger here: firstly that of an overly simplistic idea of intuition, and secondly an equally simplistic association of intuition with the body. As argued more fully in the next chapter, intuition should be understood as a fully epistemic construct: a powerful tacit knowing gained from the embodiment of knowledge. Likewise, it is important to avoid the equation of intuition with the body, as ‘nature’ or ‘natural’. The body is, of course, not only a biological but also an encultured construct; this is acknowledged in the notion of ‘embodiment’, which considers the body as situated, interacting with and influenced by its environment. With this in mind, Epstein’s comment that continuous pulse tends to correspond with ‘one’s intuitive sense of “rightness”’,³⁵⁰ – a claim that certainly reflects anecdotal accounts of proportional relationships ‘feeling good’ (see Chapter 5, Section 5.4.1.1) – could be explained aptly, for some musical contexts at least, from an embodied perspective: our ‘intuitive predilection’ for proportional tempo is a powerful, visceral reaction to our embodied knowledge of the cycle schema.

The role of ‘intuition’ in the execution of tempo relationships is, in fact, interestingly alluded to by renowned pianist Glenn Gould, in an interview with Tim Page. After explaining that ‘over the years he has come to feel that a musical work has one basic pulse’,³⁵¹ giving Bach’s *Goldberg Variations* as a particular example, Gould emphasises that one must ‘feel it in his bones’³⁵² – a subtle hint towards the embodied underpinnings of both intuition and continuous pulse. On the one hand, the seemingly innate essence of Gould’s proclivity for proportional tempo is enhanced by the fact that, according to Epstein, Gould’s discussion ‘reflects no particular historical awareness of the principle of proportional tempo and the role it played in earlier eras’.³⁵³ On the other hand, the very idea that Gould has ‘come to feel’ proportionality ‘over the years’ could certainly indicate the effects of enculturation, through which knowledge (in this case knowledge of musical style, and specifically tempo relationships) that is gained implicitly (for example through cultural immersion) becomes so deeply absorbed and embodied over time, that it feels

³⁵⁰ Epstein, *Shaping Time*, 105.

³⁵¹ *Ibid.*, 124.

³⁵² Glenn Gould, in Epstein, *Shaping Time*, 124.

³⁵³ Epstein, *Shaping Time*, 124.

‘innate’ and ‘natural’. In any case, whatever the complexities of its ontology, the role of something that feels like ‘intuition’ in interpretative timing decisions cannot be overlooked, thanks to its inherent interrelationship with embodied knowledge. (See Chapter 4, Sections 4.2 and 4.5 for more detail on this interrelationship).

2.5.3. A Historical Perspective

Whether or not proportional tempo is regarded as a consequence of our neurophysiological makeup, an ostensibly ‘intuitive’ reaction to our embodied knowledge of the cycle schema, or a tacit, epistemic product of enculturation, through which knowledge of musical style is absorbed so profoundly that it appears ‘natural’, certainly the ‘evidence of historical practice’³⁵⁴ in the context of Western classical music supports arguments in favour of continuous pulse across the ages. Epstein indeed recognises that ‘[p]roportional relations of pulse (thus of tempo) were explicit concerns throughout the late Medieval and Renaissance periods’.³⁵⁵ In discussing music of the Renaissance in particular, he clarifies that ‘it was the essence of the *tactus*, the fundamental concept of a steady pulse that underlay the music of this period’.³⁵⁶ Epstein elaborates that, as ‘a governing principle of timekeeping’,³⁵⁷ the *tactus* was most simply

a master beat that governed movement. As such, it would be the basis for proportional changes of tempo, for as it was to underlie the music in an ongoing fashion, new tempi would have to incorporate this pulse as an element or subelement.³⁵⁸

This is indeed confirmed by a substantial body of research (carried out by experts including Anna Maria Busse Berger, Roger Bowers, Ruth DeFord, George Houle and Jeffrey Kurtzman)³⁵⁹ into proportional notation (blackened notation and proportional

³⁵⁴ *Ibid.*, 155.

³⁵⁵ *Ibid.*, 109.

³⁵⁶ *Ibid.*, 106.

³⁵⁷ *Ibid.*, 109.

³⁵⁸ *Ibid.*, 109-110.

³⁵⁹ For examples, see Anna Maria Busse Berger, *Mensuration and Proportion Signs: Origins and Evolution* (Oxford: Clarendon Press, 1993); Roger Bowers, ‘Some Reflection upon Notation and Proportion in Monteverdi’s Mass and Vespers of 1610’, *Music & Letters* 73, no. 3 (August 1992): 347-398; Roger Bowers, ‘Proportional Notations in Monteverdi’s “Orfeo”’, *Music & Letters* 76, no. 2 (May 1995): 149-167; Ruth I. DeFord, *Tactus, Mensuration and Rhythm in Renaissance Music* (Cambridge: Cambridge University Press, 2015); George Houle, *Meter in Music, 1600-1800: Performance, Perception, and Notation* (Bloomington and Indianapolis: Indiana University Press, 1987); Jeffrey Kurtzman, *The Monteverdi Vespers of 1610: Music, Context, Performance: Music, Context, Performance* (New York: Oxford University Press, 1999).

mensuration signatures) as used from the late Middle Ages to the very early Baroque. Whilst the ambiguities of such proportional notation are highly debated in current academic circles (particularly in relation to the music of Claudio Monteverdi), the sheer prevalence of continuous pulse in Renaissance musical thinking cannot be denied. The issue is discussed in great detail in Michael Praetorius' monumental *Syntagma Musicum*³⁶⁰ and Pier Francesco Valentini's 'Trattato del Tempo del Modo e della Prolatione'.³⁶¹ Likewise, Sebald Heyden notes, in his treatise *De arte canendi* of 1540:

[f]or one and the same *tactus* gives to one semibreve in simple composition without diminution the same value as it gives to two semibreves in composition with diminution or *proportio dupla*, to three semibreves in *tripla*, or to one and a half semibreves in *sesquialtera*.³⁶²

Despite the prominence of proportionality in the Renaissance, Epstein acknowledges 'the minimal appearance of proportional tempo as an issue during the several centuries from the end of the Renaissance until the mid-Romantic era'.³⁶³ Indeed, before it reappears 'as an explicit concern in the mid- or late nineteenth century when ... numerous scores bear clear indications of these relationships',³⁶⁴ proportional tempo is simply 'a less visible factor in the musical dialogue of writers and practitioners' post-Renaissance.³⁶⁵ Epstein proposes two possible reasons for this decline: proportional tempo either simply 'fell into disuse',³⁶⁶ or it had become 'such a natural and accepted practice',³⁶⁷ 'so much a part of musical life that there was little need to discuss it'.³⁶⁸ Collating a variety of evidence, Epstein argues for the latter: 'proportional tempo did in fact influence the thinking of musicians during this intervening time frame';³⁶⁹ it 'emerges as a significant influence in the design of the music'.³⁷⁰ Geoffrey Simon agrees: 'in the

³⁶⁰ Michael Praetorius, *Syntagma Musicum* [1619], trans. and ed. Jeffery Kite-Powell (New York: Oxford University Press, 2004)

³⁶¹ Pier Francesco Valentini, 'Trattato del Tempo del Modo e della Prolatione' (Rome: Vatican Library Ms. Barb. Lat. 4419, 1643), 300-459.

³⁶² Sebald Heyden, in Bowers, 'Some Reflection upon Notation and Proportion in Monteverdi's Mass and Vespers of 1610', 369.

³⁶³ Epstein, *Shaping Time*, 110.

³⁶⁴ *Ibid.*, 109.

³⁶⁵ *Ibid.*, 106.

³⁶⁶ *Ibid.*

³⁶⁷ *Ibid.*, 110.

³⁶⁸ *Ibid.*, 106.

³⁶⁹ *Ibid.*

³⁷⁰ *Ibid.*, 107.

Classical period, the Baroque too, composers worked with a sense that the tempos of different sections and different movements had a germinal relationships that could be expressed mathematically'.³⁷¹ Beyond this, the subject has been further researched by a number of musicologists. In the 1950s, for example, the so-called 'Gerstenberg school' – a 'circle of proportional-tempo aficionados'³⁷² including Germans Walter Gerstenberg, Franz-Jochen Machatius, Ulrich Siegele, and American Walter Schenkman – produced 'a substantial theoretical corpus'³⁷³ concerning proportionality in the music of J. S. Bach – a subject area enriched more recently by specialist Don O. Franklin.³⁷⁴

Evidence from the seventeenth and eighteenth centuries that implies the existence of proportional tempo includes the so-called 'Takt of the Classical period'.³⁷⁵ Whilst the term '*Takt*' itself encompasses various subtleties of meaning, as discussed by Daniel Gottlob Türk in his treatise of 1789, *School of Clavier Playing*,³⁷⁶ its overriding essence is of 'controlled movement, movement that [is] ... metrical and periodic'.³⁷⁷ These rudimental similarities with the concept of 'tactus' are, after all, confirmed by etymology itself.³⁷⁸ Further evidence suggestive of a 'reigning master pulse to which all is related and to which all must inevitably return'³⁷⁹ includes the invention of pendula or time-keeping devices, such as chronometers by Michel L'Affillard (1697), Etienne Loulié (1698), Louis-Léon Pajot (1735), Jacques-Alexandre La Chappelle (1737), and Henri-Louis Choquel (1759).³⁸⁰ In 1934, Eugene Borrel compiled a table exhibiting the tempos that L'Affillard, Pajot, Chappelle and Choquel provided for various dance movements of a Baroque Suite. The numbers within the table are highly indicative of proportional tempo.³⁸¹ Moreover, Borrel seemingly used this information to deduce specific tempos for the music of Jean-Baptiste Lully and Jean-Jacques Rousseau.

³⁷¹ Geoffrey Simon, in Epstein, *Shaping Time*, 120.

³⁷² Luk Vaes, 'Artistic Research *Avant la lettre*? The Case of Glenn Gould's Brahms's Concerto Interpretation', in *Artistic Research in Music: Discipline and Resistance*, ed. Jonathan Impett (Leuven: Leuven University Press, 2017), 217.

³⁷³ Abravaya, *On Bach's Rhythm and Tempo*, 99.

³⁷⁴ As an example, see Don O. Franklin, 'Reading Bach's Notation: A Guide to the Temporal Structure of the 1733 *Missa*', *Bach* 48, no. 1 (2017): 76-92.

³⁷⁵ Epstein, *Shaping Time*, 110.

³⁷⁶ Türk, *School of Clavier Playing*, 88.

³⁷⁷ Epstein, *Shaping Time*, 110.

³⁷⁸ *Ibid.*

³⁷⁹ *Ibid.*

³⁸⁰ Epstein, *Shaping Time*, 116.

³⁸¹ *Ibid.*, 115.

In commenting on Borrel's work, Epstein states that it is 'suggestive that proportional tempos were a fact of life, particularly with regard to the music of Lully and Jean-Jacques Rousseau'.³⁸² It is, after all, believed that 'Loulie saw his device as a particular help in marking the works of Lully',³⁸³ who is, of course, well-known for conducting by banging a staff on the floor in order to keep time. Thanks to its repetitive quality, the very action that caused the injury that ultimately led to Lully's demise, also reinforces the plausible existence of continuous pulse in the Baroque. Moreover, as presented in H. C. Wolff's work 'Das Metronom des Louis-Léon Pajot 1735', Pajot himself gave a list of tempos for pieces by various composers of French Baroque, including Lully. Once again, Pajot's numbers imply proportional tempo.³⁸⁴ Further developments of pendulum timing systems, for example by Thiémé and Mason in 1801 and 1806 respectively, alongside their corresponding tables of tempos, explicitly indicate the continuation of proportional tempo into the nineteenth century.³⁸⁵ Thiémé, for example, ultimately determined that 'Andante was twice the speed of Largo, Allegro twice the speed of Andante, and so on'.³⁸⁶

Final examples that explicitly indicate the existence of proportional tempo in the Baroque period, however, include Saint Lambert's detailed discussion of 'Meter and Tempo' in his *Principes du clavecin* (1702) – usefully summarised in by Kirkpatrick's article 'Eighteenth-Century Metronomic Indications'³⁸⁷ – and Johann Joachim Quantz's tempo instructions in his treatise of 1752, *On Playing the Flute*. Indeed, by developing the connections between tempo and the human pulse already made by Franchinus Gaffurius in his *Practica musicae* (1496) and by Lodovico Zacconi in his *Prattica di Musica* (1592),³⁸⁸ Quantz created a tempo system in which 'the pulse beat at the hand of a healthy person'³⁸⁹ serves as the constant common denominator – the master pulse upon which all tempi are based and, hence, proportionally united. As an example, Quantz states:

In allla breve time there is:

In an Allegro, a pulse beat for each semibreve;

³⁸² Ibid., 116.

³⁸³ Ibid., 115.

³⁸⁴ Ibid., 116-117.

³⁸⁵ Ibid., 111-114.

³⁸⁶ Ibid., 112-113.

³⁸⁷ Kirkpatrick, 'Eighteenth-Century Metronomic Indications', 32.

³⁸⁸ Ibid., 34.

³⁸⁹ Quantz, *On Playing the Flute*, 283.

In an Allegretto, a pulse beat for each minim;
In an Adagio cantabile a pulse beat for each crotchet;
And in an Adagio assai, two pulse beats for each crotchet.³⁹⁰

Proportional tempo in these contexts is, frankly, undeniable. Whilst Quantz does acknowledge the subjective preferences and creativity of both musicians and dancers – noting ‘the whim of the dancer’ and the possibility of playing ‘a little more quickly [or slowly] than the beat of the pulse if you wish’³⁹¹ – his words explicitly support a belief in proportionality of tempo, therefore indicating a preference for continuous pulse during the Baroque.

2.5.4. Historical and Embodied Perspectives Entwined

The historical fragments presented in Section 2.5.3 not only provide reinforcement for the theory of continuous pulse in Baroque music, but they also support arguments for its embodied foundations. Whilst Quantz’s reference to ‘the pulse beat at the hand of a healthy person’³⁹² *explicitly* implicates the body in musical time, the simple recognition that proportional tempo existed and continues to persist throughout history *implicitly* supports the argument that humans are predisposed to continuous pulse thanks to our deep-rooted, embodied knowledge of the cycle schema. Whilst it is, of course, important to openly acknowledge the risks of circularity – using arguments of embodied predilection to justify musical practice, and using evidence of musical practice to justify claims of embodied predilection – it is certainly most compelling to conclude that history joins neurophysiology and embodied cognition in reinforcing the significance of cyclic, periodic continuity in musical timing.

2.6. (E) Motion

2.6.1. The Relationship between Motion and *Affekt*

Returning to the primary manifestation of time in music – motion – and considering the array of embodied image schemata (balance, pathway and cycle) that underpin our experience of motion, there is no doubt that musical motion is indeed *felt*: a ‘bodily’, ‘visceral’ *feeling*. Epstein confirms, ‘motion, how we experience it, is related to feeling

³⁹⁰ Ibid., 286.

³⁹¹ Ibid., 291, 287.

³⁹² Ibid., 283.

(affect)'.³⁹³ Indeed, this very affiliation is confirmed by etymology itself. Epstein explains: "emotion," a word closer to an elemental level of feeling, stems from the root word "motion".³⁹⁴ Drawing on the Latin roots of the word '*emotus*', he continues to clarify: 'e, out of, *motus*, motion; stemming from motion'.³⁹⁵ It is no surprise, then, that in music, motion engenders emotion, or affect. Epstein, in fact, asserts that '[m]ore than anything else, perhaps, the primary element of music that affects us, that grips us emotionally during performance, is its sense of motion'.³⁹⁶ Not only are tension and release (the 'essential factor[s]' of musical motion³⁹⁷ and the balance schema) 'experienced ... with an accompanying emotional response'³⁹⁸ (namely feelings of 'pleasure/unpleasure, sensations that lie at the core of emotion')³⁹⁹ but the satisfaction, delay or thwarting of expectations that emanate from linear motion (an embodiment of the pathway schema) are, of course, also coupled with concomitant emotions. Motion is, therefore, intimately 'allied with what may be an ultimate musical goal, that of expression and affect'.⁴⁰⁰ This is, of course, particularly significant given the amplified insistence on *Affekt* in the Baroque.

2.6.2. 'Intuition': A Performer's Ultimate Resource for (E)Motion

From a performer's perspective, then, 'to shape affect, we must shape motion'.⁴⁰¹ In reminding us that motion itself encompasses 'more than just the rhythms', *accelerandos* and *ritardandos*, Epstein insists: '[o]ne must capture as well the sense of intensifying and slackening motion that lies behind these rhythmic shapes'.⁴⁰² He recognises, however, that '[t]here probably is no marking adequate to convey this affect of motion',⁴⁰³ because '[n]o exterior signs ... can convey such a feeling with certainty'.⁴⁰⁴ After all, '[m]usical signs are a paltry collection of indications, unable to imply subtleties',⁴⁰⁵ and frankly, 'affect is

³⁹³ Epstein, *Shaping Time*, 10.

³⁹⁴ *Ibid.*, 12.

³⁹⁵ *Ibid.*, 457.

³⁹⁶ *Ibid.*, 64.

³⁹⁷ *Ibid.*, 457.

³⁹⁸ *Ibid.*

³⁹⁹ *Ibid.*

⁴⁰⁰ *Ibid.*, 5.

⁴⁰¹ *Ibid.*, 477.

⁴⁰² *Ibid.*, 461.

⁴⁰³ *Ibid.*, 462.

⁴⁰⁴ *Ibid.*, 461.

⁴⁰⁵ *Ibid.*, 462.

largely an intuitive matter'.⁴⁰⁶ As a result, just as Glenn Gould suggested that proportional tempo must be felt 'in our bones', a performer's whole matrix of expressive, temporal, motional, affective nuances must ultimately 'be found by intuition'⁴⁰⁷ – a principle that clearly resonates with eighteenth-century references to the performer's 'taste': a non-mathematical, subjective and elusive phenomenon. Kramer agrees that 'we as listeners or performers rely on our intuitions' because something 'feels correct, aurally and intuitively',⁴⁰⁸ and Epstein also insists that a performer's temporal expressivities are 'undoubtedly felt intuitively',⁴⁰⁹ because 'who could calculate these things, particularly in the heat of performance?'⁴¹⁰

As discussed in Chapters 1 and 3, most performers do, after all, recognise not only the inevitability but also the value of intuition in their practice. Kramer himself, in fact, goes as far as describing intuition as 'a critic's best tool',⁴¹¹ and Epstein views it as 'the ultimate resort for musical decisions, those of tempo included'.⁴¹² He reinforces this by explaining that affective subtleties of motion 'must be felt; it is a matter for the body, more than for the mind'.⁴¹³ Explicitly reflecting Türk's comment that such nuances 'must be felt by the player himself',⁴¹⁴ this, of course, corresponds directly with the embodied theory of intuition, which protests that our temporal intuitions are deeply rooted in embodied knowledge. It is '[t]he "feel" of a phrase, our sense of motion, of movement, the sensations with which we respond to music ... [that] serve as the ultimate influence, indeed as the primary element and criterion by which we shape music'.⁴¹⁵ Our embodied knowledge of the balance, pathway and cycle schemata, therefore – the very foundations upon which our 'intuitive' feelings of motion are firmly grounded – inspire and guide our expressive timing decisions as performers.

⁴⁰⁶ Ibid., 458.

⁴⁰⁷ Ibid., 462.

⁴⁰⁸ Kramer, *The Time of Music*, 225.

⁴⁰⁹ Epstein, *Shaping Time*, 429.

⁴¹⁰ Ibid.

⁴¹¹ Kramer, *The Time of Music*, 54.

⁴¹² Epstein, *Shaping Time*, 105.

⁴¹³ Ibid., 461.

⁴¹⁴ Türk, *School of Clavier Playing*, 328.

⁴¹⁵ Epstein, *Shaping Time*, 12.

2.7. Chapter Conclusion

It is evident that musical time is an extensive and complex subject. Pervading all spheres of music – from composition, through performance, to the listening experience – the notion of musical time is studied from a number of perspectives and through a variety of methodologies. There is, however, a relative dearth of research into the phenomenon of ‘time’ in Baroque repertoire (in comparison with music from other periods) and a notable lack of research into the phenomenological processes that underpin expressive microtiming in performance – issues this thesis endeavours to address. The domain of temporal expressivity itself incorporates a multitude of elements: durational and articulatory issues of rhythm, note length and stress; matters of hierarchy and demarcation, such as accent, metre, hypermetre, beat, bar (measure), hypermeasure, phrase, periodicity, cyclicity and punctuation; aspects of pacing, including matters rubato, climax-phrase shaping and phrase-final lengthening; and, of course, tempo relationships. Nevertheless, ‘these matters are [always] related to motion’.⁴¹⁶ The primary manifestation of time in music is, therefore, motion itself. Underpinned by a variety of embodied image schemata, including the balance, pathway and cycle schemata, the very phenomenon of musical motion is *felt*. This is, after all, confirmed by the highly affective potential of musical timing, and, indeed the etymological associations between the words ‘motion’ and ‘emotion’. It can, therefore, be deduced that the primary effect of and indeed fundamental motivation for expressive timing is affect, which, in turn, is the ultimate objective of most, if not all, musical performances. To conclude, I offer the words of Esptein, which perfectly encapsulate the broad spectrum of musical timing, its collaborative interrelationship with other musical elements, and its inherent alliance with expression and affect: ‘time, motion, tempo, the constructs of rhythm, harmony, tonality, the subtle inflections of articulation, dynamics, timbre, and the host of other qualities of musical speech, coalesce in the service of controlled affective statement’.⁴¹⁷

⁴¹⁶ Ibid., 57.

⁴¹⁷ Ibid., 481.

Chapter 3. Attentional States in Performance

3.1. Prelude

On 9th May 2015, I walked onto the stage of the National Centre for Early Music in York, to perform J. S. Bach's Sonata for Flute and Harpsichord BWV 1030. Initially focused on staying calm and watching my step, I began playing the first movement. Endeavouring to do justice to the many hours of practice I had undertaken – to satisfy the technical demands and interpretative decisions I had taken the time to perfect – I focussed carefully on a stream of specific technical and expressive concerns. Many of these issues were indicated by scribbles on my score, which served as reminders, helping to facilitate my 'ideal' execution. With specific regard to expressive microtiming, I focused on breathing in the places I had marked, and implementing the agogic stresses, articulations, motional trajectories, expressive retards, punctuation marks and embellishments that I had meticulously deliberated and eventually decided upon during the rehearsal process, in order to characterise and appropriately vary the numerous thematic returns, to interact effectively with the obbligato harpsichord part, and, most importantly, to enhance the musical shapes and emotions. I felt in control of my temporal manipulations as I intentionally realised them, one by one.

Despite the initial extremity of my concentration, I must admit not only that extra-musical thoughts (such as 'I hope the audience members are enjoying this') occasionally stole my attention, but also that, as I began to relax into the performance, my focus appeared to dilute. Indeed, there were moments in which I appeared to think of nothing in particular, enjoying only a general awareness of my surroundings. Lacking focused concentration on my interpretative nuances, my expressive timing decisions felt somewhat out of my immediate control. On occasions, even this general awareness deteriorated and I found myself in a subdued, hazy and empty daze. Admittedly, I remember very little from these blurry episodes; however, I do have vivid recollections of returning abruptly to a state of alertness when, for example, an audience member started coughing and had to leave the room. Indeed, at this point, I strictly instructed myself to 'focus', due to the rather unsatisfying quality of my previous, unfocused state.

On the other hand, there were moments, during the first movement, that felt notably fulfilling. I recall instances in which I was completely absorbed by the unfolding

musical trajectory, totally captivated by the prevailing musical emotion, followed immediately by episodes in which every sense of reality, focus and control seemed to disappear. Indeed, I had once again entered a completely unfocused daze; yet, this time, it was far from unsatisfying. This experience was exhilarating – both intrinsically rewarding and musically gratifying. Even though I experienced a lack of meticulous, intentional control over every expressive nuance, an intuitive sense of rightness characterised my interpretations. Unfortunately, however, these moments did not last long, as worries about ensuing passages of complexity, thoughts concerning the changing musical affect, and frustrations about small inaccuracies soon took over, demanding my full attention.

My experience of the opening Andante of Bach's Sonata in B minor was evidently one of utmost variety, characterised by different intensities of focus, intention, control and satisfaction – a diversity I also experienced in the third movement. In the intervening Largo e Dolce, however, my experience of the entire movement was somewhat transcendental. As soon as the movement began, I became enraptured by the powerful air of serenity, immersed in a world of tranquillity. The unfolding musical argument, subtly shaped by micro-temporal nuances, felt innate, transpiring naturally as if my own: my agogic stresses, articulations, embellishments and motional trajectories felt entirely intuitive – arising automatically, without thought. I was indeed lost in the music, existing in a hazy realm, far removed from the worries and obsessions of intentional interpretative execution. What's more, the entire experience was both musically and intrinsically fulfilling: inspired, imaginative and gratifying. When the movement eventually came to an end, I returned to reality, overcome with both calmness and ecstasy, exhausted yet invigorated. The last few minutes existed merely as a cloud in my memory: I was uncertain of the details of the experience, though I could not be more certain that it was one of extreme and exhilarating creativity. This was indeed reinforced after the concert by numerous remarks from audience members, who commented on the particularly mesmerising second movement.⁴¹⁸

⁴¹⁸ It is important to note that, whilst loosely alluding to issues of aesthetic value, judgement and appreciation (by using phrases such as 'musically gratifying' and 'exhilarating creativity', and by referring to 'remarks from audience members'), this thesis in no way aims to delve into the complexities of audience reception – a rich and complex area of research that lies far beyond the scope of this work. Indeed, the focus of this thesis is on the phenomenological experience of the performer, not the listener.

3.2. The Scope of the Chapter

The experience described above was the fundamental stimulus for my exploration of attentional states in the context of my doctoral research. Whilst not a particularly unusual account – such experiences are frequently reported and typify most performances – I realised, by reflecting on this concert, the truly varied quality of my phenomenal performing experience. Not only did I recognise that the intensity of my focus changed throughout the performance, but I also recalled instances in which I felt very much in control of my interpretative temporal executions (as they transpired intentionally) and others in which my expressive timing decisions felt wholly intuitive. Furthermore, whilst certain moments were notably gratifying and particularly musically effective, others proved far less rewarding. Far from extraordinary revelations, these very reflections led me to question the reasons behind the diversity of my experience; to scrutinise the different performing states that are at once fluid yet distinct, commonplace yet special. Why and how did the intensity of my focus change? What were the interrelationships between attention, intention, control, intuition, interpretation and creativity? Why were particular moments especially satisfying, and was there a correlation between optimal musical performance and optimal phenomenal experience? And, most importantly, how did these different experiential states influence my expressive timing decisions?

In order to address these questions, this chapter examines aspects of consciousness – the broad umbrella under which all issues of phenomenal experience fall. This exploration ultimately paves the way towards a clearer understanding of the ways in which expressive timing decisions transpire, without simply passing them off as ‘intuitive’ or ‘natural’. Indeed, as noted in the Introduction of this thesis, intuition is often used to account for individual subtleties of temporal flexibility in performance. Renowned cellist Pablo Casals, for example, says: ‘All I do is based on intuition’.⁴¹⁹ Similarly, the performers involved in Daniel Bangert’s doctoral thesis, ‘Doing without Thinking’, explain their interpretative decisions by stating that ‘it just happens’.⁴²⁰ ‘I live on intuition’.⁴²¹ This reliance on ‘intuition’ – exalting it as the intangible mastermind of interpretative expressivity – is of course, not a new attitude. As explained in Chapter 2, discussions in eighteenth-century music treatises of interpretative temporal matters, such as tempo

⁴¹⁹ Pablo Casals, in Corredor, *Conversations with Casals*, 122-123.

⁴²⁰ Participant 3, in Bangert, ‘Doing without Thinking’, 125.

⁴²¹ Christophe Coin, in Bangert, ‘Doing without Thinking’, 85.

selection, rubato, rhythmic alteration and ornamentation, are frequently coupled with concomitant reference to the ‘taste’ and ‘sensitivity’ of the performer – equally indeterminate phenomena that clearly allude to ‘intuition’. As Dogantan-Dack rightly points out, however:

“[i]ntuition,” “magic,” and “alchemy” are suspect in musicological discourse: they are too subjective, too elusive.... However, these are terms frequently used by performers to refer to and articulate real experiences and we cannot simply dismiss them if we want to understand how performers work.⁴²²

By exploring aspects of consciousness – specifically the different attentional states that musicians may enter during performance – this chapter attempts to reach a deeper understanding of this currently ill-explained source of automaticity. In particular, it endeavours to elucidate the processes by which knowledge is internalised, accessed, processed and consequently manifested in performance as interpretative decisions, frequently masquerading as ‘intuition’.

The chapter begins with an introduction to consciousness, its relevance in musicological discourse, and its relationship to notions of ‘reflective’ and ‘pre-reflective’ states. The discussion then narrows to focus on the different attentional states that a performer may assume during practice: specifically, states of ‘awareness’, ‘attention’ and ‘trance’. Drawing on Mihaly Csikszentmihalyi’s concept of ‘flow’,⁴²³ alongside theories of ‘absorption’ and the well-known notion of ‘daydream’, two different types of trance are proposed: ‘flow-trance-via-absorption’, recognised as the optimal state, and ‘daydream-trance’, defined as its less gratifying subordinate.

With theories of information processing drawn into the discussion, the chapter subsequently addresses the phenomenon of intuition (defined as the pre-reflective engine of our subattention, and recognised as an omnipresent factor in expressive decision-making) by considering its interrelationship with attention and knowledge. This very interrelationship – a construct lying at the heart of musical interpretation – is elucidated through my conception of ‘epistemic webs’, which clarifies the ways in which the dynamic network of knowledge that underpins a musician’s expressive timing

⁴²² Dogantan-Dack, in Bangert, ‘Doing without Thinking?’, 1.

⁴²³ Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper and Row, 1990).

decisions is accessed during performance, both reflectively and pre-reflectively, depending on the performer's attentional state. By focusing, in particular, on the role of experience and practice, drawing on the concept of pattern recognition and Bangert et al.'s notion of 'procedural' decisions, the ontology of intuition is further elucidated.

As the many strands of the chapter coalesce, the discussion gradually builds to a framework for understanding interpretation, the optimal performance state and intuition. Most importantly, the performer's cognitive state is confirmed as the fundamental factor that determines momentary decisions of interpretation and expression during performance, including, therefore, nuances of timing.

The chapter closes by returning to my personal reflection on the performance I gave at the National Centre for Early Music on 9th May 2015. The very experiences that stimulated my explorations of attentional states in the first place are reconsidered from a theoretically informed perspective, as connections are drawn with salient themes of the intervening discussion: once again, tacit, experiential knowing and explicit theoretical knowledge unite, in order to deepen our understanding of the processes behind expressive timing decisions in performance.

3.3. An Introduction to Consciousness

3.3.1. The Rise of Consciousness Studies

The notion of 'attentional states' inherently falls under the umbrella of 'consciousness' – a phenomenon that has risen as a subject of wide, interdisciplinary inquiry in recent years.⁴²⁴ Indeed, many institutions and courses specifically dedicated to Consciousness Studies have been established. With its roots tracing back to the 1950s, the California Institute of Integral Studies, now embracing a specialised 'Center for Consciousness Studies' and a 'School of Consciousness and Transformation', was one of the first organisations to nurture research committed specifically to the exploration of human consciousness.⁴²⁵ Subsequently, the University of Arizona saw the inauguration of its

⁴²⁴ Adam Zeman, 'What in the World Is Consciousness?', in *Progress in Brain Research*, vol. 150: *The Boundaries of Consciousness: Neurobiology and Neuropathology*, ed. Steven Laureys (Amsterdam: Elsevier, 2006), 1.

⁴²⁵ 'Center for Consciousness Studies', California Institute of Integral Studies, accessed June 6, 2013, <https://www.ciis.edu/academics/academic-schools/school-of-consciousness-and-transformation>. 'School of Consciousness and Transformation', California Institute of Integral Studies, accessed June 6, 2013, <https://www.ciis.edu/academics/academic-schools/school-of-consciousness-and-transformation>.

'Center for Consciousness Studies' in 1998,⁴²⁶ the 'Santa Barbara Institute for Consciousness Studies' was founded in 2003,⁴²⁷ the 'Centre for Consciousness' was created in the Australian National University in 2004,⁴²⁸ and the University of Sussex welcomed the 'Sackler Centre for Consciousness Science' in 2010,⁴²⁹ to name but a few leading examples. The rise of consciousness as a recognised subject of academic exploration is confirmed by the induction of the *Journal of Consciousness Studies* in 1994,⁴³⁰ and the emergence of many conventions dedicated specifically to this topic, such as 'Towards a Science of Consciousness', which has occurred yearly since 1994,⁴³¹ and the annual 'Conference for Consciousness and Human Evolution', which enjoyed its initial gathering in 2012.⁴³²

3.3.2. Consciousness and Music: A Snapshot of the Literature

Whilst the broad topic of music and consciousness has long been a focus of research, recent developments in neuroscience and embodied cognition have given rise to particularly fertile new research across the discipline. The inaugural International Conference on Music and Consciousness in 2006⁴³³ led to a key publication, *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives* – a collection of essays edited by David Clarke and Eric Clarke.⁴³⁴ Akin to most research in this area, this book provides significant insights into aspects of non-Western musical rituals and the listening experience, but it is typical in its neglect of consciousness in relation to performance, and specifically performing musicians of Western classical practice. My aim is to draw my first-hand experience as a flautist in this tradition into relation with recent

⁴²⁶ 'Center for Consciousness Studies', The University of Arizona, accessed June 6, 2013, <http://consciousness.arizona.edu/mission.htm>.

⁴²⁷ Amos Yong, *The Dialogical Spirit: Christian Reason and Theological Method in the Third Millennium* (Eugene: Cascade Books, 2014), 211.

⁴²⁸ 'Centre for Consciousness', Australian National University, accessed June 6, 2013, <http://consciousness.anu.edu.au>.

⁴²⁹ 'Sackler Centre for Consciousness Science', University of Sussex, accessed June 6, 2013, <http://www.sussex.ac.uk/sackler/>.

⁴³⁰ 'Journal of Consciousness Studies', Ingentaconnect, accessed June 6, 2013, <http://www.ingentaconnect.com/content/imp/jcs>.

⁴³¹ 'Toward a Science of Consciousness', University of Helsinki, accessed June 6, 2013, <http://www.helsinki.fi/tsc2015/>

⁴³² 'The Conference for Consciousness and Human Evolution', TCCHE, accessed June 6, 2013, <http://www.tcche.org/archive.html>

⁴³³ 'International Conference on Music and Consciousness', University of Oxford, <http://www.music.ox.ac.uk/muscon2/>.

⁴³⁴ David Clarke and Eric Clarke, eds., *Music and Consciousness: Philosophical, Psychological and Cultural Perspectives* (New York: Oxford University Press, 2011).

research on aspects of consciousness, in order to develop our understanding of the interpretative decision-making process and the phenomenon of ‘intuition’.

3.3.3. Reaching a Definition of ‘Consciousness’

Consciousness enjoys an ontological affinity with music in that it is complex, multidimensional, and ineffable.⁴³⁵ At the heart of its elusiveness lies its inherent indivisibility from the subjective mind that experiences it. Nothing can be perceived out of one’s own consciousness: one cannot enter another mind, nor escape from one’s own. This issue is encompassed by the notion of ‘the hard problem’,⁴³⁶ a term coined by David Chalmers in relation to consciousness and subsequently applied to music by Eugene Montague,⁴³⁷ which specifically refers to the perplexities of subjectivity – namely how and why we experience ‘qualia’, a concept that can be loosely defined as the ‘raw feels’⁴³⁸ or ‘phenomenal character of an experience’.⁴³⁹ These are questions that empirical evidence has not yet been able to explain.⁴⁴⁰ As consciousness forms the omnipresent foundation for all experience, therefore, it naturally provokes a diverse yet complex discourse that draws on a number of fields, from neurobiology and psychology⁴⁴¹ to philosophy and phenomenology.⁴⁴²

In spite of its sheer complexity, however, many have endeavoured to reach a definition of consciousness. Building on the range of theoretical perspectives in modern philosophy, instigated by René Descartes in the seventeenth century,⁴⁴³ Gerald Edelman formulated a bilateral model, comprising primary consciousness, ‘the state of being

⁴³⁵ Shaun Gallagher and Jonathan Shear, ‘Editors’ Introduction’, in *Models of the Self*, ed. Shaun Gallagher and Jonathan Shear (Exeter: Imprint Academic, 2002), x-xi.

⁴³⁶ David Chalmers, ‘Facing Up to the Problem of Consciousness’, *Journal of Consciousness Studies* 2, no. 3 (1995): 201-202.

⁴³⁷ Eugene Montague, ‘Phenomenology and the “Hard Problem” of Consciousness and Music’, in Clarke and Clarke, *Music and Consciousness*, 29-46.

⁴³⁸ Robert Van Gulik, ‘Functionalism and Qualia’, in *The Blackwell Companion to Consciousness*, 2nd ed., ed. Susan Schneider and Max Velmans (West Sussex: Wiley, 2017), 430.

⁴³⁹ Michael Tye, ‘Qualia’, in *Stanford Encyclopedia of Philosophy*, Summer 2018 ed., ed. Edward N. Zalta, accessed September 5, 2018 <https://plato.stanford.edu/entries/qualia/>.

⁴⁴⁰ Richard Oyelakin, ‘The Problem of Qualia’, *Journal of Psychology and Counselling* 1, no.2 (2009): 19, 24.

⁴⁴¹ Jean Delacour, ‘Neurobiology of Consciousness: An Overview’, *Behavioural Brain Research* 85, no. 2 (May 1997): 121-141; Robert Ornstein, *The Psychology of Consciousness* (San Francisco: Freeman, 1972).

⁴⁴² David Chalmers ed., *Philosophy of Mind: Classical and Contemporary Readings* (New York: Oxford University Press, 2002); Shaun Gallagher and Dan Zahavi, ‘Phenomenological Approaches to Self-Consciousness’, in *Stanford Encyclopaedia of Philosophy*, Spring 2015 ed., ed. Edward Zalta, <http://plato.stanford.edu/entries/self-consciousness-phenomenological>.

⁴⁴³ Larry Jorgensen, ‘Seventeenth-Century Theories of Consciousness’, in *Stanford Encyclopedia of Philosophy*, Winter 2014 ed., ed. Edward Zalta, accessed August 3, 2015. <http://plato.stanford.edu/entries/consciousness-17th/#Aca>.

mentally aware of things in the world', and higher order consciousness, also known as second-order or secondary consciousness, which involves 'the recognition by a thinking subject of his or her own acts and affections'.⁴⁴⁴ This bears notable similarities to neurobiologist Antonio Damasio's theory of core consciousness and extended consciousness.⁴⁴⁵ Primary or core consciousness constitutes general awareness, the basis of all consciousness, and therefore the foundation for higher-order or extended consciousness, which relies on additional, critical thought.⁴⁴⁶ This description is apparent in notions of 'pre-reflective' and 'reflective' states – terms that were popularised by Jean Paul Sartre⁴⁴⁷ and appear frequently in consciousness studies.⁴⁴⁸ A pre-reflective state is one 'we have before we do any reflecting on our experience'.⁴⁴⁹ As 'an intrinsic feature of experience',⁴⁵⁰ it is directly coupled with the notion that all experience enjoys a subjective 'feel', an ineffable, phenomenal 'what it is like' quality,⁴⁵¹ an idea discussed in great detail by Thomas Nagel in his influential article 'What is it Like to Be a Bat?'⁴⁵² As a result of its implicit, or so-called 'first-order' quality,⁴⁵³ the term 'pre-reflective' is commonly allied with Edelman and Damasio's theories of primary and core consciousness.⁴⁵⁴ In the same way that primary or core consciousness is considered the foundation of higher-order or extended consciousness, so pre-reflective dimensions underpin reflective experience,⁴⁵⁵ which is reached as soon as reflective or critical thought is added to the situation. The term 'reflective', therefore, refers to 'states in

⁴⁴⁴ Gerald Edelman, *The Remembered Present: A Biological Theory of Consciousness* (New York: Basic Books, 1989), 112.

⁴⁴⁵ Antonio Damasio, *The Feeling of What Happens: Body, Emotion and the Making of Consciousness* (London: Vintage, 1999), 16, 219.

⁴⁴⁶ Eric Clarke, 'Music Perception and Musical Consciousness', in Clarke and Clarke, *Music and Consciousness*, 195.

⁴⁴⁷ Christian Onof, 'Jean Paul Sartre: Existentialism', in *Internet Encyclopaedia of Philosophy: A Peer-Reviewed Academic Resource*, ed. Bradley Dowden and James Fieser, accessed June 5, 2015, <http://www.iep.utm.edu/sartre-ex/>.

⁴⁴⁸ These terms assume particular relevance in the current research of Antti Revonsuo, Shaun Gallagher and Dorothee Legrand.

⁴⁴⁹ Gallagher and Zahavi, 'Phenomenological Approaches to Self-Consciousness'.

⁴⁵⁰ Dorothee Legrand, 'Pre-reflective Self-as-Subject from Experiential and Empirical Perspectives', *Consciousness and Cognition* 16, no. 3 (September 2007): 588.

⁴⁵¹ Gallagher and Zahavi, 'Phenomenological Approaches to Self-Consciousness'.

⁴⁵² Nagel, 'What Is It Like to Be a Bat?', *The Philosophical Review* 83, no. 4 (1974): 435-450.

⁴⁵³ Gallagher and Zahavi, 'Phenomenological Approaches to Self-Consciousness'.

⁴⁵⁴ Clarke 'Music Perception and Musical Consciousness', 195-196.

⁴⁵⁵ Andy McGuinness and Katie Overy, 'Music, Consciousness, and the Brain', in Clarke and Clarke, *Music and Consciousness*, 250.

which the subject not only experiences something but, in addition, can take this experience as an object of further thought.’⁴⁵⁶

Despite such attempts to define ‘consciousness’, however, non-consensus persists.⁴⁵⁷ Current debates challenge, for instance, the dualistic categorisation encouraged by these types of structures, and it appears ambiguous whether notions of higher-order and extended consciousness allude simply to *any* focused, critical and attentional thought, or rather more specifically to the particular awareness of one’s own consciousness: to being conscious of being conscious.⁴⁵⁸ As further theories emerge and discrepancy endures, there remains no single, unanimous definition.⁴⁵⁹ Rather, we are presented with a multiplicity of interweaving and conflicting explanations from a variety of perspectives, each encompassing an array of inextricably interrelated concepts.

I suggest that a key issue here is the attempt to define a multidimensional phenomenon that incorporates all elements of phenomenal experience under the singular term ‘consciousness’. We are trying to define a *concept* that subsists merely as a *discourse*. The prevailing fixation on this noun is evidently troublesome and I propose, therefore, that we focus, instead, on understanding our various states of ‘awareness’, ‘attention’, and ‘trance’ (or ‘non-attention’). After all, these are the primary attentional experiences of musicians, fundamental in determining the way in which interpretative decisions arise in performance.

⁴⁵⁶ Antti Revonsuo et al., ‘The Zombies among Us’, in *Beyond Dissociation: Interaction Between Dissociated Implicit and Explicit Processing*, ed. Antti Revonsuo and Yves Rossetti (Amsterdam: John Benjamins, 2000), 343.

⁴⁵⁷ David Chalmers, ‘The Problems of Consciousness’, in *Consciousness: At the Frontiers of Neuroscience*, ed. Herbert Henry Jasper, Laurent Descarries, Vincent Castellucci and Serge Rossignol (New York: Lippincott-Raven Press, 1998), 7; Max Velmans, ‘How to Define Consciousness: And How Not to Define Consciousness’, *Journal of Consciousness Studies* 16, no. 5 (2009): 139. Current debates challenge, for instance, the dualistic categorisation encouraged by these types of structures.

⁴⁵⁸ Don Kuiken, ‘Primary and Secondary Consciousness During Dreaming: Commentary on “The Neurobiology of Consciousness: Lucid Dreaming Wakes Up” by J. Allan Hobson’, *International Journal of Dream Research* 3, no. 1 (2010): 22; Marie Vandekerckhove, Luis Carlo Bulnes and Jaak Panksepp, ‘The Emergence of Primary Anoetic Consciousness in Episodic Memory’, *Frontiers in Behavioural Neuroscience* 7, no. 210 (January 2014): 3, accessed August 17, 2015, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3879583/pdf/fnbeh-07-00210.pdf>.

⁴⁵⁹ Chalmers, ‘The Problems of Consciousness’, 7; Velmans, ‘How to Define Consciousness’, 139.

3.4. Awareness, Attention and Trance

3.4.1. Defining the Terms

In order to gain a deeper understanding of musicians' attentional states, and the way in which attentional focus influences expressive timing in performance, the notions of 'awareness', 'attention' and 'trance' must be explored. Admittedly, just like the term 'consciousness' itself, 'attention' and 'awareness' are also highly complex and elusive concepts, intimately entangled.⁴⁶⁰ Their exact interrelationship remains an important topic of debate and investigation,⁴⁶¹ and many even acknowledge that awareness and attention are 'almost impossible to tell apart'.⁴⁶² Let us, however, consider 'general awareness' as the cognitive faculty that simply distinguishes animate beings from inanimate objects – a notion bearing similarities to David Rosenthal's concept of 'creature consciousness'.⁴⁶³ When this awareness is channelled, it indistinctly morphs into a state of attention, in which one's concentration is directed towards a particular feature, and this is accompanied by a significantly lower level of peripheral awareness.⁴⁶⁴ General awareness, evidently boasting clear parallels with primary, core, creature consciousness, can be described as a wholly *pre-reflective* experience. One may assume, therefore, that 'attention' is its *reflective* counterpart. I propose, however, that attention has the capacity to be reflective *or* pre-reflective. Most simply, for example, my awareness could be channelled into attention as I stare, somewhat 'blankly', at a musical score in front of me. Void of any reflective thought, the experience would simply encompass a pre-reflective 'what it is like to stare blankly at a score' quality. As soon as critical thought is added, such as thinking about the title of the piece, working out the tempo, or labelling the harmonic progressions, the experience assumes a 'second-order' quality, which is arguably language-dependent:⁴⁶⁵ my attention becomes reflective. It is important to

⁴⁶⁰ Mohammad Reza Ahmadi, Abbas Pourhoossein Gilakjani and Seyedeh Masoumeh Ahmadi, 'The Relationship between Attention and Consciousness', *Journal of Language Teaching and Research* 2, no. 6 (November 2011): 1366.

⁴⁶¹ Koivistoa, Kainulainen and Revonsuo, 'The Relationship between Awareness and Attention', *Journal of Language Teaching and Research* 2, no. 6 (November 2011): 2891.

⁴⁶² Jochen Braun, 'Attention and Awareness', in *The Oxford Companion to Consciousness*, ed. Tim Bayne, Axel Cleeremans and Patrick Wilken (New York: University Press, 2009), 68.

⁴⁶³ David Rosenthal, 'Explaining Consciousness', in *Philosophy of Mind: Classical and Contemporary Readings*, ed. David Chalmers (New York: Oxford University Press, 2002), 406.

⁴⁶⁴ This description perhaps clarifies the often-problematic distinction between merely being conscious (having awareness) and being conscious *of* something (focusing awareness into attention).

⁴⁶⁵ Clarke 'Music Perception and Musical Consciousness', 195.

Daniel Dennet, *Sweet Dreams: Philosophical Obstacles to a Science of Consciousness* (Cambridge: MIT Press, 2005), 167.

note, at this stage, that attention can only assume a single focus at any given moment.⁴⁶⁶ 'attention is selective. It's in but one place at a time'.⁴⁶⁷

Occasionally one's attention becomes so intense that one seamlessly enters a state of trance. Indeed the concept of 'trance' has welcomed significant investigation as a branch of 'altered states of consciousness' – an expression, introduced in 1966 by the psychiatric theorist Arnold M. Ludwig⁴⁶⁸ and popularised by psychologist Charles Tart from 1969,⁴⁶⁹ that somewhat ambiguously describes any mental state that diverges from the 'normal' waking state.⁴⁷⁰ Though definitions of trance are varied,⁴⁷¹ accounts of trancing revolve around particularly transcendental experiences, which seem to emanate from an apparent evaporation of attention altogether, and in which critical faculties are severely diminished.⁴⁷² In Ruth Herbert's study of trancing within everyday listening, for example, participants recounted 'drift[ing] into the comfortable non-state',⁴⁷³ in which their 'mind was ... empty'.⁴⁷⁴

The trancing experience can be further illuminated by the notion of 'daydream', widely regarded as an example of trance.⁴⁷⁵ In everyday life, however, this term is employed to denote two highly contrasting cognitive states, and I wish to clarify my use of the term. On the one hand, 'daydream' is used to describe the experience of 'thinking about nothing',⁴⁷⁶ in which one's mind becomes a completely blank canvas. Signifying a seemingly total disappearance of awareness and attention, this encapsulates the very essence of trance, as it is considered in this thesis: a heightened state of pre-reflective non-attention. On the other hand, 'daydreaming', in its everyday use, can also be

⁴⁶⁶ Tilmann Betsch, 'The Nature of Intuition and Its Neglect in Research on Judgement and Decision Making', in *Intuition in Judgement and Decision Making*, ed. Cornelia Betsch, Tilmann Betsch and Henning Plessner (New York: Taylor and Francis, 2008), 6; Jochen Braun, 'Attention and Awareness', in *The Oxford Companion to Consciousness*, ed. Tim Bayne, Axel Cleeremans and Patrick Wilken (New York: University Press, 2009), 68.

⁴⁶⁷ David Myers, *Intuition: Its Powers and Perils* (New Haven and London: Yale University Press, 2002), 24.

⁴⁶⁸ Arnold Ludwig, 'Altered States of Consciousness', *Archives of General Psychiatry* 15, no. 3 (September 1966): 225.

⁴⁶⁹ Charles Tart, *Altered States of Consciousness: A Book of Readings* (New York: Wiley, 1969).

⁴⁷⁰ Ludwig, 'Altered States of Consciousness', 225.

⁴⁷¹ Ludwig, for example, states that 'the word 'trance' has more than one meaning, dependent on socio-cultural context, and ... different disciplines privilege different aspects of the phenomenon'.

Ludwig, 'Altered States of Consciousness', 296.

⁴⁷² Ruth Herbert, 'Consciousness and Everyday Music Listening', in Clarke and Clarke, *Music and Consciousness*, 297.

⁴⁷³ Gary, in *Ibid.*, 303.

⁴⁷⁴ Max, in *Ibid.*

⁴⁷⁵ Dennis Wier, *The Way of Trance* (California: Trance Research Foundation, 2007), 15.

⁴⁷⁶ Josie Glausiusz, 'Devoted to Distraction', *Psychology Today* 42, no. 2 (2009): 89.

characterised by an extreme, reflective focus of attention on an illusory image or thought in one's imagination. The accompanying minimal awareness and the fantastical element of such a vivid experience could likely generate a sensation that resembles the transcendental quality of trance; however, I argue that this state more accurately typifies one of acutely focussed reflective attention. My clarification of the term 'daydream' not only elucidates my particular conception of 'trance', reinforcing the fundamental distinction between attentional and non-attentional states and between reflective and pre-reflective experience, but it is also necessary for the ensuing discussion (Section 3.4.2) in which I propose two contrasting routes to trance: 'daydream' and 'absorption'.

At this stage, it is important to reinforce the relevance of 'awareness', 'attention' and 'trance' in explorations of expressive microtiming. These are identified as the primary attentional states that a musician may assume during performance, inextricably linked, therefore, to the interpretative experience. Additionally, though, because of their contrasting defining properties (reflective versus pre-reflective, attentional versus non-attentional), the *particular* way in which expressive timing decisions transpire is, of course, different in each case – an issue elucidated in forthcoming explorations of the relationship between epistemic processing and pre-reflective, reflective, attentional and non-attentional states.

3.4.2. Trance and Music

Given its defining quintessence – non-attention – trance is, undeniably, a particularly enigmatic state. Nonetheless, it has been explored in the field of music by several musicologists, including Judith Becker, who researches the phenomenon in relation to non-Western musical practices,⁴⁷⁷ and Ruth Herbert, who focuses on listening-induced trance.⁴⁷⁸ I wish to identify a specific correlation with performance, in order to explore the way in which expressive timing decisions arise when a performer lacks not only a reflective focus but also all sense of attention.

I begin, therefore, with the idiom 'becoming lost in the music'. This expression recurs extensively amongst musicians – I, in fact, use it in my personal reflection in Section 3.1 – and it is typically coupled with hazy recollections of performances in which the

⁴⁷⁷ Judith Becker, *Deep Listeners: Music, Emotion and Trancing* (Bloomington: Indiana University Press, 2004).

⁴⁷⁸ Ruth Herbert, *Everyday Music Listening: Absorption, Dissociation and Trancing* (Aldershot: Ashgate, 2011).

musician claims to have been ‘in the zone’.⁴⁷⁹ ‘Zone’, or ‘flow’ as it is more frequently termed in psychology (first named by Mihaly Csikszentmihalyi in 1975),⁴⁸⁰ is characterised by an extreme but energised focus of attention, and submission of one’s entirety to the autotelic activity. This results in unmitigated *absorption*, a disappearance of all sense of self, the merging of action and awareness (‘doing things spontaneously and automatically without having to think’)⁴⁸¹ and a distortion of time perception or possibly even the illusion of timelessness.⁴⁸² Often termed the ‘optimal experience’,⁴⁸³ the concept of flow has attracted considerable interest in sports psychology.⁴⁸⁴ Its relationship with music, however, has received far less attention:⁴⁸⁵ ‘[I]ittle is known about musicians’ experience

⁴⁷⁹ Bangert, ‘Doing without Thinking’, 19, 175, 192-195, 201, 210; Arvid Bloom and Paula Skutnick-Henley, ‘Facilitating Flow Experiences among Musicians’, *American Music Teacher* 54, no. 5 (April/May 2005): 24; Alan Cohen, *A Daily Dose of Sanity: A Five-Minute Soul Recharge for Every Day of the Year* (California: Hay House, 2010), 19; Manuela Marin and Joydeep Bhattacharya, ‘Getting into the Musical Zone: Train Emotional Intelligence and Amount of Practice Predict Flow in Pianists’, *Frontiers in Psychology* 4, no. 853 (November 2013): 1, accessed August 18, 2015, <https://www.frontiersin.org/articles/10.3389/fpsyg.2013.00853/full>.

⁴⁸⁰ Cohen, *A Daily Dose of Sanity*, 19; Stefan Engeser and Falko Rheinberg, ‘Flow, Performance and Moderators of Challenge-Skill Balance’, *Motivation and Emotion* 32, no. 3 (2008): 158.

⁴⁸¹ Andrew Martin and Susan Jackson, ‘Brief Approaches to Assessing Task Absorption and Enhanced Subjective Experience: Examining “Short” and “Core” Flow in Diverse Performance Domains’, *Motivation and Emotion* 32, no. 3 (2008): 146.

⁴⁸² Mihaly Csikszentmihalyi, *Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi* (Dordrecht: Springer, 2014), 240; Susan Jackson, ‘Flow’, in *The Oxford Handbook of Human Motivation*, ed. Richard Ryan (New York: Oxford University Press, 2012), 129; Janet Young and Michelle Pain, ‘The Zone: Evidence of a Universal Phenomenon for Athletes Across Sports’, *Athletic Insights: The Online Journal of Sport Psychology* 1, no. 3 (1999): 22, accessed August 17, 2015, <http://www.athleticinsight.com/Vol1Iss3/ZonePDF.pdf>.

⁴⁸³ Csikszentmihalyi, *Flow*, 7; Susan Jackson and Robert Eklund, ‘Flow’, in *Encyclopedia of Sport and Exercise Psychology*, ed. Robert Eklund and Gershon Tenenbaum (California: Sage Publications, 2014), 297.

⁴⁸⁴ Alice Chirico et al., ‘When Music “Flows”’: State and Trait in Musical Performance, Composition and Listening: A Systematic Review’, *Frontiers in Psychology* 6, no. 906 (2015): 2, accessed August 17, 2015, <http://journal.frontiersin.org/article/10.3389/fpsyg.2015.00906/full>; Sarah Sinnamon, Aidan Moran and Michael O’Connell, ‘Flow among Musicians: Measuring Peak Experiences of Student Performers’, *Journal of Research in Music Education* 60, no. 1 (2012): 6, 7, 9; Young and Pain, ‘The Zone’, 22.

Susan Jackson is a key researcher in this field, and important research includes:

Susan Jackson and Mihaly Csikszentmihalyi, *Flow in Sports: The Key to Optimal Experiences and Performance* (Champaign: Human Kinetics, 1999); Susan Jackson and Robert Eklund, ‘Assessing Flow in Physical Activity: The Flow State Scale-2 and Dispositional Flow Scale-2’, *Journal of Sport and Exercise Psychology* 24, no. 2 (2002): 133-150; Susan Jackson and Jay Kimiecik, ‘The Flow Perspective of Optimal Experience in Sport and Physical Psychology’, in *Advances in Sports Psychology*, 3rd ed., ed. Thelma Horn (Champaign: Human Kinetics, 2008), 377-400; Susan Jackson et al., ‘Relationships between Flow, Self-Concept, Psychological Skills, and Performance’, *Journal of Applied Sport Psychology* 13, no. 2 (2001): 129-153; Nektarios Stavrou et al., ‘Flow Experience and Athletes’ Performance with Reference to the Orthogonal Model of Flow’, *The Sport Psychologist* 21 no. 4 (2007): 438-457.

⁴⁸⁵ Sinnamon, Moran and O’Connell, ‘Flow among Musicians’, 6, 9, 20.

Barbara Smolej Fritz and Andreja Avsec, ‘The Experience of Flow and Subjective Well-Being of Music Students’, *Horizons of Psychology* 16, no.2 (2007): 8.

William Wrigley and Stephen Emmerson, ‘The Experience of the Flow State in Live Music Performance’, *Psychology of Music* 41, no. 3 (2011), 292.

of flow'.⁴⁸⁶ Despite this, however, a number of valuable studies in this area have emerged in recent years.⁴⁸⁷

I suggest that 'flow' could be viewed effectively as the route by which musicians enter trance. When their general environmental awareness of the performance situation is channelled into an extreme, reflective focus of attention, this can become so intense that, via complete immersion and *absorption*, they are transported into a state of trance, becoming 'lost in the music'. After all, 'absorption' (often equated with 'trance')⁴⁸⁸ is defined as 'an effortless, non-volitional, deep involvement with the object of experience',⁴⁸⁹ directly coupled with 'dissociation' – a detachment from self, surroundings and reality.⁴⁹⁰ From a psychoanalytic perspective, 'absorption' could be facilitated by 'projective identification'. Nicky Losseff, whose research draws parallels between psychoanalytic theory and music, suggests that projective identification could explain the process by which performers of Western classical music identify with the musical material, developing 'a particularly intense connection between musicals works

⁴⁸⁶ Sinnamon, Moran and O'Connell, 'Flow among Musicians', 6.

⁴⁸⁷ Several of the primary issues that have been addressed include: the relationships between flow and musical composition, listening, and performance; flow in musical improvisation; music education and flow; the connections between flow, music and wellbeing; and the influence of practice on flow. Key examples include: Chirico et al., 'When Music "Flows"', 1-14; Raymond MacDonald, Charles Byrne and Lana Carlton, 'Creativity and Flow in Musical Composition: An Empirical Investigation', *Psychology of Music* 34, no. 3 (2006): 292-306; Frank Diaz, 'Mindfulness, Attention, and Flow during Music Listening: An Empirical Investigation', *Psychology of Music* 41, no. 1 (2011): 42-58.; Bloom and Skutnick-Henley, 'Facilitating Flow Experiences among Musicians', 24-28; Örjan De Manzano et al., 'The Psychophysiology of Flow during Piano Playing', *Emotion* 10, no. 3 (2010): 301-311; Joann Marie Kirchner, 'Incorporating Flow into Practice and Performance', *Work: A Journal of Prevention, Assessment and Rehabilitation* 40, no. 3 (2011): 289-296; Sinnamon, Moran and O'Connell, 'Flow among Musicians', 6-25; Wrigley and Emmerson, 'The Experience of the Flow State in Live Music Performance', 292-305; Michele Biasutti and Luigi Frezza, 'Dimensions of Music Improvisation', *Creativity Research Journal* 21, no. 2-3 (2009): 232-242; Emma Hart and Zeldi Di Blassi, 'Combined Flow in Musical Jam Sessions: A Pilot Qualitative Study', *Psychology of Music* 43, no. 2 (2015): 275-290; Arnold Bakker, 'Flow among Music Teachers and Their Students: The Crossover of Peak Experiences', *Journal of Vocational Behaviour* 66, no. 1 (February 2005): 26-44; Lori Custodero, 'The Call to Create: Flow Experience in Musical Learning and Teaching', in *Musical Imaginations: Multidisciplinary Perspectives on Creativity, Performance and Perception*, ed. David Hargreaves, Dorothy Miell and Raymond MacDonald (New York: Oxford University Press, 2012) 369-384; Lori Custodero, 'Seeking Challenge, Finding Skill: Flow Experience and Music Education', *Arts Education Policy Review* 103, no. 3 (2002): 3-9; Lori Custodero, 'Observing Flow in Young Children's Music Learning', *General Music Today* 12, no. 1 (Fall 1998): 21-27; Adam Croom, 'Music, Neuroscience, and the Psychology of Well-Being', *Frontiers in Psychology* 2, no. 393 (January 2012): 1-15, accessed August 17, 2015, <http://journal.frontiersin.org/article/10.3389/fpsyg.2011.00393/full>; Adam Croom, 'Music Practice and Participation for Psychological Well-Being', *Musicae Scientiae* 19, no. 1 (2015): 44-64; Fritz and Avsec, 'The Experience of Flow and Subjective Well-Being of Music Students', 5-17; Ana Butković, Frederik Ullén and Miriam Mosing, 'Personality Traits as Predictors of Music Practice', *Personality and Individual Differences* 74 (February 2015): 133-138; Marin and Bhattacharya, 'Getting into the Musical Zone', 1-14.

⁴⁸⁸ Herbert, 'Consciousness and Everyday Music Listening', 305.

⁴⁸⁹ *Ibid.*, 304.

⁴⁹⁰ *Ibid.*, 297, 302, 303.

and their sense of self'.⁴⁹¹ As aspects of the self become constituted by the music (and aspects of the music by the self), the two identities become inseparable,⁴⁹² and this could certainly account for the loss or transformation of one's usual sense of self during trance. This, after all, bears a notable resemblance both to Denise Reid's statement that, in moments of flow, 'there is a sense of becoming one with the experience',⁴⁹³ and also to songwriter and guitarist Richard Thompson's comment that 'you get inside the music to such an extent that you kind of *are* the music'.⁴⁹⁴

It could be argued that the experience of being 'one' with the music – the process by which self and other (music) fuse – is particularly pertinent to styles that are highly experimental, original, spontaneous, creative, or personal, such as improvisation or song writing. In practices that revolve around the delivery of extant music, composed by someone other than the performer, perhaps greater expectations of stylistic convention and fidelity to 'others' (the composer, his or her score, associated common notions of good practice, and so on) pose obstacles to such a fusion of identity. However, as Losseff notes, when a musician is working with an extant piece of music, already known in the world – already considered to possess an identity and characteristics – their relation to that other can be exactly what facilitates projective identification and the transformation of self:

[i]f some forms of interpretation are a projective identification of the interpreter's own psychological processes into the music, then the musical work performed becomes in effect a narrative of self (or, should I say, one of many possible narratives of the self).⁴⁹⁵

Theoretically supported by this work of Nicky Losseff, my own experiences of performing Baroque repertoire and entering flow suggest that such music does indeed afford the phenomenal unification of subject and object, the process of projective identification and, therefore, the experience of absorption.

⁴⁹¹ Nicky Losseff, 'Projective Identification, Musical Interpretation and the Self', *Music Performance Research* 4 (2011): 53.

⁴⁹² *Ibid.*, 52-54.

⁴⁹³ Denise Reid, 'Mindfulness and Flow in Occupational Engagement', *Canadian Journal of Occupational Therapy* 78, no. 1 (February 2011): 51.

⁴⁹⁴ Richard Thompson, in Jenny Boyd and Holly George-Warren, *Musicians in Tune: Seventy-Five Contemporary Musicians Discuss the Creative Process* (New York: Simon and Schuster, 1992), 162.

⁴⁹⁵ Losseff, 'Projective Identification, Musical Interpretation and the Self', 54.

At this stage, it is important to remember that, in order to achieve the ‘really magical feeling’⁴⁹⁶ of ‘flow-trance’ via absorption, ‘deep involvement with the object of experience’⁴⁹⁷ is a prerequisite. I propose, therefore, that a musician can only enter this state when he or she is drawn into an *extended reflective* attentional focus on a single element of the unfolding performance. From deep and extended immersion in this reflection emanates flow-trance. We might, hence, consider it necessary that the object of reflective attention is a *general* aspect of the music, such as the prevailing musical emotion or motional trajectory: only then does it have the possibility of remaining as the attentional object long enough for absorption to occur. Transitory elements, on the other hand, such as a particular musical *agrément* or harmony, inherently enjoy far shorter durations, usually ceasing as attentional objects as the music elapses, rendering them unlikely to facilitate absorption.

This theory could certainly substantiate cellist Daniel Yeadon’s observation that in order to reach flow, he must pay attention to very few issues.⁴⁹⁸ He states: ‘I’ve thought about what I want in each bar but ... [i]t’s best when I’m not obsessing about any of those things really. That’s when it seems to flow’.⁴⁹⁹ Alluding to the dissociative quality of flow, he further comments: ‘I’m conscious of getting into that zone of pure creativity ... so I try to disassociate from all those mental things that have been going on in the preparation process’.⁵⁰⁰ In particular, he talks of playing ‘without having to pay attention to the specific moment-to-moment decision-making process’,⁵⁰¹ ‘leav[ing] all the technical concerns behind’⁵⁰² and focusing, instead, on ‘the overall architecture’⁵⁰³ – a general object of reflective attention. This proposed correlation between a general reflective focus and flow also begins to explain some of my own reflections, noted in the anecdotal account at the beginning of the chapter. Indeed, the ‘unfocused’ yet ‘exhilarating’ states that I experienced during my performance on 9th May 2015 arose from instances in which ‘I was completely absorbed by the unfolding musical trajectory, totally captivated by the prevailing musical emotion’ – general aspects of the music. They did not transpire from

⁴⁹⁶ Neal Peres Da Costa, in Bangert, ‘Doing without Thinking’, 193-194.

⁴⁹⁷ Herbert, ‘Consciousness and Everyday Music Listening’, 304.

⁴⁹⁸ Bangert, ‘Doing without Thinking’, 176-177.

⁴⁹⁹ Daniel Yeadon, in Bangert et al., ‘Performing Solo Bach: A Case Study of Musical Decision-Making’, *Musicae Scientiae* 18, no. 1 (March 2014), 45.

⁵⁰⁰ Yeadon, in Bangert, ‘Doing without Thinking’, 193.

⁵⁰¹ Bangert, ‘Doing without Thinking’, 175.

⁵⁰² Yeadon, in Bangert, ‘Doing without Thinking’, 197.

⁵⁰³ Yeadon, in Bangert, ‘Doing without Thinking’, 176.

moments in which ‘I focussed carefully on a stream of specific technical and expressive concerns’ – transitory elements.

Whilst absorption-via-reflective-attention can, therefore, be viewed as the route to flow, I contend that this is not the only means by which musicians enter states of trance during performance. Indeed, I propose a second route: the musical daydream, in which a prolonged focus of attention *without* reflective or critical thought – such as the mindless staring at the wall behind the audience – can cause the musician to slip into ‘nothingness’. There is an initial extended focus of attention but a complete *absence* of reflection. Indeed, when trance is reached, via absorption *or* daydream, any sense of attention itself completely vanishes, enabling the performer to enter into a completely pre-reflective ‘non-state’, in which all critical faculties cease. Interestingly, Bloom and Skutnick-Henley emphasise the suspension of ‘self-criticism’ as a fundamental feature of flow,⁵⁰⁴ whilst Limb and Braun similarly state that ‘self-monitoring can inhibit spontaneity and impair performance’.⁵⁰⁵ I suggest that the very emancipation from self-criticism and self-monitoring simply equates to the *pre-reflective* quality of trance, in which all critical thought disappears. The very pre-reflective essence could also validate the correlation Yeadon draws between ‘being analytical, and being out of flow’.⁵⁰⁶ This leads me to suggest that it is the *prolonged* lack of reflective thought during trance that creates the performer’s experience of non-attention.

Whilst the states of trance achieved via absorption and daydream enjoy similarities – including an abandonment of intentional thought, and dissociative, out-of-body transportation – there are also notable differences: ‘flow-trance’ (via absorption) appears to be a rich and dynamic experience that is highly intrinsically rewarding,⁵⁰⁷ whereas ‘daydream-trance’, seems to be a comparatively fruitless and unsatisfying subordinate. This would, after all, reflect my different experiences of ‘unfocused states’ as described in my personal reflection (Section 3.1) and it could perhaps be explained by

⁵⁰⁴ Bloom and Skutnick-Henley, ‘Facilitating Flow Experiences among Musicians’, 25-28.

⁵⁰⁵ Charles Limb and Allen Braun, ‘Neural Substrates of Spontaneous Musical Performance: An fMRI Study of Jazz Improvisation’, *PLoS One* 3, no. 2 (February 2008): 1679, accessed September 6, 2015, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0001679>

⁵⁰⁶ Bangert, ‘Doing without Thinking’, 192.

⁵⁰⁷ Csikszentmihalyi, *Flow and the Foundations of Positive Psychology*, 240.

Engeser and Rheinberg, ‘Flow, Performance and Moderators of Challenge-Skill Balance’, 169.

Stegan Engeser and Anja Schiepe-Tiska, ‘Historical Lines and an Overview of Current Research on Flow’, in *Advances in Flow Research*, ed. Stefan Engeser (New York: Springer, 2012), 5.

Marin and Bhattacharya, ‘Getting into the Musical Zone’, 1, 4, 10.

the associations that psychologists have acknowledged between flow and enhanced creativity: '[i]t is clear ... that increased levels of flow are indeed related to increased levels of creativity'.⁵⁰⁸ This is a relationship I explore in the forthcoming discussion (Section 3.7.2), in order to confirm that flow-trance does constitute the optimal cognitive state for performance.⁵⁰⁹

At this stage, it is important to note the distinction between 'optimal experiences', which are "'high points" in life that are exciting and fulfilling',⁵¹⁰ and 'optimal performance', which refers to 'the effectiveness of behaviour or action'.⁵¹¹ Current debates question whether flow is exclusively an optimal experience or also a foundation for optimal performance.⁵¹² Whilst a thorough understanding of the relationship between optimal experience and performance requires systematic, empirical investigation that far transcends the boundaries of this thesis, I argue (from a performer's inside perspective, and without attempting to make any grand claims about aesthetic value, audience reception and shared performer-listener experience) that, at least in musical performance, there is an intimate interrelationship: optimal experiences often arise as a result of optimal performances and vice versa. Not only is this reflected in my descriptions (in Section 3.1) of particular moments during my performance that were both 'intrinsically rewarding and musically gratifying',⁵¹³ but sports research has shown that 'athletes' thoughts and feelings are extremely positive when performing at their peak', and also that 'optimal subjective experience underlies peak performances'.⁵¹⁴ Furthermore, Susan Jackson identifies flow as 'a precursor of optimal functioning'.⁵¹⁵ It is, of course, essential to acknowledge the inherent complexities of using the term 'optimal performance' in a musical setting. Unlike in the field of sport, where measurable factors (such as distance, time and weight) can be used as clear indicators of optimal

⁵⁰⁸ MacDonald, Byrne and Carlton, 'Creativity and Flow in Musical Composition', 300.

⁵⁰⁹ Csikszentmihalyi, *Flow*, 7.

Jackson and Eklund, 'Flow', 297.

Susan Jackson and Herbert Marsh, 'Development and Validation of a Scale to Measure Optimal Experience', *Journal of Sport and Exercise Psychology* 18, no. 1 (March 1996), 18.

⁵¹⁰ M. Ryan Flett, 'Is Flow Related to Positive Feelings or Optimal Performance? Path Analysis of Challenge-Skill Balance and Feelings', *Sport Science Review* 24, no. 1-2 (May 2015): 6, accessed August 17, 2015, <http://www.degruyter.com/view/j/ssr.2015.24.issue-1-2/ssr-2015-0006>.

⁵¹¹ *Ibid.*

⁵¹² *Ibid.*

⁵¹³ See Prelude, Section 3.1.

⁵¹⁴ Jackson and Kimiecik, 'The Flow Perspective of Optimal Experience in Sport and Physical Psychology', 380.

⁵¹⁵ Flett, 'Is Flow Related to Positive Feelings or Optimal Performance', 7.

performance, optimal performance in music is largely a matter of subjective opinion. Given the lack of unanimity surrounding aesthetic value and appreciation, and the inability (within this thesis) to prove a correlation between performer and audience perception of optimal performance, my use of the term comes from my own subjective judgements as a performer. It is from this position I propose that flow-trance generates both an optimal musical experience *and* performance.

In any case, it must be recognised that cognitive states are fluctuating.⁵¹⁶ Musicians, therefore, transition between a variety of states of awareness, attention and non-attention during performance, in a way that is completely unique to and reliant on the given moment. Whilst any cognitive state can essentially continue for any duration, it is highly unlikely that a state of trance will remain for an entire performance. Much like hypnotic procedures, one exits trance by that which Alicia Peñalba Acitores terms ‘grabbers’: triggers that ‘grab’ one’s attention.⁵¹⁷ Examples could include a round of applause, the sudden, loud coughing of an audience member, the playing of an incorrect note, and so on. These interruptions act as vehicles that immediately transport one back to a state of attention, focussed initially on the grabber itself (as illustrated in Figure 1).

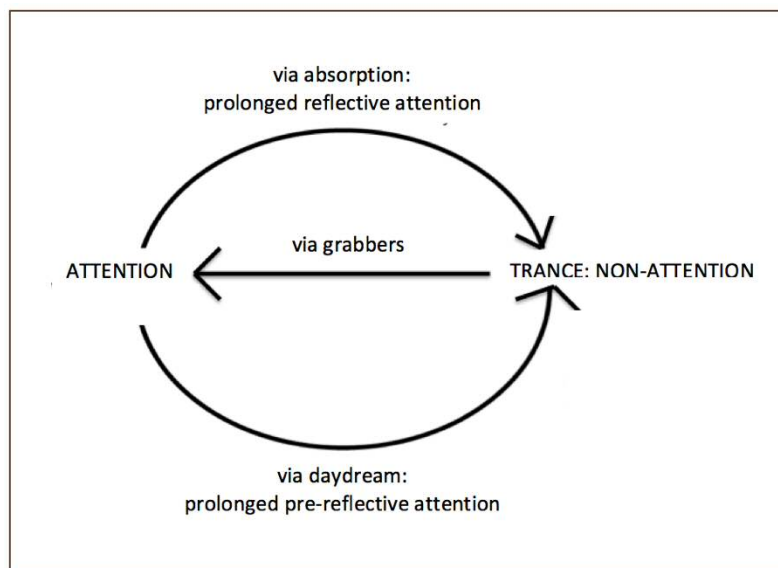


Figure 1. Attentional States

In any case, the longer the period of trance, the less the musician will vividly remember about the performance. I propose that this can be explained by the very defining

⁵¹⁶ Clarke, ‘Music Perception and Musical Consciousness’, 207-208.

Herbert, ‘Consciousness and Everyday Music Listening’, 299, 305.

⁵¹⁷ Alicia Peñalba Acitores, ‘Towards a Theory of Proprioception as a Bodily Basis for Consciousness in Music’, in Clarke and Clarke, *Music and Consciousness*, 222-225.

characteristic of trance: non-attention. If a musician experiences extended episodes of trance during performance, very little reaches his or her attentional focus, and it is precisely these instances of non-attention that account for hazy recollections of performances in which one had become 'lost in the music'.

3.5. The Functioning of Our Attention and Subattention

3.5.1. Reflective and Pre-Reflective Processing

Having identified the different attentional states that musicians may enter during performance, alongside their defining characteristics, further scrutiny is required to uncover how, *specifically*, these states influence temporal expressivity. In order to do this, the relationship between attentional states and *epistemic processing* must be considered.

To begin, it is important to note the 'emerging consensus that a useful distinction can be made between two basic systems of information processing':⁵¹⁸ Type 1, which is 'unconscious and automatic',⁵¹⁹ or as I term it, *pre-reflective*; and Type 2, which is 'conscious and deliberate',⁵²⁰ in other words, *reflective*. Indeed, a number of comparable dual-process formulations have been conceived,⁵²¹ each reinforcing the plausibility of these two distinct, fundamental systems: the cognitive-experiential self-theory (CEST), developed by Seymour Epstein and his colleagues in 1994 distinguishing 'the experiential system' and 'the rational system';⁵²² the 'associative system' and 'rule-based system' introduced by Sloman in 1996,⁵²³ and developed by Smith and DeCoster in 1999;⁵²⁴ Stanovich and West's *implicit 'System 1'* and *explicit 'System 2'* defined in 2000;⁵²⁵ and the more recent reflexive 'X-System', and reflective 'C-System' identified by Lieberman

⁵¹⁸ Gerard Hodgkinson, Janice Langan-Fox and Eugene Sadler Smith, 'Intuition: A Fundamental Bridging Construct in the Behavioural Sciences', *British Journal of Psychology* 99, no. 1 (2008): 8.

⁵¹⁹ Myers, *Intuition*, 4.

⁵²⁰ *Ibid.*

⁵²¹ Jonathan Evans and Keith Stanovich, 'Dual-Process Theories of Higher Cognition: Advancing the Debate', *Perspectives on Psychological Science* 8, no. 3 (May 2013): 226.

Hodgkinson, Langan-Fox and Sadler Smith, 'Intuition', 8-11.

⁵²² Seymour Epstein, 'Integration of the Cognitive and the Psychodynamic Unconscious', *American Psychologist* 49, no. 8 (1994): 709.

⁵²³ Steven Sloman, 'The Empirical Case for Two Systems of Reasoning', *Psychological Bulletin* 119, no. 1 (1996): 3.

⁵²⁴ Elliot Smith and Jamie DeCoster, 'Associative and Rule-Based Processing: A Connectionist Interpretation of Dual-Process Models', in *Dual-Process Theories in Social Psychology*, ed. Shelly Chaiken and Yaacov Trope (New York: The Guilford Press, 1999), 324-326.

⁵²⁵ Keith Stanovich and Richard West, 'Individual Differences in Reasoning', *Behavioural and Brain Sciences* 23, no. 5 (October 2000): 659, 690.

et al. in 2004.⁵²⁶ As David G. Myers states, ‘the mushrooming mountain of evidence plainly indicates, we have two minds One is above the surface, in our moment-to-moment awareness [in my terms, reflective attention]; the other is below [in our pre-reflective subattention], operating the autopilot that guides us through most of life’.⁵²⁷ These theories, of course, bear a significant affiliation with the distinction between ‘explicit’ and ‘tacit’ knowledge, as discussed in Chapter 4, and they provide a most valuable framework for comprehending the ways in which information (including the knowledge that underpins expressive timing decisions) is processed during performance, depending on the musician’s cognitive state. Indeed, when in a state of reflective attention, Type 2 processing occurs; when in a state of pre-reflective attention or pre-reflective non-attention (trance), Type 1 processing is activated.

3.5.2. Intuition: The Pre-Reflective Engine of Our Subattention

At this stage, it is important to consider the relationship between Type 1 processing (defined as ‘unconscious’, ‘automatic’, ‘implicit’ and ‘reflexive’) and the phenomenon of ‘intuition’ – a concept that undeniably pervades the artistic experience, yet is widely recognised as difficult to articulate,⁵²⁸ and, which ‘as a consequence ... we have tended to eschew’⁵²⁹ in academic, musical study. As violinist Lidewij Van der Voort asserts, ‘[t]hat’s the thing about intuition. You don’t know how it works’.⁵³⁰ Recently, however, as psychologists have acknowledged its significance in a number of cognitive processes, including decision-making and creativity,⁵³¹ intuition has risen as a necessary subject of inquiry.⁵³² With particular regard to musical performance, key research in the field has been published by Daniel Bangert, Dorottya Fabian and Emery Schubert, who draw on the aforementioned dual-process theories in order to investigate interpretative decision-

⁵²⁶ Matthew Lieberman, Johanna Jarcho and Ajay Satpute, ‘Evidence-Based and Intuition-Based Self-Knowledge: An fMRI Study’, *Journal of Personality and Social Psychology* 87, no. 4 (2004): 421-424.

⁵²⁷ Myers, *Intuition*, 51.

⁵²⁸ David Epstein, ‘A Curious Moment in Schumann’s Fourth Symphony: Structure as the Fusion of Affect and Intuition’, in *The Practice of Performance: Studies in Musical Interpretation*, ed. John Rink (Cambridge: Cambridge University Press, 1995), 126; Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 4; Eugene Sadler-Smith, *Inside Intuition* (Abingdon and New York: Routledge, 2008), 31.

⁵²⁹ Epstein, ‘A Curious Moment in Schumann’s Fourth Symphony’, 127.

⁵³⁰ Lidewij van der Voort, in Bangert ‘Doing without Thinking’, 80.

⁵³¹ Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 1.

⁵³² *Ibid.*, 19.

making, distinguishing, in particular, between ‘intuitive’ and ‘deliberate’ choices.⁵³³ Of course, thanks to its defining characteristic (the very fact that it is nonconscious,⁵³⁴ or as I term subattentional), intuition can be equated with Type 1 processing: the engine of our subattention, functioning pre-reflectively, without critical or intentional thought.

As a result of our sense of its automaticity, intuition is often accepted as completely instinctive, innate and natural.⁵³⁵ However, a number of researchers including, Agor, Betsch, Harper, and Klein,⁵³⁶ argue that intuition is, in fact, ‘acquired through experience and learning’:⁵³⁷ it is, a ‘correlate of knowledge’,⁵³⁸ essentially a disguised product of nurture. This is perfectly encapsulated by John Rink’s notion of ‘informed intuition’⁵³⁹ and David Myers’ term ‘acquired intuition’,⁵⁴⁰ both of which acknowledge ‘the importance of intuition in the interpretative process but also that considerable knowledge and experience generally lie behind it – in other words, that intuition need not come out of the blue, and need not be merely capricious’.⁵⁴¹ Drawing on the work of Klein and Hodgkinson in particular,⁵⁴² I assert that intuition can be defined

⁵³³ Following Bangert’s doctoral thesis ‘Doing without Thinking?’ and as a substantial extension of Bangert et al.’s 2014 article ‘Performing Solo Bach’, Bangert, Fabian and Schubert’s most recent publication, ‘Practice Thoughts and Performance Action’, provides additional empirical evidence to support their understanding of the processes behind interpretative musical decisions.

Daniel Bangert, Dorottya Fabian and Emery Schubert, ‘Practice Thoughts and Performance Action: Observing Processes of Musical Decision-Making’, *Music Performance Research* 7 (2015): 27-46.

⁵³⁴ Erik Dane and Michael Pratt, ‘Exploring Intuition and Its Role in Managerial Decision Making’, *Academy of Management* 32, no. 1 (January 2007): 36.

⁵³⁵ Alethea Blackler, Vesna Popovic and Doug Mahar, ‘The Nature of Intuitive Use of Products: An Experimental Approach’, *Design Studies* 24, no. 6 (2003): 494; Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 6.

⁵³⁶ Weston Agor, ‘The Logic of intuition: How Top Executives Make Important Decisions’, in *Intuition in Organizations: Leading and Managing Productively*, ed. Weston Agor. (Newbury Park: Sage Publications, 1989), 157-170; Betsch, ‘The Nature of Intuition and Its Neglect in Research on Judgement and Decision Making’, 3-22; Stephen C. Harper, ‘Intuition: What Separates Executives from Managers?’, in Agor, *Intuition in Organizations*, 111-124; Gary Klein, *Sources of Power: How People Make Decisions* (Cambridge: MIT Press, 1999); Gary Klein, *The Power of Intuition: How to Use Your Gut Feelings to Make Better Decisions at Work*, rev. ed. (New York: Crown Business, 2004).

⁵³⁷ Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 7.

⁵³⁸ Matthew Lieberman, ‘Intuition: A Social Cognitive Neuroscience Approach’, *Psychological Bulletin* 126, no. 1 (2000): 110.

⁵³⁹ John Rink, review of *Musical Structure and Performance*, by Wallace Berry, *Music Analysis* 9, no. 3 (October 1990): 323, 327.

⁵⁴⁰ Myers, *Intuition*, 58.

⁵⁴¹ John Rink, ‘Analysis and (or?) Performance’, in *Musical Performance: A Guide to Understanding*, ed. John Rink (Cambridge: Cambridge University Press, 2002), 36.

⁵⁴² Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 6; Klein, *The Power of Intuition*; ‘Go with Your Gut - intuition Is More Than Just a Hunch, Says Leeds Research’, The University of Leeds, accessed August, 17, 2015,

http://www.leeds.ac.uk/news/article/367/go_with_your_gut__intuition_is_mor%20e_than_just_a_hunc_h_says_leeds_research; ‘The Truth and Science behind the Amazing Intuition of Humans’, Learning Mind, accessed August 17, 2015, <https://www.learning-mind.com/the-truth-and-science-behind-the-amazing-intuition-of-humans/>.

as the pre-reflective accessing and manifestation of knowledge that has been embodied over time and become embedded in our subattention.⁵⁴³ After all, in order for information processing to occur, information (in other words knowledge) of some sort must be available for said processing. The very types of knowledge that are embodied, accessed pre-reflectively, and externalised as intuitive temporal interpretative decisions are explored in Chapter 4.

Having clarified a definition of intuition, by recognising its fundamental interrelationship with attentional states and knowledge, its particular role in generating temporal expressivity must be considered. In trance, performers assume a pre-reflective state of total non-attention. Relying exclusively on their subattention, the only means by which every interpretative gesture (including expressive microtiming) can transpire is through intuition. Type 1 processing pre-reflectively accesses, from the performer's subattention, all the information that underpins and gives rise to the interpretative temporal decision, including, therefore, an array of knowledge relating to articulation and note length, motion and phrasing, punctuation and breathing.⁵⁴⁴ Similarly, when the performer embraces an unfocused state of general awareness, an uncritical, pre-reflective attentional focus, or a reflective attentional focus but on an *extra-musical* issue, control of his or her temporal interpretation lies, once again, wholly in the realm of intuition.

In a state of reflective attention on a particular *musical* issue, however, the performer assumes *some* intentional control over his or her interpretative decisions. Here is a simple illustration: I am performing a solo flute sonata and the current object of my reflective attention is that 'I am aiming for the dissonant appoggiatura at the climax of the phrase': my attention is focused on the goal-directed musical trajectory. Whilst this reflective focus guides my overall interpretative shaping of that passage, I must still, of course, rely on a multitude of knowledge that is not directly in my reflective focus, in order to fulfil this broader expressive aim that occupies my attention. Indeed, I have to draw on knowledge of musical aesthetics linked to style and expression, such as 'the motion could increase towards the appoggiatura', 'the dynamic could increase in advance

⁵⁴³ Greater exploration of the different forms of knowledge that appear 'intuitive' can be found in Chapter 4.

⁵⁴⁴ The temporal quality of these issues is introduced in Chapter 2 on 'Time in Performance'; scrutiny of their epistemic dimensions features in Chapter 4 on 'Embodied Knowledge in Performance'; and exploration of their practical implications appears in the case study, Chapter 5.

of the climax’, and ‘my articulation could become stronger’, as well as corresponding knowledge of technique, such as faster finger and tongue movement, and different types of articulation, possibly even double-tonguing (see Figure 2 for a simple illustration).

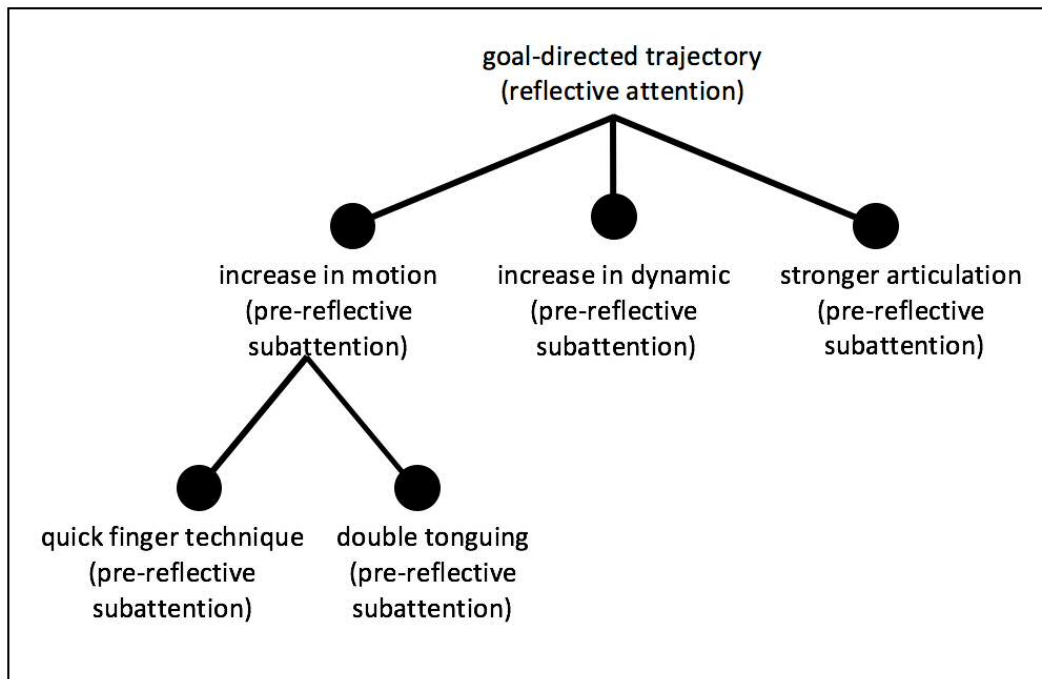


Figure 2. Epistemic Web 1

My temporal interpretation is, therefore, underpinned by a hierarchical epistemic web, at the top of which lies my reflective attentional focus – the goal-directed trajectory. Triggered by this explicit, critical intention, intuition is guided to access related implicit issues that lie further down my epistemic web, in my pre-reflective sub attention. This description is indeed supported by Jonathan St. B. T. Evans who asserts that ‘explicit processing [activated during, and indeed reserved for, states of reflective attention] ... still relies on Type 1 processing [pre-reflective, subattentional intuition]’.⁵⁴⁵

Of course, as well as the aspects of knowledge that are *directly related* to my reflective focus, every other dimension of my performance – accurate rhythmic and melodic execution, tone production, air pressure, intonation, embouchure, and so on – must simultaneously be generated pre-reflectively, by drawing on information from my subattention. These specificities of knowledge could indeed become objects of my reflective attention, and they most certainly would have been at some point, for example in the preparation process. After all, as music psychologist Carl Seashore explains, ‘one must have been intensely conscious of technique ... must have isolated element after

⁵⁴⁵ Jonathan Evans, ‘Dual-Process Theories of Reasoning: Contemporary Issues and Developmental Applications’, *Developmental Review* 31, no. 2-3 (September 2011): 93.

element for intensive study ... before control of these can become so automatic as to drop into the background of consciousness'.⁵⁴⁶ Via practice and experience, therefore, these issues have reached my subattention (in doing so, expanding my epistemic web) and are subsequently able to be accessed pre-reflectively, or intuitively; this transition of knowledge from reflective attention into one's pre-reflective subattention is explored in relation to embodiment and epistemic modes, in Chapter 4. In any case, whilst the current object of my reflective attention is the goal-directed trajectory, both the directly related and more tangential specificities of knowledge can only be accessed through my pre-reflective subattention, or intuition, for attention can, of course, only be in one place at a time.

It is evident, therefore, that intuition – pre-reflective, subattentional epistemic processing – is an omnipresent feature of interpretative decision-making, whatever the performer's cognitive state. This implies that reflective and pre-reflective systems can function *simultaneously*. Yeadon and Bangert do, after all, recognise that musical decisions often incorporate 'both intuition [pre-reflective processes] and deliberation [reflective processes]'⁵⁴⁷ – a coexistence that is, in fact, supported by 'parallel competitive (PC) theories ... [which] assume that Type 1 [pre-reflective] and 2 [reflective] processes proceed in parallel, each having a say'.⁵⁴⁸ The positing of PC theories seems to be supported by Arne Dietrich, who explains information processing during flow (which of course relies exclusively on pre-reflective, subattentional 'intuition') as involving a 'temporary suppression of the analytical ... capacities of the explicit system'.⁵⁴⁹

Dietrich's explanation could, however, perhaps be more accurately clarified by 'default-interventionist (DI) theories, [which] on the other hand, assume that Type 1 processing produces a rapid and intuitive default response, which may or may not be intervened upon by subsequent Type 2 reasoning which is slower and deliberative in nature'.⁵⁵⁰ Whilst 'parallel competitive' and 'default-interventionist' notions are often viewed as polar opposites,⁵⁵¹ I contend that the two theories could, in fact, complement, rather than contradict one another, if considered simply in 'pre-reflective' and 'reflective'

⁵⁴⁶ Carl Seashore, *The Psychology of Musical Talent* (Boston: Silver, Burdett and Company, 1919), 259.

⁵⁴⁷ Bangert, 'Doing without Thinking', 180-181, 185.

⁵⁴⁸ Evans, 'Dual-Process Theories of Reasoning', 93.

⁵⁴⁹ Arne Dietrich, 'Neurocognitive Mechanisms Underlying the Experience of Flow', *Consciousness and Cognition* 13, no.4 (2004): 74.

⁵⁵⁰ Evans, 'Dual-Process Theories of Reasoning', 93.

⁵⁵¹ *Ibid.*

terms. The ‘default-interventionist’ argument could fundamentally establish that all experience (including that of interpretative decision-making) arises from a pre-reflective foundation, upon which reflective thought *can* be *added*. It could, therefore, be concluded that there is a ‘default’ *pre-reflective* system that persists continually and this is often, but not always, *accompanied*, rather than replaced, by simultaneous (or ‘parallel’) *reflective* processing. Rather than seeing the two as mutually exclusive or operating concurrently, this synthesis bears similarities to Hogarth’s adapted version of the default-interventionist model⁵⁵² and to Bangert’s suggestion that intuition ‘is always contributing at some level, after which deliberation is used to varying degrees’.⁵⁵³

Having reinforced, through a synthesis of PC and DI theories, the *omnipresence* of intuition in interpretative decision-making, it is important to highlight the *plurality* of this pre-reflective, subattentional epistemic processing system. Indeed, as evidenced by the above example (in which a range of information is processed pre-reflectively, alongside the reflective focus of the ‘goal-directed trajectory’), *multiple* objects of knowledge are accessed simultaneously via one’s pre-reflective subattention, or intuition. This observation is reinforced by the widely researched distinction between ‘serial processing’ – a ‘one thing at a time’,⁵⁵⁴ ‘strictly sequential’⁵⁵⁵ process – and ‘parallel processing’, in which ‘multiple cognitive operations occur at once’.⁵⁵⁶ Many connections have indeed been established between ‘serial’ and reflective ‘Type 2’ processing, and between ‘parallel’ and pre-reflective ‘Type 1’.⁵⁵⁷ Whilst Evans, for example, stresses that reflective attention only has the capacity for one single focus at a time,⁵⁵⁸ Tamborini acknowledges that, ‘as intuition is understood to be a parallel process, it allows for different intuitive

⁵⁵² Bangert, ‘Doing without Thinking’, 94-95.

⁵⁵³ *Ibid.*, 185.

⁵⁵⁴ Philip Quinlan and Ben Dyson, *Cognitive Psychology* (Essex: Pearson Education Limited, 2008), 215.

⁵⁵⁵ James Townsend, ‘Serial Vs. Parallel Processing: Sometimes They Look like Tweedledum and Tweedledee but They Can (and Should) be Distinguished’, *Psychological Science* 1, no. 1 (January 1990): 46.

⁵⁵⁶ Ronald Kellogg, *Cognitive Psychology*, 2nd ed. (California: Sage Publications, 2003), 9.

⁵⁵⁷ Nicola Bauman and Julius Kuhl, ‘Intuition, Affect, and Personality: Unconscious Coherence Judgments and Self-Regulation of Negative Affect’, *Journal of Personality and Social Psychology* 83, no. 5 (November 2002): 1214; Betsch, ‘The Nature of Intuition and Its Neglect in Research on Judgement and Decision Making’, 6; Cornelia Betsch and Paola Iannello, ‘Measuring Individual Differences in Intuitive and Deliberate Decision-Making Styles: A Comparison of Different Measures’, in *Foundations for Tracing Intuition: Challenges and Methods*, ed. Andreas Glöckner and Cilia Witteman (East Sussex and New York: Psychology Press, 2010), 253; Evans and Stanovich, ‘Dual-Process Theories of Higher Cognition’, 225; Sloman, ‘The Empirical Case for Two Systems of Reasoning’, 7.

⁵⁵⁸ Evans, ‘Dual-Process Theories of Reasoning’, 93.

responses to occur simultaneously'.⁵⁵⁹ Justifying the concurrent processing of a plethora of knowledge from one's epistemic web, the very plurality of intuition helps to rationalise the multidimensionality of expressive decisions.

To summarise: by investigating the phenomenon of intuition through a variety of information-processing theories, its relationship with different attentional states is explicated, its role in the interpretative decision-making process clarified, and its very ontology elucidated. Most importantly, this exploration leads towards a deeper understanding of the ways in which the knowledge that underpins expressive timing decisions is accessed, reflectively and pre-reflectively during performance, depending on the musician's attentional state.

3.5.3. Epistemic Webs: Exploring the Subpersonal Level

As alluded to in Section 3.5.2 and illustrated, in particular, by Figure 2, expressive timing decisions are underpinned by a complex, hierarchical and interrelated web of knowledge, which is accessed reflectively and pre-reflectively during performance, in response to the performer's cognitive state. Whilst most branches of the web are available to pre-reflective or reflective processing, at the very bottom lies the multitude of *subpersonal* mechanisms that give rise to all bodily and cognitive processes – mechanisms on which all our actions and experiences ultimately depend, yet which can only ever operate pre-reflectively. In order to develop a greater understanding of the epistemic networks on which expressive timing decisions rest, we must, therefore, consider this subpersonal baseline.

The particular relationship between subpersonal mechanisms and pre-reflective experience is explored by Andy McGuiness and Katie Overy in their chapter 'Music, Consciousness, and the Brain'. They state that 'the pre-reflective self includes the outputs of subpersonal mechanisms'.⁵⁶⁰ To clarify, here is an example they provide:

[t]he ... experience of being on- (or off-) balance should be thought of as distinct from – though of course directly relying on – the subpersonal processes that allow us to keep balance, which include, for instance, the functioning of the vestibular system and

⁵⁵⁹ Ronald Tamborini, 'A Model of Intuitive Morality and Exemplars', in *Media and the Moral Mind*, ed. Ronald Tamborini (Abingdon and New York: Routledge, 2013), 46.

⁵⁶⁰ McGuiness and Overy, 'Music, Consciousness, and the Brain', 251.

the resulting motor commands that are generated to adjust muscular tension in order to maintain balance. The changes in muscular tension required to maintain balance are themselves experienced at a pre-reflective, bodily level (and may become the object of reflective consciousness [or as I would term, reflective attention]) but the subpersonal mechanisms that generate them are not available to consciousness [or as I would say, attention].⁵⁶¹

In terms of my aforementioned example in Section 3.5.2, therefore, the intricate motor activity of the muscles that control the speed in which my fingers and tongue move to produce ‘goal-directed motion’ are generated at a subpersonal level. These subpersonal processes, lying at the bottom of my epistemic web, are undoubtedly influenced by knowledge, which of course exists in many forms, such as experience and practice. As I isolate articulation or finger technique as the focus of my technical practice, for example, the correlating subpersonal mechanisms – those that generate the necessary muscle movements – are manipulated. When returning to the performance situation, the more general object of reflective attention, ‘goal-directed motion’, then acts as the trigger which activates the whole succession of related pre-reflective dimensions and their correlating subpersonal mechanisms, which have been nurtured through practice and experience: this is illustrated by Figure 3.

⁵⁶¹ Ibid.

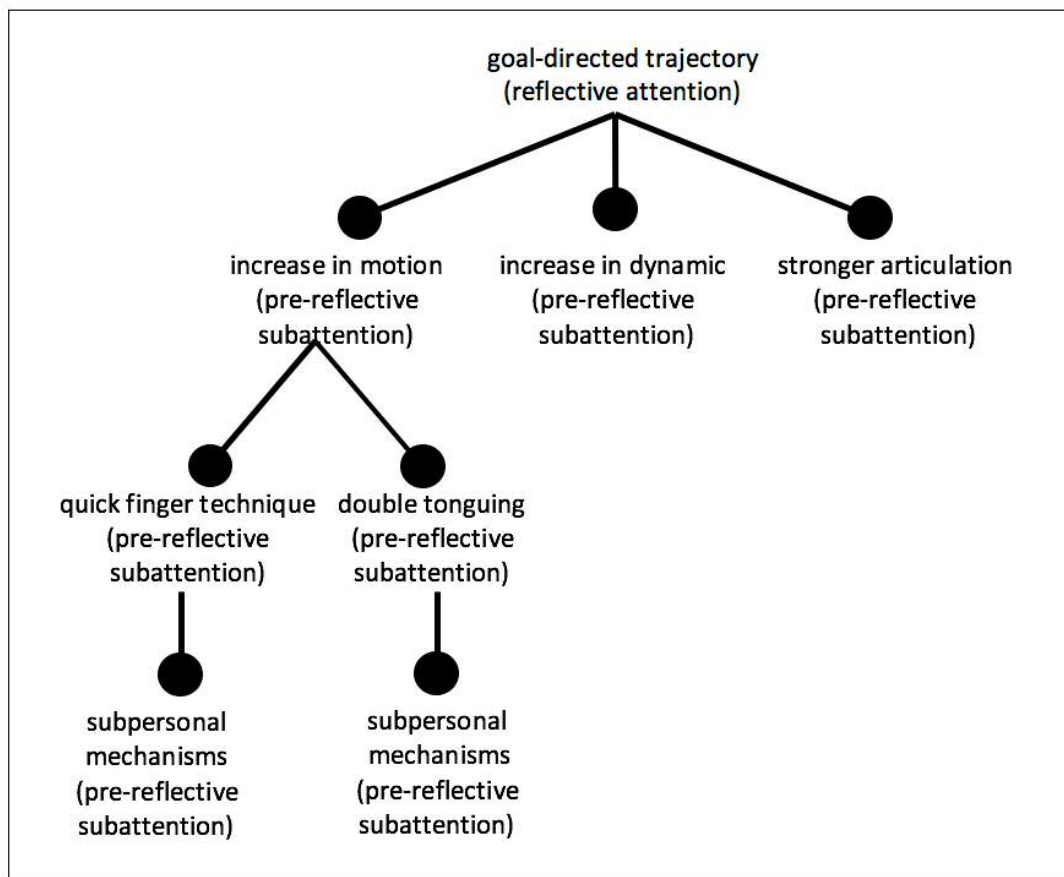


Figure 3. Epistemic Web 2

These processes occur in order to bring the object of reflective attention – in this case ‘goal-directed motion’ – to fruition. Of course, every other element of the process of performance, such as my breathing and tone production, possesses its own complex web of related issues with corresponding, underlying subpersonal mechanisms. These, too, have been influenced by knowledge (of various kinds, theoretical and practical) and, as a result, have entered my subattention and are therefore accessed pre-reflectively. The output of each of these subpersonal processes continually affects my pre-reflective experience, amalgamating to create the overall ‘what-it-feels-like’ quality;⁵⁶² this characterises the general, peripheral awareness discussed at the beginning of this chapter, which accompanies all cognitive states, and at the same time has the possibility of being channelled into the object of one’s reflective attention. Indeed, whilst the subpersonal mechanisms themselves are not available to reflective attention, the specific ‘what-it-feels-like’ experience – the tacit *feeling* – indeed has the possibility of superseding ‘goal-directed-motion’ as the next object of my reflective attention. There is evidently, therefore, an intimate relationship between subpersonal mechanisms, pre-

⁵⁶² Nagel, ‘What Is It Like to Be a Bat?’, 435-450.

reflective experience and reflective attention: subpersonal mechanisms, which are influenced by knowledge, underpin all experience; the output of subpersonal mechanisms is a pre-reflective experience; this in turn has the potential of becoming the object of reflective attention.

Fundamentally, then, an interrelated, hierarchical web of knowledge (at the base of which lies fundamental subpersonal processes) underpins all interpretative decisions. Other than the subpersonal mechanisms themselves, every other level of the epistemic network is available for reflective processing. A performer's reflective attention could, for example, focus at the level of the specific execution of double tonguing or finger technique, or on the more general 'increase in motion', or at the higher level of the overall goal-directed trajectory. Of course, the more general the reflective focus – the higher it sits on the epistemic web – the more related pre-reflective, subattentional dimensions it encompasses. Finally, the performer's reflective attention could focus on the 'what-it-feels-like' quality of the experience itself – an experiential feeling arising from a multitude of subpersonal mechanisms.

3.6. The Role of Experience

3.6.1. The Relationship between Experience and Epistemic Webs

The interrelationship between attentional states, information processing and epistemic webs has been identified, throughout the preceding discussion, as the construct that lies at the heart of expressive timing decisions. In order to scrutinise this interrelationship further, the role of *experience* must be considered. After all, epistemic webs – the networks that amalgamate performers' reservoirs of knowledge – are evidently unique to each individual and ever-growing: they continue to expand with knowledge accumulation. Effective correlations can indeed be drawn between my concept of epistemic webs and violinist Anna McDonald's notion of a 'library of mind',⁵⁶³ as well as singer Göran Folkestad's 'personal inner musical library'.⁵⁶⁴ The more experience performers enjoy, the larger their epistemic webs and the greater number of

⁵⁶³ Anna McDonald, in Bangert, 'Doing without Thinking'. 80.

⁵⁶⁴ Göran Folkestad, 'Digital Tools and Discourse in Music: The Ecology of Composition', in *Musical Imaginations: Multidisciplinary Perspectives on Creativity, Performance and Perception*, ed. David Hargreaves, Dorothy Miell and Raymond MacDonald (Oxford: Oxford University Press, 2012),198.

relationships they form between the assortment of musical elements. As Bangert states, 'experienced performers benefit from an extensive inner library from which to draw'.⁵⁶⁵

3.6.2. The Relationship between Experience and Intuition

Having recognised, in Section 3.6.1, that the size of a musician's epistemic web, and therefore the quantity of knowledge stored in his or her *subattention*, enjoys a direct correlation with experience, and by recalling the definition of intuition – the pre-reflective engine of our subattention – we begin to understand the correlation between experience and intuition. As Gary Klein states, '[i]ntuition is a natural extension of experience':⁵⁶⁶ 'the less experience we have, the weaker our intuitions will be'.⁵⁶⁷

It can, therefore, be deduced that beginner musicians are extremely unlikely to rely exclusively on 'intuition', or pre-reflective, subattentional processing. Largely thanks to their modest epistemic networks, it is far more probable that, during performance, they assume a state of reflective attention that concentrates on a particular technical issue, such as the position of their fingers, the shape of their embouchure, or the rhythm of the phrase. The fact that attention only has the capacity to focus on a single object at any given time,⁵⁶⁸ accounts for the high probability of mistakes and the necessity of step-by-step tutoring during these early stages. By focussing, for example, on embouchure at the expense of finger position, mistakes are inevitable. It is only through an accumulation, solidifying and embodying of knowledge, namely practice and experience, that these skills begin to sink into the musician's subattention, expanding their epistemic reservoir. Once this happens, the knowledge can be accessed by intuition, meaning that cognitive space has become available for a new object of attention. As ever more knowledge reaches one's subattention and epistemic webs grow, the exercising of intuition increases and the likelihood of mistakes diminishes. Just as Daniel Bangert states, '[o]nce relevant information or skills have been ... integrated, a performer can draw on reliable, appropriate intuitive responses'.⁵⁶⁹

⁵⁶⁵ Bangert, 'Doing without Thinking', 80.

⁵⁶⁶ BusinessNews Publishing, *Summary: Intuition at Work: Review and Analysis of Klein's Book* (n. p.: Primento, 2013), 2.

⁵⁶⁷ Gary Klein, in BusinessNews Publishing, *Summary*, 20.

⁵⁶⁸ Betsch, 'The Nature of Intuition and Its Neglect in Research on Judgement and Decision Making', 6. Braun, 'Attention and Awareness', 68.

Myers, *Intuition*, 24.

⁵⁶⁹ Bangert, 'Doing without Thinking', 218.

Having recognised that beginner musicians are most likely to assume a state of intense, reflective attention, concentrating on very specific musical or technical issues, it is important to recognise that they may lose reflective focus altogether and enter daydream-trance during performance. In this scenario we can expect a greater number of inaccuracies, due to a lack of attentional focus on issues that have not yet reached their subattention. I suggest that beginners are, however, extremely unlikely, to enter states of flow-trance through absorption for the reasons given below.

3.6.3. The Relationship between Experience and Flow

Some recent research has investigated the relationship between flow and musical experience. Csikszentmihalyi contends that flow is not dependent 'having an absolute level of skill *per se*',⁵⁷⁰ an opinion corroborated by Bloom and Skutnick-Henley, who conclude that 'flow is not affected directly by experience or proficiency levels ... ; the potential for flow thus appears to be available to novices and professional musicians alike'.⁵⁷¹ A study of 'Flow among Musicians' by Sinnamon, Moran and O'Connell similarly established that 'no significant difference was found between amateur students' overall frequency of flow and that of their counterparts, the elite students'.⁵⁷²

Nonetheless, the results of Sinnamon et al.'s study *do* indicate that 'amateur students experienced flow less frequently ... than elite students did',⁵⁷³ despite the difference being slight.⁵⁷⁴ Furthermore, the authors acknowledge not only that 'flow states are difficult to measure',⁵⁷⁵ but also that there were, in their results, 'subtle but significant differences between the amateurs and elite'⁵⁷⁶ regarding the specificities of their flow experiences. In addition, they recognise that further research is required into flow amongst *professional* musicians.⁵⁷⁷ It is also interesting that, whilst Bloom and Skutnick-Henley, on the one hand, do not regard experience as a prerequisite for flow, on the other hand, they emphasise that in order to reach flow, self-confidence and self-trust are essential⁵⁷⁸ – qualities I argue emanate directly from experience. Moreover, all

⁵⁷⁰ Bloom and Skutnick-Henley, 'Facilitating Flow Experiences among Musicians', 27.

⁵⁷¹ *Ibid.*, 26-27.

⁵⁷² Sinnamon, Moran and O'Connell, 'Flow among Musicians', 16.

⁵⁷³ Chirico et al., 'When Music "Flows"', 9.

⁵⁷⁴ Sinnamon, Moran and O'Connell, 'Flow among Musicians', 16, 18.

⁵⁷⁵ *Ibid.*, 20.

⁵⁷⁶ *Ibid.*, 18, 21.

⁵⁷⁷ *Ibid.*, 20.

⁵⁷⁸ Bloom and Skutnick-Henley, 'Facilitating Flow Experiences among Musicians', 25.

participants in their study were, as they put it, ‘proficient musicians’,⁵⁷⁹ which inherently implies a certain level of experience. Finally, it must be reiterated that flow relies on intuitive processing⁵⁸⁰ which, in turn, relies on experience.⁵⁸¹ Therefore, despite certain research conclusions that experience has ‘no direct impact on flow proneness’,⁵⁸² in the words of Chirico et al. ‘the link between performance and flow ... needs to be further investigated’.⁵⁸³

I propose, in contradiction to many of the comments above, that musical flow-trance is, in fact, a privilege reserved exclusively for experienced musicians. I explain this by highlighting the fact that absorption (the very route to flow-trance) requires a prolonged, reflective focus on a general aspect of the music (as explained in Section 3.4.2), and I suggest that the generality that characterises objects of reflective attention in performance largely depends on the size of the epistemic web and, therefore, the musician’s experience. Beginner performers have relatively modest epistemic webs, and their objects of reflective attention are, therefore, likely to be very specific. As previously suggested, they may, for example, focus specifically on their finger movement, in order to play the correct notes. For highly experienced musicians, on the other hand, such specificity is primarily reserved for practice situations, in which they aim to maintain their highest standard of technique by focusing on particular intricacies. Via practice and experience, these specificities of knowledge become engrained in the musician’s subattention – their epistemic web expands and interconnects – and so in performance, the musician has the opportunity to enjoy more general focuses, such as the overarching trajectories of musical shapes or the overall emotion of the music, which afford the possibility of flow.

As alluded to in Sections 3.5.2 and 3.5.3, when the object of reflective attention is both general and musical (for example, the musical affect), it acts as a valuable trigger in the epistemic web, activating the intuitive execution of the series of more specific,

⁵⁷⁹ Ibid.

⁵⁸⁰ Cohen, *A Daily Dose of Sanity*, 19.

⁵⁸¹ Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 7.

It should also be noted that current research is investigating additional factors, other than experience, that influence flow predisposition, such as individual personality. See Chirico et al., ‘When Music “Flows”’, 1-2; Johannes Keller and Frederik Blomann, ‘Locus of Control and the Flow Experience: An Experimental Analysis’, *European Journal of Personality* 22, no. 7 (November 2008): 589-607; Miriam Mosing et al., ‘Heritability of Proneness for Psychological Flow Experiences’, *Personality and Individual Differences* 53, no. 5 (2012): 699–704.

⁵⁸² Bloom and Skutnick-Henley, ‘Facilitating Flow Experiences among Musicians’, 25.

⁵⁸³ Chirico et al., ‘When Music “Flows”’, 11.

related, pre-reflective musical issues, including tempo, motion, articulation, dynamics, tone colour, vibrato, and ornaments. These related concerns, lying further down the hierarchical web of interconnected knowledge in the performer's subattention (thanks to practice and experience), each encompass additional, more specific issues, such as air pressure and embouchure, all of which are, of course, underpinned by corresponding subpersonal mechanisms. It is precisely this large and interconnected epistemic network – the product of experience – that affords flow-trance-via-absorption: the performer is successfully able to focus on an enduring *general* aspect, such as a broad, goal-directed trajectory, or the overriding musical affect, because the multitude of related issues, which have been interconnected and nurtured via practice and experience, can be reliably accessed via his or her pre-reflective subattention, or intuition.

Most interestingly, the relationships I have drawn between experience, practice, epistemic webs, one's subattention, intuition, pre-reflective processing, and general objects reflective attention (the precursor of flow), are implicitly supported by comments from musicians, such as 'don't worry so much about every note ... your body will know what to do'; 'I don't have to think about fingerings, bowings, dynamics, etc. I just play it and enjoy it'; and 'it is almost as if I were listening to the result of all the hard work without working hard'.⁵⁸⁴ They are also effectively encapsulated by Adam M. Croom:

in order for a highly practiced musical skill ... to become represented in the implicit [intuitive, subattentional, or pre-reflective] system of a musical agent's knowledge base [epistemic web], and thus capable of being implemented by a musical agent without interference from their explicit system [reflective thought] ... a sufficient amount of musical skill must first be acquired by that musical agent through a substantive ... amount of deliberate musical practice and the accumulation of the relevant sensory-motor integration that it results in.⁵⁸⁵

3.6.4. The Relationship between Experience and Pattern Recognition

The way in which the epistemic web of an experienced musician functions during performance (and therefore the information processing that underpins expressive timing

⁵⁸⁴ Participants, in Bloom and Skutnick-Henley, 'Facilitating Flow Experiences among Musicians', 26-27.

⁵⁸⁵ Croom, 'Music Practice and Participation for Psychological Well-Being', 50.

decisions) can be further clarified by the concept of 'pattern recognition'. Central to the fields of Artificial Intelligence and Machine Learning, pattern recognition can be defined, most broadly, as the 'classifying [of] data (patterns) based on either a priori knowledge that is acquired by human experts or on knowledge automatically learned from data'.⁵⁸⁶ My very conception of an interrelated web of knowledge – in particular, the patterns formed between a general reflective attentional focus and a range of related pre-reflective, subattentional elements – is supported by considering pattern recognition in relation to intuition, as do Mary M. Crossan et. al.: '[t]he expert view of intuiting is a process of ... pattern recognition. A highly sophisticated and complex map enables the expert to perceive patterns that novices cannot'.⁵⁸⁷

The relationship between experience and pattern recognition is well-established. Hodgkinson et al., for example, acknowledge not only that experts have 'large numbers of patterns held in long-term memory'⁵⁸⁸ or their subattention, (which accounts for their heightened intuitive ability),⁵⁸⁹ but also that their knowledge is 'more organized than novices, in ways that enable them to access it efficiently. Novices see information in isolated pieces; experts see large meaningful patterns'.⁵⁹⁰ As previously argued, via experience musicians forge relationships between a range of epistemic issues, creating patterns in their ever-growing epistemic webs. These very patterns allow them to assume a general focus of reflective attention, such as goal-directed motion, which inherently incorporates a number of related pre-reflective issues, such as articulation, note length, rubato and punctuation.

The theory of pattern recognition has indeed been applied to a range of practices. Studies of chess players, for example, explain that the 'intuitive expertise'⁵⁹¹ of grand masters arises from 'their ability to access a repertoire of an estimated 50000 to 100000 immediately recognisable patterns',⁵⁹² confirming that '[t]he more you practice, the more

⁵⁸⁶ Marie-Francine Moens, *Information Extraction: Algorithms and Prospects in a Retrieval Context* (The Netherlands: Springer, 2006), 65.

⁵⁸⁷ Mary M. Crossan, Henry W. Lane, and Roderick E. White, 'An Organizational Learning Framework: From Intuition to Institution', *The Academy of Management Review* 24, no. 3 (July 1999): 526.

⁵⁸⁸ Hodgkinson, Langan-Fox and Sadler Smith, 'Intuition', 7.

⁵⁸⁹ Ibid.

⁵⁹⁰ Myers, *Intuition*, 56.

⁵⁹¹ Daniel Kahneman and Gary Klein, 'Conditions for Intuitive Expertise: A Failure to Disagree', *American Psychologist* 64, no. 6 (September 2009): 515.

⁵⁹² Bangert, 'Doing without Thinking', 145.

patterns you intuitively recognize'.⁵⁹³ With specific regard to music, this very correlation between practice, subattentional epistemic patterns and intuition is alluded to by Jane Davidson:

the information stored in memory [*subattentional knowledge*], the mental plans and schemes which organize these memories [*pattern recognition*], and associated thoughts and physical actions [*related epistemic issues and corresponding gestures*] becomes completely automatic and fluent [*intuitive*]. Practice is central to achieving this fluency.⁵⁹⁴

3.6.5. The Effect of Practice on Intuition: An Exploration of Intuition's Subsets

Despite the tendency of some musicians to regard intuition as a matter of nature, separate from that of practice and experience (nurture), it is evident from Sections 3.6.3 and 3.6.4 that *practice* does affect intuition. This is confirmed by David Myers, who states that a skilled musician's 'intuition is hard-earned. It is natural, graceful automatic processing wrought from thousands of hours of practice'.⁵⁹⁵ In order to gain an even deeper understanding of intuition – a phenomenon confirmed as *central* to the interpretative process and, therefore, to temporal expressivity – its relationship with practice must be further scrutinised.

In their study of musical decision-making, 'Performing Solo Bach', Bangert et al. directly acknowledge the influence of repetition and practice on intuition. Drawing on the work of Jonathan Evans, they identify a sub-category of intuition, using the term 'procedural' to classify 'intuitive decisions that were described as having been conscious deliberate choices at some point in the past'⁵⁹⁶ – choices that 'were once explicitly rehearsed and have become automatic through practice'.⁵⁹⁷ This description resonates strongly with my argument, described in Chapter 4, that by embodying explicit knowledge in practice – the practical application and exploration of reflective intentions – initially

⁵⁹³ Thomas A. Stewart, 'How to Think with Your Gut: How the Geniuses behind the Osbournes, the Mini, Federal Express, and Starbucks Followed Their Instincts and Reached Success', *Business 2.0*, November 2002, 1.

⁵⁹⁴ Jane Davidson, 'Communicating with the Body in Performance', in *Musical Performance: A Guide to Understanding*, ed. John Rink (Cambridge: Cambridge University Press, 2002), 144.

⁵⁹⁵ Myers, *Intuition*, 59.

⁵⁹⁶ *Ibid.*, 39.

⁵⁹⁷ Evans, 'Dual-Process Theories of Deductive Reasoning', 126.

explicit, reflective, deliberate decisions gain a tacit, experiential dimension as they enter one's subattention: an intuitive, 'what-it-feels-like', pre-reflective quality. Alluding to the fluidity of the explicit-tacit relationship, implicitly confirming the correlation between practice, embodiment, one's subattention and intuition, and somewhat reflecting Herbert A. Simon's notion of 'analyses frozen into habit', the term 'procedural' can, therefore, be summarised most simply as 'the assimilation and automation of previously deliberate decisions'.⁵⁹⁸

This very proposition of a 'procedural' subset could be a plausible response to psychologist Robert Hamm's question of whether there are two types of intuition:

[i]t may be argued that expert cognition is distinct from the intuition that is based on instinctual or emotional response tendencies or learning processes ... because expertise is postulated to be based on explicit analytic processes that have become chunked and automatized.⁵⁹⁹

Baylor, who distinguishes novices' 'immature intuition' from experts' 'mature intuition', also advocates such a bilateral distinction.⁶⁰⁰ Whilst it is evident that experts' 'mature', 'procedural' intuition arises from epistemic roots, it must be remembered that, ultimately, *all* intuition originates in knowledge and experience of some sort: it is the 'integration of all the experiences, conditioning, and knowledge of a lifetime, including cultural and emotional biases of that lifetime'.⁶⁰¹ We might consider, therefore, that the sole difference between 'procedural' intuition on the one hand, and 'immature', 'instinctual',⁶⁰² or 'gut'⁶⁰³ intuition on the other, is simply that the former describes the pre-reflective processing of *knowledge that was initially the focus of reflective of attention* and has reached one's subattention through deliberate practice and embodiment. By contrast, the latter describes the pre-reflective accessing of *knowledge that has not been the object of prior critical thought (or reflective attention)*.

⁵⁹⁸ Bangert et al., 'Performing Solo Bach', 44.

⁵⁹⁹ Hamm, 'Cue by Hypothesis Interactions in Descriptive Modeling of Unconscious Use of Multiple Intuitive Judgement Strategies', in Betsch, Betsch and Plessner, *Intuition in Judgement and Decision Making*, 56.

⁶⁰⁰ Amy Baylor, 'A U-Shaped Model for the Development of Intuition by Level of Expertise', *New Ideas in Psychology* 19, no. 3 (2001): 237-244.

⁶⁰¹ Bruce D. Henderson, in Prassana Chandra, *Financial Management: Theory and Practice*, 8th ed. (New Dehli: Tata McGraw Hill, 2011), 399.

⁶⁰² Hamm, 'Cue by Hypothesis Interactions in Descriptive Modeling of Unconscious Use of Multiple Intuitive Judgement Strategies', 56.

⁶⁰³ Sadler-Smith, *Inside Intuition*, 1, 3.

Further clarification can perhaps be gained by considering my explorations of ‘explicit’ and ‘tacit’ knowledge, as presented in Chapter 4, Section 4.2.⁶⁰⁴ Indeed, procedural intuition is perhaps most easily associated with knowledge that has been codified and *explicitly* defined: its very explicit quality enables it to occupy reflective attentional focus clearly. As an example, a musician, such as myself, experienced in playing Baroque repertoire, would likely insert a cadential trill pre-reflectively, without intentional, deliberate thought – an intuitive, decision that of course ultimately arises from explicit knowledge of Baroque performance practice. Through practice, experience and embodiment, the explicit knowledge has become engrained in the musician’s subattention, and is subsequently externalised as an intuitive decision thanks to Type 1 pre-reflective processing. So-called ‘gut’ intuition, on the other hand, perhaps arises from epistemic aspects that are fundamentally uncodifiable, such as our embodied, phenomenal experience of felt shapes – tacit knowledge that cannot accurately be codified and is, therefore, less readily accessible to our reflective attention. Of course, as explored in Chapter 4, theories such as Mark Johnson’s ‘image schemata’⁶⁰⁵ have indeed emerged in an attempt to codify our phenomenal experiences. The resulting theoretical information – such as explicit knowledge of the pathway schema – could become the focus of reflective attention, as we critically consider our experience of goal-directed musical motion from a phenomenological perspective. As the following chapter explains, however, these theories only represent the superficial apex of knowledge that is, in fact, much more profound, fundamentally experiential and largely uncodifiable.

In any case, the crux of the argument is that *all* intuition is ultimately ‘informed’ or ‘acquired’. ‘Procedural’ intuition merely describes palpable examples, from which the *origin* of knowledge can be traced (thanks to the appearance of its explicit codification in reflective attention) far more easily than it can from ‘gut’ intuition, which (thanks to the

⁶⁰⁴ It should be noted that issues of ‘explicit’ and ‘tacit’ knowledge do, in fact, feature in the literature on intuition. On a most rudimentary level, Type 1 processing is, commonly equated with implicit learning. For examples, see the references below:

Bangert, ‘Doing without Thinking’, 162 and 218; Cornelia Betsch, ‘Chronic Preferences for Intuition and Deliberation in Decision Making: Lessons Learned about Intuition from an Individual Differences Approach’, in Betsch, Betsch and Plessner, *Intuition in Judgement and Decision Making*, 241; Evans and Stanovich, ‘Dual-Process Theories of Higher Cognition’, 225, 236; Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 2-5; Robin Hogarth, *Educating Intuition* (Chicago: University of Chicago Press, 2001), 36; Liebermann, ‘Intuition’, 109-137; Myers, *Intuition*, 33-34, 57; Authur Reber, ‘Implicit Learning of Tacit Knowledge’, *Journal of Experimental Psychology: General* 118, no. 3 (1989), 219, 232; Stanovich and West, ‘Individual Differences in Reasoning’, 709.

⁶⁰⁵ Johnson, *The Body in the Mind*, 65-100.

‘uncodifiable’ essence of tacit knowledge – an experiential quality that rarely assumes *reflective* focus) masquerades as innateness. This is, of course, not to say that intuition is sterile and spiritless, and that performance is void of imagination and excitement, but rather that the ability to make apparently spontaneous decisions and creative leaps (the very qualities that engender the magic of performance) is afforded by these forms of knowledge, which together offer a fluid epistemic network of possibility.

To conclude this discussion concerning the subsets of intuition, it is interesting to note that Yeadon affiliates *procedural* intuition with flow.⁶⁰⁶ I propose that this connection simply highlights Bloom and Skutnick-Henley’s suggestion that self-confidence and self-trust are essential for flow.⁶⁰⁷ Self-confidence and self-trust arise from familiarity, which Bloom and Skutnick-Henley also regard as a fundamental for flow.⁶⁰⁸ Procedural decisions, of course, arise from explicit, reflective origins and practice, which, together, engender a dependable familiarity. With the reassurance of this familiarity, therefore, self-trust is gained and Yeadon is able to ‘let go’⁶⁰⁹ – yet another factor that Bloom and Skutnick-Henley regard as indispensable for flow.⁶¹⁰ As Bangert states, ‘the security that comes from knowing that your intuition is based on deep knowledge, [and] familiarity ... leads to ... trust’.⁶¹¹

3.7. Epistemic Webs

3.7.1. A Framework for Understanding Interpretation

With its close affiliation to attentional states and information processing, my conception of epistemic webs – the construct at the centre of expressive decisions – is intended to provide a framework for understanding interpretation. Due to the multiplicity of interrelated musical variables, an experienced musician’s web is a *particularly* fluid and dynamic network of possibility, offering a variety of performative routes, each of which draws on a unique combination of knowledge. Not every variable can be exploited every time. These different routes equate to different interpretations.

⁶⁰⁶ Bangert et al., ‘Performing Solo Bach’, 45-46.

⁶⁰⁷ Bloom and Skutnick-Henley, ‘Facilitating Flow Experiences among Musicians’ 25-26.

⁶⁰⁸ *Ibid.*, 26.

⁶⁰⁹ Bangert, ‘Doing without Thinking’, 175, 177.

⁶¹⁰ Bloom and Skutnick-Henley, ‘Facilitating Flow Experiences among Musicians’ 26.

⁶¹¹ Bangert, ‘Doing without Thinking’, 82.

As violinist Lucy Van Dael states, in performing any piece ‘you have so many possibilities’.⁶¹² Each time a performer plays the same piece of music, she or he dips into the unending palette of expressive opportunity, exploring various combinations and creating unique renditions. Of course, in practice and rehearsal situations, detailed interpretative work can be carried out by systematically isolating individual variables. Bangert, for example, talks of performers ‘experimenting with interpretative possibilities’ and explains that ‘it is through deliberate practice that decisions are consciously weighed up, reflected on, analysed, and other options explored’.⁶¹³ Undoubtedly, by investigating the array of possibilities through this thorough and experimental process, an invaluable intimacy is generated, both rewarding and dependable. The performer knows the music on a profound level. Subsequently, the musician may choose to carefully construct his or her ‘perfect’ interpretation, endeavouring to cement every precise interpretative nuance. When meticulous replication of this ‘ideal’ rendition becomes an obsessive preoccupation and the primary concern of performance – as it did for me at the beginning of my concert on 9th May 2015 – this reliable and reassuring, yet rigid and prescriptive, security becomes an obstacle that *inhibits* absorption. The performer’s cognitive state is certainly one of intense, reflective attention; yet it is characterised by a long series of momentary attentional bursts, sequentially focusing on each of the specific elements the performer wishes to regulate: ‘a trill here; a longer note there; staccato articulation here; *notes inégales* there; this fingering here; a quick breath there’. In order to facilitate his or her ‘ideal’ interpretation, the numerous, and rather transitory, objects of attention lie towards the bottom of the performer’s epistemic web, near to the subpersonal processes. This guarantees maximum accuracy and control over the predetermined details. The parts of the web that are exploited during performance are simply controlled regularly and with purposeful, premeditated outcomes.

On the other hand, many experienced musicians enter a performance situation without such a fixed musical agenda. Sebastian Comberti, for example, explains: ‘[w]hat I like ... is not to set it in stone. ... It might come out slightly differently every time’.⁶¹⁴ Susie Napper comments similarly: ‘you have many recipes up your sleeve and whatever feels good at the moment is the one you choose’.⁶¹⁵ In these cases, performers trust that

⁶¹² Lucy Van Dael, in Bangert, ‘Doing without Thinking’, 76.

⁶¹³ *Ibid.*, 216.

⁶¹⁴ Sebastian Comberti, in Bangert, ‘Doing without Thinking’, 78.

⁶¹⁵ Susie Napper, in Bangert, ‘Doing without Thinking’, 77.

their intuition – fostered by knowledge, experience, practice, and ultimately pattern recognition – will lead them through one of many possible interpretative routes. As Stephen Emmerson insists, ‘the processes of decision-making ... should be transcended in performance’⁶¹⁶: ‘[o]ne hands the process over to the subconscious instincts [intuition] to synthesise – to forge all those details into a coherent form, inevitably one that is your own’.⁶¹⁷ Alluding more specifically to the notion of *procedural* intuition, Bernard D. Sherman summarises ‘[o]ne doesn’t *think*; one *has thought*’.⁶¹⁸

This trust in intuition and openness to interpretative flexibility encourages the performer to give up control over every expressive nicety and assume a much more general object of reflective attention that occupies a higher position in their epistemic web – a reflective focus on, for example, the goal-directed trajectory, ‘the overall architecture’,⁶¹⁹ the felt shape, or the musical emotion. This, of course, creates the appropriate condition for absorption, which affords the possibility of flow-trance. In these instances of intense reflective attention on a general aspect of the music, the specific expressive nuances lie not under the direct control of the performer, but rather in the creative power of his or her intuition, which ultimately determines which particular interpretative route is taken. The broad object of attention simply directs intuition to the general area of the epistemic web that will be exploited. The performance is, therefore, guided by the reflective attentional object, yet predominantly carried out by intuition – pre-reflective, subattentional Type 1 processing. It is this very essence of unpredictable variety – the submission of control to *intuition* – that indeed accounts for the *creative* nature of absorption. After all, many connections have been established between creativity and intuition.⁶²⁰ Hodgkinson et al., for example, assert that intuition is, in fact, the very ‘antecedent of creativity’.⁶²¹

At this point, it is important to reiterate that, as discussed in Section 3.5.2, *all* attentional states rely, to varying extents of course, on one’s pre-reflective subattention. Intuition is, therefore, an inextricable ingredient of *every* interpretation, accounting for

⁶¹⁶ Bangert, ‘Doing without Thinking’, 219.

⁶¹⁷ Stephen Emmerson, ‘Evoking Spring in Winter: Some Personal Reflections on Returning to Schubert’s Song Cycle’, in *Music Autoethnographies*, ed. Brydie-Leigh Bartleet and Carolyn Ellis (Bowen Hills: Australian Academic Press, 2009), 117.

⁶¹⁸ Bernard Sherman, *Inside Early Music: Conversations with Performers* (Oxford: Oxford University Press, 1997), 198.

⁶¹⁹ Yeadon, in Bangert, ‘Doing without Thinking’, 197.

⁶²⁰ Bangert, ‘Doing without Thinking’, 29, 152, 153.

⁶²¹ Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 19.

the uniqueness of every performance. As a participant in Bloom and Skutnick-Henley's study summarises: '[e]very time I play, something new happens'.⁶²² It is evident, therefore, that, thanks to the multitude of expressive possibilities they afford and their reliance on pre-reflective Type 1 processing, epistemic webs are the very site of interpretative creativity. Interestingly, their creative quintessence is implicitly supported by Bangert's theory of 'musical intuition'. Indeed, by drawing on Gore and Sadler-Smith's four primary categories of intuition – problem-solving, creative, social, and moral,⁶²³ – Bangert proposes that 'musical intuition' could be conceptualised as a distinct, 'secondary type': a composite predominantly comprising 'creative' and 'problem-solving' intuitions.⁶²⁴ Remarkably, 'creative intuition' is defined by Goldberg as involving 'alternatives, options' or 'possibilities',⁶²⁵ and 'problem-solving intuition' is intimately related to 'pattern matching'.⁶²⁶ Defined precisely as a network of many interpretative 'alternatives, options' or 'possibilities' that are interrelated, organised and navigated via 'pattern matching' (or pattern recognition), the parallels between epistemic webs and 'musical intuition' are patent.

3.7.2. Rationalising the Optimal State

Having recognised that interpretative creativity is affiliated with the pre-reflective processing of epistemic webs, why is flow-trance-via-absorption regarded as a *particularly* creative and satisfying experience, the optimal performance state? Overall, as noted by MacDonald, Byrne and Carlton, 'there is a relative dearth of research literature investigating the process and outcomes of creative tasks'.⁶²⁷ Despite this, I propose that the highly creative, and indeed gratifying, quality of flow-trance can be explained by considering, in greater detail, the two fundamentally characterising and interdependent features of absorption: generality and prolonged duration.

⁶²² Participant, in Bloom and Skutnick-Henley, 'Facilitating Flow Experiences among Musicians', 26.

⁶²³ Julie Gore and Eugene Sadler-Smith, 'Unpacking Intuition: A Process and Outcome Framework', *Review of General Psychology* 15, no. 4 (2011): 308.

⁶²⁴ Bangert, 'Doing without Thinking', 144-145, 154.

⁶²⁵ Philip Goldberg, 'The Many Faces of Intuition', in *Intuition in Organizations: Leading and Managing Productively*, ed. Weston Agor (Newbury Park: Sage Publications, 1989), 65.

⁶²⁶ Erik Dane and Michael Pratt, 'Conceptualizing and Measuring Intuition', 'Conceptualizing and Measuring Intuition: A Review of Recent Trends', in *International Review of Industrial and Organizational Psychology*, vol. 24, ed. Gerard Hodgkinson and J. Kevin Ford (West Sussex: Jon Wiley & Sons, 2009), 5-7; Gore and Sadler-Smith, 'Unpacking Intuition', 308.

⁶²⁷ MacDonald, Byrne and Carlton, 'Creativity and Flow in Musical Composition', 294.

Firstly, in a state of *reflective* attention, the *quantity* of related gestures that arise *intuitively* (from one's pre-reflective subattention) relates to the generality and duration of the attentional objects. The more *general* the reflective focus (the higher it sits on the web), the greater the quantity of related pre-reflective, subattentional dimensions it encompasses. Similarly, the more *prolonged* the focus, the fewer the distinct objects that enter reflective attention, and consequently the greater the number of gestures that arise from one's subattention, or intuition. Absorption, characterised precisely by a *prolonged* and *general* reflective focus, therefore relies extensively on intuition.

Furthermore, the array and variety of *possible* gestures on which intuition has the capacity to draw enjoys a direct correlation with the size of the web – the quantity of variables generated via knowledge and stored in one's subattention – and, therefore, the experience of the performer. Absorption of course relies on a general focus, a general focus relies on a large web, and a large web relies on an experienced performer. This means that the experienced performer's web is particularly rich and colourful, abounding with various possibilities for intuition to exploit. This extreme degree of opportunity and variety equates to exceptional flexibility and creativity. After all, as Eugene Sadler-Smith states, 'creativity depends upon expertise'.⁶²⁸ Robert Sternberg and Todd Lubart also identify expertise as a prerequisite for creativity: '[t]he more ideas and images each of us has gained through accumulated learning, the more chances we have to combine the building blocks in *creative ways*'⁶²⁹ (italics added for emphasis).

Another valuable and exclusive characteristic of absorption is that the general attentional focus means that everything that occurs pre-reflectively in relation to that focus enjoys a *common overall theme*, such as the prevailing emotion of the music. The intuitive gestures, though excitingly unpredictable, are likely to be mutually enhancing, as they enjoy a shared commonality. This idea is alluded to in Bangert, Fabian, Schubert and Yeadon's study: a number of quotations from expert-cellist Daniel Yeadon indicated that many of his interpretative decisions were 'manipulated in an interrelated manner to

⁶²⁸ Sadler-Smith, *Inside Intuition*, 121.

⁶²⁹ Myers, *Intuition*, 59.

It is important to note that the range of possibilities, of course, also increases with the number of participating musicians. All performers have their own individual epistemic web, and these vibrant networks form relationships with one another, interacting in every moment that the musicians play together. Any gesture by any performer can act as a trigger, immediately transporting the musicians to different parts of their webs, stimulating new connections, and aiding web-expansion.

achieve a certain musical goal'.⁶³⁰ Furthermore, Chaffin, Lemieux and Chen note that 'if the performer focuses on interpretative and expressive goals [general objects of reflective attention], then a spontaneous and creative performance [the result of flow-trance-via-absorption] is possible. The small variations that inevitably occur in any performance will be shaped by the performer's musical goals'⁶³¹ (which provide the common overall theme).

As illustrated by Figure 3, the more general the attentional focus, the greater the number of *related* intuitive gestures it encompasses. If the object of reflective attention is, conversely, characterised by a *specific* element, such as double tonguing articulation, or the fingering of each particular note, far fewer *related* elements are left to intuition. Of course, alongside these specific, fluctuating objects of reflective attention, simultaneous *unrelated* aspects of the performance continually arise via the musician's pre-reflective subattention, as explained in Section 3.5. The pre-reflective gestures are, however, comparatively arbitrary – they are not linked to a common overall focus in the same way that characterises the numerous related intuitive gestures generated by absorption. Evidently, if the performer's reflective focus is completely *extra-musical*, then the musical web is manipulated *exclusively* by his or her pre-reflective subattention: *every* musical gesture arises intuitively, but once again with no overall theme.

In *totally* pre-reflective states – namely states of general awareness, pre-reflective attention, flow-trance, and daydream-trance – *everything* that transpires is contingent upon one's pre-reflective subattention, or intuition. This is the epitome of unpredictability and creativity. States of general awareness, pre-reflective attention and daydream-trance differ from flow-trance, however: they do not arise from an initial reflective focus. Flow-trance-via-absorption, on the other hand, *always* begins with a general object of reflective attention – such as the goal-directed trajectory or musical emotion – which *guides* most of the intuitive gestures. I believe that it is this initial guidance – the common theme – that explains why this particular creative state is the most satisfying, the optimum. Fundamentally grounded by the general reflective focus, the performer becomes immersed in the overall, pre-reflective, 'what-it-feels-like' quality of the exhilarating experience of absorption, which is all that remains when the reflective

⁶³⁰ Bangert et al., 'Performing Solo Bach', 50.

⁶³¹ Roger Chaffin, Anthony Lemieux and Colleen Chen, 'Spontaneity and Creativity in Highly Practised Performance', in *Musical Creativity: Multidisciplinary Research in Theory and Practice*, ed. Irène Deliège and Geraint Wiggins (East Sussex: Psychology Press, 2006), 201.

focus then lifts and the performer is transported into the transcendental world of flow-trance. Indeed, the ‘what-it-feels-like’ quality of reflectively guided absorption is carried over, and becomes the sole condition that characterises the posterior, pre-reflective state (flow-trance), which is consequently most effective, fruitful and rewarding.⁶³²

3.7.3. Activation: Reflective and Pre-Reflective Triggers

When control is assigned to intuition, how can it be trusted to exploit one’s epistemic web both reliably and effectively? Whilst this can be explained partly by ‘pattern recognition’, I also propose the notion of ‘pre-reflective triggers’, and revisit, with elevated significance, the phenomenological, ‘what-it-feels-like’ quality of pre-reflective experience. It has already been suggested (in Sections 3.5.2 and 3.5.3) that objects of reflective attention activate series of related subattentional and subpersonal dimensions that have been nurtured and interconnected via practice and experience (See Figure 3). I will call this the functioning of ‘reflective triggers’. I suggest that ‘pre-reflective triggers’ behave in a near identical fashion, prompting additional, subattentional responses but from a *pre-reflective* impetus: explicitly, the ‘what-it-feels-like’ output of subpersonal processes. This is very close to Bauman and Kuhl’s argument that ‘extended associationistic networks are activated automatically on exposure to a stimulus’.⁶³³ Triggers, therefore, undoubtedly *instigate* pattern recognition and ‘intuitive’ responses.

Triggers can be likened to the notion of ‘cues’, which appears in the literature surrounding intuition and pattern recognition. Alluding to the notion of procedural decisions, Chaffin et al. explain that, ‘practising with ... particular features in mind [in my terms, reflective attention] turns them into performance cues, features of the music that come to mind automatically [intuitively] as the piece unfolds, along with their associated motor responses’.⁶³⁴ Herbert Simon clarifies: ‘the situation has provided a cue; this cue has given the expert access to information stored in memory [their subattentional epistemic web], and the information provides the answer’.⁶³⁵ The cue, therefore, acts as a trigger, instigating a series of reactions by activating the related knowledge from one’s epistemic web. In drawing implicit connections with pattern recognition, Hodgkinson et

⁶³² I reiterate that this discussion is grounded in the phenomenological experience of a performer. It does not attempt to make any claims about audience reception or experience – avenues that lie beyond the remit of this research.

⁶³³ Hodgkinson, Langan-Fox and Sadler Smith, ‘Intuition’, 12.

⁶³⁴ Chaffin, Lemieux and Chen, ‘Spontaneity and Creativity in Highly Practised Performance’, 202.

⁶³⁵ Herbert Simon, ‘What is an “Explanation” of Behaviour?’, *Psychological Science* 3, no. 3 (1992): 155.

al. elucidate that an 'expert's intuitive ability is ... derived from their capacity to recognize ... cues and rapidly match those cues to ... patterns, responding in ways that lead to effective ... decision making'.⁶³⁶ As Chaffin et al. summarise: 'performance cues make it possible for the execution of a highly prepared, automatic skill to be a creative response to the demands of a particular performance'.⁶³⁷

Interestingly, Chaffin et al. classify three types of cue: 'basic cues', which include technical issues and ensure accuracy (and would therefore lie towards the bottom of the epistemic web); 'interpretative cues', which (lying further up the epistemic web) encompass matters such as phrasing, dynamic, tempo and timbre; and 'expressive cues', which relate to feeling and emotion (and would assume, therefore, a position at the top of the epistemic web).⁶³⁸ Most interestingly, the links I have forged between general focuses of reflective attention and creativity are confirmed through Chaffin et al.'s discussion. Indeed, they state:

[w]hen a performer has to think mostly of basic cues dealing with matters of technique, the possibilities for creativity are limited. When a performer is focused on interpretive cues and is thinking about what the music sounds like, the opportunities for creativity are greater but still limited. The goal of performance is to evoke musical feelings and this is best achieved when the performer focuses on expression. A creative performance is, therefore, most likely when the performer is focusing on expressive cues.⁶³⁹

This undoubtedly reinforces the idea that assuming a general object of reflective attention – the very route to flow-trance – is indeed a favourable attentional state.

I argue that all cues have the capability to be reflective *or* pre-reflective. Chaffin et al. allude to this when they explain that if an expressive goal is under 'the spotlight of attention' – in other words, the object of reflective thought and, hence, the *reflective trigger* – then the other cues 'form a penumbra on the edges of awareness'; in other words, they form a group of *pre-reflective triggers* that function in our subattention.⁶⁴⁰ Whilst reflective triggers are perhaps easily identifiable (see Figure 3), pre-reflective

⁶³⁶ Hodgkinson, Langan-Fox and Sadler Smith, 'Intuition', 7.

⁶³⁷ Chaffin, Lemieux and Chen, 'Spontaneity and Creativity in Highly Practised Performance', 202.

⁶³⁸ *Ibid.* 202.

⁶³⁹ *Ibid.*, 215.

⁶⁴⁰ *Ibid.*, 203.

triggers are rather more subtle. An example of a pre-reflective trigger that influences expressive microtiming might be the ‘what-it-feels-like’ quality of an increase in motion (underpinned by subpersonal mechanisms) that becomes too fast for single tonguing technique to endure. By sending a signal to the performer’s subattention – his or her unique repository of information, acquired through knowledge, practice and experience – the appropriate faster tonguing pattern is intuitively accessed and exploited. A second example might be the phenomenal experience of a passage of increasing harmonic tension in a Baroque sonata. This pre-reflective trigger stimulates an intuitive response, such as pushing forward and growing through the dissonant harmonies to the resolution – a subattentional reaction that has, of course, been shaped by knowledge of issues relating to performance practice and harmony (namely matters of consonance and dissonance, tension and release, and strong-weak emphasis), as well as, of course, the necessary knowledge of corresponding technique. A final example might be the ‘what-it-feels-like’ quality of playing stepwise quavers in a piece of French Baroque music. This propels a signal to the musician’s subattention, which stores knowledge of French repertoire and of historical and national performance practice issues (including rhythmic alteration, particular tonguing patterns, and specifically *notes inégales*) and this leads to intuitively uneven playing.

Whilst some triggers are somewhat general and widely applicable, such as the three aforementioned examples, others can be extremely particular, and even specific to an individual piece of music. The phenomenal, ‘what-it-feels-like’ experience of playing a distinct phrase of a certain piece, for instance, might act as a pre-reflective trigger that activates a particular interpretative response, or series of responses nurtured by practice, simply leading the performer down a recognisable route in the web. Of course, the very nature of practice means that preferred and more effective routes are likely to become more familiar, becoming engrained in the performer’s subattention as ‘popular interpretative packages’, which can be accessed readily via the corresponding triggers.

Playing *notes inégales*, therefore, may be a widely applicable intuitive response of an experienced musician playing *any* piece of French Baroque music, familiar *or* unfamiliar. Thanks to the performer’s extensive experience of this style of repertoire, the phenomenal quality of playing stepwise quavers amidst a quintessentially French piece of Baroque music acts as a trigger, pre-reflectively activating unequal playing. This could justify the following comments from participants in ‘Doing without Thinking’: ‘a certain

percentage of stylistic understanding is built in';⁶⁴¹ 'why do I make those decisions? I don't know, I guess it's just experience. I think I recognize other things. I haven't played it, I haven't heard it before but it certainly reminds me [perhaps pre-reflectively] of other things'.⁶⁴² On the other hand, *notes inégales* could also characterise part of an interpretative route that is particular to a specific passage of *learned* music. The familiar succession of notes creates an extremely recognisable pre-reflective experience that immediately triggers uneven playing, evidently demonstrating the functioning of *procedural* intuition. In this case, the use of *notes inégales* has become part of the performer's preferred interpretative route for that *particular* piece.⁶⁴³

3.7.4. Some Final Remarks on Intuition

To conclude the discussion of epistemic webs, it is useful to return to intuition, now understood not merely as the elusive phenomenon to which so many musicians attribute their interpretative decisions, but the fundamental system that accesses and navigates epistemic webs during performance, giving rise to interpretative decisions and expressive nuances, including those of microtiming. In particular, it is interesting to consider the *conspicuousness* of intuition in relation to different triggers, epistemic levels, and attentional states.

Of course, in performance, a matter of expressive timing at any level of generality or specificity might characterise the object of reflective attention. The directly associated, *pre-reflective* specificities of the epistemic web, which lie in our subattention and are generated by subpersonal processes that have been manipulated by practice, are relied upon to fulfil this attentional focus, which simply acts as the reflective trigger. This is the working of intuition. It is only usually regarded as such, however, when the intuitive musical gesture is not the *direct* result of the intentional object of reflective attention. This is because when one reflectively *intends* to implement *notes inégales* or an increase in motion, and does so successfully, it does not feel intuitive, despite relying on *pre-*

⁶⁴¹ Participant 6, in Bangert, 'Doing without Thinking', 135.

⁶⁴² Participant 1, in Bangert, 'Doing without Thinking', 212.

⁶⁴³ Interestingly, Bangert implicitly supports my suggestion that intuition can be activated both by a trigger that is very general and widely applicable (e.g. stepwise quavers in any quintessentially French piece) *and* by a very familiar trigger, specific to an individual circumstance (e.g. a particular passage of a specific piece) when he states that 'concept of automaticity ... can be thought of as a process that occurs over a performer's lifetime, but also as something that happens over the course of preparing for any one performance'.

Bangert, 'Doing without Thinking', 83.

reflective responses (namely the appropriate tongue and finger technique): one has simply fulfilled the outcome of the reflective attentional object.

On the other hand, when one's attention focuses on the overall musical shape or emotion, and the motion increases seemingly 'spontaneously', the expressive timing decision appears intuitive. This is because the temporal manipulation, although related to the reflective focus, is not the *specific* intentional outcome. Sitting higher up on the musical web, the attentional object – the overarching musical shape or prevailing emotion – is simply more general, and the increase in motion is merely one related, *pre-reflective* dimension that happens to be exploited on this occasion in response to the reflective trigger. In this instance, the operation of intuition is certainly palpable, yet it is fundamentally identical to the previous example. The 'process of intuition' simply occurs on a larger scale as it journeys down the epistemic web. There undoubtedly exists, therefore, a direct correlation between the transparency of intuition and the generality of the reflective trigger – the higher the trigger sits on the web, the more conspicuous the working of intuition. Indeed, intuition is also clearly recognisable when the specific object of reflective attention, perhaps extra-musical, is completely unrelated to the pre-reflective musical gestures, and also, of course, when a completely pre-reflective state is assumed. In these instances, temporal gestures arise exclusively from pre-reflective triggers.

It appears, therefore, that, developing the definition provided in Section 3.5.2, intuition can best be described as the *pre-reflective* process by which knowledge stored in one's subattention is accessed and manifested, in response to both reflective and pre-reflective triggers.

3.8. Postlude

On 9th May 2015, I walked onto the stage of the National Centre for Early Music in York, to perform J. S. Bach's Sonata for Flute and Continuo BWV 1030. Initially focused on staying calm and watching my step, I began playing the first movement. In light of this chapter, I would now describe my initial attentional state as one of reflective attention, focused extra-musical thoughts.

Endeavouring to do justice to the many hours of practice I had undertaken – to satisfy the technical demands and interpretative decisions I had taken the time to perfect – I focussed carefully on a stream of specific technical and expressive concerns. In order

to assume maximum control over my performance, a series of transient issues, lying near the bottom of my epistemic web, entered my reflective attention, one at a time. I would argue this to be the most common state that performers assume at the beginning of any performance: not only does it facilitate heightened concentration, but the reassuring and reliable sense of security and control that it affords allows the musician to relax into the performance.

Many of these issues were indicated by scribbles on my score, which served as reminders, helping to facilitate my 'ideal' execution. My annotations acted as cues, which helped to direct my reflective attention.

With specific regard to expressive microtiming, I focused on breathing in the places I had marked, and implementing the agogic stresses, articulations, motional trajectories, expressive retards, punctuation marks and embellishments that I had meticulously deliberated and eventually decided upon during the rehearsal process, in order to characterise and appropriately vary the numerous thematic returns, to interact effectively with the obligato harpsichord part, and, most importantly, to enhance the musical shapes and emotions. These numerous, successive objects of attention were reflective triggers that guided many of my interpretative decisions by instigating serial Type 2 information processing – a system that of course still relied on the pre-reflective processing of *related* information from the subattentional and subpersonal levels of my epistemic web. Furthermore, additional pre-reflective triggers (such as the phenomenal experience of the musical emotion, or the 'what-it-feels-like' familiarity of playing that particular passage of music) guided the remaining, *unrelated* expressive gestures. Reflective Type 2 and pre-reflective Type 1 information-processing functioned concurrently.

I felt in control of my temporal manipulations as I intentionally realised them, one by one. Once, again, this sense of control is confirmed by the specificity of my reflective focus which governed my decision-making.

Despite the initial extremity of my concentration, I must admit not only that extra-musical thoughts (such as 'I hope the audience members are enjoying this') occasionally stole my attention, but also that, as I began to relax into the performance, my focus appeared to dilute. Indeed, there were moments in which I appeared to think of nothing in particular, enjoying only a general awareness of my surroundings. Lacking focused concentration on my interpretative nuances, my expressive timing decisions felt

somewhat out of my immediate control. In these moments of reflective attention on an extra-musical thought, and pre-reflective general awareness, every musical gesture transpired via pre-reflective triggers, which activated intuitive, Type 1 processing to navigate the epistemic web lying in my subattention.

On occasions, even this general awareness deteriorated and I found myself in a subdued, hazy and empty daze: a prolonged period of pre-reflective attention had led me to daydream-trance. *Admittedly, I remember very little from these blurry episodes:* this can be explained by my state of non-attention. *I do, however, have vivid recollections of returning abruptly to a state of alertness when, for example, an audience member started coughing and had to leave the room:* my attention was suddenly seized by a grabber, stealing me from trance. *Indeed, at this point, I strictly instructed myself to ‘focus’ – a specific, reflective intention – due to the rather unsatisfying quality of my previous, unfocused state.* Lacking an overall theme to guide the pre-reflective processing of knowledge from one’s subattention (intuition), daydream-trance (as well as states of pre-reflective general awareness, and reflective attention focused on an extra-musical thought) does not generate a particularly rewarding experience.

On the other hand, there were moments, during the first movement, that felt notably fulfilling. I recall instances in which I was completely absorbed by the unfolding musical trajectory, totally captivated by the prevailing musical emotion, followed immediately by episodes in which every sense of reality, focus and control seemed to disappear. From a prolonged state of reflective attention on a general aspect of the music – the unfolding musical and emotional trajectory – I had been transported, via absorption, into a transcendental, pre-reflective state of flow-trance.

Indeed, I had once again entered a completely unfocused daze; yet, this time, it was far from unsatisfying. This experience was exhilarating – both intrinsically rewarding and musically gratifying. Even though I experienced a lack of meticulous, intentional control over every expressive nuance, an intuitive sense of rightness characterised my interpretations. Thanks to my initial reflective focus on a general matter sitting high on my epistemic web, my interpretative decisions (which were generated creatively in that given moment, as intuition drew on interpretative possibilities from my epistemic network) were united by a common, overall theme. Even when my reflective focus lifted, as I entered non-attention, the ‘what-it-feels-like’ quality of absorption remained, continuing to (this time pre-reflectively) guide intuition. It is this overall theme, affording

a shared commonality to my creative, pre-reflective decisions, that accounts for the particularly effective and satisfying quality of this state. *Unfortunately, however, these moments did not last long, as worries about ensuing passages of complexity, thoughts concerning the changing musical affect, and frustrations about small inaccuracies soon took over, demanding my full attention: grabbers stole me from trance.*

My experience of the opening Andante of Bach's Sonata in B minor was evidently one of utmost variety, characterised by different intensities of focus, intention, control and satisfaction – a diversity I also experienced in the third movement. I evidently transitioned between a variety of cognitive states, drawing on reflective and pre-reflective information-processing in different ways. *In the intervening Largo e Dolce, however, my experience of the entire movement was somewhat transcendental. As soon as the movement began, I became enraptured by the powerful air of serenity, immersed in a world of tranquillity: an intense focus on the calm musical affect transported me into a notably extended episode of flow-trance. The unfolding musical argument, subtly shaped by micro-temporal nuances, felt innate, transpiring naturally as if my own: myagogic stresses, articulations, embellishments and motional trajectories felt entirely intuitive – arising automatically, without thought. I was indeed lost in the music, existing in a hazy realm, far removed from the worries and obsessions of intentional interpretative execution.* In this state of non-attention, I had surrendered control of all expressive decisions to intuition: knowledge was exclusively accessed pre-reflectively, from my subattention.

What's more, the entire experience was both musically and intrinsically fulfilling: inspired, imaginative and gratifying. This can, once again, be explained by the overall theme that directed the creative functioning of intuition, as it travelled through my epistemic web.

When the movement eventually came to an end, I returned to reality, overcome with both calmness and ecstasy, exhausted yet invigorated. Perhaps it was the double barline (a visual grabber); perhaps it was the cessation of music, silence (an aural grabber); or perhaps it was the eventual subsiding of an intense serenity (an emotional and atmospheric grabber) that stole me from trance when the movement came to a close. *The last few minutes existed merely as a cloud in my memory: I was uncertain of the details of the experience (thanks to my state of non-attention), though I could not be more certain that it was one of extreme and exhilarating creativity. This was indeed*

reinforced after the concert by numerous remarks from audience members, who commented on the particularly mesmerising second movement.

It is interesting to note that the opening *Andante* and closing *Presto: Allegro* of this Sonata are musically complex, technically intricate, and boast a number of changes in mood. The intervening *Largo e Dolce*, however, exists, rather more simply, as if it were one long and clear sentence – a moment of repose amidst convulsion. I argue that this very observation further justifies my experiences. It was indeed possible for me to enjoy a state of trance for the entirety of the second movement because there were no musical features salient enough to grab my attention. The technical, musical and emotional complexity and constant volatility of the *Andante* and *Presto: Allegro*, on the other hand, offer very plausible, supporting explanations for the shorter durations of trance during these movements: they inherently afford more grabbers, such as a change in mood, a complex passage, or an inaccuracy, which readily enter reflective attention.

Chapter 4. Embodied Knowledge in Performance

4.1. The Scope of the Chapter

As argued in Chapter 3, all interpretative decisions, even those that appear intuitive, fundamentally arise from epistemic foundations. In order to gain a greater understanding of the underpinnings of temporal expressivity, it is, therefore, essential to scrutinise the different forms of knowledge at play in the interpretative process.

Of course, knowledge lies at the foundation of *all* experience: it is a dynamic, ever-changing, and boundless phenomenon. Organically intangible and fluctuant, yet inherently and indivisibly entangled in all that we do, knowledge powerfully shapes our reality: our perceptions of and actions in the world. As a result of its sheer omnipresence, the concept naturally invites scholarship across a number of disciplines, and it has consequently developed a rather substantial discourse.

After a brief summary of relevant literature, in which the primary epistemic modes and their interrelationships are identified, the chapter focuses on interrogating salient forms of *tacit* knowledge that influence expressive timing decisions – forms of knowledge that are particularly enigmatic, yet play a central role in the interpretative process. By interweaving psychoanalytic theory with phenomenological notions of ‘resonance’, ‘critique’ and ‘affordances’, the relational knowledge that emerges via body-instrument interaction is explored. This is followed by a detailed investigation of the role of the body in interpretative decision-making.

Drawing, in particular, on the work of Deniz Peters, Arnie Cox and Mark Johnson, the ‘felt’ dimension of musical experience – a highly visceral form of embodied knowing – is explained, primarily in relation to theories of mimetic participation and image schemata. Recognising that these feelings are experienced predominantly as *shapes* with concomitant emotions, the research of Hallgjerd Aksnes and Candace Brower is integrated into the discussion, in order to explore the most prominent ‘felt’ shapes that influence temporal expressivity in relation to their embodied foundations and overt externalisations. After a series of examples, outlining the way in which such knowledge may indeed influence expressive microtiming through processes of epistemic interaction, the chapter closes by drawing explicit connections with ‘attentional states’ and with salient themes of Baroque practice.

4.2. Forms of Knowledge

4.2.1. Explicit-Tacit Duality

As alluded to in Chapter 3, Section 3.5, the literature, broadly speaking, divides the phenomenon of knowledge into two primary categories: *explicit* knowledge, fundamentally describing that which can be readily articulated and transferred; and *tacit* knowledge (more commonly termed tacit *knowing*), which, conversely, can neither be captured adequately in verbal expression, nor easily accessed and distributed. As information that can be fully and accurately codified and stored in objective forms, dictionary definitions, mathematical equations and textbook facts typically exemplify explicit knowledge, whilst skills, feelings and experiences, which only exist within the knowing subject or subjects, characterise tacit knowing.⁶⁴⁴ Michael Polanyi, who indeed introduced the term to philosophy in 1958, in his book *Personal Knowledge*, famously summarises the very essence of ‘tacit knowing’ in his later work, *The Tacit Dimension* (1966): ‘we can know more than we can tell’.⁶⁴⁵ Knowledge, therefore, extends far beyond the confines of language, transcending propositional limitations.

Music, too, transgresses these barriers. Despite the wealth of explicit knowledge that fuels musicological discourse, defining music theory and influencing practice, musical performance is fundamentally an activity of tacit knowing. The epistemological distinction between tacit ‘knowledge-how’ and explicit ‘knowledge-that’⁶⁴⁶ – also termed ‘procedural’ and ‘propositional’ (or ‘declarative’)⁶⁴⁷ knowledge respectively – effectively clarifies this. Even the greatest acquisition of explicit knowledge is insufficient to truly ‘know-how’ to play the flute, or indeed perform eighteenth-century repertoire stylistically. A tacit, experiential dimension is indispensable.

4.2.2. Explicit-Tacit Fluidity

It is particularly important to consider the relationship between the tacit and the explicit. Despite terminological compartmentalisation, the ostensibly distinct divide is, in fact,

⁶⁴⁴ Ikujiro Nonaka and Hirotaka Takeuchi, *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation* (New York and Oxford: Oxford University Press, 1995), viii.

⁶⁴⁵ Michael Polanyi, *The Tacit Dimension* (New York: Anchor Books, 1967), 4.

⁶⁴⁶ Gilbert Ryle, *The Concept of Mind*, 60th anniversary edition (Abingdon and New York: Routledge, 2009), 14-47.

⁶⁴⁷ Roger H. Bruning et al., *Cognitive Psychology and Instruction* (New Jersey: Prentice Hall, 1995), 212.

ambiguous.⁶⁴⁸ States of knowledge are not static, but rather evolve, morph and are reshaped through intimate interaction. First and foremost, it is often argued that all knowledge originates from tacit roots,⁶⁴⁹ and it is, therefore, only via a translation process, termed ‘externalization’,⁶⁵⁰ ‘codification’,⁶⁵¹ or ‘articulation’,⁶⁵² that knowledge receives an ‘explicit’ status, as illustrated in Figure 4.

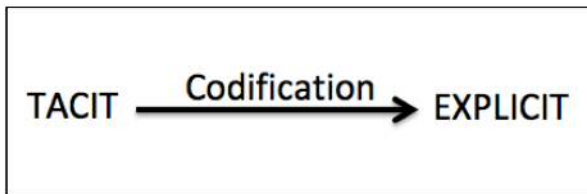


Figure 4. Codification

Consider a Baroque treatise on flute playing, for example: a tangible site of explicit musical information. The tacit understanding of instrumental technique and stylistic practice, such as the ‘intuitive’ know-how of spontaneous embellishment and expressive rhythmic inequality, has been codified, so that the knowledge can be easily transferred.

These secondary, explicit counterparts do not, however, capture the full depth of knowledge. Tacit understanding cannot simply be reduced to a propositional equivalent. This can perhaps be explained by the suggestion that tacit knowing comprises both codifiable (or articulable) and uncodifiable (or inarticulable) aspects,⁶⁵³ and this is certainly reflected in the unrelenting insistence in Baroque treatises that performers realise all codified ‘rules’ or guidelines with ‘taste’ – an essential yet elusive, uncoded and perhaps uncodifiable, phenomenon. It is precisely the very presence of these

⁶⁴⁸ Michael Polanyi, ‘The Logic of Tacit Inference’, *The Journal of the Royal Institute of Philosophy* XLI, no. 155 (January 1966): 7; A. Puusa and M. Eerikäinen, ‘Is Tacit Knowledge Really Tacit?’, *Electronic Journal of Knowledge Management* 8 no. 3 (2010): 309, accessed April, 6 2016

http://s3.amazonaws.com/academia.edu.documents/31416695/Is_tacit_knowledge_really_tacit.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1491999815&Signature=d5Fp89QV3g6HhFuo%2BLx2vFWHj8%3D&response-content-disposition=inline%3B%20filename%3Dis_Tacit_Knowledge_Really_tacit.pdf.

⁶⁴⁹ Polanyi, ‘The Logic of Tacit Inference’, 7; Puusa and Eerikäinen, ‘Is Tacit Knowledge Really Tacit?’, 308.

⁶⁵⁰ Ikujiro Nonaka, Royoko Toyama and Philippe Bysière, ‘A Theory of Organizational Knowledge Creation: Understanding the Dynamic Process of Creating Knowledge’, in *Handbook of Organizational Learning & Knowledge*, ed. Meinolf Dierkes et al. (New York: Oxford University Press, 2001), 495.

⁶⁵¹ Lars Hakanson, ‘Creating Knowledge: The Power and Logic of Articulation’, *Industrial and Corporate Change* 16, no.1 (March 2007): 51; Nowshade Kabir, ‘Tacit Knowledge, Its Codification and Technological Advancement’, *Electronic Journal of Knowledge Management* 11, no. 3 (2013): 237.

⁶⁵² Hakanson, ‘Creating Knowledge’, 51.

⁶⁵³ R. Cowan, P. A. David and D. Foray, ‘The Explicit Economics of Knowledge Codification and Tacitness’, *Industrial and Corporate Change* 9, no. 2 (2000): 228; Verenna Hackmann, *Knowledge Development in Transnational Projects* (Oxon and New York: Routledge, 2016), 27; Hakanson, ‘Creating Knowledge’, 58. Puusa and Eerikäinen, ‘Is Tacit Knowledge Really Tacit?’, 307, 314; Arshad Siddiqi, ‘Knowledge Management’, in *Software Development Techniques for Constructive Information Systems Design*, ed. Khalid A. Buragga and Noor Zaman (Hershey: Information Science Reference, 2013), 336.

uncodifiable elements that explains why exactly tacit knowing can never be authentically expressed in propositional terms.

It is evident, therefore, that the tacit, in all its complexity, underpins the explicit. To clarify, a popular analogy equates the explicit articulation of knowledge with the mere tip of an iceberg, beneath which an expansive and vital foundation of tacit knowing lies⁶⁵⁴ (as illustrated in Figure 5).

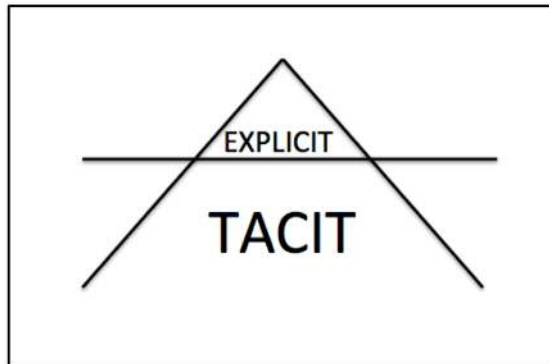


Figure 5. Iceberg

In order to fully understand the explicit, the tacit is essential. This statement both elucidates and is elucidated by the act of musical performance. Codified knowledge (the explicit apex) is frequently exploited in order to initiate the learning of a skill, such as playing an instrument or mastering historically-informed performance practices. As one begins to acquire such abilities, there is, however, a simultaneous obtaining of corresponding tacit understanding,⁶⁵⁵ which defies articulation and enables ‘sense-making’:⁶⁵⁶ the subaqueous base gradually becomes known. I suggest that the very essence of ‘sense-making’ in performance, the process by which declarative musical knowledge gains a tacit dimension that allows true comprehension, is embodiment. Embodiment allows the uncodified, and more importantly the uncodifiable aspects to be discovered: this is illustrated in Figure 6 below.

⁶⁵⁴ Constantin Bratianu, *Organizational Knowledge Dynamics: Managing Knowledge Creation, Acquisition, Sharing and Transformation* (Hershey: Information Science Reference, 2015), 38; Constantin Bratianu and Ivona Orzea, ‘Emotional Knowledge: The Hidden Part of the Knowledge Iceberg’, *Management Dynamics in the Knowledge Economy* 2, no.1 (2014): 41-56.

Nonaka and Takeuchi, *The Knowledge-Creating Company*, 60.

⁶⁵⁵ Hubert L. Dreyfus, ‘Overcoming the Myth of the Mental: How Philosophers Can Profit from the Phenomenology of Everyday Expertise’, *Proceedings and Addresses of the American Philosophical Association* 79, no. 2 (Nov 2005): 52; Polanyi, ‘The Logic of Tacit Inference’, 7.

⁶⁵⁶ Melanie M. Minarik, ‘Building Knowledge through Sensemaking: Connecting the Dot with New Information’, (PhD dissertation, University of Nevada, 2008), 43.

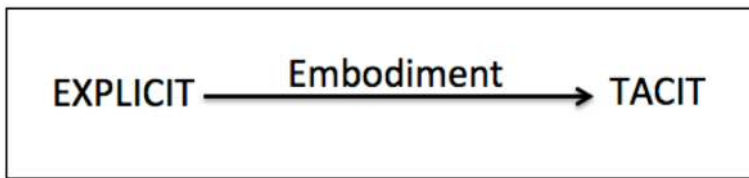


Figure 6. Embodiment

To give a specific example that relates directly to expressive microtiming, let us consider the issue of *notes inégales*. One may explicitly ‘know-that’, in French Baroque repertoire, inequality is expected in particular passages that feature equally-notated note values and usually progress in stepwise motion; yet one does not ‘know-how’ to realise *notes inégales* until the information is physically embodied. Over time, the overall embodied and experiential understanding surpasses the limited propositional correlate, which consequently loses significance and becomes somewhat redundant. The performer has gained a so-called ‘feeling in the fingertips’⁶⁵⁷ as superficial ‘knowledge-that’ has developed into a deeper ‘intuitive’ ‘knowledge-how’ – a more comprehensive tacit knowing which, as a whole, is inexpressible. Perhaps this status transformation, from explicit to tacit, reflects the moment at which the original codified information, which was the object of reflective attention, becomes engrained in the performer’s subattention. A profound and personal tacit knowing, or pre-reflective ‘intuition’, replaces declarative knowledge, or reflective attentional focus. After all, our tacit understanding develops with our experience as a performer, effectively supporting the direct correlation between expertise and ‘intuition’. As evermore explicit knowledge is embodied, becoming engrained in one’s subattention, one’s epistemic web blossoms, tacit knowing develops, and ‘intuitive’ performance decisions increase.

It must, of course, be recognised that, as *new* tacit knowing emerges amongst musicians, the process repeats itself: codification translates, and in doing so reduces ‘knowledge-how’ into propositional forms (‘knowledge-that’) so that the information can be readily passed on to others who then ‘make sense’ of it, developing the corresponding and more comprehensive procedural understanding by embodying it themselves, consequently gaining the ‘knowledge-how’. As Figure 7 indicates, the interactive cycle between the explicit and the tacit continues.

⁶⁵⁷ Thomas A. Stewart, *The Wealth of Knowledge: Intellectual Capital and the Twenty-First Century Organization* (New York: Currency, 2001), 123.

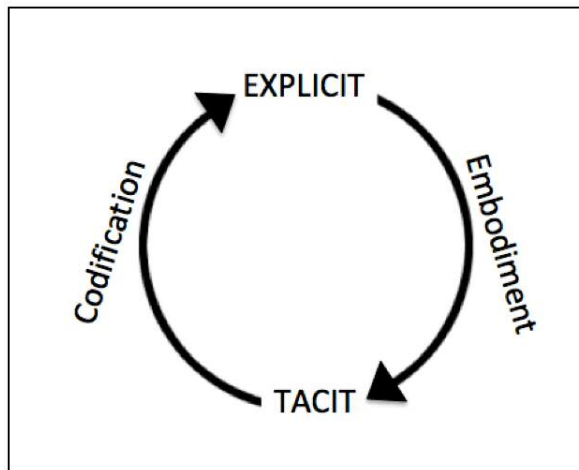


Figure 7. Interactive Cycle

4.2.3. Subsets of Tacit Knowing

The process of embodiment not only highlights the transformation of explicit knowledge into tacit intuition, confirming that tacit knowing can only ever be obtained via personal *experience*, but also leads us to consider the different strains of tacit knowing and the corresponding subtleties of experiential knowledge-acquisition. ‘Embodied knowledge’, also termed ‘somatic knowledge’,⁶⁵⁸ evidently describes tacit knowing that is gained corporeally: ‘the body “knows” how to do things’.⁶⁵⁹ This, I suggest, is indivisibly related to ‘actional knowledge’: understanding acquired ‘through what we can do and how we act’.⁶⁶⁰ After all, our bodies perform our actions. The tacit ‘know-how’ of musical performance (and, more specifically, expressive interpretation) is grounded in embodied, actional knowledge: it is through physical activity, such as playing the flute, that our bodies become valuable sites of ‘sense-making’.⁶⁶¹

Another branch of tacit knowing is ‘relational knowledge’, which ‘resides intangibly in our relations with others’: ‘one’s mind is not quite one’s own when one is

⁶⁵⁸ Sandra Kerka, ‘Somatic/Embodied Learning and Adult Education. Trends and Issues Alert No. 32,’ *ERIC Institute of Educational Sciences*, 2002, accessed April 29, 2016, <http://files.eric.ed.gov/fulltext/ED462550.pdf>.

⁶⁵⁹ Robert E. Wood, *A Path into Metaphysics: Phenomenological, Hermeneutical and Dialogical Studies* (Albany: State University of New York Press, 1990), 50; Max Van Manen and S. Li, ‘The Pathic Principle of Pedagogic Language,’ *Teaching and Teacher Education* 18, no. 2 (February 2002): 220; Max Van Manen, ‘Embodied Knowledge: We Discover What We Know in Our Embodied Being’, *Phenomenology Online*, 2011, accessed April 29, 2016, <http://www.phenomenologyonline.com/inquiry/epistemology-of-practice/practice-as-pathic-knowledge/embodied-knowledge/>.

⁶⁶⁰ Max Van Manen, ‘Actional Knowledge: We Discover “What We Know” in “What We Can Do”’, *Phenomenology Online*, 2011, accessed April 29, 2016, <http://www.phenomenologyonline.com/inquiry/epistemology-of-practice/practice-as-pathic-knowledge/actional-knowledge/>.

⁶⁶¹ Minarik, ‘Building Knowledge through Sensemaking’, 43.

actively involved in social interactions'.⁶⁶² This shared, interpersonal and intersubjective knowing perfectly describes the unique, intimate and synergetic interplay of knowledge that occurs between musicians as they play together. However, I propose that it could also be applied to the relationships that exist between a musician and their tools – the music and the instrument (a form of knowledge explored, in detail, in Section 4.3). The research of musicologist and pianist Nicky Losseff (introduced briefly in Chapter 3) highlights, through psychoanalytic perspectives, the very significance of the dynamic interrelationship that evolves between performer and musical work: information from both agents interact,⁶⁶³ generating an exclusive, relational tacit knowing. Undeniably, a similar bond is forged between performer and instrument – a special connection that often becomes so profound and intimate that (as theoretically rationalised in Section 4.3) the two entities become inseparable. Reflecting the very quintessence of 'relational knowledge', this example of tacit knowing (undeniably incorporating embodied and actional qualities) is generated through and exists exclusively within the unique relationship, from which it cannot be extracted. In any case, as these relationships (musician-musician, musician-work, musician-instrument) intensify over time, so does the corresponding relational knowledge – knowledge that (as explored in Section 4.3) is fundamental to performance, inherently and inextricably bound with interpretation and, therefore, expressive timing decisions.

Despite the undeniable correlation between time, familiarity and deeper knowing, relational knowledge is not reserved exclusively for long-standing relationships. In every given situation, in every given moment, relational interplay exists: it is an unavoidable and inherent foundation of experience. We are constantly interacting with both our environment and the many agents within it, and this generates the dynamic web of coexistent interrelationships that, together, create our experience. Indeed, by recognising that we enter contextual relationships with our surroundings, we acknowledge a direct affiliation between 'relational knowledge' and 'situational

⁶⁶² Max Van Manen, 'Relational Knowledge: We Discover What We Know in Our Relations', *Phenomenology Online*, 2011, accessed April 29, 2016, <http://www.phenomenologyonline.com/inquiry/epistemology-of-practice/practice-as-pathic-knowledge/relational-knowledge/>.

⁶⁶³ Nicky Losseff, 'Curiosity, Apathy, Creativity and Deference in the Musical Subject–Object Relationship', in *Creative Teaching for Creative Learning in Higher Music Education*, ed. Elizabeth Haddon and Pamela Burnard (Abingdon: Routledge, 2016), 168-185; Nicky Losseff, 'Relationships with Pieces', September 26, 2014, accessed January 23, 2015, <http://www.nickylosseff.com>; Nicky Losseff, 'Projective Identification, Musical Interpretation and the Self', 49-59.

knowledge': 'we discover what we know from our world' – 'the physical space, the social ambience, and the cultural ecology'.⁶⁶⁴ As a multi-dimensional activity that unfolds in and interacts with a particular time- and space-bound environment in real time, musical performance cannot escape the hugely influential, inherent involvement of situational knowledge – an immediate and ever-changing sphere of knowing that can only be accessed by being 'there', engaging in the numerous tacit interrelationships that exist exclusively within that given setting, in that given moment.

However, as a heavily socially-conditioned and culturally-coded activity, musical performance is not only situated in a physical location, but also within a history of conventions and practices that have influenced and shaped its existence, and are, therefore, always tacitly present. Musical performance hence incorporates both the 'liveness' of situational knowledge (which explains spontaneity and irreproducibility) and the wider situational knowledge that frames the performance more generally.

It is evident, therefore, that tacit knowing is a fascinatingly rich and complex sphere of understanding that includes a variety of closely interrelated sub-categories (as illustrated in Figure 8) which, together, engender the immense diversity of this elusive yet absolutely invaluable 'personal knowing' that experience alone can generate.

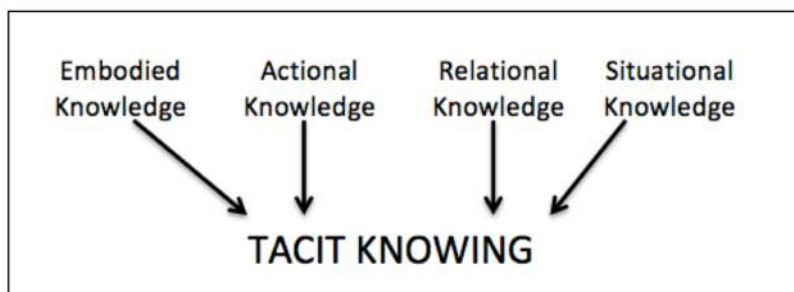


Figure 8. Sub-Categories of Tacit Knowing

4.2.4. Knowledge and Expressive Microtiming: Clarifying the Relationship

With specific regard to expressive timing decisions, all forms of knowledge come into play. The interpretative process is inherently grounded on embodied and actional knowledge, as we use our bodies to play an instrument and ultimately generate expressive decisions. It is further shaped by relational knowledge gained from our interactions not only with the music and instrument but also with our environment, in

⁶⁶⁴ Max Van Manen, 'Situational Knowledge: We Discover What We Know from Our World', *Phenomenology Online*, 2011, accessed April 29, 2016, <http://www.phenomenologyonline.com/inquiry/epistemology-of-practice/practice-as-pathic-knowledge/situational-knowledge/>.

that moment, in that given situation. Explicit knowledge, of course, also plays a central role.

Forms of explicit knowledge relating directly to temporal matters of Baroque performance practice have been noted in Chapter 2 on 'Time in Performance' and are manifest in my case study (Chapter 5), which specifically explores the ways in which this knowledge is drawn on in practice. However, to consider in more depth how such knowledge becomes tacit and embodied, let us consider one representative example: the issue of dotted rhythms. As Dorottya Fabian and Emery Schubert acknowledge, this subject 'has received considerable scholarly attention in the recent past',⁶⁶⁵ because whilst the 'notation is usually uniform, the sources often mention the desirability of non-literal execution'.⁶⁶⁶ Judith Schneider notes that 'the dot in Baroque times ... was in essence a way of notating "unevenness"', elaborating that 'the amount of time the dot added was variable'.⁶⁶⁷ There is some commentary on the notion of 'underdotting', in which the dotted note is shortened 'to produce a more flowing style', but accounts are primarily concerned with 'overdotting' – lengthening the dot 'for a sharper rhythmic effect'.⁶⁶⁸ As Nikolaus Harnoncourt summarises, dotted notation in the Baroque simply implied 'a long note and a short note: how long and how short can be seen from the context'.⁶⁶⁹

Whilst recent discourse (such as that noted above) provides explicit information regarding 'the variable dot' in Baroque music, music treatises of the time are perhaps a more valuable source of declarative knowledge on the matter. In his book of 1752, *On Playing the Flute*, Johann Joachim Quantz, for example, states that dotted rhythms 'are not always played with their literal value',⁶⁷⁰ and 'cannot be fixed with complete exactness'.⁶⁷¹ He simply explains that 'the dots are held long, and the following notes are

⁶⁶⁵ Dorottya Fabian and Emery Schubert, 'Musical Character and the Performance and Perception of Dotting, Articulation and Tempo in 34 Recordings of Variation 7 from J. S. Bach's *Goldberg Variations* (BWV 988)', *Musicae Scientiae* xii no. 2 (Fall 2008): 177.

⁶⁶⁶ Dorottya Fabian and Emery Schubert, 'Performance and Perception of Dotting: A Comparison of Responses to Dotted Rhythms in 6/8 by Experienced and Inexperienced Baroque Music Listeners', *European Society for the Cognitive Sciences of Music*, accessed March 2, 2016, <http://www.escom.org/proceedings/ESCOM2002/sources/Pdf/Session/Fabian.pdf>.

⁶⁶⁷ Judith Schneider, 'Alterations of Rhythm', in Johann Sebastian Bach, *The Well-Tempered Clavier*, vol. 2, ed. Judith Schneider with fingering by Maria Sofianska (n. p.: Alfred Publishing, 2004), 22.

⁶⁶⁸ *Ibid.*

⁶⁶⁹ Nikolaus Harnoncourt, in Schneider, 'Alterations of Rhythm', in Bach, *The Well-Tempered Clavier*, 22.

⁶⁷⁰ Quantz, *On Playing the Flute*, 290.

⁶⁷¹ *Ibid.*, 67.

made very short'⁶⁷² – a description similar to that of Michel L'Affilard some years earlier in 1694: '[t]o play dots as they should be played, you are advised to suspend the dotted note and quickly go over the eighth-note which follows it'.⁶⁷³ Drawing connections between dotted rhythms and *Affekt*, Quantz reinforces that the notes 'following the dots must always be played very shortly and sharply in slow and quick tempos ... since dotted notes generally express something of the majestic and sublime'.⁶⁷⁴

It is self-evident how codified knowledge about issues of microtiming like this can be drawn on in the interpretative process, in order to inform expressive timing decisions. Thanks to its explicit form, the knowledge can readily become the object of reflective attention for performers concerned to understand historical practice. Of course, as explained in Section 4.2.2 (as well as in Section 3.6.5 of Chapter 3), via repeated embodiment in practice, over time this declarative knowledge transforms into a more profound experiential, tacit knowing and becomes engrained in the performer's subattention. In this way, the knowledge can be accessed pre-reflectively, in response to triggers, and externalised as a seemingly intuitive decision. In any case, because it can be traced back to explicit roots, the ontology of such knowledge (which is fundamentally codified) and its role in expressive decision-making is relatively transparent; more so than its enigmatic counterpart, wholly tacit knowledge, which by nature is unarticulated and requires, therefore, greater scrutiny in order to understand its ontology. The remainder of this chapter hence focuses on exploring salient forms of tacit (and specifically embodied) knowledge that influence expressive timing decisions.

4.3. Body-Instrument Interaction

4.3.1. Towards a 'Resonant Subject'

In order to develop an understanding of the embodied knowledge that is crucial to expressive timing, we must explore the role of the body. The centrality of the body in music is an expanding area of current research. Created, experienced and comprehended by embodied beings, music, in all its multidimensional complexity, lives through the body: 'it is a phenomenon experienced through the senses of the body, regardless of the media

⁶⁷² Ibid., 133.

⁶⁷³ Michel L'Affilard, in Betty Bang Mather, *Interpretation of French Music From 1675 to 1775 for Woodwind and Other Performers: Additional Comments on German and Italian Music* (n. p.: McGinnis & Marx Music Publishers, 1973), 6.

⁶⁷⁴ Quantz, *On Playing the Flute*, 224.

used to render it'.⁶⁷⁵ With regard to musical *performance*, the body's indispensability is self-evident. By manipulating sound-producing technology it is, ultimately, the body that creates the music, generating interpretative decisions including expressive microtiming.

Despite its undeniably fundamental position, however, it is essential to acknowledge that the body does not simply assume control in a unidirectional relationship whilst the instrument lies submissive. As Aden Evens discusses in his book *Sound Ideas: Music, Machines, and Experience*:

the instrument does not just yield passively to the desire of the musician. It is not a blank slate waiting for an inscription. Likewise, the musician does not just turn the instrument to his own ends, bending it to his will against whatever resistance it offers. Rather musician and instrument meet, each drawing the other out of its native territory.⁶⁷⁶

The instrument, in James J. Gibson's terms, has certain 'affordances': 'the qualities or properties of an object that define its possible uses'.⁶⁷⁷ Gibson firmly emphasises that

affordances are relational entities: they exist only relative to given organisms. Thus, the surface of a lake affords neither support nor easy locomotion to a horse, but it offers both of these to a water bug. Thus, to speak of an affordance is to speak elliptically; an affordance exists only in relation to particular organisms with particular needs and capacities.⁶⁷⁸

In a musical context, Stefan Östersjö reminds us of this relational quality when he asserts that 'affordances are as dependent on the individual performer as on the ... properties of the instrument' and they 'emerge [therefore] in the interaction'.⁶⁷⁹ There is, then, a richness of interplay, the affordances and resistances of both agents interacting to produce a new, composite entity: a synthesised whole, rather than a mere assemblage

⁶⁷⁵ Greg Corness, 'The Musical Experience through the Lens of Embodiment', *Leonardo Music Journal* 18 (2008): 21.

⁶⁷⁶ Aden Evens, *Sound Ideas: Music, Machines, and Experience* (Minneapolis: University of Minnesota Press, 2005), 161.

⁶⁷⁷ *Merriam-Webster Online*, s.v. 'affordance', accessed June 23, 2016, <http://www.merriam-webster.com/dictionary/affordance>.

⁶⁷⁸ Mark Rowlands, *The Environmental Crisis: Understanding the Value of Nature*, ed. Jo Campling (Houndsmill and London: Macmillan Press Ltd, 2000), 145.

⁶⁷⁹ Stefan Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer: Reflections on a Collaborative CD-Project with Erdem Helvacioğlu', *Contemporary Music Review* 32, no. 2-3 (2013): 205.

of 'the body' and 'the instrument'. Merleau-Ponty provides clarification of this fusion through his well-known metaphor: 'the blind man's stick has ceased to be an object for him, and is no longer perceived for itself'.⁶⁸⁰ Parallels can, of course, be made with a musical instrument, which, once mastered, becomes an integral component of the musician's being – his or her expression, vocabulary, and body. Without it, the performer is incomplete. It is, however, important to highlight that, as Östersjö asserts, this body-instrument intimacy 'does not [simply] result from the incorporation of the instrument as a transparent tool, but rather from the affirmation of its resistance, amplifying and playing with it'.⁶⁸¹ Again, this stresses the instrument's agency, and the sense of mutual interaction, whereby the resistances and affordances of both parties (the instrument *and* the body) are at play in the generation of a composite entity.

To clarify, let us consider the act of playing the flute. The performer's gestures, mediated by the mechanics of technology, are co-defined by the instrument, which itself is reliant on the expulsion of air from the performer. Flute playing, of course, involves the physical projection of one's breath, an internal aspect from deep within an individual's body, into an external object in order to breathe life into the instrument. As the air crosses the body's borders, and moves into the outside world, parallels can, of course, be drawn with the voice, which is described by Mladen Dolar as 'a bodily missile which separates itself from the body and spreads out, but on the other hand it points to a bodily interior, an intimate partition of the body'.⁶⁸² Flute playing, too, cannot escape being entwined with and defined by the unique and personal 'bodily interior' of the performer. As John Shepherd puts it, 'sound, the basis of music as discursively constituted, reflects and articulates the internal physical properties ... of the bodies that generate it'.⁶⁸³ As the body plays the instrument, the instrument simultaneously plays the body.

This is encapsulated by Taina Riikonen's description of flute playing: 'while blowing into the tube, the flute is never a separate entity from the player, because the generated flute sound is always a body sound of the performer as well breathing exists

⁶⁸⁰ Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London and New York: Routledge Classics, 2002), 165.

⁶⁸¹ Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer', 206.

⁶⁸² Mladen Dolar, *A Voice and Nothing More* (Cambridge MA: MIT Press, 2006), 70.

⁶⁸³ John Shepherd, 'Difference and Power in Music', in *Musicology and Difference: Gender and Sexuality in Music Scholarship*, ed. Ruth A. Solie (Berkeley: University of California Press, 1993), 52.

from the player's body'.⁶⁸⁴ The breath, projected from the musician into the instrument, is, of course, the physical connector that fuses the two initially separate worlds – the internal, bodily world of the flautist, and the external existence of the flute. However, the instrumentalist does not solely project physical aspects of themselves but rather aspects of their entire embodied being: entangled in that breath are explicit musical and technical knowledge, the bodily know-how of flute playing and the fundamental tacit and personal knowing of feeling and emotion. It is from this epistemic complex that musical interpretation can arise, including, therefore, temporal expressivity.

This intimate relationship between body and instrument can also be considered in psychoanalytic terms. As discussed in Chapter 3, musicologist and pianist Nicky Losseff draws on notions of projection, introjection, and projective identification from the field of psychoanalysis to understand the intimacy that evolves between an individual and a musical work, whereby a performer can start to feel the music as part of their innermost selves, or can 'hear' aspects of themselves – their emotional world – in the music. 'Projection' describes the process by which aspects from one's internal world are transferred onto an external entity; 'introjection' defines the process of absorbing aspects of an external entity into one's internal world;⁶⁸⁵ and 'projective identification' explains the process by which an individual identifies with an external entity, having projected parts of oneself *into* it.⁶⁸⁶ Losseff argues: 'through a joint process of *projection* of psychological material from me into [the] musical object and *introjection* of musical material into my psychological domain ... [,] musical material will become inseparable from my psychological material'.⁶⁸⁷ She continues to understand this coalescence by drawing specific parallels with projective identification, whereby it is believed that 'the object takes on aspects of that self and "becomes" those parts of the self',⁶⁸⁸ 'the piece may take on an existence as *part of my subjectivity*: the music has contributed to my psychological and emotional vocabulary, merging with my self'.⁶⁸⁹

⁶⁸⁴ Taina Riikonen, 'Stories from the Mouth: Flautists, Bodily Presence and Intimacy in Saariaho's Flute Music', in *Kaija Saariaho: Visions, Narratives, Dialogues*, ed. Tim Howell, Jon Hargreaves, and Michael Rofe (Surrey: Ashgate, 2011), 75.

⁶⁸⁵ David Straker, 'Projection and Introjection', *Changing Minds*, accessed July 10, 2016, http://changingminds.org/disciplines/psychoanalysis/concepts/projection_introjection.htm.

⁶⁸⁶ Nicky Losseff, 'Projective Identification, Musical Interpretation and the Self', 53-54.

⁶⁸⁷ Nicky Losseff, 'Relationships with Pieces'.

⁶⁸⁸ Losseff, 'Projective Identification, Musical Interpretation and the Self', 53-54.

⁶⁸⁹ Losseff, 'Relationships with Pieces'.

Losseff's focus is upon the intimate entanglement of a musical work and the psychological world of the performer. However, aspects of this can be extended to highlight the relationship between the performer and the musical instrument. Playing an instrument is undeniably a highly personal, experiential activity, and it is inevitable that performers bring themselves to the event: not only their own physicality but also their own subjectivity, shaped precisely by their unique 'lifeworld', their 'lived experience', or their 'being-in-the-world'.⁶⁹⁰ In the same way that 'a piece of music isn't immutable, nor stable',⁶⁹¹ and exists through the unique interpretations of individual performers, an instrument, too, enjoys a malleable ontology, moulded by the particular idiosyncrasies of each player. Performers cannot help but project aspects of themselves into the instrument, which comes to life only through interaction with their body. A body is not merely a tangible object, but the embodiment of the performer's existence, the physical site of their very being, uniquely inscribed with 'personal histories'⁶⁹² and carrying imprints of all that the individual has 'already done, felt, heard, and seen'.⁶⁹³ The instrument seems only to enjoy a true, 'lived' existence when parts of the self are projected into it, perhaps highlighting 'projection' as the very process that initiates the merging of body and instrument into a unique entity: there forms a similar 'bridge' to an 'external object, into which thoughts and feelings can be projected', through a 'dynamic process, a two-way process between subject and object'.⁶⁹⁴ After all, it is precisely the projected material from the performer that determines quite how the instrument is involved in the interaction; as psychoanalyst Hanna Segal puts it, the 'external object ... becomes possessed by, controlled and identified with the projected parts',⁶⁹⁵ to such an extent that the subject 'can induce behaviours in the external object which s/he already believes to be attributes of the object'.⁶⁹⁶

However, alongside projection there occurs a process of introjection, whereby 'a subject takes into itself the behaviours, attributes of other external objects'.⁶⁹⁷ The flute

⁶⁹⁰ David Seamon and Jacob Sowers, 'Existentialism / Existential Geography', in *The International Encyclopedia of Human Geography*, vol. 3, ed. R. Kitchen and N. Thrift (Oxford: Elsevier, 2009), 667-668.

⁶⁹¹ Losseff, 'Relationships with Pieces'.

⁶⁹² Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer', 209.

⁶⁹³ Bennett Hogg, 'Working through the New: Consciousness, Embodiment, Gesture, and Intertextuality', (conference paper, CILM Research Network, The Open University, Milton Keynes, July 2009).

⁶⁹⁴ Losseff, 'Projective Identification, Musical Interpretation and the Self', 55.

⁶⁹⁵ Hannah Segal, *Introduction to the Work of Melanie Klein*, new ed. (London: The Hogarth Press, 1973), 27.

⁶⁹⁶ Losseff, 'Projective Identification, Musical Interpretation and the Self', 54.

⁶⁹⁷ Straker, 'Projection and Introjection'.

introjects aspects of the performer's physical and psychological world, particularly through the breath, which I reiterate is not merely a physical construct but a fundamental carrier of subjective expression. Simultaneously, as the performer introjects tangible aspects of the instrument into his or her physicality, the corresponding intangible, expressive attributes of the instrument are also introjected into his or her emotional vocabulary. In the case of body-instrument interaction, projection and introjection therefore involve both corporeal and expressive dimensions.

By viewing the instrument as a *subject*, with the ability to introject and project, rather than merely an *object* from which material is introjected and onto which material is projected, it can be understood that each entity in the relationship projects the aspects the other introjects and vice versa. I suggest, however, that not all projections are introjected by the co-agent, precisely due to the presence of resistances – the unavoidable 'friction between the "grain of the voice" of the instrument and the physicality of musical performance'.⁶⁹⁸ Even Losseff, who earnestly believes in the merging of two worlds, insists that we cannot ignore the initial 'separateness' of the participants,⁶⁹⁹ which, of course, accounts for their individual idiosyncrasies and the consequent resistances they present to one another. Losseff talks, in particular, of the 'relationship space' that exists between performer and musical work,⁷⁰⁰ and I suggest that a similar 'relationship space' between musician and *instrument* is the very site of synergy, where the two agents engage with each other and their resistances meet, the ensuing 'friction' igniting a creative and dynamic interaction, where projection and introjection occur. Certain projected features are successfully introjected, whilst others are dismissed, the reasons for which I propose can be understood by returning to Östersjö's work.

In endeavouring to define the 'habitus' of a performer, Östersjö identifies a dual process of 'resonance' (an 'affirmative phase' in which instrumental possibilities are exploited) and 'critique' (the 'phase of denial', where habits are decomposed or discarded).⁷⁰¹ In adapting his application of these terms, I suggest that some projections are 'denied', whilst others 'resonate' with the fellow agent and are hence 'affirmed' or

⁶⁹⁸ Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer', 203.

⁶⁹⁹ Losseff, 'Relationships with Pieces'.

⁷⁰⁰ Ibid.

⁷⁰¹ Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer', 205-206.

introjected. In this latter case, the introjector has ‘not simply ... overcome’ but rather learnt ‘how to “play” the dynamics of [the] resistances’ of that, which was projected.⁷⁰²

These distinctions between resonance and critique, affirmation and denial, highlight the currently ill-explained, unsubstantiated difference between projection ‘onto’ and projection ‘into’,⁷⁰³ the latter of which I propose relies on introjection from the other agent, and therefore ‘resonance’. Resonance, connoting harmonious acceptance and agreement can therefore be viewed as the place where projection and introjection meet. If resonance is indeed vital for projection *into* an entity, projective identification could perhaps be redefined as the process by which resonance transforms resistances into affordances, enabling the projected aspects from one entity to be introjected into the other. This engenders the coalescence of both agents; the formation of a united identity with which both agents identify. The resulting entity, the ultimate ‘resonant subject’⁷⁰⁴ is, therefore, the unique fusion of relational versions of body and instrument that arise from undergoing processes of projection, introjection, resonance and critique. This resonant subject – the product of profound relational knowledge, and, therefore, a highly epistemic construct – is the very entity that ultimately creates music and, therefore temporal expressivity.

4.3.2. The ‘Resonant Subject’ and Temporal Expressivity

Having clarified the processes through which aspects of two separate entities fuse into one resonant subject, it is essential to consider the relevance of this synergy specifically in terms of expressive timing decisions. These processes that occur between performer and instrument are, I propose, as significant in guiding interpretation, as those that exist between performer and musical work. As Östersjö confirms, ‘a fundamental form of musical interpretation is the complex set of interactions between a performer, musical materials ... and the instrument’.⁷⁰⁵

Musical decision-making is, therefore, partially determined by the relational knowledge that develops in the ‘relationship space’ of body and instrument, living specifically within the fused entity that is born of them. After all, an interpretation surely

⁷⁰² Ibid., 203.

⁷⁰³ David Straker, ‘Projective Identification’, *Changing Minds*, accessed July 10, 2016, http://changingminds.org/disciplines/psychoanalysis/concepts/projective_identification.htm.

⁷⁰⁴ Östersjö, ‘The Resistance of the Turkish Makam and the Habitus of a Performer’, 206.

⁷⁰⁵ Ibid., 202.

begins to take shape when that which the performer affords the instrument ('resonant' projections, such as physical aspects of his or her body, explicit technical and musical knowledge, and tacit feeling) meets that which the instrument affords the performer (its physicality and corresponding expressive possibilities), both in relation to the musical material. Interpretation is, therefore, largely shaped by the collaboration, or integration, of the affordances within this particular interrelationship.

Furthermore, the very 'knowledge how' to carry out these musical decisions successfully on the instrument, also relies on this relational status. Simply consider instrumental technique – a necessary component of performing an interpretation: technical proficiency is a form of relational and embodied, procedural knowledge that exists within the 'performer-instrument' entity, having emerged from resonance between projections of the instrument's physicality, the performer's explicit knowledge of technique, and the performer's physicality. Expressive timing decisions, dependent on technical and expressive affordances of both the performer's body and the instrument, are, therefore, completely reliant on this fused 'resonant subject'.

4.4. Introducing the 'Felt' Dimension

4.4.1. 'The Listening Body'⁷⁰⁶

Having considered the status of the body in regard to the relational knowledge that emerges from body-instrument interaction, it is essential to scrutinise, in greater depth, its role in the interpretative process. In his paper 'Letting the Body Decide', Deniz Peters draws on recent phenomenological accounts of embodied listening, using the notion of the 'listening body' as the basis for arguing that 'the body can be involved in decisions on issues of musical interpretation *by way of listening*'.⁷⁰⁷ After all, as Stefan Östersjö notes, 'for the performer it is not really possible to distinguish between being in the world as performing and being in the world as listening'.⁷⁰⁸ The crux of this chapter is that 'the listening body' – a site of 'felt' experience – hosts salient forms of embodied, tacit

⁷⁰⁶ Deniz Peters, 'Letting the Body Decide: Creativity, Gesture and Musical Embodiment in Space as a Virtual Instrument', (conference paper, CMPCP Performance Studies Network International Conference, Faculty of Music, University of Cambridge, July 15, 2011), 3, accessed April, 29, 2016 <http://www.cmppc.ac.uk/wp-content/uploads/2015/11/PSN2011>

Peters.pdf.

⁷⁰⁷ Ibid., 1.

⁷⁰⁸ Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer', 205.

knowledge that underpin a performer's expressive timing decisions (as explored, in particular, in Section 4.6).

Firstly, as Peters notes, listening to music triggers involuntary bodily responses,⁷⁰⁹ the output of which is the phenomenal 'what-it-feels-like' quality of pre-reflective experience. Drawing on neuropsychological research and its musical application in the work of Arnie Cox, Ian Cross and Rolf Inge Godøy, Peters begins by identifying *covert*, also termed 'offline', bodily participation, whereby 'parts of the brain involved in the planning of motor behaviours are active in listening, including [for example] areas planning laryngeal and tongue movement'.⁷¹⁰ Noting that "'covert" implies an overt counterpart',⁷¹¹ and that, for Ian Cross, 'the covert activity in listening ... is on the brink of overt action',⁷¹² Peters recognises possible externalisations of these subpersonal, neural processes: *overt* forms of reflexive bodily activity, such as 'sudden jags, tapping, finger twiddling' or 'spontaneous acts of singing and dancing'.⁷¹³ Along with these scientifically-substantiated physiological responses to listening, Peters talks of the well-known sensation of 'musical chills',⁷¹⁴ termed 'frissons' by Jerrold Levinson:⁷¹⁵ a palpable bodily reaction to music, especially when it is notably dramatic or intense. Most importantly, however, Peters notes that, *all* of these bodily experiences, whether covert neural activity, overt unintentional movement, or frissons

originate without tactile stimulation. One doesn't quite know where they come from, except that they arise within the musical experience; in this, they might be viewed as being "as if" experiences. Differently put, one might say that it is "as if" we were touched, in some mysterious way, by music, not only in terms of emotion, but also quite literally, in proprioceptive terms.⁷¹⁶

Peters concludes this part of his argument with a particularly noteworthy statement: 'theories or observations concerning the bodily effect of musical experience share their

⁷⁰⁹ Peters, 'Letting the Body Decide', 1-2.

⁷¹⁰ *Ibid.*, 1.

⁷¹¹ *Ibid.*, 2.

⁷¹² *Ibid.*, 1.

⁷¹³ *Ibid.*, 2.

⁷¹⁴ *Ibid.*, 4.

⁷¹⁵ Jerrold Levinson, 'Musical Frissons', *Revue Française D'études Américaines*, no. 86 (2000): 66-67;

Jerrold Levinson, *Contemplating Art: Essays in Aesthetics* (New York: Oxford University Press, 2006), 222.

⁷¹⁶ Peters, 'Letting the Body Decide', 5.

consideration of its felt dimension⁷¹⁷ – a dimension, of course, only known experientially, through the lived body itself.

4.4.2. Mimetic Participation

Peters develops the important notion of music's '*felt dimension*', or so-called '*sonic tactility*',⁷¹⁸ by specifically exploring 'the feeling of shape arising from the sound'⁷¹⁹ – a particularly important matter given that microtiming serves to *shape* sound expressively. Peters explains, 'when we hear *Gestalt*, shapes, phrases, gesture in music, we don't just hear them but also feel them in it'.⁷²⁰ Arnie Cox, provides an example: "'melodic sighs" and "musical gestures" *feel* like gestures and sighs'.⁷²¹ For Cox, this tactile quality can be explained by his '*mimetic hypothesis*', which holds that listening 'involves making the heard sounds for ourselves' – an '*imagined participation* [that] involves covertly and overtly imitating the sounds heard and imitating the physical actions that produce these sounds'.⁷²² Cox clarifies: 'it is as if we are acting – acting in a way that is more or less isomorphic with the sound-producing actions heard (and seen)'.⁷²³

Beginning to explain the subpersonal underpinning of our '*what-it-feels-like*' experiential, embodied knowledge of musical shapes, the theory of mimetic participation is strengthened by the wealth of scientific research into '*mirror neurons*' – 'a particular type of neurons that discharge when an individual performs an action, as well as when he/she observes a similar action done by another individual'.⁷²⁴ Indeed empirical studies by Bangert and Altenmüller (2003), Haslinger et al. (2005), Bangert et al. (2006), and Lahav, Saltzman and Schlaug (2007)⁷²⁵ all reveal that when listening to piano music, for

⁷¹⁷ Ibid.

⁷¹⁸ Ibid., 1, 10.

⁷¹⁹ Ibid., 7.

⁷²⁰ Ibid.

⁷²¹ Arnie Cox, 'Hearing, Feeling, Grasping', in *Music and Gesture*, ed. Anthony Gritten and Elaine King (Aldershot: Ashgate, 2006), 52.

⁷²² Ibid., 46.

⁷²³ Ibid., 53.

⁷²⁴ Giacomo, Rizzolatti, 'The Mirror Neuron System and Its Function in Humans', *Anatomical Embryology* 210 (2005): 419.

⁷²⁵ M. Bangert and E. O. Altenmüller, 'Mapping Perception to Action in Piano Practice: A Longitudinal DC-EEG Study', *BMC Neuroscience* 4, no. 26. (2003); B. Haslinger et al., 'Transmodal Sensorimotor Networks during Action Observation in Professional Pianists', *Journal of Cognitive Neuroscience* 17, no. 2 (2005): 282-293; M. Bangert et al., 'Shared Networks for Auditory and Motor Processing in Professional Pianists: Evidence from fMRI Conjunction', *Neuroimage*, 30, no. 3 (2006): 917-926; A. Lahav, E. Saltzman and G. Schlaug, 'Action Representation of Sound: Audiomotor Recognition Network While Listening to Newly Acquired Actions', *Journal of Neuro-science* 27, no. 2 (2007): 308-314.

example, the mirror neuron system is activated in the listener. Cox conceives, therefore, the listener's bodily activity 'as closely imitative to the performer's'.⁷²⁶

Peters, however, argues that 'there is reason to doubt the ability of non-musicians to imitate performing actions to a significant level of adequacy and intimacy'.⁷²⁷ He therefore proposes:

sound-producing actions coming into play in bodily experience are neither primarily those of the instrumental performers, nor imitations thereof, but reminiscent of sound-producing actions belong to a realm without instruments, a realm where the body itself is producing the sound.⁷²⁸

He continues to explain that this realm of sound production is one with which we are extremely familiar: we make sound through our bodies every single day, and therefore enjoy a deep-rooted sensorimotor knowledge of the way in which timbres are created and manipulated through contact, force, and speed. It is this less technically specific and rather more holistic knowing that, he argues, is drawn on in the mimetic process, as we listen to music. Overall, despite the notable differences between Cox's arguments for isomorphism and Peters' nuanced discussion of embodied listening, what underlies their work is a recognition of the intimate relationship between sound, body and movement in music cognition: the embodied foundations of the listening experience.

Beyond this, Cox's research into 'subvocalisation' takes us one step further to understanding our embodied experience of 'felt' musical shapes – a form of knowledge that, as I show in Section 4.6 and in the case study (Chapter 5), is most salient in guiding expressive timing decisions. Subvocalisation can be defined as one's inner voice – the silent, internal speech that enables the comprehension of written and spoken language and is characterised physiologically by covert, subvocal articulation – subtle movements of the muscles involved in speaking.⁷²⁹ Whilst many studies have shown that

⁷²⁶ Peters, 'Letting the Body Decide', 8.

⁷²⁷ Ibid.

⁷²⁸ Ibid.

⁷²⁹ CTI Reviews, *Just the Facts, Textbook Key Facts: Cognition, Exploring the Science of the Mind*, 5th ed. (Cram101 Textbook Reviews, 2016), accessed July 3, 2017, https://books.google.co.uk/books?id=j_aoDAAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q=subvocal&f=false.

subvocalisation is ‘integral to the perception and cognition of vocal music’,⁷³⁰ some, including those by Crowder and Pitt (1992) and Baddeley and Logie (1992), suggest that it also occurs when listening to *instrumental* music.⁷³¹ The voice is, after all, our primary, most primitive and most personal means of sound-production and communication. It is, therefore, perhaps unsurprising that we understand sound in relation to our own vocal experience – a realm without additional instrumental technology, surely epitomising Peters’ proposed ‘realm where the body itself is producing the sound’⁷³². After all, as Cox says:

[t]he imagination looks for any basis for comparison: one is the experience of making the same or similar gestures; another is the experience of making sounds that are in some way(s) acoustically similar to those heard. In this sense, anyone with vocal experience has a basis for understanding most instrumental sounds, without having to have ever played any of the various kinds of instruments, to the extent that vocal sounds are acoustically similar to instrumental sounds.⁷³³

Comprehending instrumental music through our embodied knowledge of the voice is, after all, not a new phenomenon. Not only is it evidenced by the explicit parallels drawn between music and oratory in Baroque music treatises (as noted in discussions of ‘punctuation’ in Chapter 2),⁷³⁴ but it is reinforced by cross-domain mappings, whereby vocal qualities are frequently used to describe instrumental sounds. For example, instrumental melodies are often labelled ‘*cantabile*’,⁷³⁵ performers aim to make their instrument ‘sing’, and wind players talk of getting notes to ‘speak’. Given these well-established parallels between vocal and instrumental sound, as well as the intimate

⁷³⁰ Arnie Cox, ‘The Mimetic Hypothesis and Embodied Musical Meaning’, *Musicae Scientiae* 5, no. 2 (Fall 2001): 200.

See also J. D. Smith, D. Reisberg and M. Wilson, ‘Subvocalization and Auditory Imagery: Interactions between the Inner Ear and Inner Voice’, *Auditory Imagery*, ed. D. Reisberg (Hillsdale: Lawrence Erlbaum, 1992), 95-119; J. D. Smith, M. Wilson and D. Reisberg, ‘The Role of Subvocalization in Auditory Imagery’, *Neuropsychologia*, 33, no. 11 (1995): 1433-1454.

⁷³¹ R. G. Crowder and M. A. Pitt, ‘Research on Memory/Imagery for Musical Timbre’, in Reisberg, *Auditory Imagery*, 29-44; A. Baddeley and R. Logie, ‘Auditory Imagery and Working Memory’, in Reisberg, *Auditory Imagery*, 179-97.

⁷³² Peters, ‘Letting the Body Decide’, 8.

⁷³³ Cox, ‘The Mimetic Hypothesis and Embodied Musical Meaning’, 201-202.

⁷³⁴ To give just one example, Quantz states ‘Musical execution may be compared with the delivery of an orator’.

Quantz, *On Playing the Flute*, 119.

⁷³⁵ Cox, ‘The Mimetic Hypothesis and Embodied Musical Meaning’, 202.

connection between subvocalisation and comprehension, and between mimesis and ‘the sound-producing body’, it seems highly appropriate to acknowledge subvocalisation as a fundamental ingredient of the bodily activity that occurs when listening to instrumental music – a salient subpersonal process that gives rise to our embodied feeling of musical shape.

Cox, after all, identifies subvocalisation as one of three primary components of mimesis, which he reveals by returning to the image of the ‘musical sigh’. He states that, when listening to a musical sigh as performed on an oboe, mimetic participation includes: ‘(1) imitation of the fingering, embouchure and blowing; (2) subvocal imitation of the musical sounds produced (the two-note descent); and (3) amodal, visceral imitation of the exertion dynamic of the event’,⁷³⁶ therefore explicitly referencing realms that both include and exclude the instrument. Notably, through this example, he also indicates the concurrence of specifically-situated sound-producing action-imitation – that which is associated with the instrument and the voice – and overall gesture-producing action-imitation, relating to the general viscera. Through his description of the latter, Cox aims to convey that mimetic participation importantly involves ‘something in the *gut* that somehow matches the energy pattern of the music’.⁷³⁷ In summarising Cox’s argument, Nancy Yunhwa Rao clarifies: ‘mimetic participation involves imitating not only the imagined physical actions that produce those sounds, but also the physical actions that those sounds signify’.⁷³⁸ This can be further elucidated by drawing on Mark Johnson’s theory of image schemata.

4.4.3. Image Schemata

According to Mark Johnson, ‘image schemas constitute a preverbal and pre-reflective emergent level of meaning’, based on ‘recurrent patterns of bodily experience’.⁷³⁹ As explained most simply in Chapter 2 (Section 2.4.2.1), similarities are forged between our everyday sensory and perceptual, embodied experiences, in such way that a particular pattern or ‘image schema’ is formed. It is important to highlight that, thanks to their

⁷³⁶ Cox, ‘Hearing, Feeling, Grasping Gestures’, 52.

⁷³⁷ *Ibid.*, 51.

⁷³⁸ Nancy Yunhwa Rao, ‘The Transformative Power of Musical Gestures: Cultural Translation in Chen Yi’s Symphony No. 2’, in *Analytical Essays on Music by Women Composers: Concert Music, 1960-2000*, ed. Laurel Parsons and Brenda Ravenscroft (New York: OUP, 2016), 133.

⁷³⁹ Mark Johnson, *Embodied Mind, Meaning, and Reason: How Our Bodies Give Rise to Understanding* (Chicago and London: The University of Chicago Press, 2017), 86.

grounding in embodied experience, ‘image schemas exist across all perceptual modalities’, and, as such, ‘are at once visual, auditory, kinesthetic, and tactile’.⁷⁴⁰

This, of course, helps to explain our perception and experience of a ‘musical sigh’. As Cox states, ‘each melodic sigh performed by various instruments, manifests, somehow, the same image schema’.⁷⁴¹ It is indeed precisely via our embodied knowing of ‘sighing’ as a multimodal gesture with acoustic, physical and visceral properties – via its properties as an image schema – that mimetic participation (including subvocal and amodal imitation) enables the ‘musical sigh’ to be comprehended as such, the musical shape felt. Our experience of felt musical shapes – a salient form of embodied, tacit knowledge that guides temporal expressivity (as explored, in particular, in Section 4.6 and the case study, Chapter 5) – is therefore partially explained by the cooperation of mimetic participation and image schemata. These theories, of course, represent the explicit apex of a much deeper, phenomenal embodied knowing that incorporates uncodifiable aspects which cannot be fully articulated.

4.4.4. ‘Felt’ Emotion

Recalling the close affiliation between motion and emotion, the salience of *Affekt* in Baroque music treatises, and the rhetorical parallels between music and language – concerns intimately bound with interpretative microtiming, as discussed in Chapter 2 – the ensuing discussion focuses on the emotional quintessence of felt shapes and its relationship with our embodied knowledge of expressive vocalisation. Indeed, by understanding the emotional core of musical shapes, we move towards a deeper understanding of this form of visceral, embodied knowledge that lies at the heart of interpretative decision-making.

Just like a sigh, the ‘feeling’ of expressive speech, is a deep-rooted form of embodied knowing. Aside from the subject matter and vocabulary, which have their own implications, speech becomes expressive and can even gain a particular emotional content precisely from the particular exploitation of various acoustic elements, such as pitch, timbre, dynamic, and their temporal articulation. These expressive devices are

⁷⁴⁰ R. W. Gibbs and H. Colston, ‘The Cognitive Psychological Reality of Image Schemas and Their Transformations’, *Cognitive Linguistics* 6, (1995): 349.

⁷⁴¹ Cox, ‘Hearing, Feeling, Grasping Gestures’, 51.

fundamental tools of communication (and explicitly, of rhetoric, the 'art of persuasion',⁷⁴²) and I suggest that their affective properties are understood from an embodied perspective, thanks to our bodily experiences that unite covert emotion and corresponding overt expression.

To clarify, just like a sigh (a vocalisation that arises from feelings of sadness, yearning, tiredness, despair or relief), expressive speech is often a pre-reflective response to an emotional stimulus. As a catalyst induces an emotion in us, we *feel* this covertly within our body. Expressive speech is simply an overt externalisation. The feeling of delivering the speech, of combining certain expressive devices, therefore becomes inextricably bound with the feeling of the emotion. For example, the feeling of screaming in a fit of rage is directly associated with the feeling of anger, or similarly, that an outpouring of grief is underpinned by the feeling of pain. Even in a premeditated speech, arising via preparation rather than raw emotion, the orator not only exploits the powerful associations that have been forged between acoustic properties and emotional expression, but he or she also cannot escape any emotional impetus that may touch him or her in that moment. Importantly, when listening to these different vocalisations, the particular expression and its corresponding emotional content are recognised due to image schemata, derived from our embodied experience of the same or similar event – of shouting or lamenting, for example. Via mimetic participation, including, of course, subvocalisation, the body uses this prior experience to imitate the gesture-producing actions, generating the image schema and, therefore, the comprehension of the expressive gesture. As such, the expression is not only heard, but also *felt*.

Given that the sound-producing actions of expressive vocalisations are intimately tied to the feeling of the related emotion, it could be argued that the emotion is *felt*, to some extent, by the listener, as part of comprehending the expression. Most certainly an inextricable ingredient of that 'gut' feeling,⁷⁴³ the emotion could, in particular, play a fundamental part in the 'amodal, visceral ... exertion dynamic'⁷⁴⁴ of the expression. There is, of course, a wealth of literature debating the correlation between perceived and

⁷⁴² Paddy Bullard, 'Rhetoric and Eloquence: The Language of Persuasion', in *The Oxford Handbook of British Philosophy in the Eighteenth Century*, ed. James A. Harris (New York: Oxford University Press, 2013), 84.

⁷⁴³ Cox, 'Hearing, Feeling, Grasping Gestures', 51.

⁷⁴⁴ *Ibid.*, 52.

induced emotion⁷⁴⁵ – an area that lies far beyond the scope of this thesis – however, I simply argue that, thanks to both the direct correlation between covert emotion and overt expression, and the subpersonal, bodily processes of mimetic participation (which work in tandem with image schemata in the listening experience), the emotion of a musical shape is, in some way, experienced by the listener. They do not merely recognise the musical emotion cognitively (as suggested in earlier work into music cognition), but from a *felt* perspective – an understanding based on embodied involvement.

Music, of course, exploits the same emotionally-characterised devices as expressive speech: pitch, timbre, dynamic, articulation, tempo, duration, rhythm, and silence. I suggest, therefore, that the emotional content of a musical phrase – created, once again, by combining these acoustic features – is similarly perceived through mimetic participation, whereby, thanks to embodied knowing, the listener subvocalises and tacitly imitates the ‘amodal, visceral ... exertion dynamic’,⁷⁴⁶ generating a gut feeling of the expressive shape and the corresponding emotion.⁷⁴⁷ The *feeling* of emotion, embedded in these felt musical shapes (as illustrated in Figure 9 below) is, therefore, a fundamental component of the listening experience.

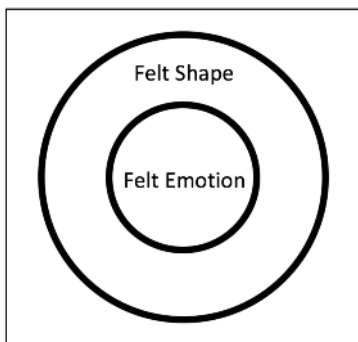


Figure 9. Felt Emotion

⁷⁴⁵ Examples include:

Alf Gabrielsson, ‘Emotion Perceived and Emotion Felt: Same or Different?’, *Musicae Scientiae* Special Issue (2001-2003): 123-124; Patrik N. Juslin and Daniel Västfjäll, ‘Emotional Responses to Music: The Need to Consider Underlying Mechanisms’, *Behavioral and Brain Sciences* 31 no. 5 (2008): 559-560; Patrick G. Hunter and E. Glenn Schellenberg, ‘Music and Emotion’, in *Springer Handbook of Auditory Research*, vol. 36: *Music Perception*, ed. Mari Riess Jones, Richard R. Fay, Arthur N. Popper (New York: Springer, 2010), 129.

⁷⁴⁶ Cox, ‘Hearing, Feeling, Grasping Gestures’, 52.

⁷⁴⁷ It is interesting to note that Le Guin also alludes to the gut feeling of a performer, by referring to eighteenth-century writing: Étienne Bonnot de Condillac’s notion of ‘fundamental feeling’ and Jean-Baptiste le Rond D’Alembert’s comment that such an ‘internal sense would seem above all to reside around the region of the stomach’.

Étienne Bonnot de Condillac, in Le Guin, *Boccherini’s Body*, 7.

Jean-Baptiste le Rond D’Alembert, in Le Guin, *Boccherini’s Body*, 8.

Whilst recognising the importance of felt emotion in temporal expressivity, at this stage it seems most essential to address Deniz Peters' question, 'What are these felt shapes?'⁷⁴⁸

4.5. Identifying 'Felt' Shapes

4.5.1. An Example: Downward Shapes of Sadness

Having explored the subpersonal and emotional foundations of our embodied knowledge of 'felt' musical shapes, it is indeed necessary to consider what exactly these shapes are and, of course, how they affect a performer's expressive timing decisions. John Rink has 'noted the importance of musical "shape" ... in the performer's conceptualisation of music – an elusive but elucidatory notion ... temporally conceived'.⁷⁴⁹ This comment from Rink (who explicitly acknowledges 'forward impulse, timing and "shape"' as the 'most essential concerns'⁷⁵⁰ of a performer) reinforces the significance of felt shapes in terms of both the performer's experience and musical timing. Whilst Section 4.5 serves primarily to identify these shapes in relation to image schemata, Section 4.6 and, in particular, the case study (Chapter 5) reveal how this embodied knowledge specifically affects temporal expressivity.⁷⁵¹

Hallgjerd Aksnes alludes to felt shapes in her research into 'how both sounding music and score are understood in terms of our own embodiment'.⁷⁵² As part of her explorations, Asknes considers our embodied experience of sadness: specifically, 'what it feels like to be sad, and how we carry our bodies when we are sad'.⁷⁵³ She states: 'we feel excessively heavy and sluggish, we sink together, our shoulders crouch, and our head falls; in other words, we experience our body in terms of downward motion – much like the downward motion of the melodic lines'.⁷⁵⁴ Aksnes continues to draw connections between our embodied experiences of sadness and musical shapes as she specifically

⁷⁴⁸ Peters, 'Letting the Body Decide', 9.

⁷⁴⁹ Rink, 'Analysis and (or?) Performance', in Rink, *Musical Performance*, 36.

⁷⁵⁰ John Rink, 'Playing in Time: Rhythm, Metre, and Tempo in Brahms's *Fantasien* Op. 116', in Rink, *The Practice of Performance*, 255.

⁷⁵¹ It is very important, at this stage, to acknowledge the potential cultural limitations of the ensuing discussion (Section 4.5), which is situated in Western practice. Whilst certain comments may indeed have cross-cultural relevance, claims of shared universal experience would require thorough cross-cultural investigation that lies beyond the scope of this thesis. The cultural nuances and limitations of my research are further considered in Chapter 6.

⁷⁵² Hallgjerd Aksnes. 'Music and Its Resonating Body', in *Musical Signification: Between Rhetoric and Pragmatics: Proceedings of the 5th International Congress on Musical Signification*, ed. G. Stefani, E. Tarasti and L Marconi (Bologna: CLUEB, 1998), 81.

⁷⁵³ *Ibid.*, 93.

⁷⁵⁴ *Ibid.*

compares 'our facial and postural expressions of sadness', with 'falling melodic lines'.⁷⁵⁵ Recognising overt externalisations of felt emotions, she refers to 'spontaneous vocal expressions of sadness' and 'sobbing', noting 'sonorous similarities'⁷⁵⁶ with 'falling chromatic lines',⁷⁵⁷ and the 'dotted rhythm'⁷⁵⁸ respectively.

Most importantly, Aksnes develops her argument for body-based musical meaning by proposing that 'we draw upon these bodily patterns and reactions when listening'.⁷⁵⁹ She suggests that our understanding of musical shape and emotion can arise not only 'from simple recognition of music's expressive properties' but also 'from our identifying with and actually feeling the expressivity of the music'.⁷⁶⁰ In this way, Asknes implicitly recognises that felt musical shapes of sadness exploit the cross-modal dimensions of mimesis and image schemata, drawing on the acoustic properties of the sound ('understand[ing] sounds in comparison to sounds we have made ourselves',⁷⁶¹ such as crying or sobbing), as well as on 'the physical actions that those sounds signify'⁷⁶² (such as slouching or frowning). Of course, together, a vocal wail, a facial grimace and a postural slump form an overall gesture of sadness, encapsulating the profound and all-consuming visceral, 'gut feeling'. Ultimately, when listening to descending musical lines (such as that which typically characterises 'Dido's Lament') or to musical sighs and sobs, due to mimetic participation, which exploits our many, multisensory, embodied experiences of unhappiness, we *feel* the downward, sighing or sobbing musical shape (thanks to its image-schematic properties) in our bodies and this inherently instigates the concomitant feeling of sadness.⁷⁶³

4.5.2. The Balance Schema

Continuing to exploit 'body-based metaphors', favoured for their intersubjective quality as a result of 'shared biological and cultural dispositions',⁷⁶⁴ Aksnes recognises another

⁷⁵⁵ Ibid., 87.

⁷⁵⁶ Ibid., 93.

⁷⁵⁷ Ibid., 91.

⁷⁵⁸ Ibid.

⁷⁵⁹ Ibid., 93.

⁷⁶⁰ Ibid., 94.

⁷⁶¹ Cox, 'The Mimetic Hypothesis and Embodied Musical Meaning', 195.

⁷⁶² Rao, 'Chen Yi, Symphony No. 2 (1993)', 133.

⁷⁶³ This holistic, multimodal quality of musical experience helps to explain a comment by Le Guin, in her research into the embodied experiences of performing Boccherini's music: 'I can never be sure whether the experience I am describing is primarily heard, or primarily felt, or primarily seen'.

Le Guin, *Boccherini's Body*, 36.

⁷⁶⁴ Aksnes, 'Music and Its Resonating Body', 82.

felt musical shape: balance. The phenomenon of balance is inextricably bound up with notions of tension and release, and there are indeed a number of connections between musical and bodily tension. The boundary between musical dissonance and resolution, as well as between physical pain and pleasure, is very close,⁷⁶⁵ the longer both musical and physical tension endure, the greater the impact of the ensuing relaxation (hence the powerful effect of prolonging a dissonant appoggiatura to delay the resolution), and finally, listening to musical tension induces bodily activity associated with muscular tension.⁷⁶⁶ These observations underpin my argument that musical shapes of balance are *felt* by the listener, confirming the visceral essence of our embodied experience of felt musical shapes.

Asknes specifically proposes that musical balance is felt in relation to our somatic experience of gravity – a deep-rooted tacit understanding of the balance schema, which is directly related to ‘stability’, ‘centeredness’ and ‘uprightness’ (and therefore to the ‘verticality’ and ‘center-periphery’ schemata)⁷⁶⁷ – and is known only through the lived body:

rising melodic lines, for example, are often heard as an increase in tension; much like our understanding of potential energy, which is proportionate to the elevation of an object. In the same way as physical objects, melodies seem to return to their original energy when they return to the registral point of departure.⁷⁶⁸

Reminiscent of Peters’ discussion of the cross-modal relationships between musical shapes and other embodied experiences of the world, Asknes’ arguments confirm the power of image schemata to ‘transcend the different sensory modalities’.⁷⁶⁹

Having made these connections between gravitational force and melodic musical balance, Asknes subsequently draws parallels with Western functional harmony. Quoting Jean-Philippe Rameau’s comment that the tonic ‘must be seen as the centre of the mode, towards which is drawn all our desires’,⁷⁷⁰ alongside Riemann’s description of ‘the

⁷⁶⁵ Jim Schnabel, ‘The Yin and Yang of Pleasure and Pain’, *The Dana Foundation*, August 21, 2008, accessed July 28, 2016, <http://www.dana.org/News/Details.aspx?id=42834>.

⁷⁶⁶ Lee A. Rothfarb, *August Halm: A Critical and Creative Life in Music* (New York: University of Rochester Press, 2009), 179.

⁷⁶⁷ Brower, ‘A Cognitive Theory of Musical Meaning’, 327.

⁷⁶⁸ Asknes, ‘Music and Its Resonating Body’, 85.

⁷⁶⁹ *Ibid.*, 86.

⁷⁷⁰ Jean-Philippe Rameau, in Asknes, ‘Music and Its Resonating Body’, 97.

dominant chord's leading tone being pulled towards the tonic', she summarises: '[i]n our culture we both hear and feel this pull as a major source of musical tensions and releases',⁷⁷¹ thanks to our embodied experiences of the forces and attraction of gravity. Candace Brower concurs not only that 'bodily image schemas – especially those involving force and motion – appear to underlie our understanding of music',⁷⁷² but also that the 'balance schema' in particular plays a fundamental role in our embodied experience of melodic contours and 'the pull of the tonic'.⁷⁷³ Examples of how our embodied knowledge of tension and release – our tacit understanding of the balance schema – influences expressive timing decisions in performance can be seen in Section 5.4.1.4 of the case study.

4.5.3. The Cycle Schema

Having identified the significance of our embodied knowledge of the balance schema in regard to our experience of felt musical shapes, it is important to consider the interrelationship between the balance and the cycle schemata. Interestingly, Brower notes that, as 'processes or states related by binary opposition', tension and relaxation, along with 'up versus down', 'in versus out', and 'departure versus return', reflect many of our bodily cycles, such as 'the alternation of left and right in walking, in and out in breathing, back and forth in swinging'.⁷⁷⁴ Brower illustrates this relationship with a 'cycle [that] takes the shape of a repeating pattern of peaks and troughs, suggesting climaxes alternating with points of repose'⁷⁷⁵ – the 'cycle schema' – as indicated in Figure 10.

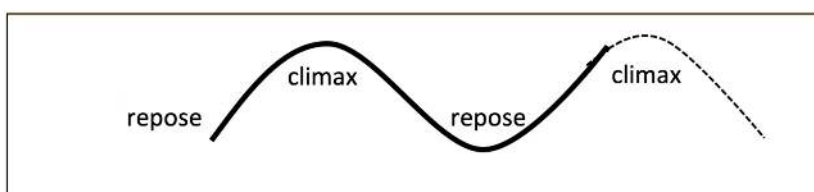


Figure 10. The Cycle Schema

Of course, as Brower notes, whilst the wave may be balanced, it may also be 'asymmetrical, as in the case of most bodily processes of tension and relaxation, with the climax sometimes coming well after the midpoint of the cycle'.⁷⁷⁶ This wave of tension

⁷⁷¹ Aksnes, 'Music and Its Resonating Body', 97.

⁷⁷² Brower, 'A Cognitive Theory of Musical Meaning', 324.

⁷⁷³ *Ibid.*, 335.

⁷⁷⁴ *Ibid.*, 330.

⁷⁷⁵ *Ibid.*, 329.

⁷⁷⁶ *Ibid.*, 330.

and release is also reflected in musical shapes on many levels, from a dissonant appoggiatura lasting half or two-thirds of a single note, to the high point of an individual phrase, to the climax at a structural golden section. Indeed, this coexistence of multi-level musical cycles is supported by Brower's assertion that they may 'be nested, with larger cycles subsuming smaller ones, producing ... hierarchy'.⁷⁷⁷

In order to understand the profundity of this form of knowledge – which often masquerades as 'intuitive' or 'natural' – it is essential to consider how it is acquired. In Chapter 2, following Epstein, I noted that cyclicity pervades our bodily and worldly experiences. This is confirmed by Mark Johnson:

[w]e come into existence as the culmination of a reproductive cycle. Our bodily maintenance depends upon the regular recurrence of complex interacting cycles: heartbeat, breathing, digestion, menstruation, waking and sleeping, circulation, emotional build-up followed by release, etc. We experience our world and everything in it as embedded within cyclic processes: day and night, the seasons, the course of life (birth through death), the stages of development in plants and animals, the revolutions of the heavenly bodies.⁷⁷⁸

It is evident, therefore, that from a multitude of cyclic experiences, we have a deep-rooted embodied knowledge of the cycle schema, without necessarily realising it.⁷⁷⁹ It is this deeply engrained, pre-reflective quality that accounts for the 'intuitive' status of tacit, experiential knowledge.

Having recognised the many experiences that together generate our profound embodied knowledge of cyclicity, it is essential to highlight the inherent temporality of this schema, in order to understand its particular influence on microtemporal expressivity in performance. Developing her explanation (already noted in Chapter 2, Section 2.4.2.3)

⁷⁷⁷ Ibid., 329.

⁷⁷⁸ Johnson, *The Body in the Mind*, 119.

⁷⁷⁹ Of course, the theory of image schemata endeavours to codify our tacit knowledge of the cycle schema into an explicit epistemic form. One could, therefore, critically consider the theory of image schemata in one's reflective attention. As Mark Johnson says, 'even though image schemas typically operate without our conscious awareness of how they structure our experience, it is sometimes possible to become reflectively aware of the image-schematic structure of a certain experience'. In any case, as explained in Section 4.2.2 and illustrated by Figure 5, the full depth of this embodied knowledge can only ever be understood experientially.

Johnson, *Embodied Mind, Meaning, and Reason*, 86.

that 'the CYCLE [sic] schema serves to organize our experience of time',⁷⁸⁰ Brower's account of the prevalence of cyclicity in everyday life highlights its temporal quintessence:

[a]t many levels of temporal experience, human activity tends to organize itself into cycles. From low-level patterns of walking and breathing to higher-level patterns of waking and sleeping, working and resting, we use these cycles to locate ourselves within the flow of time, anticipating the timing of upcoming events through the regularity and predictability of the cycles.⁷⁸¹

Johnson, too, emphasises that 'this structure constitutes one of our most basic patterns for experiencing and understanding temporality'.⁷⁸² Cycles simply 'constitute temporal boundaries for our activities', thanks to their idiosyncratic capacity to 'mark off ... units of time'⁷⁸³ – a characteristic elucidated by viewing the cycle not merely as a sine wave (as represented in Figure 10), but as a 'circle', or a 'closed pathway'.⁷⁸⁴ Brower draws connections with the 'container schema': '[t]he circle, being closed, can be conceptualized as a container for motion around its perimeter', or more specifically as 'a temporal container', adding that these temporal circles 'may be subject to expansion and contraction'.⁷⁸⁵

Whilst the specific relationship between our embodied knowledge of the cycle schema and micro-temporal nuances has been introduced in Chapter 2 (specifically in terms of punctuation or 'rest points' and proportional tempo) and is explored in detail in the case study, at this stage it is interesting to draw some brief, rudimentary connections with musical phrases. Thanks to the cross-modality and subpersonal, bodily underpinnings of image schemata, I contend that phrases are *felt* as temporally-delineating, cyclic patterns, the continuous flow and regularity of which establishes a sense of predictability or expectation, such as a series of four-bar phrases. Phrase expansions or contractions, therefore, defy our anticipations and are hence experienced as premature or delayed arrivals at the expected goal, of course stimulating corresponding feelings of surprise or uncertainty, for example. This conceptualisation of

⁷⁸⁰ Brower, 'A Cognitive Theory of Musical Meaning', 328.

⁷⁸¹ *Ibid.*, 351.

⁷⁸² Johnson, *The Body in the Mind*, 121.

⁷⁸³ Brower, 'A Cognitive Theory of Musical Meaning', 329.

⁷⁸⁴ *Ibid.*

⁷⁸⁵ *Ibid.*

temporally-organising cyclic containers that can enlarge and decrease – the very result of the synergetic interaction of different schemata to construct meaning based on embodied experience – perfectly explains the *feeling* of different musical phrase lengths, along with the inherent, corresponding *feeling of emotion*, such as that of satisfaction as our expectations are met, or surprise or and unease as they are thwarted.

What is significant here is that earlier ideas concerning expectation in musical shape (such those developed from the 1950s onwards by Leonard Meyer and others)⁷⁸⁶ take on a new dimension: beyond purely mental cognitive models for music perception, my argument (following the likes of Cox, Peters, Aksnes and Brower) is that musical shapes and emotions are not only perceived mentally, but *felt* through embodied cognition. Specifically, in drawing on Brower’s recognition of the ‘cycle schema’ as a significant component of embodied musical meaning, as well as on my own experience as a listener and performer, I contend that musical shapes, and in particular phrase shapes, are felt predominantly as *cycles* – an embodied, cyclic experience that influences our expressive timing decisions (as noted in Chapter 2 on ‘Time’ and further elucidated in Section 5.4 of the case study).

4.5.4. The Pathway Schema

Recognising the implicit connections between cyclic patterns and notions of motion, departure, expectation, goals and arrival, it is noteworthy that Brower claims, ‘we move through life in cycles in which the attainment of one type of goal is followed by striving for the other’.⁷⁸⁷ There is, of course, an explicit alliance here, between the ‘cycle schema’ and the ‘source-path-goal schema’ (or as I term it, the ‘pathway schema’), which, as noted in Chapter 2, ‘organizes our experience of motion, specifically goal-directed motion’.⁷⁸⁸ Recalling David Epstein’s comment that ‘motion is the very stuff of time itself’,⁷⁸⁹ as well as the prevalence of ‘goal-directed linearity’ in the literature on musical time, the significance of the pathway schema in expressive timing is patent. Most importantly, it supports my proposal that musical shapes (or cycles) are also felt as journeys – a universal

⁷⁸⁶ Leonard B. Meyer, *Emotion and Meaning in Music* (Chicago and London: The University of Chicago Press, 1956).

⁷⁸⁷ Brower, ‘A Cognitive Theory of Musical Meaning’, 331.

⁷⁸⁸ Ibid.

⁷⁸⁹ Epstein, *Shaping Time*, 8.

understanding of progression, the embodied foundations of which have already been alluded to in the discussion of Kramer's work in Chapter 2 (Section 2.4.2.2).

Indeed, the metaphor of a musical journey is a familiar concept. Just like life – one big voyage (or cycle), encompassing a vast multitude of smaller journeys (or cycles) – a musical journey exists on many levels, comprising a number of phases of departure and arrival, from individual motifs, to phrases, to structural sections, to whole movements, to entire works – journeys nested within journeys. With specific regard to pitch, 'the description of melody as moving by step clearly reflects the bodily experience of walking', and suggests 'a step-by-step progression along a pathway leading to a goal'.⁷⁹⁰ After all, Schenker himself states: '[s]ince it is a melodic succession of definite steps of a second, the fundamental line signifies motion, striving toward a goal, and ultimately the completion of this course'.⁷⁹¹ The way in which our embodied knowledge of the pathway schema relates to our experience of pitch, thanks to the cross-modality of image schemata and metaphorical projection, is evident.

Each single step one takes can be viewed as an individual journey in itself, underpinned by the feeling of 1) departure as the foot leaves stable ground, 2) anticipation and tension as the foot is suspended in the air against gravity, and 3) arrival at a goal, as the foot returns to a stable position and balance is regained. This is illustrated in Figure 11.

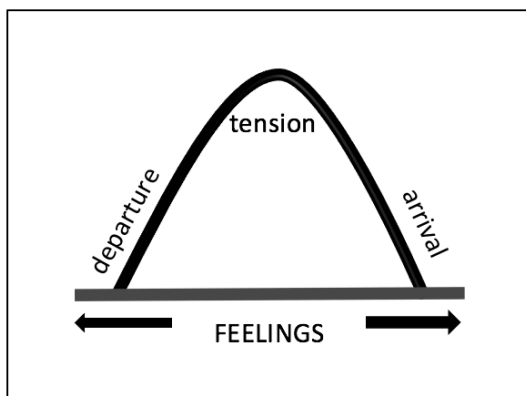


Figure 11. Journey

This highlights the intimate relationship not only between different phases of a journey and corresponding emotions (and, therefore between felt shapes and felt emotions), but also between the verticality, balance, cycle and source-path-goal schemata. These interrelated schemata are similarly reflected in a melodic journey, whereby the music

⁷⁹⁰ Brower, 'A Cognitive Theory of Musical Meaning', 333.

⁷⁹¹ Heinrich Schenker, *Free Composition*, trans. Ernst Oster (New York and London: Longman, 1979), 4.

departs from a stable pitch, causing the listener to *feel* a force, mirroring the tension of gravitational energy; in diatonic music, for example, this manifests as a ‘pull’ from ‘unstable tones’, such as the 7th or the 4th, ‘upward or downward to the closest stable tones’, such as the 1st or the 3rd – the melodic goal.⁷⁹²

With regard to harmonic progression in Western classical tonal music, the term ‘progression’ itself inherently connoting a journey, the suspense of an ensuing cadence leads to the feeling of arrival and repose as the tonic is reached – a shape experienced thanks to our embodied knowledge of the pathway schema. In particular, Brower notes that ‘the progression I-V-I evokes the experience not only of departure and return, but also of rise and fall, tension and relaxation’,⁷⁹³ once again indicating the coexistence of the verticality, balance and source-path-goal schemata. When she asserts that ‘[c]ompletion of the I-V-I progression brings into play the CYCLE [sic] schema, and with it implications of closure and containment’,⁷⁹⁴ she also alludes to the ‘container schema’.⁷⁹⁵ Evidently, if the harmonic progression ends, instead, with an interrupted cadence, our expectations are defied. This certainly generates a feeling of surprise rather than arrival, and extends our musical journey, just as an unforeseen road closure causes us to deviate from our original route and take a new direction. This is represented in Figure 12.

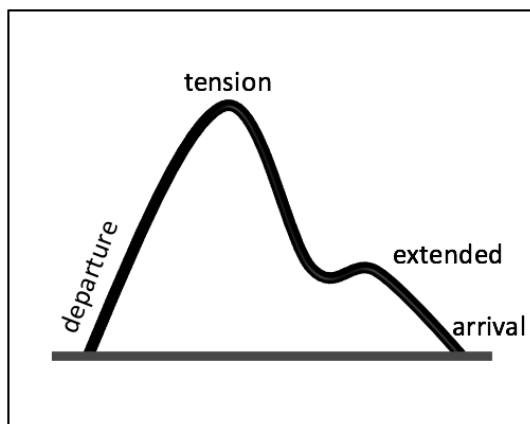


Figure 12. Extended Journey

Thanks to the cross-modality of image schemata, in the same way that exploring new territory and making unusual discoveries can be both disorienting and intriguing, we may feel lost yet curious when our anticipated musical journey changes course, such as listening to the surprises of a development section, or a series of unexpected harmonic

⁷⁹² Brower, ‘A Cognitive Theory of Musical Meaning’, 334.

⁷⁹³ Ibid., 340.

⁷⁹⁴ Ibid.

⁷⁹⁵ Ibid, 329, 342.

progressions. In any case, thanks to its defining quintessence – goal-directed motion – the salience of the pathway schema in expressive timing decisions is patent (and this is confirmed by examples provided in Section 4.6.3 and in the case study, Chapter 5).

4.5.5. Arch Shapes

To draw together my examples of felt musical shapes it seems useful to consider the image of an ‘arc’ or ‘arch’. This shape is referenced frequently in Brower’s discussion, thanks to its curvature, which inherently reflects the contour of the cycle schema, the ‘up and down’ of verticality and balance schemas, the departure, motion and arrival of the pathway schema, and hence the overall trajectory of a journey. Whilst recognising the ‘hierarchical nesting of arcs’ in music,⁷⁹⁶ Brower refers, in particular, to ‘arcs of motion’ to describe musical phrases.⁷⁹⁷ Interestingly, Aksnes, too, recognises the significance of arches in musical experience, highlighting ‘the arch’ as ‘a striking example of metaphorical projection between different domains of experience’.⁷⁹⁸ Aksnes identifies ‘visual images of arches in the score (including phrase arches)’, as well as arch shapes that are ‘associated with the movement and tension qualities of bodily gestures’,⁷⁹⁹ alluding, of course, to the tension-release of the balance schema and the related contour of the cycle schema, which underpin both overt physical motions, such as walking, and undulating subpersonal bodily processes, such as breathing. The significance of arch shapes in embodied listening is reinforced by a study carried out by music theorist Marion Guck in which she asked music students to describe a passage from Chopin’s B Minor Prelude in non-technical terms. Responses included:

a pole-vaulter just releasing a pole; a labored breath; and a person diving off a diving board. All three describe the activity of a person and suggest an arching shape with steadily increasing tension culminating in a point of climax with subsequent sudden release. Differences between the three seem to be differences in emphasis rather than fundamental disparities in conception.⁸⁰⁰

⁷⁹⁶ Ibid., 370.

⁷⁹⁷ Ibid., 351.

⁷⁹⁸ Aksnes, ‘Music and Its Resonating Body’, 96.

⁷⁹⁹ Ibid.

⁸⁰⁰ Marion Guck, ‘Musical Images as Musical Thoughts: The Contribution of Metaphor to Analysis’, *In Theory Only* 5, no. 5 (1981): 34-35.

These descriptions demonstrate the arching contour of the balance, cycle and pathway schemata, which draw on a variety of embodied experience and work together to generate these felt musical shapes.

4.5.6. Section Summary

To conclude my discussion of felt shapes within the listening body, I summarise: the body plays a fundamental role in the listening experience. Via the interdependent cooperation of mimetic participation and image schemata – complex processes that are underpinned by covert bodily and cognitive activity and draw on a multimodal array of embodied knowledge – musical shapes, entwined with and co-created by corresponding emotions, are *felt* by the listener. These shapes are neither precisely defined, nor rigidly fixed, yet they are felt vividly within the body. The shapes predominantly take the form of emotionally-characterised gestures or expressions, and journeys, felt as cycles or arches, encompassing a vast array of feelings associated with departure, motion, tension, expectation, arrival and relaxation. Thanks to their inherent temporality – particularly the temporally-delineating quality of the cycle schema and the motional trajectories of the pathway schema – these felt shapes (a profound visceral form of embodied knowledge) play a crucial role in guiding expressive timing decisions.

I reiterate, here, that I am not merely articulating the cognitivist view that we might recognise musical patterns through mental metaphorical projections, cognitively identifying shapes (and their corresponding affective properties) in notation or sound; nor am I delving into the psychological complexities of emotional perception and induction by insisting that emotion is induced in the listener. Rather, the crux of my argument is embodiment: musical patterns and shapes are understood, perceived and felt through the mind and body together, through embodied cognition. In the case study (Chapter 5), I aim to exemplify this process in action.

4.6. Felt Shapes in Performance

4.6.1. Performer as Listener

Having explored felt shapes that arise in the listening experience, it is, of course, essential to understand their relevance to the performer, and, specifically, to expressive timing decisions. After all, it is essential to reiterate that the focus of this research is on the experience of the performer, not the audience. My explorations of embodied listening

therefore serve specifically to develop an understanding of the way in which this form of knowledge influences a performer's interpretative decisions; they do not intend to address issues of audience reception. Whilst theories of mimetic participation, mirror neurons and image schemata do, to some extent, suggest that there may be some shared experience between performer and audience,⁸⁰¹ and that we may well experience musical shapes in terms of similar embodied image schemata, this relationship requires thorough investigation that lies far beyond the scope of this study. After all, just as a performer's embodied knowledge of image schemata interacts with a range of other epistemic avenues in the individual's epistemic web, each listener also brings their unique reservoir of knowledge to the activity, influencing their personal experience of the music.

The purpose of Section 4.6 is, therefore, to focus specifically on the way in which felt shapes – a form of knowledge grounded in embodied listening – can influence temporal expressivity in performance. This involves considering the role of the performer simultaneously as performer *and* listener. Stefan Östersjö's comment, which I quoted earlier and which echoes Merleau-Ponty's notion of 'reversibility',⁸⁰² is worth recalling here: 'for the performer it is not really possible to distinguish between being in the world as performing and being in the world as listening', due to the intimate entanglement of 'action perception loops at play in musical performance'.⁸⁰³ The performer is '*as one both hearing and being heard*'.⁸⁰⁴ Deniz Peters provides a detailed explanation:

[a] similar strand of bodily experience that engages the listener, engages the performer, only that the performer decides about the continuation of a sounding shape. In other words, the performer approaches in her or his interpretation of a score, or in her or his improvisation, not only the heard attribute of a passage, but also the felt Decisions of this kind are made and often consolidated already at the rehearsal stage, which involves experimentation beyond the question of how a passage is

⁸⁰¹ Such an imitative experience is, in fact, also proposed by Le Guin, when she states that '[I]n a live performance (and to some extent in a recorded one) not only will the performer feel things ... but the listener-observer will feel them too, or will at least feel that the performer feels them'.

Le Guin, *Boccherini's Body*, 24.

⁸⁰² Jack Reynolds, 'Maurice Merleau-Ponty (1908-1961)', in *Internet Encyclopaedia of Philosophy: A Peer-Reviewed Academic Resource*, ed. Bradley Dowden and James Fieser, accessed July 20, 2016, <http://www.iep.utm.edu/merleau/#SH3b>.

⁸⁰³ Östersjö, 'The Resistance of the Turkish Makam and the Habitus of a Performer', 205.

⁸⁰⁴ Corness, 'The Musical Experience through the Lens of Embodiment', 21.

approached technically, into that of its felt shape. The sum of such decisions and the consistency and synthesis formed therein, make a decisive difference on interpretation. It is with the body that such shapes are *found*, and consequently, decisions taken.⁸⁰⁵

We listen as we play music; we feel the shapes as we create them. Whilst the exploratory nature of practice lends itself to experimentation with different felt shapes, providing the opportunity to consolidate an interpretation, or better still, interpretative possibilities, the performer cannot escape the impact of the felt musical shape in the moment, which is, of course, an initially pre-reflective response to the unfolding musical narrative in real time, influenced by the subtleties of the surrounding shapes – a phenomenal, ‘what-it-feels-like’, visceral experience. In this way, as Peters summarises, the ‘body [takes] the lead in shaping the sound’.⁸⁰⁶

Felt musical shapes, therefore, ultimately underpin and guide expressive decision-making. As noted, shapes are felt predominantly as cycles, arches and journeys, all of which have a highly temporal quality – recall the discussion of ‘temporally-organising containers’ – and suggest directional motion towards and away from a climax. As such, the felt shape plays a crucial role in determining the temporal trajectory of the phrase, therefore lying at the heart of expressive timing decisions. Due to action-perception loops, the felt shapes and concomitant emotions lead to expressive musical motion; yet the expressive musical motion simultaneously engenders the felt musical shape. There is indeed a complex entwinement of musical shapes and felt shapes, of doing and feeling, of motion and emotion: musical shapes stimulate and are simultaneously stimulated by felt shapes. In any case, we cannot neglect the primacy of the body in governing musical interpretation – its inherent ability to guide expressive decision-making in performance.

4.6.2. Felt Shapes and Overt Externalisations

Having established the invaluable role of covert felt shapes in musical performance, I wish to consider their *overt* externalisations. Whilst *overt acoustic* externalisations take the form of interpretative musical decisions, such as temporal expressivity, and are, therefore, manifest in the *sound*, I suggest that it is equally important to explore potential

⁸⁰⁵ Peters, ‘Letting the Body Decide’, 11.

⁸⁰⁶ *Ibid.*, 12.

physical externalisations. I propose, after all, that covert felt shapes may directly give rise to overt bodily shapes or gestures.

This relationship has indeed been touched upon in Deniz Peters' work, in which 'the relation between musical expression and bodily expression' is examined;⁸⁰⁷ however, rather than exploring the gestures of performing musicians, it is the movement of *dancers* (as they interacted with music in a complex, embodied action-perception process, both producing and responding to electronic sound) that steals the focus. Whilst the dancers recount that 'they felt they were correlating their movements spontaneously with those invited or incited by the sound',⁸⁰⁸ Peters elaborates that the 'shapes engendered by the sonic development' were not only 'felt proprioceptively' by the dancers, but, more importantly, that '[t]hese felt shapes were [also] present enough for the dancers to orient their movements on or even to give rise to movement'.⁸⁰⁹ In considering potential 'mappings between motion qualities and sound qualities', Peters most significantly recognises moments that indicate an 'empathic correlation of sonically suggested movement qualities with their actual movement, [where the] dancers would feel that they "embodied the sound", meaning that they would feel as if sonic and movement qualities *merged*'.⁸¹⁰ Peters continues: 'beyond the qualities, the intentionalities of the two movements (one suggested by the music, the other continuing the dancer's) merged as well'.⁸¹¹ This intimate connection between the *sonic shape* of the music, the corresponding *covert felt shape* within the dancer, and the dancer's externalised, *overt bodily shape* is effectively summarized by Peters, as follows: '[t]he feeling of shape arising from the sound they approached was just there – in the sound, into which they extended, and which thus became part of their bodies'.⁸¹²

As they play, creating music, performing musicians also embody the sound, covertly feeling shapes and overtly generating them, moving both in response to and in anticipation of the sound, in such a way that the motional and sonic dimensions of their performance fuse. Personally, I cannot forget the moment that Professor Peter Seymour told me that I 'dance' when I play. Whilst there is, of course, an abundance of research

⁸⁰⁷ Peters, 'Letting the Body Decide', 6.

⁸⁰⁸ *Ibid.*, 7.

⁸⁰⁹ *Ibid.*, 6

⁸¹⁰ *Ibid.*

⁸¹¹ *Ibid.*, 6-7.

⁸¹² Peters, 'Letting the Body Decide', 7.

into the performative, physical gestures of musicians,⁸¹³ this subject is rarely considered specifically in connection with covert felt shapes. Research into the relationship between covert felt shapes and overt bodily gestures must therefore, by necessity, extend from dancers, to investigate performing musicians. After all, I propose not only that a musician's performative gestures arise predominantly as externalisations of covert felt shapes, but also that they may be as integral in shaping performance and guiding interpretative decisions as the covert shapes themselves. In particular, I suggest that the duration and motion of gestures play a fundamental role in *expressive timing decisions*.

At this stage, it is important to acknowledge that thorough investigation of overt gesture lies beyond the scope of this thesis. Indeed, I did not set out to study body gesture as part of my research: my observations emerged organically in the research process and hinted at interesting connections with my felt experience and image-schematic shapes. The following discussion is, therefore, based on my own experiences and observations as a performer-researcher, and serves to introduce a plausible interrelationship between felt shapes, image schemata, overt gesture and temporal expressivity. It does not attempt to make any grand claims based on highly scientific empirical investigation that would require advanced technology to scrutinise correlations between overt gesture and microtiming – an avenue for further research. Indeed, such a formal, experimental study using motion capture sensors and gestural analysis would not only pose different technological and methodological requirements, but the primary research focus would shift from the covert processes and phenomenological experiences that are of utmost interest in this thesis, towards external, observable and measurable phenomena. What is relevant here is not the minutiae of gestural speed or distance, but the very fact that there seems to be a noteworthy relationship between felt experience, image-schematic shapes, overt gesture and expressive timing decisions.

⁸¹³ Particularly notable examples, lying at the forefront of the literature, include:

Jane W. Davidson, 'Introducing the Issue of Performativity in Music', *Musicology Australia* 36, no. 2 (2014):179-188; Jane W. Davidson, 'Bodily Movement and Facial Actions in Expressive Musical Performance by Solo and Duo Instrumentalists: Two Distinctive Case Studies', *Psychology of Music* 40, no. 5 (2012): 595–633; Anthony Gritten and Elaine King, eds., *New Perspectives on Music and Gesture* (Surrey: Ashgate, 2011); Rolf Inge Godøy and Marc Leman, eds., *Musical Gestures: Sound, Movement, and Meaning* (New York and Oxon: Routledge, 2010); Jane W. Davidson, 'Qualitative Insights into the Use of Expressive Body Movement in Solo Piano Performance: A Case Study Approach', *Psychology of Music* 35, no. 3 (2007): 381–401; Jane W. Davidson, 'The Role of the Body in the Production and Perception of Solo Vocal Performance: A Case Study of Annie Lennox', *Musicae Scientiae* 5, no. 2 (Fall 2001): 235-256; Jane W. Davidson and Jorge Salgado Correia, 'Meaningful Musical Performance: A Bodily Experience', *Research Studies in Music Education* 17, no. 1 (2001): 70-83; Jane W. Davidson, 'Visual Perception of Performance Manner in the Movements of Solo Musicians', *Psychology of Music* 23 (1993): 103-113.

Interestingly, in my analysis of audio-visual recordings of my own performances, carried out *prior* to my theoretical explorations into the body and gesture, my primary and most recurrent observation was of the preponderance of circular, cyclic movement, which characterised the vast majority of my gestures and coincided directly with my interpretation of small musical shapes.⁸¹⁴ These circular motions often occurred in tandem with bodily movement forwards and backwards, which seemed to reflect the direction of the musical phrase. Example 1, an excerpt taken from one of my performances of Michel Blavet's Sonata in D major, shows both my trajectorial motion (00:16 – 00:21) and cyclic gestures (00:29 - 00:33). Whilst I initially discarded these preliminary observations as simple, futile trivia, in retrospect, they appear most significant. Having since come to understand the centrality of the cycle and pathway schemata (and more specifically, cycles, containers, arches and journeys) in the comprehension and felt dimension of music, it seems most plausible that my performative bodily gestures relate directly to these schemata, and more importantly, to these felt shapes. By feeling the musical phrase as a journey, the motion to and from musical goals is embodied, and externalised physically and visually by the forward and backward movement of my body. Intimately entwined with this directional motion, my circular movement (an embodiment of the journey as a 'temporally-organising arc of motion') simultaneously determines not only the duration of the phrase, but also the subtleties of the sonic motion – the temporal nuances. After all, the physical gesture, itself one of motion, takes a certain amount of time: it is a temporal container. It seems, therefore, that the cycle and pathway schemata work synergistically, both covertly and overtly, to guide expressive timing decisions. It is important to emphasise that, if effective and convincing communication relies on the musical shape being felt by the performer, the overt, physical shapes, which not only attest to but also consolidate and enrich this embodiment, are perhaps essential to this end.⁸¹⁵

⁸¹⁴ This observation reflects the findings of a study carried out by Jane Davidson, in which she notes the prominent 'circling action' that characterises the bodily gestures of flautists and clarinettists. Davidson, 'Bodily Movement and Facial Actions in Expressive Musical Performance by Solo and Duo Instrumentalists', 605.

⁸¹⁵ I reiterate, here, that, though I speak of effective and convincing communication and draw connections with body gesture, I do not attempt to make grand claims about audience reception, which would require evidence from systematic, empirical investigation. My comments are intentionally based on my own authentic experiences and observations.

Whilst the complex entwinement and co-creation of covert, overt and musical shapes must not be forgotten, for sake of clarity, I provide a simplified, linear explanation of how we might understand the forces behind expressive timing decisions: the covert, bodily processes of mimetic participation and image schemata underpin felt musical shapes, predominantly of goal-directed journeys or arcs of motion, which inherently encompass feelings associated with departure, travel, tension, arrival and release; these covert felt shapes often externalise into overt bodily gestures, dominated by cyclic patterns (sometimes in tandem with forward-backward movement), which correspond directly with the musical shapes and phrases; characterised by motion, these gestures, which take a certain amount of time, control the duration and temporal evolution of the musical correlate, hence determining expressive timing decisions. I firmly reiterate, however, that, due to action-perception loops, the overt physical gesture is determined by the covert felt shape, which arises from the musical motion and corresponding emotion; yet it is the overt physical gesture itself that indeed determines the musical motion in the first place. For performers, then, musical shapes of motion are at once felt, found and created by the body.

In my audio-visual analysis, I also identified instances in which there was a momentary pause within my overt bodily gesture, which appeared to be suspended up in the air, the motion adjourned, as my body physically paused. This corresponded directly with moments of temporary sonic caesura, in which the music appeared to be 'suspended' on 'unstable' territory, such as an interrupted cadence, before the tension subsided, stability returned and the physical gesture resumed. (This gestural suspension and resumption can be seen in Example 1 (00:06 – 00:09) and (00:28 – 00:30). This not only demonstrates metaphorical projection in music, the cross-modal working of image schemata, and mappings between sonic and motion qualities, but more importantly, it is testament to the embodiment and physical externalisation of felt musical shapes and, therefore, to the entanglement of covert, overt and sonic gestures. Simply, it reinforces the entwinement of body and sound.

More noteworthy, however, is the particular moment of resumption. I can confirm, from my first-hand experience, that I simply rely on a powerful impulsive feeling, an embodied knowing in that moment, to determine and control the continuation of the physical and sonic motion. It just '*feels* right'. I now believe that this can be explained precisely by *felt shapes*. Having embodied the musical phrase as a journey, or even as a

verbal expression, both of which have a unique temporal trajectory and duration, the pacing and temporal niceties are simply intrinsic features of the felt shape. The inherent momentum of the gesture as a whole, not least of the physical cyclic gesture, effectively determines the expressive timing of the suspension and resumption.

Finally, it must be highlighted that, in terms of verbal expression, breathing is also fundamental in controlling the duration, trajectory and execution, and it is, of course, equally important in shaping musical expression, particularly on wind instruments such as the flute. The breath – itself a bodily cycle of inhalation and exhalation – is an integral, unavoidable and inseparable part of the verbal and musical utterance. By feeling the shape of the expression, the breath is adjusted accordingly, felt by the whole body, not just the lungs, and this determines the evolution of the phrase. By embodying a musical shape, therefore, as a verbal expression, a vocal journey (of course linked to subvocalisation in mimesis), the temporal trajectory of the phrase, including moments of suspension and continuation, is based not only on the felt cyclic shape of the gesture and the overt physical externalisation, but also on the bodily cycle of breathing. Covert, felt, visceral cycles; externalised, overt, physical cycles; and pre-reflective, subpersonal, bodily cycles intimately correspond with one another, and work together to control expressive timing decisions.

4.6.3. Felt Shapes and Epistemic Interaction

Having noted the centrality of embodied knowledge in the interpretative process, it is important to consider how it may specifically influence expressive timing decisions in performance. Whilst this is alluded to in Chapter 2 and explored most thoroughly in the case study (Chapter 5), here I provide a few general examples, to introduce the process of epistemic interaction – the very process that underpins interpretative decision-making and, therefore, temporal expressivity.

As evidenced throughout this thesis, musicians ‘play with time’, fundamentally in order to create an expressive, emotionally-engaging and convincing performance. A performer specialising in Baroque repertoire will, in order to inform his or her interpretation, most certainly draw upon *explicit* knowledge of the musical *Affekts* of the time, alongside the well-known rhetorical principles for persuasive, emotional communication. However, he or she is also influenced by the *feeling* of emotion, and of impassioned expression – an embodied, *tacit* knowing, acquired through experience.

Alongside both declarative and personal knowledge associated with emotion, the performer also exploits other explicit knowledge to aid his or her interpretation. Propositional knowledge of harmony, melody and rhythm, for example, can be used to determine a musical emotion, shape or phrase; yet far more potent is, of course, the tacit feeling of that shape within the listening body. The unparalleled depth and intensity of this embodied feeling simply reinforces my assertion, in Section 4.2.2, that embodiment allows the *uncodifiable* aspects of knowledge to be discovered. As a result of its sheer profundity, this tacit feeling may eventually surpass the corresponding explicit musical knowledge, reflecting the moment at which declarative, codified knowledge becomes engrained in the performer's subattention, and replaced by a greater, more comprehensive knowing: 'intuition'.

Having identified, explicitly *or* tacitly, a musical shape, the performer then 'plays with time' correspondingly. It is important to reiterate, here, that I regard 'playing with time' as any interpretative decision that alters the notated time. Chapters 2 and 5, however, loosely categorise this enormous subject into three fundamental subsets: the manipulation of note length, the ebb and flow of motion, and the punctuating of musical clauses. Firstly, I wish to consider motion; in particular, the way in which a performer's embodied knowledge of the pathway schema may influence the overarching shaping of a phrase. To do so, I recall a comment from Brower (noted in Chapter 2, Section 2.4.2.2) that describes the motional quality of our everyday, embodied, goal-directed actions:

[a]s we approach an unstable goal, we tend to move toward it with increased speed, tension, and anticipation. Upon reaching the goal, we tend immediately to seek its opposite – stability, relaxation, and the slowing and/or stopping of motion. Thus, each completed motion corresponds to a completed cycle of tension and relaxation.⁸¹⁶

Not only does this description indicate a direct 'superimposition of the SOURCE-PATH-GOAL schema onto the CYCLE [sic] schema',⁸¹⁷ but I suggest that it also provides an embodied explanation for our desire to move or strive towards the musical climax of a phrase. After all, according to Brower, 'the climax of the phrase – the turning point between tension and relaxation' is one of the 'two distinct goals' within a musical phrase

⁸¹⁶ Brower, 'A Cognitive Theory of Musical Meaning', 332.

⁸¹⁷ *Ibid.*

instability' quality) exploits the performer's wealth of embodied experience of tension and relaxation (such as that inherent in the breathing process, or the clenching and releasing of muscles, or the defying of and submitting to gravitational force).

Nonetheless, as the propositional string of words from Quantz's treatise extends from the page into practice, becoming embodied in the performer, the explicit information interacts with the tacit dimensions of the corresponding felt shape, and the uncodifiable aspects (the ineffable essence of taste, creativity and expression) are discovered. The performer begins to learn, *through feeling*, that the longer he or she prolongs the dissonance and tension, for example, the greater the impact of the ensuing resolution. I propose, therefore, that, though of course initially guided by the rather rudimentary and mathematical *explicit* knowledge of appoggiatura lengths (knowledge that is likely to become engrained in the performer's subattention through practice), the subtleties of this ornament's temporal execution (an elusive quality that gives life and expression to an otherwise mechanical and uninspiring realisation of a 'rule') arises from the felt shape. By relying on this felt shape the performer is, in the words of Deniz Peters, 'letting the body decide'.⁸²¹

Related to essential graces, such as the appoggiatura, is, of course, extempore embellishment – 'the free and usually spontaneous addition of melodic Figures'.⁸²² As a tool that enhances expressive communication of the musical character and inherently alters the notated time, embellishment must be recognised as an important strain of expressive timing. Informed by the explicit guidelines and examples of effective ornamental patterns (such as those that fill Quantz's chapters on 'Extempore Variations'⁸²³ and on 'the Manner of Playing the Adagio'⁸²⁴), as well as by tacit, experiential knowledge acquired not only from listening to other performers' embellishments, but also via practical experimentation, the musician usually relies on 'intuition' to guide his or her ornamentation in the performance, embellishing impulsively in the moment. This reliance on intuition confirms that, through practice, the knowledge has become ingrained in the performer's subattention and is hence accessed pre-reflectively in the performance, in response to triggers. Whilst triggers take a variety of

⁸²¹ Peters, 'Letting the Body Decide', 1, 11, 12.

⁸²² Colin Lawson and Robin Stowell, *The Historical Performance of Music: An Introduction* (Cambridge: Cambridge University Press, 1999), 70.

⁸²³ Quantz, *On Playing the Flute*, 136-161.

⁸²⁴ *Ibid.*, 162-178.

forms and can, of course, be reflective *or* pre-reflective, I suggest that, as extempore embellishment both arises from and heightens the prevailing musical sentiment, the most significant trigger for ornamentation is the *feeling* of the musical expression. This covert felt shape, constituted largely from feeling the inherent emotion, therefore inspires the embellishment – the *sonic* externalisation, usually mirrored by the *physical* externalisation, which controls the overall temporal execution of the expressive gesture.

A final example that highlights the emergence of expressive timing decisions from epistemic interaction, and also reinforces the ultimate dependence of temporal expressivity on felt shapes within the body, is the performance of *notes inégales*. Literature on Baroque performance practice indeed abounds with explicit information discussing the uneven execution of equally notated notes. Yet, despite the substantial discourse, there is no unanimous consensus, in either theory or practice, about the exact ratio of inequality. Opinions are, however, united by the belief that *notes inégales*, being an *expressive* device, must fundamentally be guided by the ‘character of the music’.⁸²⁵ Indeed, musicologist Jacques Chailley notes ‘the absence of a universal mathematical rule’, the ‘non-mathematical criterion of character’, and ‘the constant reference to good taste’.⁸²⁶ It is accepted, therefore, that the specific degree of unevenness be ‘left to the performer’.⁸²⁷ Due to the evident inadequacy of explicit information on *notes inégales* alone, the performer must, intentionally or otherwise, seek other additional knowledge to fuel his or her interpretation of inequality effectively. As well as necessarily establishing the emotional character of the music, via explicit musical knowledge and/or tacit feeling arising from pre-reflective musical triggers and mimetic participation, I suggest that the performer may also draw upon his or her embodied knowledge of expressive speech as varied and uneven, rather than mechanically repetitive and monotonous. After all, based on the ‘natural stress and lingering’ of the French language,⁸²⁸ *notes inégales* have an inherently vocal, flexible and expressive quality. It is possible, therefore, that via image schemata, mimesis, and, in particular subvocalisation, the felt shape of the particular emotionally-stimulated and emotionally-characterised expression, guides his or her execution of rhythmic inequality.

⁸²⁵ Mary Cyr, *Performing Baroque Music* (Aldershot: Ashgate, 1992), 117-118.

⁸²⁶ Jacques Chailley, in Mather, *Interpretation of French Music From 1675 to 1775 for Woodwind and Other Performers*, 5.

⁸²⁷ Cyr, *Performing Baroque Music*, 117.

⁸²⁸ Timothy Schultz, *Performing French Classical Music: Sources and Applications* (Hillsdale: Pendragon Press, 2001), 12.

4.6.4. Felt Shapes and Attentional States

Having noted ways in which felt shapes (embodied knowledge grounded on mimetic participation and image schemata) may influence temporal expressivity, we should question whether decisions made on these grounds are wholly 'intuitive' or in fact 'intentional'. To address this, I draw directly on notions discussed in Chapter 3 on 'Attentional States', for the answer certainly depends on the cognitive state of the performer and, if in a state of attention, where his or her focus lies.

If, for example, attention centres precisely on the execution of specific temporal fluctuations, expressive timing *relating* to said focus would transpire as a direct result of the reflective intention, rather than of the felt shape. Remembering that attention is in but one place at a time, this particular focus on deliberate timing decisions not only prevents reflective attention on the overall felt shape of the gesture, but is also likely to override any *alternative* temporal nuances that would arise directly from said felt shape. If, on the other hand, a *completely unrelated* matter, such as an extra-musical issue, characterises the object of attention, expressive timing relies exclusively on the pre-reflective working of intuition. Whilst the subattentional felt shape and the corresponding temporal trajectory could certainly be exploited, this cannot be *guaranteed*, due to the inherently unpredictable nature of intuition, which has the potential to travel any route of the performer's web of knowledge. Of course, if the particular felt shape was a prominent feature of the preparatory process, exploited when consolidating interpretative possibilities in practice, and favoured as a preferred expressive route, it is likely that the temporal evolution of that particular shape will transpire in performance. This can, of course, be explained by the dominance of familiar interpretative routes and, specifically, the working of pre-reflective triggers – such as the pre-reflective 'what-it-feels-like' quality that arises from subpersonal processes, including those that underpin the playing of a specific phrase, and, more importantly, those that occur in mimetic participation and engender a particular felt musical shape.

Finally, it must be noted that, if the performer's reflective attention is, in fact, focused on the overall felt shape and concomitant emotion of the phrase (a general reflective focus; the prerequisite for flow-trance-via-absorption), intuition, guided by the very object of attention (the overarching felt shape) pre-reflectively exploits the musician's epistemic web accordingly, giving rise to expressive affective and temporal

nuances that are associated with that very shape. This would arguably generate the most convincing result because 1) the felt shape works intimately and synergistically with the musical shape, the overt gesture and subpersonal bodily processes to great effect, and 2) the felt shape, and concomitant emotion, provides an overarching theme for the initial attentional focus, which guides intuition effectively and facilitates absorption, ultimately affording flow-trance – the optimum cognitive state for performance (as argued in Chapter 3, particularly in Sections 3.4.2 and 3.7.2).

To summarise: in the act of performance, when musician is both performer and listener, subpersonal processes of mimetic participation and embodied knowledge of image schemata together give rise to a pre-reflective, phenomenal ‘what-it-feels-like’ tacit feeling – a felt shape, such as a cycle, journey or arch, which has a highly temporal quality and is experienced as intuitive and natural. This pre-reflective, embodied feeling can become the object of reflective attention as the performer focuses on the felt shape. In this way, the inherent temporal trajectory of the felt shape guides expressive timing decisions. Moreover, now that these felt shapes have, to some extent, been codified by Mark Johnson’s theory of image schemata, the more specific, explicit theoretical correlate of this experience could also become the object of reflective attention, as, for example, the performer critically considers musical shapes in relation to the cycle or pathway schemata. In any case, however, this explicit apex cannot encompass the full depth of embodied felt shapes, which incorporate profound and uncodifiable dimensions – dimensions that are understood *only* through experience, through tacit knowing, and can, therefore, only be accessed pre-reflectively in performance.

4.6.5. Felt Shapes and Baroque Practice

As the above discussion indicates, a complex and intimate interaction, an interdependent entanglement, between explicit musical knowledge, tacit embodied knowing, image schemata, mimetic participation, triggers, reflective attention and pre-reflective, subattentional intuition, underpins *felt shapes*, which ultimately reign supreme in guiding temporal expressivity. Considering the focus of this thesis on expressive timing within the performance of Baroque flute repertoire, I would like to end this chapter by drawing some interesting connections between felt shapes and recurrent themes that pervade music treatises from the time.

Whilst emotional communication is, of course, the primary objective of many musical performances, one cannot dismiss (as noted throughout this thesis) the amplified insistence in the Baroque period that the musician be guided by emotion. To provide an elucidating example, the performance instructions in Quantz's treatise are completely saturated with references to 'sentiment'⁸²⁹ and 'passion',⁸³⁰ which he mentions more than fifty times throughout his essay. Whilst we cannot be certain of the nuances of meaning in Quantz's use of these words, in particular whether he is referring to emotion perception or induction – an area of research that has received much attention since Quantz's time, especially in regard to cognitivist and emotivist perspectives – what is significant here is Quantz's undeniable reference to strong emotional engagement with the music. Quantz even asserts that the performer must 'counterfeit in himself the passion required in the piece',⁸³¹ surely encouraging the musician to *feel*, in some way, the musical emotion within himself. Felt emotion is, of course, the crux of *felt shapes*.

In particular, I cannot ignore the inherent parallels between the verb 'counterfeit', synonymous with 'imitate',⁸³² and the mimetic processes that are indeed essential in giving rise to the very *felt* dimension of shapes and emotions within the listening body. Whilst acknowledging, once again, the somewhat speculative nature of these parallels (drawn between a translation of an eighteenth-century music treatise and twenty-first-century theories of embodied cognition), and reiterating that we cannot situate Quantz's position in contemporary theory with any certainty, it is nonetheless noteworthy that these imitative connotations are reinforced when Quantz states that, if the performer does indeed *feel* the emotion, 'his execution will always be *moving*',⁸³³ and similarly that, 'without being moved yourself', you cannot move others, and the performance will consequently be 'poor'.⁸³⁴ Quantz's description of 'being moved' could be explained physiologically as the subpersonal, physical processes of mimesis, that underpin these felt shapes and do, in fact, covertly 'move' your body. Furthermore, his direct correlation between 'being moved yourself' and 'moving' others through a 'moving' performance,

⁸²⁹ Quantz, *On Playing the Flute*, 100, 119, 125, 126, 128, 131, 132, 134, 159, 164, 181, 208, 223, 226, 231, 233, 237, 243, 248, 253, 255, 279, 304, 307, 314, 331.

⁸³⁰ *Ibid.*, 23, 71, 75, 98, 100, 119, 124, 125, 126, 128, 133, 134, 158, 164, 182, 185, 186, 205, 215, 230, 242, 244, 254, 263, 270, 271, 273, 274, 277, 284, 301, 307, 308, 313, 319, 329, 332, 334.

⁸³¹ *Ibid.*, 273.

⁸³² *Oxford Dictionary of English*, 3rd ed., ed. Angus Stevenson (Oxford: Oxford University Press, 2010) s.v. 'counterfeit'.

⁸³³ Quantz, *On Playing the Flute*, 126.

⁸³⁴ *Ibid.*, 128.

supports my belief that the most effective and convincing performances are indeed those in which the performer surrenders to the felt shapes and corresponding emotions, and ‘gives the lived body the lead in shaping the sound’.⁸³⁵ Indeed, by focusing on this feeling – a general object of reflective attention – the performer can be ‘moved’, through total absorption in the felt emotion, into a state of flow-trance. This is in fact also alluded to by Quantz when he states that ‘[t]he performer must ... seek to transport himself into ... [the] passions’⁸³⁶ – a phrase connoting dissociation from one’s usual state (thanks to the word ‘transport’) into a realm of intense, phenomenal, felt emotion (‘passions’).

It is essential to reiterate that many of my comments here are speculative and require some critical consideration. Firstly, it is impossible to determine whether Quantz’s description of ‘being moved’ relates specifically to a musician’s experience during a performance itself, or rather more generally to their experience of being moved, at some point, by the music. After all, some performers may not feel ‘moved’ in the moment of performance (perhaps due to performance anxiety, or a desire for utmost focus and control); yet the performance may still ‘move’ members of the audience. Indeed, my comments on effective and convincing performances, as well as the concomitant allusions to an implicit, imitative connection between performer and listener experience, are based on a creative synthesis of reflections on my own performing experiences, theories of consciousness, information processing and embodied cognition, and my interpretation of translated eighteenth-century writing on music. Whilst the imitative essence of mimetic participation and mirror neurons, in particular, does indeed suggest there may be some shared experience between performer and listener,⁸³⁷ this thesis in no way attempts to delve into the complexities of audience reception, by investigating performance effectiveness or the extent to which a performer’s experience is reflected in that of the audience – huge areas of investigation that lie far beyond the confines of this thesis.

Having considered the limitations of my discussion, I wish to make some final speculations, by proposing that felt shapes and emotions could be the very answer to performing with ‘taste’ – another most persistent yet frustratingly unexplained and

⁸³⁵ Peters, ‘Letting the Body Decide’, 12.

⁸³⁶ Quantz, *On Playing the Flute*, 133.

⁸³⁷ I reiterate Le Guin’s position (noted in Section 4.6.1), which supports such a connection: ‘[I]n a live performance (and to some extent in a recorded one) not only will the performer feel things ... but the listener-observer will feel them too, or will at least feel that the performer feels them’.

Le Guin, *Boccherini’s Body*, 24.

elusive requirement for effective performance, as insisted in most Baroque music treatises. If both *taste*, and *felt emotion* are deemed as the *sine qua non* of supreme performance, perhaps they are, in fact, indistinguishable from one another. After all, it is interesting to note that, when discussing expressive rhythmic alterations in eighteenth-century musical performance, musicologist Eugene Borrel states, ‘this is the place to note the difference between thinking in geometrical or mathematical terms and thinking which is sensitive and full of finesse. The latter ... the musicians of the time called *goût* [or *taste*].’⁸³⁸ Not only does Borrel associate non-mathematical and expressive approaches to temporal manipulation with ‘*taste*’, but his particular use of the term ‘sensitive’ – directly related, of course, to the word ‘sentiment’, which fills Baroque writing on performance – is a derivative of the Latin ‘*sentire*’, meaning to ‘feel’,⁸³⁹ and therefore has inherent associations, once again, with the *felt* dimension of musical shapes and emotion. In order to create an effective and moving performance, filled with ‘emotion’ and carried out by ‘*taste*’, it appears that the *felt* quality – a profound form of embodied knowledge (underpinned by mimetic participation and image schemata) – is simply indispensable.

⁸³⁸ Eugène Borrel, in Mather, *Interpretation of French Music From 1675-1775 for Woodwind and Other Performers*, 4.

⁸³⁹ *Oxford Dictionary of English*, s.v. ‘sensitive’.

Chapter 5. The Case Study

5.1. An Introduction to the Case Study

In order to deepen my understanding of the interrelationships between interpretative timing decisions, different forms of knowledge and attentional states, and to reinforce the crucial integration of theory and practice, it was essential to carry out a practical case study. After all, as Christopher Small states, ‘the best one can hope to do with words is suggest ways in which we might begin to understand the experience. The understanding itself can only come from the musicking itself’.⁸⁴⁰

At this stage, it is important to remember that this case study is fuelled by the essence of Practice Research – self-reflection – rather than by more scientific methods. Whilst more systematic empirical investigations could certainly complement or extend this study, for example by quantifying temporal decisions, my critical reasoning for not choosing this approach (as discussed in detail in Chapter 1, particularly in Section 1.3.2) must be recalled. Indeed, identifying specific temporal durations (including note onsets, offsets and inter-onset intervals) would not, in itself, elucidate the issues under interrogation. Objective, quantitative data would be reductionist in a context focused on the multidimensional, subjective, qualitative processes that this thesis aims to understand. The complex and dynamic interrelationships between attentional states, knowledge, embodiment, epistemic interaction, felt shapes, intuition and temporal expressivity simply cannot be scrutinised in isolation or at a distance. These phenomena must be considered concurrently and ecologically through measures representative of their entangled, interrelational existence. The only way to truly understand issues of experience, is through experience itself. A quantitative investigation of my timing decisions – an examination of product rather than process – would therefore fail to serve the fundamental inquiry of this thesis.

Due to my focus on interpretative, phenomenological processes – the ‘musicking’ rather than the ‘music’, the process rather than the product – *any* piece could have provided the necessary stimulus for the study.⁸⁴¹ My particular decision to use Fantasia

⁸⁴⁰ Christopher Small, *Musicking: The Meanings of Performing and Listening* (Connecticut: Wesleyan University Press, 1998), 185.

⁸⁴¹ The limits of my methodological application to other repertoire are considered in Chapter 6.

No. 7 by Georg Telemann (shown in Appendices 1 and 2)⁸⁴² is based on a multiplicity of factors. Firstly, the solo instrument not only reflects the single voice of an orator, who exploits an extensive palate of expressive tools to communicate his or her message clearly and convincingly, but it also eliminates any inter-performer compromise, allowing maximum interpretative freedom, which is, of course, ideal for a study of expressive timing. Indeed, by reducing relational variables and complexity, this minimising of agents affords greater ease and reliability to both reflective and analytical pursuits, in turn leading to a more definitive and authoritative discussion of the interrelationships between temporal expressivity, phenomenological experience and individual webs of knowledge.

Secondly, with its very title inherently evoking connotations of dream-like fantasy and freedom, the *Fantasia* juxtaposes distinctly contrasting material that incites vivid characterisation and demands interpretative creativity – the perfect canvas for colourful temporal expressivity. Moreover, as this diversity meets concision, coalescing ideally into a rather short musical journey, the *Fantasia* can be digested comfortably as a whole or easily broken down and analysed. Indeed, as a result of this, I was able to focus on the rather self-contained French Overture section (bars 1-94), which constitutes the centrepiece of this work. Whilst this form is heavily stylised, conventionally structured and perhaps, therefore, affording a little less freedom than some of the other *Fantasias*, it usefully brings explicit knowledge of the French Overture style into play – an excellent foundation for exploring the way in which explicit information interacts with tacit understanding. Finally, as a new piece that I had not yet studied or performed, as a piece that provokes consideration of all sorts of knowledge, and as a piece that presents a number of complex passages offering various interpretative possibilities, *Fantasia* No. 7 presents an ideal case through which to explore the processes of epistemic interaction, embodiment and interpretation.

After critical consideration of some further methodological issues relating directly to this case study, Section 5.3 examines the slow and stately, majestic opening of *Fantasia*

⁸⁴² The musical excerpts (and bar numbers) in this case study are taken from the Wiener Urtext Edition (1999) of *Fantasia for Flute solo, No. 7* by Georg Philipp Telemann. This can be seen in Appendix 1. Appendix 2 presents a facsimile of the first edition of this work (c. 1727). Georg Philipp Telemann, *Fantasies for Flute Solo* (Wien: Wiener Urtext Edition, 1999), 14-15; Georg Philipp Telemann, *Fantasia 7* (Hamburg: G. P. Telemann, c. 1727), accessed November 7, 2015, [http://imslp.eu/files/imglnks/euimg/5/5e/IMSLP322698-PMLP54405-Telemann_-_Fantasies_flute_\(with_facsimile_-_Musica_Rara\).pdf](http://imslp.eu/files/imglnks/euimg/5/5e/IMSLP322698-PMLP54405-Telemann_-_Fantasies_flute_(with_facsimile_-_Musica_Rara).pdf).

No. 7 (bars 1-14), before Section 5.4 focuses on the contrasting livelier counterpart that follows (bars 15-85). Examining subtle, and *subjective*, matters of interpretative temporal nuance, these discussions, fuelled by my practice, draw in the many concepts introduced in Chapters 2 to 4, ultimately shedding light on micro-temporal issues of note length, goal-directed motion, continuous pulse and punctuation, in relation to the fundamental interactive epistemic processes that underpin them.

5.2. Further Methodological Considerations

5.2.1. Documentation

It was important to video-record my practice of Fantasia No. 7. This allowed the normal process through which I learn a piece – meeting and overcoming challenges, creating and experimenting with interpretative possibilities – to be captured. By concretising the ephemeral event (both the unfurling of the creative activity and its concomitant product) this documentation provided tangible material for reflection and analysis of my practice – so-called ‘reflection-on-action (after-the-event thinking)’⁸⁴³. Furthermore, by offering material from which to select illustrative audio-visual examples to supplement my written discussion, it offers another medium through which to present my work that is a little truer to multidimensional, experiential practice than words are. After all, as Hannula et al. insist, certain issues simply ‘demand ways of expression that are not exclusively propositional’⁸⁴⁴ and benefit from ‘using the language of the skill itself’.⁸⁴⁵ In the famous words of Hans Christian Andersen: ‘where words fail, music speaks’.⁸⁴⁶

Whilst the benefits of video-recording are patent, its disadvantages and limitations must also be recognised. Indeed, it could be argued that the very presence of a video camera disturbs the natural ethnographic conditions of my practice, due to a perhaps unsettling and pressurising awareness that my usually private, intangible and evanescent practice will be tangibly and permanently represented and distributed. Bede Williams comments on the ‘off-putting’ realisation that, by video-recording his practice as a conductor, his ‘instantaneous responses ... would be captured forever’.⁸⁴⁷ Although

⁸⁴³ Linda Finlay, ‘Reflecting on Reflective Practice’, *PBPL* paper 52 (January 2008), 3, accessed April 8, 2017, <https://pdfs.semanticscholar.org/c128/691f2615de873dfe544fcb5dc902fe812675.pdf>.

⁸⁴⁴ Hannula, Suoranta and Vadén, *Artistic Research*, 45.

⁸⁴⁵ *Ibid.*, 45-46.

⁸⁴⁶ Hans Christian Andersen, in ‘Hans Christian Anderson Quotes’, *Goodreads*, accessed Dec 29, 2015, https://www.goodreads.com/author/quotes/6378.Hans_Christian_Andersen.

⁸⁴⁷ Williams, ‘Conducting Research with the Camera On’.

this awareness cannot be avoided, I believe that it had negligible influence on my practice, which I conducted as normally as possible. It is important to acknowledge that the defining attribute of a recording itself – the fixation of a permanent, repeatable and tangible artefact – opposes the very essence of musical practice, interpretation, and performance: real-time, live activities, characterised by spontaneity, transiency, flexibility, intangibility and irreproducibility. Robin Nelson agrees that ‘the recording is always in one sense a reconstruction and not the thing itself’.⁸⁴⁸ Unfortunately, it must be accepted that the situated, circumstantial immediacy of performance, contingent upon situational knowledge and ‘relationship spaces’⁸⁴⁹ in the moment, will always lie beyond the confines of recordings. Finally, it is important to recognise that video-recordings, as Williams comments, ‘cannot capture what goes on “inside”’:⁸⁵⁰ in themselves, they cannot disclose the covert processes that underpin phenomenal experience – the very processes that are, of course, central to this thesis.

In order to gain a better understanding of ‘what goes on “inside”’ and penetrate the covert underpinnings of my interpretative decision-making (such as processes of epistemic interaction), my thoughts *during* practice – that which Donald Schön terms ‘reflection-in-action (thinking while doing)’⁸⁵¹ – were voiced as soon as they entered my attention, allowing them to be instantly documented in the video-recording. Jane Davidson calls this the “talk-aloud” protocol⁸⁵² and, similar to the ‘running commentary’⁸⁵³ or ‘flow-of-consciousness’ approaches of Action Research,⁸⁵⁴ this externalisation technique captures that which Doğantan-Dack describes as ‘the moment that the artist-researcher seizes a sensation or an image and keeps it from receding into the distance within the sensory continuum by marking it for sustained attention’.⁸⁵⁵ The thought is ‘brought into consciousness, directly attended to, and connected into other knowledge’⁸⁵⁶ – a description also alluded to by Elisabeth Le Guin, who identifies ‘rehearsal-interrupting attention’ as central to her method of researching ‘the sensations

⁸⁴⁸ Nelson, ‘Supervision, Documentation and Other Aspects of Praxis’, 83.

⁸⁴⁹ Losseff, ‘Relationships with Pieces’.

⁸⁵⁰ Williams, ‘Conducting Research with the Camera On’.

⁸⁵¹ Finlay, ‘Reflecting on Reflective Practice’, 3.

⁸⁵² Davidson, ‘Practice-based Music Research’, 96.

⁸⁵³ Leitch and Day, ‘Action Research and Reflective Practice’, 184.

⁸⁵⁴ *Ibid.*, 186.

⁸⁵⁵ Doğantan-Dack, ‘The Role of the Musical Instrument in Performance as Research’, 175-176.

⁸⁵⁶ Butler, ‘Professional Development’, 272.

and experiences of playing' Boccherini's music.⁸⁵⁷ For me, this very process allowed my attentional focus at precise moments in time to be recorded alongside corresponding musical experimentation, which, in turn, enabled valuable connections to be made between my cognitive state, particular details of knowledge and specific musical decisions: examples of this technique in practice are drawn on in the case study. Furthermore, one significant concern of the self-reflective approach is that the very experience being studied may indeed change through the inherently *ex post facto* process of reflection. As such, this real-time vocalisation of my thoughts-in-action minimised the influence of retrospection. I was able to use these very thoughts (captured in real time as they entered my reflective attention) to fuel this chapter.

This documentation of emergent ideas, deemed vital by Coffey and Atkinson,⁸⁵⁸ simply 'entails making conscious and [verbally] explicit the dynamic interplay between thinking and action'.⁸⁵⁹ In other words, my vocalisations provide a tangible representation of the *reflexive* process that is inherent in my practice and methodology. For clarification, reflexivity is viewed here as a 'continued, self-referential activity',⁸⁶⁰ where self-scrutiny occurs in and through the process in such a way that it "'bends back on", refers to, and affects the entity instigating the action or examination'.⁸⁶¹ There is a truly circular and bidirectional 'intertwinement of thinking and doing', 'a continuing flow between them, a recurrent bending back that keeps the research process dynamic'.⁸⁶² Mareli Stolp summarises: reflexivity is 'the facilitator of a dialogue', a dialogue which 'could be interpreted as interactions between embodied experience (generated through artistic practices), and processes of thinking through these experiences'.⁸⁶³

In addition to these real-time verbalisations of the reflexive process, detailed supporting comments were noted in a log-book immediately after each practice session. It seems unnecessary to provide these comments – both spoken and written – in their entirety in this thesis; however an excerpt taken from my log book is given in Appendix

⁸⁵⁷ Le Guin, *Boccherini's Body*, 3.

⁸⁵⁸ A. Coffey and P. Atkinson, in Finlay, 'Negotiating the Swamp', 210.

⁸⁵⁹ Leitch and Day, 'Action Research and Reflective Practice', 181.

⁸⁶⁰ Mareli Stolp, 'Settling the Score: Music and the Performer-Creator Approach in Nicola Elliott's Run!', *South African Theatre Journal* 29, no. 1-3 (2016): 17.

⁸⁶¹ Hyun Jean Lee, 'The Screen as Boundary Object in the Realm of Imagination', (PhD dissertation, Georgia Institute of Technology, May 2009), 112.

⁸⁶² Mareli Stolp, 'Subjectivity and Reflexivity in Artistic Research', *Artistic Research Reports*, October 16, 2015, accessed April 19, 2017, <http://artisticresearchreports.blogspot.co.uk/2015/10/mareli-stolp-on-reflexivity.html>.

⁸⁶³ *Ibid.*

3. In any case, my spoken and written comments are incorporated in the chapter; they afforded authentic material from which the discussions of this chapter emerged. As a naturally meticulous deliberator, these actions did not disrupt my practice: I am used to debating my interpretative considerations and keeping a practice diary. Nonetheless, whilst these quasi-instantaneous, verbal externalisations of both my spoken ‘thoughts-in-action’ and my written ‘thoughts-immediately-after-action’ endeavour to confront the problems of retrospection, they cannot escape the inherent issues. It is, of course, undeniable that translation of any kind involves a certain degree of modification. This concern is amplified when experience (an intangible, allusive and multidimensional phenomenon) is codified and condensed into a ‘one-thing-at-a-time’⁸⁶⁴ string of words (a propositional and reductionist medium). A fluctuating, ephemeral and tacit phenomenon paradoxically becomes fixed, permanent and explicit.

It is, though, essential to recognise the positive aspects of this process. For me, explicit, reflective articulation has, in fact, not only confirmed but also clarified and refined my thoughts. Jim Butler agrees: through such processes, ideas ‘are linked to what is already known, relationships ... are established, ideas and feelings are tested for their authenticity, and thus new ... knowledge and understanding are established’.⁸⁶⁵ This purification and concretisation process is indeed invaluable when forging meaningful connections between practice and theory, and between various complex phenomena. Codification is, therefore, at once reductive yet clarifying, reshaping yet refining, deficient yet solidifying.

Overall, the synergistic marriage of live practice and real-time vocalisations, with retrospective reflection and analysis supported by video-recordings, can lead to a greater understanding of the elusive, subjective activity of musical performance, and specifically the complex processes that underpin interpretative decision-making.

5.2.2. Subjective Classification

Whilst my self-reflective case study inevitably, and indeed purposefully, revolves around ‘subjectivity’ – an issue discussed broadly in Chapter 1 (Section 1.3.2) in terms of research approaches in general – a *specific* example of its manifestation within my methodology concerns ‘classification’. An important part of my process was the written recording of

⁸⁶⁴ Small, *Musicking*, 59, 94, 105, 132.

⁸⁶⁵ Butler, ‘Professional Development’, 273.

my temporal manipulations and their subsequent categorisation in a table, according to their general effect or purpose: this can be seen in Appendix 4. This categorisation was inevitably a matter of subjectivity. Instead of seeking an objective classification system, the selection and definition of categories, as well as the allocation of musical examples thereto, are based on my own musical intuitions, understandings, motivations and intentions. Despite the potential controversy of such a personally-driven method, this idiosyncratic approach, in fact, is of value. My very choice of categories illuminates the way in which I conceive my interpretative decisions, which in turn implicitly suggests the nature of the explicit and tacit information that fuels my musical motivations – the precise phenomena I wish to understand. It would be futile, therefore, to use categories lying outside my motivations. Evidently influenced both by my tacit, felt experience of the music and by related explicit, theoretical explorations, my categorisations help to build a picture of expressive musical decisions in relation to phenomenological experience and contextually clarifying theoretical frameworks, in doing so illuminating the imbrication of different modes of knowledge. Hence, this methodological process (ostensibly trivial) is, in fact, inherently implicated in the research matter, in itself revealing a greater insight into the reasons behind my musical decisions – why I do what I do. My understanding of the research issues is in this sense deepened by this methodological issue.

Subjectivity of course also penetrates my classification of knowledge. The process of classifying the information guiding my expressive timing decisions as either explicit or tacit is inevitably subjective: not only does this determination process rely on *reflection*, but knowledge forms are, of course, fluid, interwoven and, frankly, ambiguous⁸⁶⁶ – their classification simply cannot escape the inherence of subjective projection. It is evident, therefore, that subjectivity infiltrates my methodology; yet the concept of subjectivity itself of course lies at the centre of my research. My methodological process, therefore, allows me to immerse myself in and hence better understand this very issue. As qualitative research specialist Johnathan Cook recognises, ‘reducing subjectivity is contrary to its purpose’.⁸⁶⁷ This leads me to argue that the categorisation of matters related to phenomenological experience indeed benefits from a personally-driven

⁸⁶⁶ Polanyi, ‘The Logic of Tacit Inference’, 7; Puusa and Eerikäinen, ‘Is Tacit Knowledge Really Tacit?’, 307.

⁸⁶⁷ Johnathan Cook, ‘How Do You Reduce Subjectivity in Qualitative Research?’, *Quora*, November 9, 2015, accessed 14 April 2017, <https://www.quora.com/How-do-you-reduce-subjectivity-in-qualitative-research>.

approach. In the words of Linda Finlay, 'subjectivity in research is transformed from a problem to an opportunity'.⁸⁶⁸

5.2.3. Playing with Theory in Practice

As already suggested by the comments on my processes of classification, my methodology serves to facilitate the application and exploration of theoretical matters in practice. By experientially working through research issues, a more authentic, thorough and holistic understanding of theoretical concepts and the relationships between them is gained. One prominent example of this concerns cognitive states. In Section 5.3.1, whilst reflecting on a specific moment from my practice (the same moment introduced at the end of Example 2) I state that

I *specifically* endeavoured to "forget" the information I had been contemplating, or at least to entrust it to my subattention to dilute my focus and relax into a more intuitive realm of musical communication, focusing simply on expressing the felt musical emotion and seeing where pre-reflective intuition would guide me.⁸⁶⁹

Here, stimulated by my extensive theoretical research into aspects of consciousness, it is evident that I intentionally attempted to alter my attentional focus during my practice, in order to explore the different phenomenal experiences of various cognitive states – different intensities of concentration and angles of focus – alongside the respective interpretative, musical outcomes. In particular, this specific methodological process facilitated practical exploration of reflective attention and pre-reflective subattention (or intuition) in musical performance, offering a platform to examine the influence of explicit thought on subsequent intuitive, musical execution. Issues of consciousness, knowledge, embodiment, intuition, interpretation and felt shapes are hence brought together, experienced concurrently, and therefore experientially connected as a result of the initially simple decision to alter my attentional focus in practice. Such a methodological approach, allowing theory to be played with in practice, affords invaluable insights, meaningful connections, and more genuine understandings.

⁸⁶⁸ Finlay, 'Negotiating the Swamp', 212.

⁸⁶⁹ See Section 5.3.1, page 201.

5.2.4. Choice of Instrument

At this stage, it must be addressed, why, in a case study of a Baroque flute piece, I am performing on a modern instrument. Firstly, it is essential to recall the purpose of this case study: it is not an investigation into historical authenticity; it is an exploration of interpretative, epistemic processes. In this way, the instrument itself is not a primary concern. Most simply, each instrument brings different knowledge to the process. By performing on the modern flute, I simply interact with the instrument-specific knowledge afforded by this instrument. Were I to play on the Baroque flute, the epistemic content, relational knowledge and resultant interpretations would be differently nuanced, yet the interactive processes would be fundamentally comparable. After all, it must be recognised that relational epistemic nuances are unique to *every* instrument. As performers well know, no two instruments – not even two identical models of a modern flute – are quite the same: they each present subtly unique resistances and affordances. Whilst the differences between the modern and Baroque flute are of course far more pronounced, it is neither the specificities of the epistemic content nor the resultant interpretative product that is significant here; it is the process that is of interest, and this can be studied by playing the Baroque or the modern flute.

Secondly, it is important to reiterate that I specialise in the performance of Baroque music on the modern flute. Having only recently become acquainted with the Baroque flute (in comparison to my many years of playing its modern counterpart), my lesser ability on this instrument means that, currently, my expressive voice and interpretative intentions cannot be communicated satisfactorily through this instrument. My lack of familiarity with the Baroque flute simply results in a lack of intimate relational knowledge: the resistances in the relationship have not yet transformed into affordances. Whilst I can draw, to some extent, on an understanding (albeit a limited explicit, rather than embodied tacit understanding) of the idiosyncrasies of the Baroque instrument, it is the modern flute that is my voice, through which I am able to express the very shapes that I feel. Together, we form a resonant subject. (The relational knowledge formed through performer-instrument interaction is discussed in detail in Chapter 4, Section 4.3).

5.3. Bars 1-14

5.3.1. Table 1: An Explanation

Exploration of bars 1-14 was instigated by examining my audio-visual documentation and consequently creating a table, cataloguing a variety of information from my practice, as shown in Appendix 4. It is from this table that the examples in Section 5.3 are drawn. By juxtaposing descriptions of specific timing manipulations alongside their underlying motivations, corroborating primary source evidence, and other explicit and tacit knowledge that influenced the interpretative decisions, the correlations between these matters become manifest.

To explain the configuration process, the column titled 'What' explains the particular ways in which my interpretations alter the notated time of the music, alongside the corresponding bar numbers. Detailed answers to 'Why' these timing decisions transpire immediately follow, before subsequent classification according to their 'General Purpose' or 'Effect', for which three primary categories have been identified. The first concerns communication of the overall majestic *Affekt* of this section of the Fantasia; the second deals with the connecting of individual notes to form a united shape or gestural unit; and the third covers goal-directed motion. This final category is more specifically subdivided into 1) the suggestion of motion towards a goal; 2) the feeling of arrival at a goal; and 3) the relaxation of motion after having reached a goal. This particular classification system of 'general purposes and effects' is certainly not the only possibility, and it is by no means exhaustive. Frankly, the chosen categories most successfully encompass my primary musical motivations for these specific examples of expressive timing, whilst also coinciding perfectly with the principal themes and overall discussion of this thesis. After all, one cannot dismiss the inherent associations with musical and felt emotions, covert and overt shapes or gestures, and journeying or the pathway schema, all of which are, of course, closely connected. Indeed, by recalling this intimate interrelationship between emotion, shapes, and motion (as described in Chapter 4), we can understand why many of the reasons underpinning timing manipulations and the consequent effects are intricately entangled.

Take, for example, bars 1 and 2, as shown in Figure 14 below.

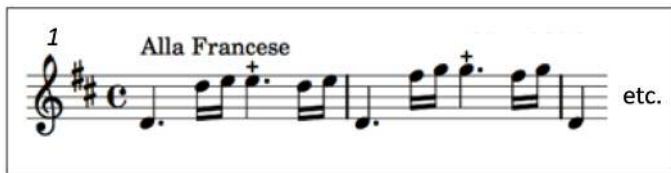


Figure 14. Bars 1-2: Unprepared Trills

Beginning the trills without a prolonged preparation or upper appoggiatura but rather at a similar speed to the preceding semiquavers, before gradually accelerating through the ornament and the succeeding semiquavers (as demonstrated in Example 3), was an initially pre-reflective and subsequently reflective decision made fundamentally to connect the semiquavers and trills as one decorative gesture. This timing decision, however, also creates a greater sense of motion, a building of momentum, towards beat one of the following bar, as well as offering a brief moment of decorative beauty, of relaxed and fluid gentleness amidst the bolder overall *Affekt*. For me, the desire to unite the ornamental gesture was greater than any compulsion to maintain the majestic character, which could arguably be upheld with a prolonged appoggiatura and a much shorter trill (as demonstrated in Example 4). From this simple example, it is clearly apparent that a particular shape or gesture inspires or even demands a certain motion, which in turn generates an emotion or *Affekt*. Furthermore, it can be deduced that one small timing decision can arise from a variety of intentions, generate multiple effects and, therefore, belong in more than one category. Hence, in Table 1, the primary purpose of each timing manipulation (whether initially attentional or pre-reflectively subattentional and retrospectively articulated) is listed first, before any significant secondary motivations or by-products.

These interpretative timing decisions and causal incentives arise from somewhere. They must originate from knowledge of some sort. By delving into my web of accumulated knowledge, I have, therefore, with the support of my theoretical backdrop, endeavoured to identify some of the specific strains of knowledge that fuelled my interpretive motivations and ultimately led to my expressive timing decisions. Through a list of quotations, the column ‘Examples of Primary Source Information’ highlights explicit knowledge from eighteenth-century music treatises that influenced my timing manipulations.⁸⁷⁰ These citations are based on a bank of information gained over

⁸⁷⁰ I reiterate, here, that because stylistic change over time is a gradual process, treatises from the latter half of the eighteenth century, to some extent, reflect the influence of earlier practices and are, therefore, relevant to my discussion.

the years through study and experience of Baroque performance practice. It is important to note that most of this explicit information has become so deeply engrained in my subattention that it induces somewhat automatic or pre-reflective reactions in response to musical triggers (the process discussed in Chapter 3). Nonetheless, during instances of interpretative deliberation, many of these specific ideas were recalled in practice, brought forward into focus, and hence received full attention.

For example, as a result of the potent French Overture style that opens Fantasia No. 7, I intuitively over-dotted the rhythms from the very outset of learning this piece. This tacit response certainly developed from absorbing propositional knowledge of rhythmic alteration from eighteenth-century music treatises (examples of which are provided in Appendix 4), alongside extensive practical experience of this stylistic issue. To give one clear example, amongst the many sources of propositional information on over-dotting in direct connection to the French Overture style is the article 'Ouverture', by Johann Philipp Kirnberger (a pupil of J. S. Bach) and Johann Abraham Peter Schulz (a pupil of Kirnberger and C. P. E. Bach) – 'among the most detailed discussions of that genre to appear during the eighteenth century',⁸⁷¹ according to Stephen Hefling – in which they state:

[f]irst of all there generally appears a section of serious yet fiery character in 4/4 time. The movement has something proud about it, the steps [beats] are slow, but embellished with many little notes that must be played in a fiery manner. ... The main notes are mostly dotted, and in performance the dots are held out beyond their value. After these main notes follow more or fewer smaller ones, which must be played with extreme rapidity.⁸⁷²

Interestingly, at certain points during my practice, my reflective attention did in fact focus on explicit information regarding over-dotting such as this, not only thanks to the '*alla Francese*' marking in the music – an explicit trigger – but also because I intentionally concentrated on perfecting my bold, rhythmic characterisation. Reinforcing the relationship between knowledge and attentional states, this confirms that explicit,

⁸⁷¹ Stephen Hefling, *Rhythmic Alteration in Seventeenth- and Eighteenth-Century Music: Notes Inégales and Overdotting* (New York: Schirmer Books, 1993), 132.

⁸⁷² Johann Philipp Kirnberger and Johann Abraham Peter Schulz, in Hefling, *Rhythmic Alteration in Seventeenth- and Eighteenth-Century Music*, 133.

propositional knowledge gained from primary sources, influences my timing decisions, such as rhythmic alteration, both pre-reflectively and reflectively during practice.

Another short example concerns a moment in which I critically reflected upon my intuitive execution of the trills in bars 1, 2 and 13 alongside their varying affective and temporal impacts. In doing so, I recalled specific Baroque information concerning preparatory notes and speeds of oscillation, in relation to the decorative, harmonic and structural qualities of trills, and found that this confirmed my intuitive musical response. In particular, by recalling Loulié's description of prepared and unprepared trills, my interpretations were justified:

[w]hen the Voice remains appreciable ... on the little sound of the first Appoggiatura ... this is called preparing the Trill When the Voice does not remain appreciably on the first Note ... of the first Appoggiatura, the Trill is called unprepared Trill (*non appuyé*) or without Preparation (*sans Appuy*).⁸⁷³

A prepared trill can be heard in Example 5, with its corresponding notation presented in Figure 15; an unprepared trill, in Example 3, Figure 14. My decisions are further supported by Tosi's remark that 'on final Cadences, it [the preparation] is always necessary'⁸⁷⁴ (again, this is evident in Figure 15 and can be heard in Example 5), as well as by Couperin's description of trills 'begin[ning] more slowly than they end,⁸⁷⁵ and Marpurg's explanation of 'a slow beating ... [that] increases ... by a kind of gradation'⁸⁷⁶ (see Figure 14 and Example 3). In my practice, therefore, I critically reflected on my 'natural', pre-reflective execution of trills, alongside issues of timing, *Affekt* and explicit knowledge of unprepared, decorative trills and prepared, cadential trills.



Figure 15. Bars 13-14: Structural, Prepared Trill

Therefore, whilst precise quotations were located and compiled into the table *after* practice, knowledge of over-dotting, the French Overture style, and trill execution

⁸⁷³ Étienne Loulié, in Robert Donington, *The Interpretation of Early Music*, new rev. ed. (New York and London: W. W. Norton & Company, 1992), 242.

⁸⁷⁴ Pier Francesco Tosi, *Observations on the Florid Song*, 48.

⁸⁷⁵ Couperin, *L'Art de Toucher Le Clavecin*, 38.

⁸⁷⁶ Friedrich Wilhelm Marpurg, in Donington, *The Interpretation of Early Music*, 244.

undoubtedly influenced my timing manipulations both reflectively and pre-reflectively during practice.

The final two columns of Table 1 record *other* specific aspects of knowledge that influenced my timing manipulations, falling under the 'explicit' or 'tacit' headings. Every entry in the 'explicit' column became the object of my reflective attention at some point during practice, perhaps because of my determination to unite theory and practice, exploiting explicit knowledge, where appropriate, to suggest, enhance and justify my interpretations. Indeed, due to the exclusive and singular focus of attention at any given moment, much of this explicit knowledge would also have been accessed pre-reflectively from my subattention, at moments when it did not fall directly under the attentional spotlight. At other times, I specifically endeavoured to 'forget' the information I had been contemplating, or at least to entrust it to my subattention, because my intense concentration on specific elements of knowledge had become too pedantic or overwhelming. It was important, in these instances, to dilute my focus and relax into a more intuitive realm of musical communication, focusing simply on expressing the felt musical emotion and seeing where pre-reflective intuition would guide me. It is certain, nonetheless, that at these points some of the knowledge I had just been exploring would have been accessed pre-reflectively via subattention as a particularly 'familiar interpretative route'.⁸⁷⁷

There were also moments during my practice when I centred my concentration on the tacit feelings that were stimulating my temporal expressivity: the strong, felt shapes. These covert shapes were induced, of course, by musical shapes, most often as reactions to particularly salient musical features, such as sequences, voice leading or prominent harmonic progressions. They were allied, therefore, with explicit correlates listed in the adjacent column in Table 1. This suggests that, as well as being rooted in mimetic participation and image schemata, which draw on a range of embodied experience (as explained in Chapter 4, Sections 4.4 and 4.5), these tacit feelings could also originate from, or at least be co-created by, explicit knowledge that, via a process of internalisation and assimilation over time, has deepened into a more profound and intuitive tacit feeling. Embodied knowledge of image schemata therefore interacts closely

⁸⁷⁷ See page 183.

with explicit musical knowledge that has been embodied, together generating profound felt shapes.

5.3.2. Note Length

5.3.2.1 The Relationship between Beat Hierarchy, Note Length, Epistemic Interaction and Attentional States

An example that effectively exhibits the ambiguous distinction, fluid transition and intimate correlation between propositional information and tacit feeling (as discussed in Chapter 4) concerns *beat hierarchy*. Indeed, as alluded to in Chapter 2, the notion of ‘strong’ and ‘weak’ beats is perhaps one of the most crucial elements of Baroque performance practice: a topic pervading the music treatises of the time. Quantz, for example, in his monumental essay, *On Playing the Flute*, analyses numerous musical examples in these terms, noting that ‘you must adjust your tonguing or bowing in such fashion that you give each note greater or less stress’⁸⁷⁸ even when, according to the notation, ‘they seem to have the same value’.⁸⁷⁹ Of course, modern instruments generally enjoy a greater dynamic range than their Baroque counterparts and can therefore engender emphasis successfully through dynamic contrast. Due to the inherent dynamic limitations of many Baroque instruments, articulation, or specifically note length is perhaps the most fundamental means of creating subtle musical hierarchies, giving shape and direction to phrases in Baroque repertoire. Many notes are, therefore, performed with a shorter sonic duration than their notational value suggests. Sounding a note for the entirety of its written length of course creates a stronger emphasis than instances in which the sonic value is diminished by filling the remaining duration with silence. As illustrated in simple form in Figure 16 below, the longer the note length, the greater emphasis: a so-called agogic accent.



Figure 16. Hierarchy and Note Length

⁸⁷⁸ Quantz, *On Playing the Flute*, 172.

⁸⁷⁹ *Ibid.*, 123.

Explicit knowledge of beat hierarchy, a frequent focus of my concentration when I first began learning Baroque style, has become so deeply engrained in my subattention and so profoundly embodied in my being, that it is usually reflected *intuitively* in my playing, through sonic emphasis. As already noted, this is achieved predominantly via *note length* – a fundamental manner of timing. From this, a resultant musical framework of emphatic regularity is created, from which any unexpected deviation is inherently highlighted. Of course, when deliberating upon varying degrees of interpretative emphasis, explicit information concerning beat hierarchy is brought forward from my subattention to the forefront of my reflective attention. Nonetheless, having embodied a deep hierarchical understanding and correlating articulatory flexibility via practice and experience, most of my sonic hierarchical externalisations transpire from my realm of tacit knowing. Perhaps even more interestingly, thanks to my understanding of image schemata – newly acquired theoretical knowledge that explicitly codifies my corresponding, deep-rooted tacit experiences – I argue that these intuitive feelings of hierarchy pre-reflectively exploit the pathway and cycle schemata, drawing on a range of embodied experience associated with travelling towards and away from goals of varying significance. This suggests that there is an intimate interrelationship between interpretative timing decisions concerning note length, explicit knowledge of beat hierarchy, embodied knowledge of image schemata, and attentional states (the latter determining the ways in which these different forms of knowledge are accessed).

5.3.2.2. Beat 3: Its Execution

To elucidate these issues of hierarchy in practice, let us consider bars 3 and 14 as examples. Firstly, it is essential to note that the well-known practice of over-dotting (a characteristic feature of the French Overture Style) immediately alters the notated rhythm by prolonging the dotted notes through sonic extension or rest insertion, subsequently shortening the ensuing quavers or semiquavers.⁸⁸⁰ More noteworthy than my mere adherence to this basic principle, however, is my hierarchical interpretation of these bars – in particular, the relationship between the sonic durations of the dotted quavers. My initial intuitive, or pre-reflective, execution of bars 3 and 14 rendered each dotted quaver of the bar a similar length, without noticeable hierarchical differentiation.

⁸⁸⁰ Of course, the realisation and extent of over-dotting depends on the tempo.

This particular timing decision, arising pre-reflectively via subattentive intuition, consequently created only *one* strong beat in the bar, on beat 1 (as can be seen in Figures Figure 17 and 18, and heard in Examples 6 and 7, respectively).

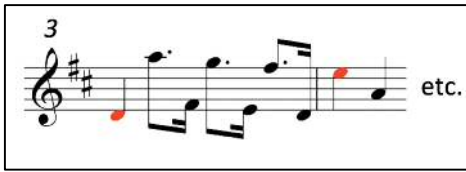


Figure 17. Bars 3-4: One Strong Beat per Bar



Figure 18. Bars 14-1: One Strong Beat per Bar

After reflectively recalling primary source material stating that ‘four-part meters have two strong beats, namely, the first and the third’,⁸⁸¹ and that ‘the second strong beat is also played with emphasis’,⁸⁸² I subsequently experimented with temporal manipulation, lengthening the *sounding* duration of the dotted quaver on the third beat to give it greater emphasis than beats 2 and 4, hence creating *two* strong beats per bar: this can be heard in Examples 8 and 9, and seen in Figure 19 and 20. This of course demonstrates the hugely influential and creative potential of knowledge, reinforcing the dynamic interaction between knowledge and expressive decisions: interpretations are not only born of knowledge, but can be remoulded in light of knowledge.

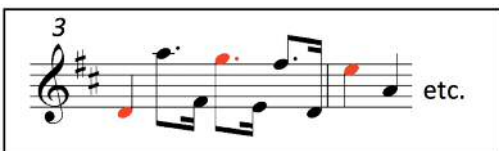


Figure 19. Bars 3-4: Two Strong Beats per Bar

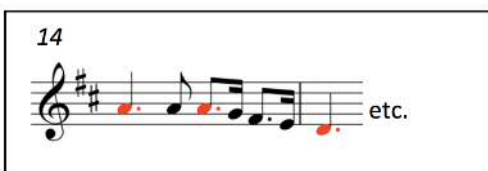


Figure 20. Bars 14-1: Two Strong Beats per Bar

In this particular example, the ostensibly minor temporal modification (of durational emphasis) had, in fact, a notable impact on the musical outcome: the sense of

⁸⁸¹ Türk, *School of Clavier Playing*, 91.

⁸⁸² *Ibid.*, 325.

motion was altered, generating a different characterisation of these short passages. By accentuating beat 3, it simply became the goal to which beat 2 led, meaning that the longer, (to my mind) more important journey to beat 1 of the following bar diminished in significance. Frankly, the motion felt restrained, confirming, for me, the main function of these passages is to lead to beat 1. This interpretation indeed acknowledges the primacy of this greater journey, clearly connected by the descending voice leading and by the fundamental harmonic progression from the tonic (D major) to the dominant (A major) in bar 3, and from the dominant back to the tonic in bar 14, all of which rather naturally propel the music forwards to beat 1, as shown in Figure 21 and 22.

3 etc.

I Ib VIIb I V (Detailed analysis)

I → V (Underlying Foundation)

Figure 21. Bars 3-4: Voice Leading and Harmonic Progression

14 etc.

V → I

Figure 22. Bars 14-15: Voice Leading and Harmonic Progression

Of course, various harmonic interpretations are possible. Those presented in my examples, however, are particularly potent, reflecting both traditional harmonic progressions of the time and my own phenomenal experience of implied harmonies. With this in mind, it is interesting to recognise that my interpretation of the third beat of bar 3 as part of chord VII (as illustrated in the ‘detailed analysis’ of Figure 21) could certainly inspire durational emphasis, as a means of reflecting the dissonant quality of the diminished harmony. Nonetheless, my experience of the underlying harmonic drive to the dominant, as well as the increasing speed of the harmonic progression (as implied by the ‘detailed analysis’ in Figure 21 and elucidated in Figure 23) was far more influential in this case. Indeed, following a change of harmony on every minim beat in bars 1 and 2, the harmonic progression quickens in bar 3, with a different chord for every crotchet, as illustrated in Figure 23. This increase in harmonic motion acts as a signal, indicating that the music is moving towards the imperfect cadence – the musical goal. There is, hence,

an undeniable sense of journeying through the whole bar towards beat 1 of bar 4. This can be heard in Example 10.

1
+
+
+
etc.

I V I V I Ib VIIb I V
GOAL

Figure 23. Bars 1-4: Harmonic Progression

It is interesting to note that recognition and analysis of the musical devices used in these examples, came *after* their effects were felt so strongly and tacitly in my playing. Identification of correlating propositional, musical knowledge (concerning harmony, voice-leading and harmonic progression) simply transpired as explicit, theoretical and reflective justification for the tacit felt shapes that pre-reflectively guided my seemingly intuitive interpretation – an interpretation that, I contend, is ultimately based on an interaction of embodied knowledge of the pathway schema and embodied knowledge of musical harmony. Moreover, my initially simple exploration of articulation in these two short passages revealed the hugely influential quality of note length. Most simply, it became clear that a prolonged note length amongst notes of shorter value creates not only hierarchical emphasis but also a notable feeling of arrival at a musical goal, and correspondingly, that the shorter surrounding notes suggest motion towards or away from that goal. The expressive flexibility of note length is therefore used as a valuable tool to convey varying degrees of hierarchy and different aspects of travel. Of course, this is something that performers and theorists of Baroque music know, but the important point here is the significant interrelationship between note length, hierarchy and the pathway schema (as illustrated in Figure 24), and therefore between expressive timing and different forms of knowledge. Note length is an overt, sonic and temporal manifestation or interpretative externalisation of our knowledge of musical hierarchy and of our embodied understanding of goal-directed motion.

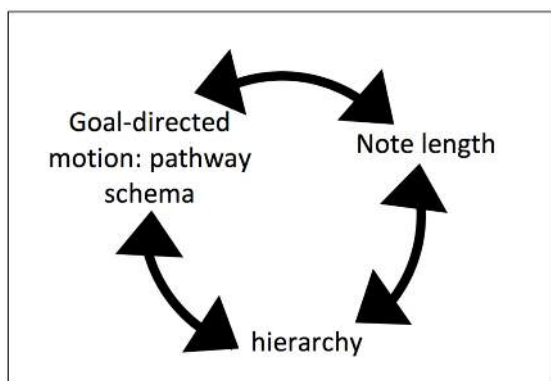


Figure 24. Interrelationship

In any case, it became clear from my practical experimentation that, in accordance with my initial intuitions and supported by explicit knowledge, a *light*, unemphasised execution of beat 3 conveyed my musical intentions for bars 3-4 and bars 14-1 most effectively (as shown in Figure 17 and 18, and heard in Examples 6 and 7). This interpretation, of course, adheres to the fact that the downbeat is ‘the first and most important note in a measure’,⁸⁸³ yet, more importantly, it highlights that, whilst four-part metres often ‘have two strong beats’,⁸⁸⁴ ultimately, as Türk explains, emphasis ‘depend[s] primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them’.⁸⁸⁵ In these two particular cases, I regard beat 3 as: having much less importance than beat 1 and similar importance to beats 2 and 4 (this corresponds to Türk’s first point); as related to the other dotted quavers of the bar as one descending journey that leads, like an upbeat, to beat 1 (Türk’s second point); and as part of the fundamental harmonic progression leading from the tonic to the dominant or from the dominant to the tonic (Türk’s final point). By recalling Türk’s comment from his eighteenth-century treatise, I gained explicit justification for my expressive decisions: a reminder of the dynamic entanglement of knowledge and interpretation.

It is, however, essential to acknowledge that the likelihood of performing each dotted quaver in the bar with exact durational equality is negligible, and, in fact, undesirable. Expressive nuances are, of course, inherently and positively flexible. They will vary on every occasion, not only due to the innate uniqueness of any musical performance, but here, more significantly, because of my heightened awareness of

⁸⁸³ Türk, *School of Clavier Playing*, 325.

⁸⁸⁴ *Ibid.*, 91.

⁸⁸⁵ *Ibid.*, 327-328.

different interpretative possibilities and the related supporting knowledge. It is, of course, possible that I could marginally lengthen the dotted quavers of bars 3 and 14 successively, in response to my gut feeling of growing intensification throughout the bar, or slightly prolong the third beat due to my subattentive knowledge of traditional four-part meter hierarchy and experimentation with this particular interpretative possibility. After all, in bar 14, the falling sequence *begins* on beat 3 (as opposed to the second beat in bar 3), and on the note A (the dominant) itself: compare Figures 20 and 21. The dominant-tonic progression is, therefore, explicitly delineated by the melodic line: A falling to D. It is hence possible that this demarcation may be subtly reflected in my execution, highlighting the dominant and the onset of the descent with an ever so slightly prolonged third beat. Frankly, different strains of knowledge are accessed on different occasions, as a result of a performer's recent interpretative exploration, his or her cognitive state and attentional focus, the situational knowledge of the moment, and the uniquely unfurling musical narrative. Most importantly, this discussion highlights the interpretative flexibility that explicit knowledge offers. Propositional knowledge neither demands nor generates one exclusive or unanimous outcome. It offers a variety of interpretive possibilities that must be moulded by an individual's unique experience, feeling and tacit knowing. This, in itself, is something that we might well already know: it is an inherent part of the interpretative process, experienced by all performers. Quite how these forms of knowledge interact to engender a particular decision is, however, what my research shows.

5.3.2.3. Note Length: A Means of Uniting Gestural Units

Despite the interpretative plasticity that knowledge affords, it is apparent that, in the above examples, I ultimately favour larger cycles, sonically delineating bar-length (rather than half-bar) journeys. Interestingly, a similar lightening of beat three, generating just one strong beat per bar, is also evident in my interpretation of bars 7 and 8, as illustrated in Figure 25. Following a light upbeat at the end of bars 6 and 7, the voice leading and descending pattern unite the first three beats of bars 7 and 8 as one gesture: one felt shape. The downbeat establishes the goal (shown in Figure 25 by means of bright red note-heads), before beats 2 and 3 act as fading repercussions or reverberations and suggest a relaxation of motion away from the goal (illustrated by the subsequent lightening of note-heads).

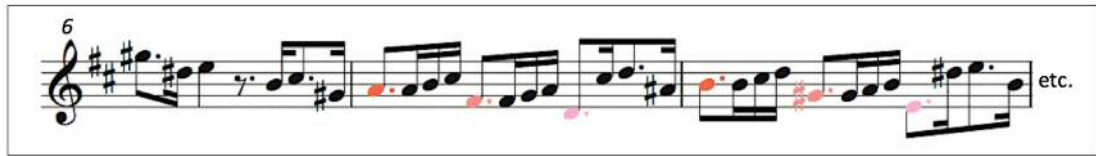


Figure 25. Bars 6-8: Uniting Gestural Units

In contradiction to the consistency of rhythmic notation, modifications of note length are employed in my interpretation, in order to connect the gesture together as a single entity and express the trajectory of a goal-directed journey, conveying motion and delineating arrival in accordance with the pathway schema. Simply, the many dotted quavers – notationally equivalent – enjoy varying sonic durations depending on their function. The final dotted quavers of bars 6 and 7 unsurprisingly are given a relatively short note length, fulfilling their role as light upbeats leading to beat 1. The dotted quavers on the downbeat of bars 7 and 8 have the longest sonic value, highlighting their identity as musical goals, before the motion relaxes through the second and third beats, which gently complete the shape with much shorter, lightly articulated dotted quavers and, therefore, greater use of silence. These different note lengths, serving to unite gestural units, can be heard in Example 11, which begins with the upbeat into bar 7. Furthermore, the video in Example 12 (whilst not reflecting the light upbeat that characterises my later and preferred interpretation) evidences the very first moment in which I reflectively responded to these triadic shapes, felt covertly as united gestures.

This manipulation of note length as a means of connecting individual notes together into small gestural shapes also occurs in bars 5, 6, 9, 10 and 12, and is illustrated in Figure 26 and 27 below.

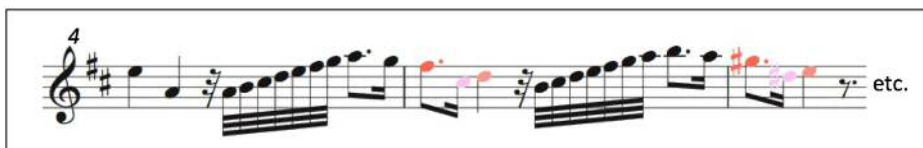


Figure 26. Bars 4-6: Uniting Gestural Units



Figure 27. Bars 8-12: Uniting Gestural Units

Indeed, recordings of my practice reveal that I give the crotchets on the second beat of the bar a notably short sonic duration, even though they have the longest notational value. Whilst of course falling on a 'weak' beat in terms of musical hierarchy, these

crotchets more significantly constitute the close of a small gestural unit: a small felt shape. These small units simply characterise the arrival at the goal on beat 1, followed by a gentle tapering, as can be heard in Example 13 (which begins from the middle of bar 4, and can be seen in Figure 26) and Example 14 (which begins from the upbeat into bar 9, seen in Figure 27). Indeed, thanks to sequential repetition and delineating rests, the conspicuous phrases in bars 4-6 reinforce my felt experience of the crotchet on beat 2 as an unimportant conclusion to the musical shape, which inherently demands a lack of emphasis. This is clarified by the annotations in Figure 28.

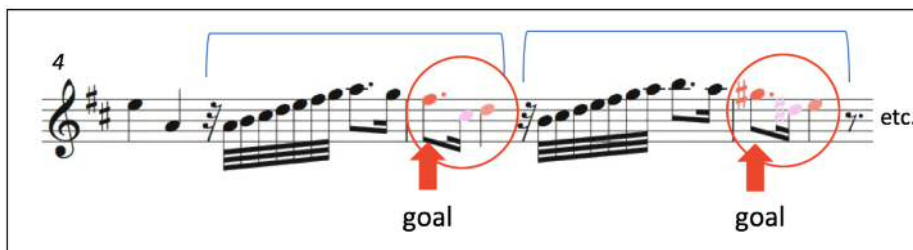


Figure 28. Bars 4-6: Uniting Gestural Units

The same argument can be made for bars 8-12, wherein each cycle is closed by the same rhythmic figure (dotted quaver-semiquaver-crotchet): see Figure 29.

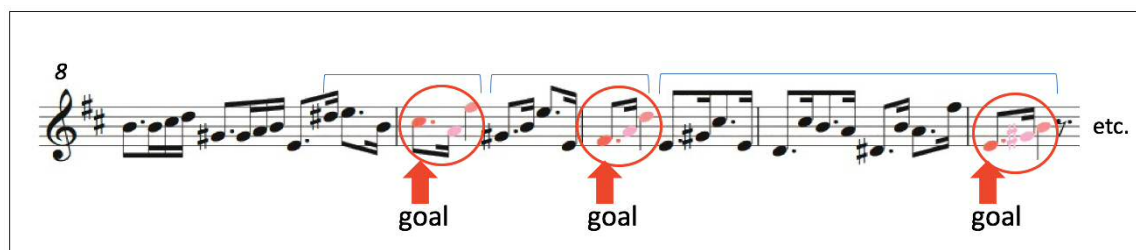


Figure 29. Bars 8-12: Uniting Gestural Units

Despite its visually ostensible importance, the entire notational duration of the crotchet is not realised in performance. As my interpretation sonically externalises my felt sense of the shape of these small figures, communicating the arrival at and subsequent relaxation away from the musical goal (thanks to embodied knowledge of the pathway schema), the dotted quavers falling on beat 1 of bars 5, 6, 9, 10 and 12 assume a greater sonic note length than the subsequent crotchet.

To clarify the relationship between my temporal decisions, knowledge, and attentional states, it should be noted that, whilst these shapes in Figure 25-29 were vividly felt *covertly*, and sonically externalised thanks to my *intuitive* timing manipulations, *explicit* theoretical knowledge from musical analysis (including knowledge of phrases, sequences, and repetition) was recalled, in order to accredit my tacit

interpretation – to *justify* the felt shapes and my corresponding expressive timing decisions. This of course reminds us of the interaction between the tacit and the explicit; between the pre-reflective and the reflective.

Figure 25-29 clearly demonstrate that notational durations can be effectively manipulated in order to connect individual notes together as one united shape. Further examination of these examples, however, reveals additional temporal issues that must be considered. Returning to bars 6-8 (Figure 25), it is important to recognise that, in addition to my interpretative modifications of the dotted quavers, this particular example in fact *demand*s alteration of the notated time. As written, beats 1 and 2 of bars 7 and 8 exceed their allocated value by a quaver, rendering both bars too long by one whole crotchet. The existence of bars in which the sum of the written note lengths is theoretically incorrect, failing to correspond with the time signature, is not uncommon in Baroque repertoire. The following excerpt (Figure 30) from the first movement of Michel Blavet's Sonata No. 4 in G minor (*'La Lumague'*)⁸⁸⁶ is a good example (note that this movement is in common time).

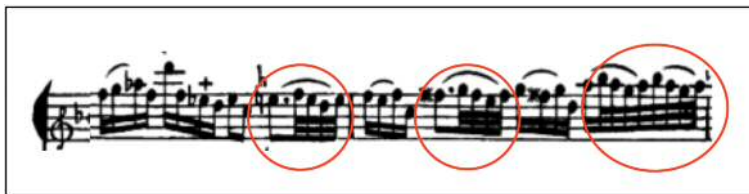


Figure 30. Excerpt from Sonata No. 4 by Michel Blavet

Each circled beat is too long by one semiquaver and must, therefore, be expressively adapted in performance.

Due to limitations of printing in the eighteenth century, dotted rhythms and complex rhythms, such as written-out ornamental flourishes, were often notated imprecisely, with the very expectation that the performer would use expressive intuition to follow the general shape of the suggestive notation and execute a fitting gesture. Robert Donington identifies similar examples where notes are 'to be taken ornamentally, unmeasured and a little quicker than they are notated',⁸⁸⁷ and Richard Rastall, discussing the interpretative ambiguities of the "'variable dot" principle', recognises that, because of 'dotted rhythms being fussy and laborious to write ... composers of the seventeenth and eighteenth centuries often did not bother to write the necessary rests and short

⁸⁸⁶ Excerpt taken from the *Adagio* of Michel Blavet's flute Sonata No. 4 *'La Lumague'* Blavet, *Sonates Pour la Flûte Traversière*, 19.

⁸⁸⁷ Donington, *The Interpretation of Early Music*, 469.

notes'.⁸⁸⁸ The dot and/or the short notes, therefore, have to 'expand or contract in value before the group adds up to the right total duration'.⁸⁸⁹ Simply, in the words of Rastall, 'notated rhythms accommodate themselves to the basic metre required by the composer'.⁸⁹⁰ Evidently, in the case of Figure 25, Telemann simply expresses the desire for a dotted note, followed by a decorative flourish of short notes leading to the subsequent beat. This example of course corroborates the existence, acceptance and need for temporal manipulation in Baroque repertoire.

5.3.2.4. Closer Examination of Bars 4-6

While revisiting bars 7-8, above, showed that these two deceptively simple bars in fact present a number of important considerations regarding note length, bars 4-6 similarly demand further attention. It is interesting to note that my initial, pre-reflective interpretation here created a rather ineffective hierarchical imbalance. A felt sense of arrival at the top of the decorative flourish resulted in a somewhat untasteful and unstylistic emphasis on beat 4, rendering the dotted quavers of beat 4 and beat 1 equal. This is shown in Figure 31 and evidenced by Example 15 – an excerpt taken one of my initial practices.

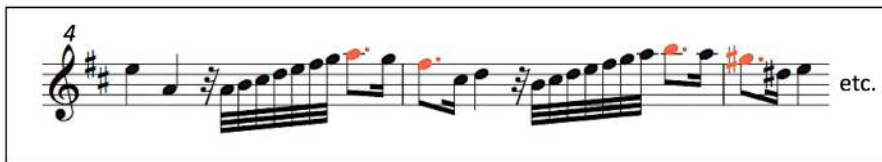


Figure 31. Bars 4-6: Hierarchical Imbalance

Musical functions were neglected and hierarchical equilibrium was obscured.

In this instance, my tacit intuition was ineffective, clearly contradicting any explicit justification, and the requisite knowledge – the same knowledge more effectively used, apparently intuitively, in the aforementioned examples – was not being accessed successfully from my subattention. It was essential to recall that 'each meter has strong and weak beats, although according to their external value or duration, they are equal to each other'.⁸⁹¹ The basic, explicit rudiments of beat hierarchy were consequently brought into my reflective attention, in order to regain balance and differentiate the equally

⁸⁸⁸ Rastall, *The Notation of Western Music*, 222-223.

⁸⁸⁹ *Ibid.*

⁸⁹⁰ *Ibid.*, 226.

⁸⁹¹ Türk, *School of Clavier Playing*, 90.

notated dotted quavers of beat 4 and beat 1 according to their distinct and primary roles – a light upbeat leading forwards and a strong arrival on the downbeat, respectively. Once again, this was achieved primarily via note length – an alteration of the notated time – the results of which can be heard in Example 13. Whilst of course demonstrating the practical application of eighteenth-century information, this particular discussion, perhaps more interestingly, recognises that initial intuitions do not always reign supreme, they cannot be relied upon exclusively without consideration, and they may be moulded successfully by recalling explicit knowledge. In the words of Epstein, '[i]ntuition ... is not omnipotent';⁸⁹² 'knowledge can assist intuition'.⁸⁹³ Furthermore, this experience highlights the very real significance of 'nesting journeys' in practice (a notion explained in Chapter 4, Section 4.5.3). Whilst beat 4 certainly marks an arrival at the end of a florid ornamental gesture, it also forms part of the larger and more important journey towards beat 1. It is fundamentally because of this superimposition of musical journeys that gradations of expressive emphasis are necessary, in order to convey varying degrees of motion towards, arrival at, and relaxation away from goals of differing importance.

Another noteworthy observation within this passage concerns the demisemiquaver rests. As evidenced by Example 16, I experienced the notationally equivalent rests in bars 4 and 5 differently: they seemed to have contrasting functions, characterisations and therefore slightly different durations. Not only did I feel these different degrees pre-reflectively, thanks to my deep-rooted, embodied knowledge of punctuation and grammar (both verbal and musical), but I subsequently recalled explicit primary source information to reinforce my intuitions, bringing knowledge that had become engrained in my subattention directly into reflective attentional focus. In particular, I was thinking of Quantz's comment that 'the end of the preceding idea and the beginning of the one that follows are separated from one another'⁸⁹⁴ – an instruction similar to that of Couperin, who insists that 'one must make a slight break at the end of a phrase before going on to the following one'⁸⁹⁵ and (as noted in Chapter 2) 'pause at the full stops'⁸⁹⁶. I later recalled Georg Puttenham's description – in his influential handbook on poetry and rhetoric *The Arte of English Poesie* (1589) – of different caesural durations

⁸⁹² Epstein, *Shaping Time*, 101.

⁸⁹³ *Ibid.*, 417.

⁸⁹⁴ Quantz, *On Playing the Flute*, 88.

⁸⁹⁵ François Couperin, *Pièces de Clavecin: Troisième Livre* [1722], ed. Kenneth Gilbert (Paris: Heugel, n. d.), ix.

⁸⁹⁶ *Ibid.*, ix

as the equivalent of stopping for a quick drink, a longer meal, or an even longer overnight stay.⁸⁹⁷ All in all, these comments explicitly rationalised my experience of the rest in bar 4 as a full stop, over which I took some time before introducing the contrasting material.

In bar 5, however, the demisemiquaver rest was experienced as a comma mid-sentence, like a small gap of air: it had a slightly shorter duration than its equivalent in bar 4 (as can be heard in Example 17). I contend that I experience this rest as a comma, largely thanks to the music's sequential ascent, which connects the gestures either side of the rest, in doing so creating an inherent sense of urgency. This interpretation is, after all, further justified by explicit, counterbalancing advice from Quantz, that '[y]ou must be just as careful to avoid separating phrases that belong together'.⁸⁹⁸ Succinctly, as a result of our many embodied experiences of 'pauses' – in music, speech and writing, as well as in our daily routines – we have a deep and multi-faceted, embodied knowledge of 'taking time', which, thanks to the cross-modal and projective qualities of knowledge, influences musical punctuation. Undeniably, this richness of epistemic interaction played a fundamental role in my temporal executions of the rests in bars 4 and 5.

Furthermore, thanks to the sequential intensification across bars 4-6, I experienced a greater sense of arrival on beat 1 of bar 6 (highlighted by the sharpened G), as opposed to beat 1 of bar 5. This is reflected in my interpretations through a longer dotted quaver in bar 6, usually enhanced by a trill, which draws attention to the more emphatic, higher version of the gesture. This is illustrated in Figure 32 and can be heard in Example 17. Indeed, my insertion of a trill on this note was initially a pre-reflective, subattentional reaction to my embodied, tacit understanding of sequential repetitions that become more and more emphatic. An integral component of this tacit feeling is, of course, explicit knowledge (of rhetorical principles and ornamentation) that has become engrained and embodied.

⁸⁹⁷ George Puttenham, *The Arte of English Poesie* [1589] (Teddington: Echo Library, 2007), 57.

⁸⁹⁸ Quantz, *On Playing the Flute*, 90.

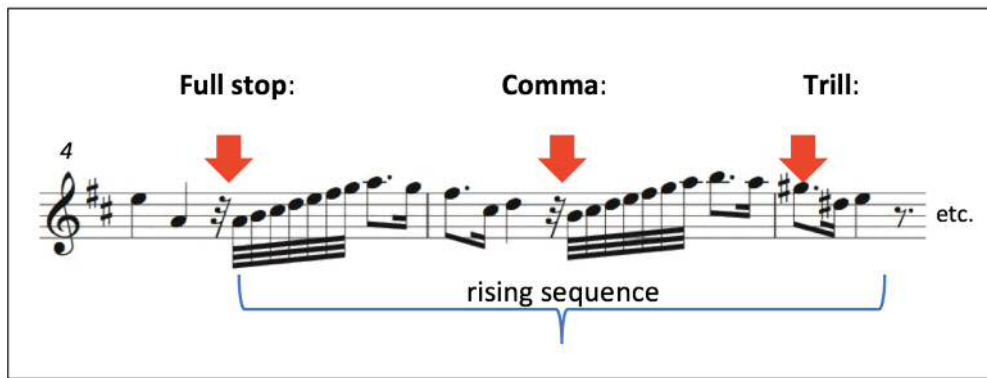


Figure 32. Bars 4-6: Rests and Sequential Repetitions

This detailed exploration of bars 4-6 confirms that expressive timing encompasses the manipulation of note length (including by means of ornamentation), as well as the manipulation of rests. Drawing parallels with speech and, in particular, our embodied experience of speaking, the rests can be interpreted as punctuation marks – inherently flexible, clarifying and expressive. In practice, this deep-rooted embodied knowledge interacts closely with explicit knowledge of music theory and Baroque performance practice in a way that solidifies my interpretative timing decisions.

5.3.2.5. Closer Examination of Bars 8-12

Bars 8-12 must also be revisited. This passage, in particular, afforded notably extensive experimentation with the number of strong beats per bar, and provoked especially detailed exploration of the various interpretative possibilities that arise from ostensibly simple knowledge of beat hierarchy. It is of course most apparent from the above examples, that my interpretation of the first section of Fantasia no. 7 predominantly revolves around one strong beat per bar, whereby emphasis falls solely on beat 1 rather than beats 1 and 3. This is essentially a result of three factors: notated rests on the third beat (bars 4, 5, 6, 12); the function of leading figures that vividly suggest motion forwards (bars 3 and 14, see Figure 17 and 18); and united shapes (bars 7 and 8, see Figure 25). Instances where this is not the case and two strong beats transpire in my preferred interpretation can be seen in bars 1, 2 and 13 (presented in Figure 14 and 15). The trills on beat 3 have an inherently emphatic quality, though this is, of course, far greater in the latter case due to the significant structural function and prominent harmonic quality of this cadential trill, with its long preparation or upper appoggiatura (as demonstrated in Example 5). In the case of bars 8-12, however, I did not have an immediate or overriding tacit feeling that confirmed one particular framework of hierarchical emphasis: many

interpretations felt equally right. I could not rely, therefore, on the determination of any one piece of explicit knowledge, nor on a particularly compelling tacit feeling. I hence experimented thoroughly with different emphases and their varying affects, whilst simultaneously drawing on a wealth of explicit knowledge concerning music theory, such as harmony and voice-leading. Indeed, in instances of heightened interpretative uncertainty and possibility, a particularly exploratory process of musical experimentation and explicit epistemic recollection facilitates the consolidation of convincing interpretative options.

To elucidate, it is evident that, following the end of the previous shape (as described in Figure 25), the notes D#-E-B closing bar 8 constitute an upbeat (illustrated in a pale colour in Figure 33) leading to beat 1 of bar 9 (highlighted in red). Having recognised this, I could then intentionally imitate this effect in bars 9 and 10 and execute the entirety of beats 3 and 4 lightly, as an upbeat to the following bar, generating *one* strong beat per bar: this is demonstrated in Example 18, which begins from the upbeat to bar 9.

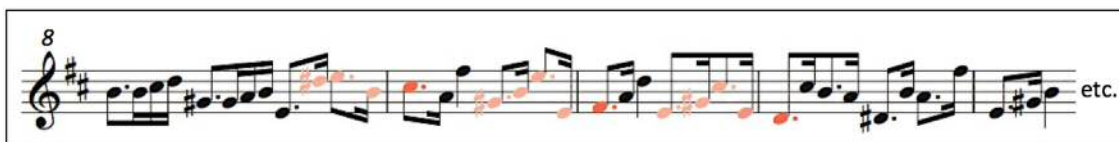


Figure 33. Bars 8-12: Upbeat – One Strong Beat per Bar

In this way, explicit knowledge of ‘upbeats’ is applied practically to guide decisions of note length. On the other hand, I could noticeably accentuate beat 3 to highlight the descending voice-leading from G#-F#-E-D, consequently creating *two* strong beats per bar, as illustrated in Figure 34 and Example 19. In this case, knowledge of ‘voice leading’ gains primacy, surpassing knowledge of ‘upbeats’ as the primary influence, to generate this alternative interpretation.

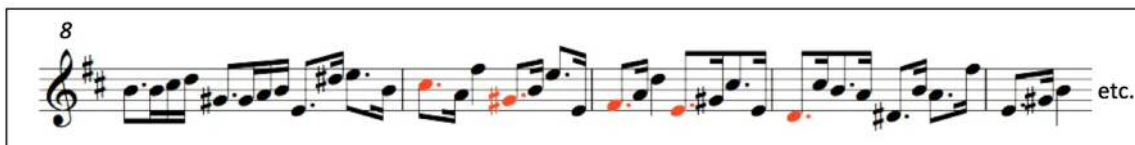


Figure 34. Bars 8-12: Voice Leading – Two Strong Beats per Bar

Having reflectively experimented with both interpretative possibilities in practice, my ultimate favouring of lightening the upbeat rather than accentuating the voice leading concerns the impact of bar 11 and the intensification of motion. In bar 11, Telemann breaks the pattern he has established in bars 9 and 10 by postponing the arrival of the expected rhythmic figure (dotted quaver-semiquaver-crotchet). He does this by

continuing the series of dotted quaver-semiquaver and, more importantly, by introducing ascending and rather unexpected chromatic voice leading from D, through D# to E, where the rhythmic goal is eventually reached. As a result, the established regularity of one-bar (or four-beat) cycles expands to feature a two-bar (or eight-beat) cycle, as shown in Figure 35. The moment I reflectively realised this cyclic expansion during my practice can be seen in Example 20.

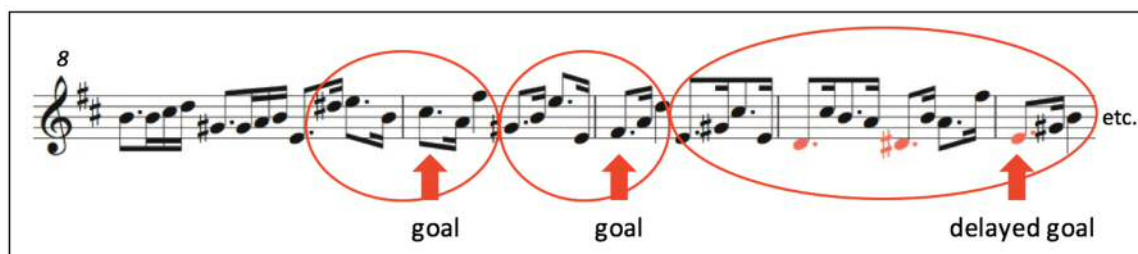


Figure 35. Bars 8-12: Chromatic Voice Leading and Cyclic Expansion

Having explicitly recognised Telemann's compositional development, highlighting the deviation from the expected course of the journey, the delaying of the goal-arrival and the cyclic expansion, I accentuate the chromatic voice-leading from bar 11-12 by emphatically lengthening beats 1 and 3, creating two strong beats in bar 11. After experimentation, it was clear that this had greater impact when beat 1 only was emphasised in bars 9 and 10, as the subsequent increase of accentuation interrupted the regular framework and created a new, more dramatic sense of motion. This increase of accentuation can be heard in Example 21 (which begins from the upbeat to bar 9) and seen, thanks to the red note-heads, in Figure 36.

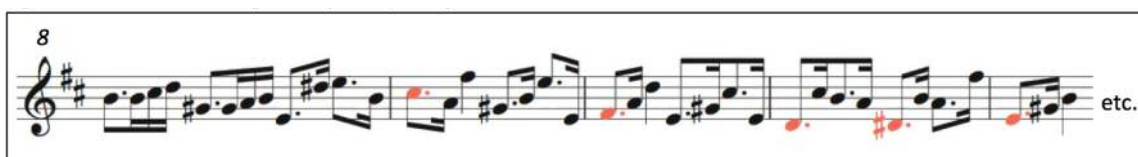


Figure 36. Bars 8-12: Change in Emphasis; Change in Motion

Interestingly, when two strong beats per bar were emphasised continually from bar 9 (as demonstrated in Example 22) I experienced feelings associated with rather heavy, pedantic and tiresome motion; yet when this dual emphasis was reserved for bar 11, to highlight a noteworthy moment (in this case the chromaticism), the opposite effect occurred: the sense of motion intensified. This demonstrates the varied potential of a singular expressive device and therefore the importance of its use in the wider musical context and its relationship to other musical elements. Situational and relational knowledge is absolutely pivotal. It also reveals the significance of epistemic interaction.

My ultimate, favoured interpretation arose from (and is indeed justified by) the interplay of different forms of knowledge: musical knowledge of upbeats, thematic development and chromaticism, and theoretical knowledge of the cycle schema. More generally, by discussing the deliberative process that led to my decision to vary the number of strong beats per bar via note length (a matter of timing), this example demonstrates the practical application of knowledge, whilst simultaneously reinforcing the importance of musical functions and context, the flexible potential of explicit knowledge, and the valuable interaction of all kinds of knowledge to lead to the most convincing individual interpretation. Fundamentally, it is through epistemic interplay that interpretations are born and consolidated.

The above examples demonstrate the power of manipulating the notated time via note length to connect notes together as a united gesture and to express different degrees of motion, delineating journeys towards and away from goals of varying significance. Furthermore, they highlight the interaction, complementarity and malleable divide between the explicit and the tacit. Interestingly, this epistemic fluidity is epitomised by the notion of procedural knowledge (noted in Chapter 4) – a marriage of codified technical knowledge that has become absorbed and embodied, and corresponding uncodifiable actional and relational knowledge of the instrument, gained only by doing. Indeed, it is important to recognise that, in addition to the specific examples of knowledge listed in Table 1 and discussed in the above examples, my research confirmed that the entirety of my practice is grounded on this fundamental and omnipresent foundation of ‘knowledge *how*’ to fulfil my interpretative intentions.

5.3.3: Closer Connections with Image Schemata

5.3.3.1: Nesting Journeys and Cycles

It is evident from the above discussion that the cycle schema and, in particular, the pathway schema play an important role in guiding my interpretative timing decisions. To prove just how integral embodied image schemata are in musical performance, the opening few bars of Fantasia No. 7 will be revisited.

As discussed in Chapter 2 (Section 2.4) and Chapter 4 (Section 4.5), there is a close affinity not only between the cycle and pathway schemata, but also between a cycle and a musical phrase, both of which act as temporal containers, ‘mark[ing] off ... units of

time'.⁸⁹⁹ With this in mind, the opening phrase of Fantasia No. 7 can certainly be conceived, and indeed felt, as one overarching cycle and, correspondingly, as one journey, travelling, fundamentally, from the tonic towards the dominant (the goal). This is illustrated in Figure 37 below and in Example 23, the latter highlighting the physical manifestation of embodied knowledge. Indeed, the forward motion of my body indicates that the goal-directed trajectory (embodied knowledge of the pathway schema) is not only felt covertly and externalised *sonically*, through my interpretation, but also physically externalised in the pre-reflective motion of my body, which moves forward as it reaches the goal in bar 4. As suggested in Chapter 4 (Section 4.6), covert, felt shapes work synergistically with overt bodily shapes, both in reaction to and in order to generate musical shapes.

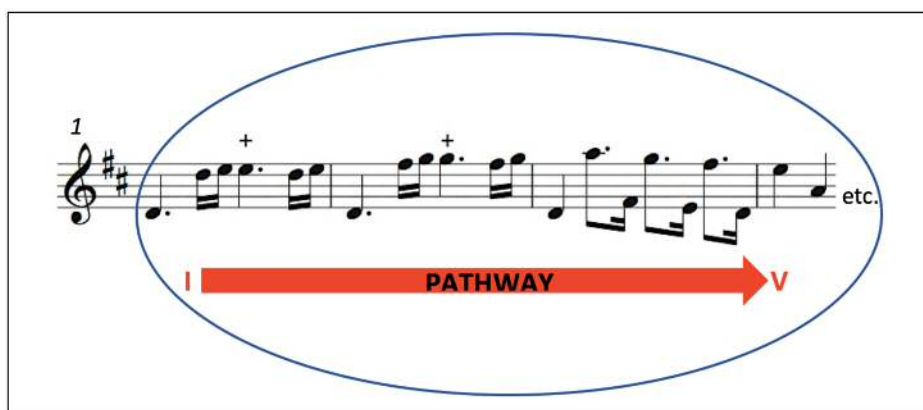


Figure 37. Bars 1-4: Cycle and Pathway Schemata

Within this phrasal container, however, smaller cycles and journeys are nested – namely the smaller musical gestures that together create the larger phrase. These are shown in Figure 38.

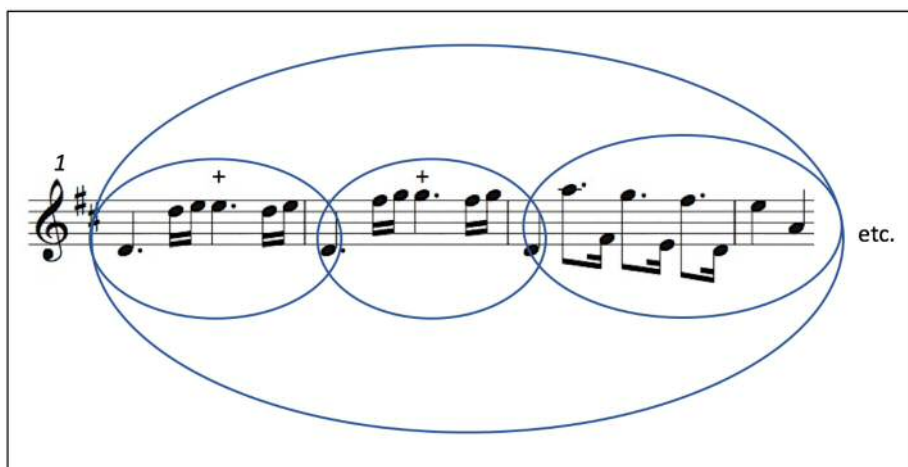


Figure 38. Bars 1-4: Nesting Cycles and Journeys 1

⁸⁹⁹ Brower, 'A Cognitive Theory of Musical Meaning', 329.

These smaller journeys loosely follow the regularity of the bars – another means of demarcating time into cycles. Of course, within the third sub-cycle, we can identify a series of even smaller rhythmic sub-cycles, which once again piece together to form the greater musical shape within which they nest: see Figure 39.

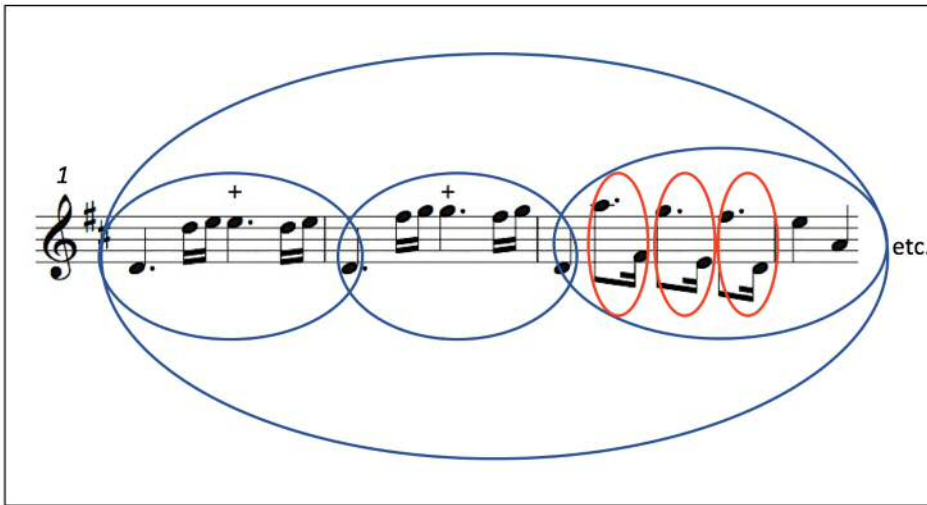


Figure 39. Bars 1-4: Nesting Cycles and Journeys 2

5.3.3.2. The Balance Schema

Interestingly, the first two sub-cycles in Figure 38 each complete a notable journey of tension and release (the balance schema) as the harmonic progression of $I \rightarrow V \rightarrow I$ (or $I \rightarrow V^7 \rightarrow I$) moves the music from stability (the tonic) to the dominant, which enjoys a degree of tension and instability, thanks to the chord's inherent pull towards the tonic. In this way, the music completes a full cycle of relaxation-tension-relaxation, as shown in Figure 40.

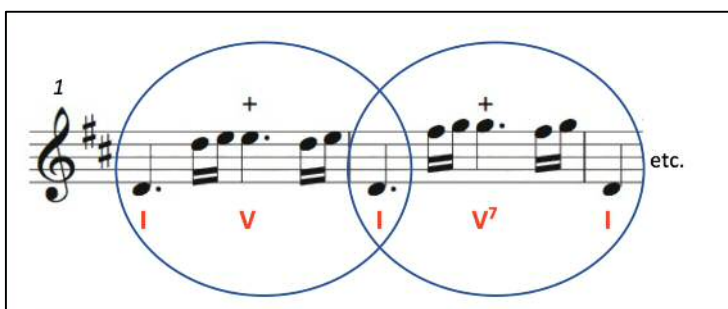


Figure 40. Bars 1-3: Balance and Cycle Schemata

This musical manifestation of the balance schema is further emphasised by the trill on chord V, which intensifies the phase of instability through cycles of tension and release on an even smaller scale: in the trill's idiosyncratic undulation between dissonance and consonance, between tension and release. This reinforces the cycle and balance schemata on different levels.

5.3.3.3. The Pathway Schema

In terms of the goal-directed trajectory of the sub-cycles in Figure 40 – the pathway schema – I argue that there are two interpretative possibilities: the goal towards which each sub-cycle strives could be either beat 3 (mid-cycle) or beat 1 of the subsequent bar (at the end of the cycle). As mentioned when discussing Figure 21, the underlying harmonic drive towards the dominant and the prominent voice-leading in bars 3-4 leads me to experience beat 1 of bar 4 as the goal of the third sub-cycle. The first two sub-cycles could similarly travel towards beat 1, in order to establish a clear hierarchical framework from the outset. This would highlight the first beat of the bar as the goal, creating cyclic regularity and of course resonating with (or subattentionally drawing on) my explicit knowledge that the first beat of the bar assumes hierarchical precedence. This interpretation, illustrated in Figure 41 and Example 24, would at once inspire and be achieved by a trill that ‘increases [in speed] ... by a kind of gradation’,⁹⁰⁰ inherently gaining motion and momentum towards beat 1, the goal. It is interesting to note, once again, the physical externalisation of my embodied experience of the pathway schema, as can be seen in Example 25.

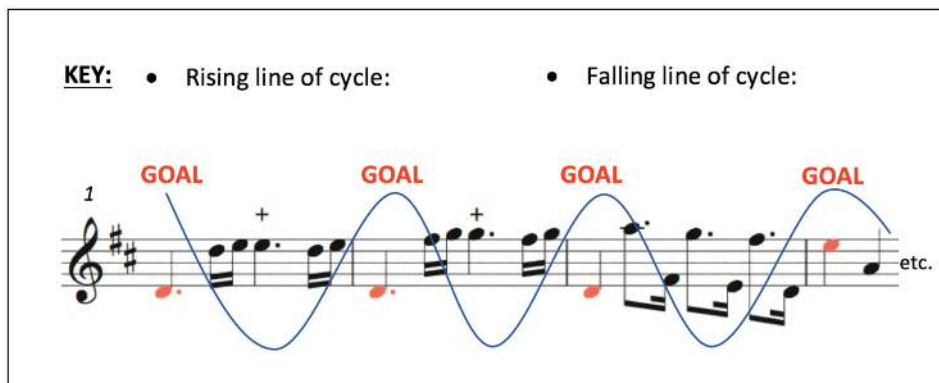


Figure 41. Bars 1-4: Cycle and Pathway Schemata 1

On the other hand, it is possible that the first two sub-cycles pictured in Figure 40 strive towards the third beat, inherently highlighted both by the departure from the tonic to the dominant and by the trill, which creates an undulation between consonance and dissonance on the highest note of the bar. The third beat could therefore most certainly be characterised as that which Brower terms ‘an unstable goal’:

[a]s we approach an unstable goal, we tend to move toward it with increased speed, tension, and anticipation. Upon reaching

⁹⁰⁰ Friedrich Wilhelm Marpurg, in Donington, *The Interpretation of Early Music*, 244.

the goal, we tend immediately to seek its opposite – stability, relaxation, and the slowing and/or stopping of motion. Thus, each completed motion corresponds to a completed cycle of tension and relaxation.⁹⁰¹

This description could most certainly be applied to sub-cycles 1 and 2: motion builds as the music strives towards beat 3 – the unstable goal characterised by a dissonant trill on the dominant chord; upon reaching the goal, the motion relaxes, and the music calmly returns to the tonic. This interpretation would, of course, correspond closely with the balance schema, through which the first two sub-cycles complete a full journey of repose-tension-repose (I-V-I). Subsequently, in bar 3-4, the voice-leading and harmonic progression to the dominant lead the music towards beat 1, before the motion relaxes on beat 2, with its tapering repercussion, fading away from the goal. In this case, the change in hierarchical emphasis, from beat 3 (in bars 1 and 2) to beat 1 (in bar 4), breaks the expected regularity established by the first two sub-cycles, in turn emphasising the longer journey through bar 3 as the dominant chord (the goal) is delayed by two beats until beat 1 of the subsequent bar. A sense of expansion is created as the journey towards the goal in the final sub-cycle is prolonged. This is demonstrated in Figure 42 and Example 26.

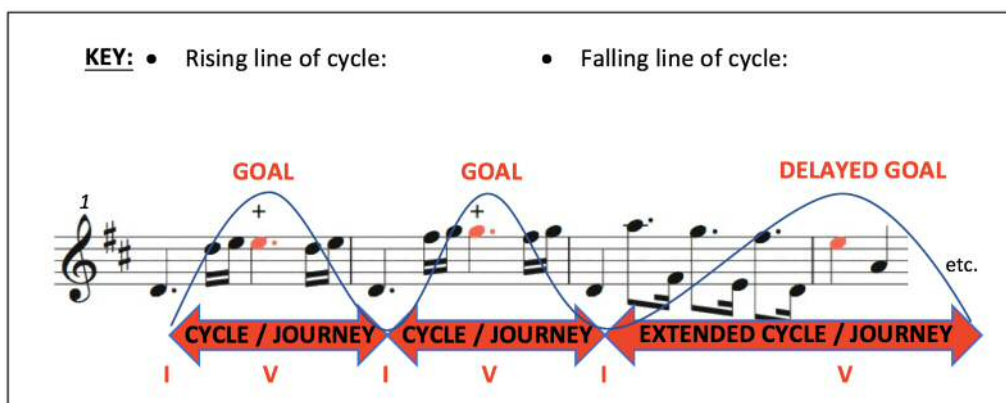


Figure 42. Bars 1-4: Cycle and Pathway Schemata 2

Of course, thanks to the increased sense of anticipation in the extended journey towards this delayed goal, the effect of the eventual arrival is greater, effectively highlighting this moment as the main goal of the overarching phrasal cycle, as suggested in Figure 37.

These two salient examples (Figure 41 and 42) demonstrate that different epistemic combinations generate different resultant temporal interpretations; in the first case

⁹⁰¹ Brower, 'A Cognitive Theory of Musical Meaning', 332.

through knowledge of beat hierarchy and of the cycle and pathway schemata, and in the second, knowledge of harmony, consonance and dissonance, of voice-leading, and of the cycle, pathway and balance schemata.

5.3.3.4. Physical Externalisations of Embodied Image Schemata

By examining recordings from my practice, and as highlighted by Example 23 in Section 5.3.3.1 and Example 25 in Section 5.3.3.3, it is most evident that the motion of my body is entwined in the interpretative process. My overt physical externalisations appear to correspond to my internalised, covert experience of goal-directed trajectories. Whilst research into the influence of visual gesture on expressive and interpretative communication lies beyond the scope of this study, from my personal experience, I argue that these bodily gestures play a crucial role in allowing my interpretations to be realised effectively. They reflect the embodiment of the goal-directed trajectory, enriching both the visceral felt shape and sonic externalisation.

For another illustration, see Examples 27 and 28: excerpts taken from practice session filmed when I had been considering interpretative ideas for the opening section. These clips (beginning from the anacrusis at the end of bar 6) both reveal that the notes I regarded as particularly significant and to which I consequently gave durational emphasis – the ‘goals’ noted in bars 7, 8, 9 and 10, and the unexpected chromatic voice leading in bar 11 which demarcates the extended ascent to the goal in bar 12 (all of which are highlighted in red in Figure 43) – corresponded with notable forward motions of my body.

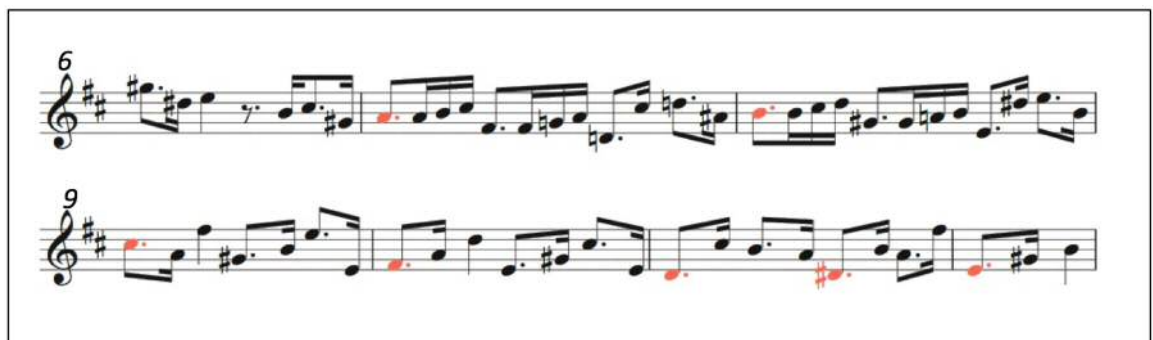


Figure 43. Bars 6-12. Embodied Pathway Schema

I move forwards, as if journeying towards and subsequently reaching a target, therefore visually marking out the goals and important markers towards them. This overtly visual externalisation of my interpretative decisions is testament to the cross-modal working

and embodied qualities of image schemata, as well as to the physicality of embodied knowledge within musical practice.

5.4. Bars 15-85

5.4.1. Embodied Cycle Schema

5.4.1.1. Embodied Cycles and Metric Modulations

The slow and stately opening of Fantasia No. 7, characterised by its distinctive dotted rhythms and majestic grandeur, is immediately followed by a contrasting, livelier section in 3/8. The '*Alla Francese*' marking is reinforced by the musical conformity to the traditional format of the French Overture style. For the performer, a matter of crucial (and frankly inescapable) consideration is the transition between the sections. Indeed, the second-time bar itself inherently calls for interpretation. Marking the end of one sectional journey and the start of another, yet lacking any explicit indication of a metric relationship, this particular bar requires the performer to make a variety of temporal decisions – it is a capsule of interpretative temporal possibility. Given the performer's heightened level of both interpretative freedom and responsibility in this transitional moment, how exactly do temporal decisions come about?

Having studied recordings of my practice, it is evident that a metric modulation of 'crotchet = dotted crotchet' consistently characterised my subattentive, pre-reflective interpretation of this transition. By subsequently drawing on my theoretical understanding of image schemata, it became clear that my embodied experience of the cycle schema accounts for this metric relationship. Indeed, as noted in Chapters 2 and 4 (specifically, Section 2.4.2.3 and Section 4.5.3), a defining characteristic of the cycle schema is the expectation and desire for continuity and regularity. Establishing an underlying tempo throughout the first section of the Fantasia, with a continuous flow of beat-sized cycles, means that this regularity becomes deeply felt internally. In this context, my predisposition to continue this cyclic pattern (the felt shape), if at all possible, guides the metric relationship. Of course, due to the one-beat-per-bar characteristic of a 3/8 time signature, a 'crotchet = dotted crotchet' metric modulation maintains a 'beat = beat' relationship, enabling a particularly smooth transition. This is illustrated in Figure 44 and can be heard in Example 29.

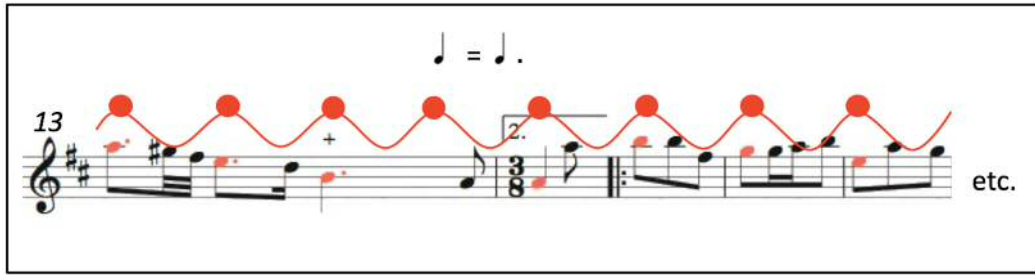


Figure 44. Bars 13-17: Crotchet = Dotted Crotchet Metric Modulation

If, on the other hand, the original cycle endeavoured to endure a ‘crotchet = crotchet’ modulation, for example, the three quaver beats in the 3/8 section would be divided uncomfortably by the cycle, rendering a conflicting friction or dislocation between the musical shapes (understood through knowledge of metre, hierarchy, phrases, and so on) and the contour of the cycle, which inherently suggests hierarchical patterns and goal-directed pathways. This interpretative possibility felt so unnatural to me that I could not successfully achieve this particular metric modulation, despite considering this possibility. Indeed, there was a strong epistemic disaccord between the explicit theoretical knowledge in my reflective attention (a ‘crotchet = crotchet’ relationship’) and the tacit embodied felt shape in my intuitive, pre-reflective subattention. In any case, the ‘crotchet = crotchet’ possibility is represented in Figure 45 below.

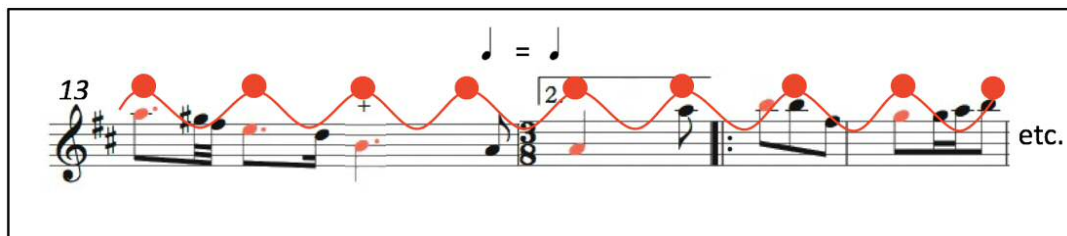


Figure 45. Bars 13-16: Crotchet = Crotchet Metric Modulation

As illustrated by the nonalignment of red notes and red dots, the cycle simply marks off opposing segments of time to those indicated in the music by, for example, the time signature and barlines. As a result of the new pulse – a slower beat arising from the ‘crotchet = crotchet’ modulation – the emphatic fluctuations of the music cannot be united with those of the original cycle unless the cycle is adapted or replaced. A ‘crotchet = dotted crotchet’ correlation, however, which characterised my intuitive metric modulation (illustrated in Figure 44 and Example 29), corresponds with the natural division of common time into crotchet beats and the natural cohesion of 3/8 time into

dotted crotchet beats, consequently aligning the small-scale cyclic and musical shapes (as shown by the coinciding red notes and dots in Figure 44).

It could, of course, be argued that a 'minim = dotted crotchet' metric modulation also satisfies a natural grouping of beats. In this case, however, the defining characteristic of the French Overture style – the transition from a slow and stately opening to a faster, livelier section – is far from fulfilled. As the quaver expands or slows down across the transition, from 4 to 3 quavers per beat, the temporal and characterful effects of the contrasting sections are somewhat reversed: the opening creates a greater sense of movement and energy than the subsequent section, suggesting a $2/2 \rightarrow 3/4$ rather than a $4/4 \rightarrow 3/8$ transition.⁹⁰² The resultant tempo of my intuitive 'crotchet = dotted crotchet' metric modulation, however, not only reflects the temporal implications of the time signatures used, but is also ideally suited both to fulfilling the typically lively character of the second section of a French Overture and to negotiating the technical demands of the acrobatically leaping semiquavers. It is, therefore, evident that my tacit, embodied knowledge of the cycle schema, as a continuing pattern, plays an integral role in navigating this metric modulation – a crucial matter of interpretative timing.

From a more general point of view, it is interesting to note, based both on my own experiences as performer and listener and on anecdotal accounts from other musicians, that performances which, intentionally or otherwise, boast such smooth and well-constructed tempo relationships between sections are very often regarded as effective. Generally, the overall experience is remarkably satisfying. This is, of course, supported and elucidated by the detailed discussion of proportional tempo in Chapter 2 (Section 2.5). However, many listeners, and indeed performers, are not explicitly or reflectively aware of the intimate tempo relationships that occur. They simply know that it 'feels' good or 'feels' right: an embodied, tacit feeling. My basic understanding of the unifying quality of tempo relationships – knowledge overtly disclosed by the word 'relationship' itself, the defining essence of which is connectivity – provided an elementary and somewhat superficial explanation for this. By connecting sections together, tempo relationships unify the musical whole, generating a successful rendition and a positive experience. Having since explicitly studied image schemata, and in particular the cycle schema, I now attribute the effectiveness to more than just a simple relationship between

⁹⁰² For more information on the temporal implications of time signatures, see Mather, *Interpretation of French Music from 1675 to 1775 for Woodwind and Other Performers*, 11, 22, 24.

tempi: it lies in a deep-rooted embodied understanding of the cycle schema and a concomitant inherent predisposition for cyclic patterns to continue. Indeed, by fulfilling this desire for perpetuation, our embodied experience is satisfying: things ‘feel’ good, it ‘feels’ right. Furthermore, through continuity, we are able to experience the greater overarching journey – the pathway schema on a larger scale. Embodied knowledge of the cycle schema therefore plays a hugely significant, yet largely unrecognised, role in our experience of musical performance, both as performers and/or listeners, particularly with regards to sectional transitions and tempo relationships.

From these fundamental principles, it is worth noting the affective possibilities that subtle modification can afford. By taking a slightly slower tempo than that implied by cyclic continuation at a sectional transition, for example, an affect of calmness or relaxation can be achieved: our embodied cyclic experience slows down as the cycle is subtly stretched or slackened. On the other hand, a slightly faster tempo creates a sense of urgency as our embodied cycle contracts slightly. The underlying tempo relationship lingers, yet it is understatedly adjusted, via subtle expansion or contraction, for expressive or affective intent. The cycle, on the contrary, could be completely broken at a sectional transition – in other words, one cycle terminates and another, unrelated cycle begins. Whilst the lack of cyclic continuation could certainly generate a less pleasing overall result, it could conversely achieve the heightened contrast or the dramatic and distinct sectional separation that a performer (or listener, for that matter) desires. Put simply, it is possible to exploit or manipulate the cycle schema for particular effect. In any case, it is important to recognise the inherent temporal implications of cyclic continuity, expansion, contraction and termination at sectional transitions, and the affective and experiential concomitants.

5.4.1.2. Larger Cycles, Goal-Directed Journeys, and Hierarchical Frameworks

Having recognised that a felt, tacit understanding of beat-sized cycles – the embodiment of the cycle schema on a notably small-scale – underpins my preferred ‘crotchet = dotted crotchet’ metric modulation, it is essential to consider other temporal issues that inhere within this sectional transition. Indeed, recalling the multi-layered nesting of cycles, we should zoom out to examine larger shapes, longer journeys. After all, whilst beat-sized cycles undeniably govern my metric modulation, I argue that my co-existing experience of larger cycles influences the time taken between the sections as well as the hierarchical,

goal-directed trajectory of the ensuing phrases. This suggests that embodied knowledge of the cycle schema influences expressive timing decisions on several levels.

In order to explore these matters, I focused on bar 13. As the bar that precedes the transition, and therefore the final bar belonging exclusively to the opening section, bar 13 is particularly significant. As explained in Section 5.3.2.5, this is a salient example in which two strong beats are featured. Following the upbeat at the end of bar 12, the arrival on A on the first beat of bar 13 marks an emphatic and joyous arrival in A major (the uplifting dominant of D major) and at a notably high tessitura – there has been only one higher note in the music so far. Just two beats later, however, a structurally important, emphatic cadential trill highlights the third beat as the second goal of the bar. It is evident, therefore, that in terms of expressive, hierarchical emphasis (or simply musical shaping) I feel bar 13 most prominently in half-bar cycles – a broader undulation that demarcates goals every two beats, as illustrated in Figure 46.

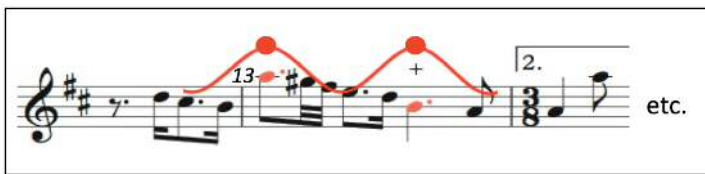


Figure 46. Bars 13-14: Half-Bar Cycles

This half-bar pattern is, after all, reflected in my bodily gestures, whereby two visually overt, bodily cycles correspond precisely with the two-beat, goal-directed musical cycles: there is a parallelism between the sonic and physical externalisations that arise from my embodiment of the cycle schema. This is apparent throughout the recordings of my practice, right from the initial to the final play-throughs, as can be seen in Examples 30 to 32.

If this larger, half-bar cycle, inspiring sonic emphasis every 2 beats, does indeed manifest in bar 13 as the most profoundly felt cycle for the performer, it is inclined to persist across the ensuing transition and into the second section. In this case, the hierarchical emphasis of every alternate beat in bar 13 at the end of the first section subsequently marks every alternate bar in the following section, thanks to the cyclic continuation and the 'beat = beat' metric relationship. This resultant emphatic framework, an organic consequence of the inherently goal-directed contour of the cycle is, in fact, musically effective. Indeed, at particular moments in my practice, I intentionally focused my reflective attention on hierarchical phrasing across multiple bars, in order to prevent the monotony and motional restraint that arises from emphasising every bar.

Travelling towards a goal every two bars instead creates a greater sense of direction, movement and energy.

Interestingly, the video recordings taken from my first couple of practices reveal that I did, in fact, initially sonically emphasise the first beat of every bar at the start of the second section. Moreover, this emphatic frequency was reflected by the motion of my body – a regular swaying with each bar, as shown in Examples 33 and 34. Not only does this reinforce the influence of the overt, physical gesture in musical interpretation – the intimate interrelationship of body and sound – but it confirms my argument in Chapter 3 (Section 3.6) that inexperience often equates to a focus of attention on a very specific detail rather than on the overall musical shape or emotion. Indeed, due to my unfamiliarity with Telemann's Fantasia No. 7 at that time, my attentional focus during my first few play-throughs was directed to playing the correct notes in the correct rhythm and metre, rather than to creating an expressive and emotional interpretation. In order to guide myself step-by-step through this sight-reading process, maintaining a regular pulse was essential. The need for a strong, unwavering pulse was, of course, intensified when navigating the sectional transition, hence, at this stage, the use of a beat-sized cycle, regularly marking off small sections of time (each bar of the 3/8). Indeed, the corresponding (and to my mind rather tasteless) bar-by-bar pulsation of my body – a strong overt externalisation of my embodied feeling of the cycle schema – provided an additional support, as the beat was felt with my entirety, increasing my sense of control, reliability and assurance in tackling the sight-reading process and, in particular the metric modulation.

Over time, of course – as experience was gained, interpretative possibilities explored, knowledge embodied, and attention refocused on more general expressive issues, such as the broader musical trajectory – both the sonic and bodily cycles changed, to reflect the larger journeys and expressive shapes. Indeed, recent recordings (such as that shown in Example 35) show that the larger two-bar cyclic pattern characterises my current sonic *and* bodily interpretation of the 3/8 section, with longer phrasal lines punctuated by hierarchical emphasis every other bar, and an accordingly calmer bodily motion. It is important to note that this cyclic change (musical and bodily) occurs in other passages, too. The video recording of my initial play-through also reveals that in bar 3 my bodily motion reflected the small rhythmic sub-cycles (as illustrated in Figure 39), rather than the larger journey to beat 1 of bar 4, as it does now. This difference in physical

gesture can be seen by comparing Example 36 (taken from my initial play-through) with Example 37 (taken from my most recent practice session).

Overall, this suggests that as attentional focus expands towards expression rather than elementary specifics, the bigger picture is considered, additional aspects of knowledge are embodied, interpretative possibilities consolidated and, consequently, sonic and bodily externalisations modified. Fundamentally, these observations of visual changes in bodily gesture confirm that knowledge is embodied physically. Furthermore, they highlight the significant implications that the size of the embodied cycle has not only on bodily shapes but also on musical shapes. Indeed, thanks to the intimate correlation between the embodied cycle schema and interpretative nuances of musical phrasing and emphasis, the expressive shaping and temporal trajectory of the music is hugely dependent on the *size* of the cycle that is embodied, or simply felt most prominently, at that given moment. Different sized embodied cycles generate different expressive and temporal results.

In any case, having followed the evolution of cyclic change that occurred throughout the process of learning Fantasia No. 7, it can be established that a two-bar cycle ultimately underpins my favoured interpretation of the second section. Recognition of this cyclic dominance does not, however, solve all interpretative temporal complexities. Indeed, if the notation is strictly adhered to, the first goal of the second section, as determined by the continued cycle, is bar 16 – the second bar of the phrase. As illustrated in Figure 47 and Example 38 emphasis falls on every even-numbered bar.

The image displays a musical score in treble clef with a key signature of two sharps (F# and C#). The score is divided into four systems, each starting with a bar number: 13, 16, 22, and 28. Red lines with circular endpoints are drawn across the notes, indicating phrasing or breath marks. Blue rectangular boxes are drawn around the notes in the even-numbered bars (16, 22, and 28) to highlight them. The notation includes various note values, rests, and a repeat sign with a first ending bracket in bar 13. The final system shows a partial bar starting with a red dot and the text 'etc.'.

Figure 47. Bars 13-28: Even-Numbered Bar Emphasis

As can be seen in Figure 47, there is a particularly strong resonance between the cyclic and musical contour in bars 18, 22 and 26: the descending semiquavers simply fall away from the third to the root, having arrived on the chord (the goal) at the beginning of the bar. As well as reflecting this potent decaying shape, the hierarchical framework also corresponds with an implied harmonic progression in which the bassline demarcates beats 1 and 3 in the odd-numbered bars, driving the motion towards the even-numbered bars at the beginning of this section: this is illustrated in Figure 48, which provides a possible harmonic realisation.

Figure 48. Bars 15-20: Implied Harmony 1

Whilst this hierarchical interpretation is certainly plausible and effective, it simply opposes the alternative possibility of goals falling on the odd-numbered bars. In fact, taking the second section in isolation, I find a hierarchical interpretation that highlights the first main bar (bar 15) and every alternate bar thereafter particularly successful. In accordance with this framework, ends of phrases and punctuating musical junctures correspond with weak, unemphasised bars. This is shown in Figure 49 (though with the upbeat at the end of bar 14 omitted for illustrative clarity) and it can also be heard in Example 39.

Figure 49. Bars 15-28: Odd-Numbered Bar Emphasis

Thanks to my pre-reflective interpretation of the implied harmony across bars 19-20 as a perfect cadence (V-I), as well as the return of the theme into bar 23 and the somewhat unexpected A# in bar 28 (an imperfect cadence in B minor), bars 20, 22 and 28 all lend themselves to being characterised as moments of punctuation (which inherently end clauses) rather than central points of sentential emphasis.⁹⁰³ The A# in bar 28, for instance, marking the imperfect cadence, rhetorically represents a question. Left up in the air (both musically, and physically, as evidenced by Example 40) and anticipating an answer, this musical question mark intrinsically resists any realisation that endeavours to redefine it as an emphatic goal point. Reflecting my embodied experience of implied harmony and punctuation, and supported by explicit knowledge of cadences and thematic restatements, there is, therefore, a compelling argument for an emphatic framework that highlights the odd-numbered bars of the second section. Despite the inevitable change of harmony in bar 19, a fundamentally slower harmonic progression of one chord per bar – a simple foundation that inherently allows greater flexibility regarding hierarchy and direction – would support this interpretation. Figure 50 offers a possible harmonic realisation.

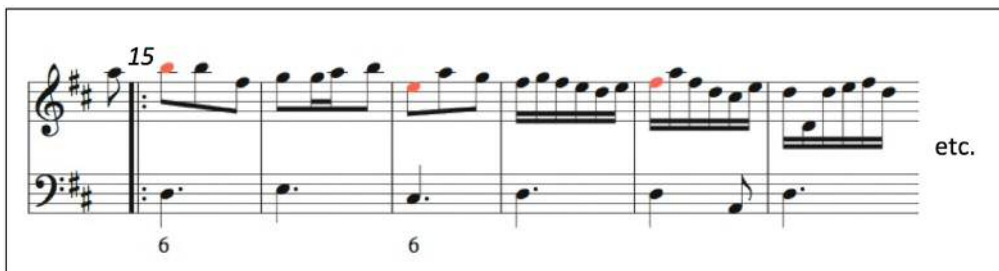


Figure 50. Bars 15-20: Implied Harmony 2

With this in mind, we must revisit the bar of transition. As a pivotal moment – wherein one sectional journey is completed and another begins – bar 14 lends itself to exaggerated temporal freedom. Indeed, significant structural moments of punctuation welcome elevated flexibility, allowing the performer to play with the notated time. In the case of bar 14, taking time between the two As acknowledges the sectional divide and offers a ‘breathing moment’; a brief interlude of repose, as one large sectional journey comes to a close. From analysing the recordings of my practice (and as evidenced by Example 41), it was evident that my initial, pre-reflective execution of this transition – my

⁹⁰³ Note that, due to the inherent and inescapable ambiguity, flexibility and possibility of implied harmony, another performer could experience alternative chord progressions, such as a V-VI progression across bars 19-20, creating an interrupted, rather than perfect, cadence. In any case, the argument for punctuation remains the same.

intuitive interpretation of this ‘breathing moment’ – could loosely be notated as Figure 51 below suggests, with an additional 3/8 bar. Interestingly, this interpretation creates a musical ‘paragraph indentation’, rather than a mere ‘full stop’, whilst maintaining an effective metric modulation that satisfies the inherent continuity of the felt cycle, as shown in Figure 51 below.

Figure 51. Bars 13-28: Paragraph Indentation

In this case, not only do the two sections enjoy a more explicit delineation, but the continued cyclic pattern emphasises the first main bar of the phrase and every odd-numbered bar thereafter, rather than on the even-numbered bars, as would transpire if, conversely, the notation was strictly obeyed. Based on my experiences of this passage, I contend, therefore, that a performer’s hierarchical interpretation – the particular trajectory of the goal-directed shape he or she experiences – together with the profundity of the felt cyclic pattern could be the very catalyst that inspires temporal manipulation within this second-time bar.

It is evident that bar 14 is a most crucial and determining bar, rich with temporal possibilities. Its execution is fundamental in shaping the subsequent hierarchical framework, which in turn determines the goal-directed trajectory of the ensuing musical phrases. Each interpretative possibility of course corresponds with a unique embodiment of the cycle and therefore pathway schemata, as the music journeys towards and away from different goals. Simply, the felt shapes are different in each case. Each interpretation is of course then externalised correspondingly, both by the performer’s bodily gestures, and sonically, through hierarchical emphasis, note length, musical motion, and phrasal

shaping – all matters of timing. Embodied knowledge of the cycle schema is therefore an intensely powerful form of knowledge that guides a number of important interpretative temporal decisions. In this particular example, it plays a hugely influential role in navigating the sectional transition – the metric modulation and the time taken between sections – and in shaping the ensuing phrases: the hierarchical framework and corresponding goal-directed pathways, conveyed through note length and musical motion.

This retrospective analysis, connecting my practical, interpretative experiences with theoretical discourse on the cycle and pathway schemata, was extremely valuable, elucidating and reassuring. Indeed, the majority of my practice on bars 14-28 – the beginning of the second section – was characterised by frustration and uncertainty, as I persistently debated the musical direction and phrasing of this passage. On occasions, an embodied cycle or pathway would intuitively lead me to towards even-numbered bars; at other times, to odd-numbered bars. Different felt shapes dominated in different moments, yet without consistency and, initially, I could not justify my experiences. No tacit felt shape was powerful enough to guide me convincingly and resolutely through this passage. By subsequently understanding the impact of multi-scalic embodied cycles in relation to this specific passage, alongside the concomitant temporal and hierarchical issues (as discussed above), theoretical explanations for my interpretative ambiguities began to emerge, reaffirming the value of integrating theory and practice.

5.4.1.3. Cyclic Discrepancy, Ambiguity and Irregularity

Additional explanation of my interpretative difficulties was gained by later recognising the rather unusual way in which the cycle schema operates on a larger level within this section, due to the ambiguous and irregular quality of the longer, phrasal cycles and a disaccord between explicit cycles understood from the page (via notation and analysis) and tacit felt cycles. Explicit notational analysis of the first 14 bars – the opening musical paragraph – of the second section of Fantasia No. 7 reveals three appearances of a four-bar theme, in which the final restatement is extended by two bars. Resembling a fugal exposition and showcasing Telemann's expertise in creating polyphonic textures for a solo instrument, a four-bar subject is followed firstly by a four-bar answer (a fourth lower) and then by an extended subject restatement (one octave lower), both of which are hidden amongst a profusion of semiquavers. Explicit analysis, therefore, reveals an

undeniable compositional regularity of four-bar cycles followed by cyclic expansion (six bars). This is shown in Figure 52. (Note that the A highlighted in purple in bar 22 could be considered a pivot note, as it officially begins the return of the subject, yet simultaneously closes the previous falling gesture at the end of the answer.)

Figure 52. Bars 15-28: Thematic Cycles

Whilst this explicit analysis of thematic cycles could certainly be reflected in a performer's interpretation, in practising I found it to be at odds with my personal, pre-reflective felt experience of this passage. Here there was a disjunction between theory and practice, between reflective thought and pre-reflective intuition, between the explicit and the tacit. Simply, there was a discrepancy between different forms of knowledge. Indeed, the pre-reflective felt cyclic shapes that arose from my embodied, tacit knowledge of the cycle schema did not correspond with the notational cyclic shapes identified by reflective thematic analysis – with explicit knowledge of the cycle schema. It is certainly possible that, having reflectively focused my attention on thematic analysis, I could, over time, embody this explicit knowledge and ultimately experience the passage accordingly, as two four-bar cycles followed by an extended six-bar cycle. Nonetheless, it is important to remember that analytic justification does not necessarily equate to superior interpretation or supreme performance. As music theorist William Rothstein reminds us, 'to perform the analysis is not to perform the piece'.⁹⁰⁴

This viewpoint is indeed endorsed by a number of performers, composers, musicologists and music analysts: Anton Webern insisted that audiences must be

⁹⁰⁴ Rothstein, 'Analysis and the Act of Performance', in Rink, *The Practice of Performance*, 229.

unaware of the serial processes he employed to construct his music.⁹⁰⁵ Music analyst Tim Howell similarly emphasises that the listener should not be 'made directly aware of analytical thinking in any obvious way';⁹⁰⁶ the musician should step back from analysis and return to intuition in performance.⁹⁰⁷ Likewise, John Rink compares the plotting of analytical results directly onto performance to the reciting of a translation 'word-for-word, without regard to the second language's particular idioms, inflections, grammar and syntax': although one or two phrases may coincidentally appear fitting, the spirit of the text is lost to a rather unnatural and nonsensical rendition.⁹⁰⁸ Reflecting Rink's notion of 'informed intuition',⁹⁰⁹ my ensuing discussion gradually diverts its focus away from the influence of explicit thematic knowledge to my initial pre-reflective felt or tacit experience, *prior* to any reflective analysis. This will provide a genuine representation of my experience and the interpretative challenges faced during my practice.

In an endeavour to truly understand my experiences, it is essential to explore the reasons behind the surprising conflict between the cycles presented in Figure 52 and those I felt tacitly. The embellished façade that obscures the thematic restatements is significant here. Disguised amidst a sea of semiquavers, the thematic identity of bars 19-22 and bars 23-26 is concealed and the felt potency of the four-bar repetitions consequently reduced. Frankly, I do not tacitly or pre-reflectively *experience* bars 19-22 (and to some extent bars 23-26) as salient thematic material, even though I explicitly or reflectively recognise it as such. Furthermore, despite the V-I progression that completes the traditional four-bar thematic cycle, there are a number of features that prevent me from experiencing bars 17-18 as a phrasal close, the most fundamental being the implied harmony.

As demonstrated in Figure 50, I tacitly experience the harmonic progression across bars 17-18 as Vb-I (the dominant chord in first inversion rather than root position). Along with the preceding lack of implied D major harmony to reinforce the tonic, the relative weakness of the first inversion chord, in comparison to the far more pronounced

⁹⁰⁵ Anton Webern in Christopher Wintle, 'Analysis and Performance: Webern's Concerto Op.24/II', *Music Analysis* 1, no.1 (March 1982): 75.

⁹⁰⁶ Tim Howell, 'Analysis and Performance: The Search for a Middleground', in *Companion to Contemporary Musical Thought*, vol. 2, ed. John Paynter, Tim Howell, Richard Orton and Peter Seymour (London and New York: Routledge, 1992), 700.

⁹⁰⁷ *Ibid.*, 709.

⁹⁰⁸ Rink, review of *Musical Structure and Performance*, 320.

⁹⁰⁹ *Ibid.*, 323, 327.

authentic perfect cadence that I experience across bars 19-20, begins to explain my characterisation of bars 15-20 as the first phrasal cycle of this section. After passing through the tonic for the first time in bar 18, it is only on arrival in D major in bar 20 that the phrasal cycle *feels* complete. Indeed, thanks to our deep-rooted and powerful embodied experiences of perfect cadences in traditional Western harmony, which characterise ends of phrases such as to create a feeling of repose, my tacit experience of a perfect cadence across bars 19-20 – a resolute arrival on stable territory – strongly implies a *six-bar* phrasal cycle, despite falling in the middle of the second four-bar thematic restatement or fugal ‘answer’. This interpretation, extending the first phrasal cycle from 4 to 6 bars, is indeed reinforced by the inherent inclination for the semiquavers introduced in bar 18 to continue, as motion is driven forward through bar 18 towards the authentic perfect cadence across bars 19-20. Perhaps these implied harmonies (indicated in Figure 53) and the corresponding phrasal cycle, can be heard when listening to Example 42.

Figure 53. Bars 15-20: 6-Bar Felt Phrasal Cycle

Reinforcing the relationship between the explicit and the tacit, between the reflective and the pre-reflective, this example illustrates the way in which explicit knowledge – in this case, explicit music analysis (particularly of harmony) – can help to explain a performer’s pre-reflective, tacit experience of a musical passage. It is, of course, important to acknowledge that, thanks to the inherent ambiguity and flexible potential of implied (rather than absolute) harmonies, it is certainly possible for a performer to experience different harmonic progressions to those I have discussed. Figure 54 below, for instance, presents an alternative harmonic realisation, in which an underlying harmonic foundation corresponds with the four-bar thematic cycles. (It should be noted that, rather than voicing the bassline stylistically with different inversions and octaves,

Figure 54 simply presents the root of each chord, in order to show, mostly clearly, the corresponding harmonies across the thematic returns.)

Figure 54. Bars 15-26: Alternative Harmonic Realisation

Nonetheless, even with these corresponding harmonies that reinforce the repetition of four-bar compositional cycles, one could still experience longer phrases trespassing across the thematic divisions, for example by feeling the B minor chord in bar 20 as an interrupted cadence closing the first six-bar shape.

Fundamentally, because of the way in which I pre-reflectively interpret or *feel* the implied harmony (a visceral form of embodied knowing), the various thematic restatements are not experienced as equivalents: they enjoy unique characterisations, taking on distinct roles, fulfilling new functions and generating different musical results. This helps to explain why I pre-reflectively experience bars 19-20 as a perfect cadence closing a six-bar phrasal cycle, despite my reflective recognition of its simultaneous characterisation as part of a thematic four-bar cycle. There is, for me, a dislocated and incongruous co-existence of explicit thematic cycles and felt phrasal cycles. In this way, the thematic repetitions can be considered a means of compositional development rather than definitive markers of phrasal shapes. This argument, after all, corresponds with advice from Rothstein, who warns us of the ‘pedantry’ that can arise from ‘bringing out’ every subject and answer of a fugue: he considers that by sonically divulging each thematic appearance, particularly those that the composer has perhaps tried to conceal, the overall spirit and shaping of the music becomes distorted.⁹¹⁰ In this particular case, the cyclic, four-bar, thematic restatements that Telemann camouflages with

⁹¹⁰ Rothstein, ‘Analysis and the Act of Performance’, 218-219.

semiquavers, are not discernibly highlighted by my intuitive, pre-reflective cyclic interpretation. It is important to recognise these cyclic discrepancies (between compositional and felt cycles), because such deliberations are an integral ingredient of musical practice, interpretation and expressive timing, whether or not they are considered in these image-schematic terms.

Having identified my tacit inclination towards a six-bar opening phrasal cycle, specific interpretative considerations from my practice can be explored. Firstly, the repeated Ds in bar 20 (as can be seen at the end of the first line of Figure 55 below) afford the performer subtle interpretative flexibility in terms of the precise moment of phrasal completion and the subsequent anacrusis onset of the ensuing shape. Marking the moment of arrival in D major, the very first D of bar 20 is an effective point of termination, yet it is also possible to interpret the following one or two Ds as tapering reverberations, subtly prolonging the phrasal ending and shortening the subsequent anacrusis from 5 to 4 or 3 semiquavers respectively. These three interpretative possibilities can be heard by comparing Examples 43, 44 and 45.

The figure shows three staves of musical notation in D major. The first staff, starting at bar 15, contains six bars of music. A red bracket above the first bar is labeled '6 bars'. A red bracket above the final two bars is labeled 'Flexible ending'. The second staff, starting at bar 21, contains six bars of music. A red bracket above the first bar is labeled 'Thematic Return'. A red bracket above the final two bars is labeled '6 bars'. A red label 'V - I (in D major)' is placed above the final bar. The third staff, starting at bar 27, shows two bars of music. A red bracket above the first bar is labeled 'etc.'. Below the staff, a red label reads 'IVb - V (in B minor)'. The key signature is one sharp (F#).

Figure 55. Bars 15-28: 6-Bar Phrasal Cycles

Despite the ambiguity regarding the exact moment of phrasal completion, the fundamental six-bar interpretation is indeed reinforced by the thematic return from the upbeat to bar 23. As aforementioned, a two-bar extension – this time ending with an imperfect cadence in B minor (bar 28) – extends the four-bar thematic cycle into a six-bar phrasal shape, as shown in Figure 55. Interestingly, complexities of phrasal demarcation also inhere within this particular cycle. As already suggested by the purple pivot note in Figure 52, explicit notational analysis patently characterises the A in bar 22 as both the

beginning and end of a phrasal cycle. Thanks to my overriding felt experience of this note as the natural close of the preceding falling shape, my interpretation entrusts the subsequent anacrusic role to the F# alone (as can be heard in Example 46). In any case, the overall six-bar trajectory, reflecting that of bars 15-20, is patent.

Sandwiched between these two six-bar shapes, however, bars 21-22 are left somewhat unaccounted for in terms of felt phrasal cycles. Do they belong to the first phrasal shape, extending it into an eight-bar cycle ending on A major, the dominant of D major, (which would of course correspond with the two successive appearances of the four-bar theme); do they belong to the second phrasal shape, serving to introduce the leaping semiquavers and further obfuscate the thematic returns; or do they simply stand alone, as a self-contained cycle? Thanks to the potency of my experience of a perfect cadence across bars 19-20 (which prevents me from pre-reflectively feeling bars 21-22 as the close of the first phrasal cycle) alongside explicit, reflective recognition of the thematic restatement that begins another six-bar phrase from the upbeat to bar 23, I would argue that, in terms of phrasal cycles, bars 21-22 are best conceived as a bridging passage – an additional small shape connecting the two six-bar phrasal shapes. Regarded in this way, bars 21-22 can be characterised as a short echo of bars 17-18.

In any case, whether this fourteen-bar stretch is interpreted as such (6+2+6), or indeed subdivided into 8+6 or 6+8, there is an unavoidable irregularity in terms of the cycle schema on an experiential phrasal level. Clauses of different lengths and therefore cycles of altering sizes oppose the regularity, predictability and continuity of the cycle schema. This explains my interpretative struggles: compositional ambiguities and irregular cycles prevent a consistency of profound tacit felt shapes on a phrasal level, causing extensive deliberation regarding musical shaping, direction and phrasing (matters that are inextricably linked to timing). These *practical* issues are, therefore, better understood thanks to my *theoretical* knowledge of the cycle schema, reminding us of the importance and synergistic value of combining theory and practice.

This irregularity of phrasal cycles and corresponding interpretative ambiguity persists throughout this section of the Fantasia. Indeed, even occasional instances that satisfy conventional phrasal expectations (such as the palpable four-bar cycles in bars 29-36, bars 47-54 and bars 67-74, which are shown in Figure 56 and 57) contribute to the inconsistency, thanks to their intermingled position amongst other cycles of varying sizes.

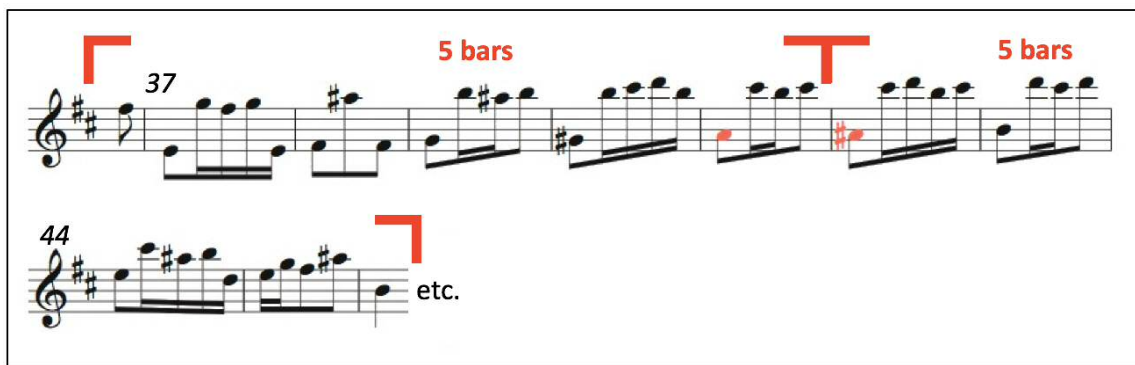


Figure 58. Bars 37-46: Cyclic Subdivision 5+5

A four-bar + six-bar interpretation (as presented in Figure 59), superficially satisfying cyclic regularity (4 bars) and subsequent expansion (6 bars), is similarly rejected by the chromatic voice-leading (G#-A) as well as the forward motion engendered by the semiquavers, which connect bars 40 and 41, particularly thanks to the B-A movement across the bar: this approach can be heard in Example 48.

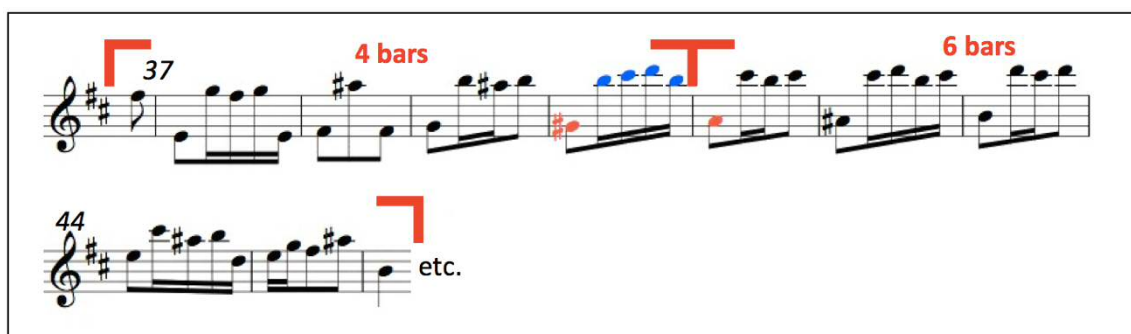


Figure 59. Bars 37-46: Cyclic Subdivision 4+6

Similar arguments would indeed challenge an interpretation that groups the stepwise ascent into three two-bar pairings, followed by an extended four-bar cycle (in which the musical direction changes in order to reach the perfect cadence), or of course a corresponding six-bar + four-bar formation (in which the two-bar sub-cycles are conceived as a larger six-bar ascent). This is illustrated in Figure 60 and Example 49.

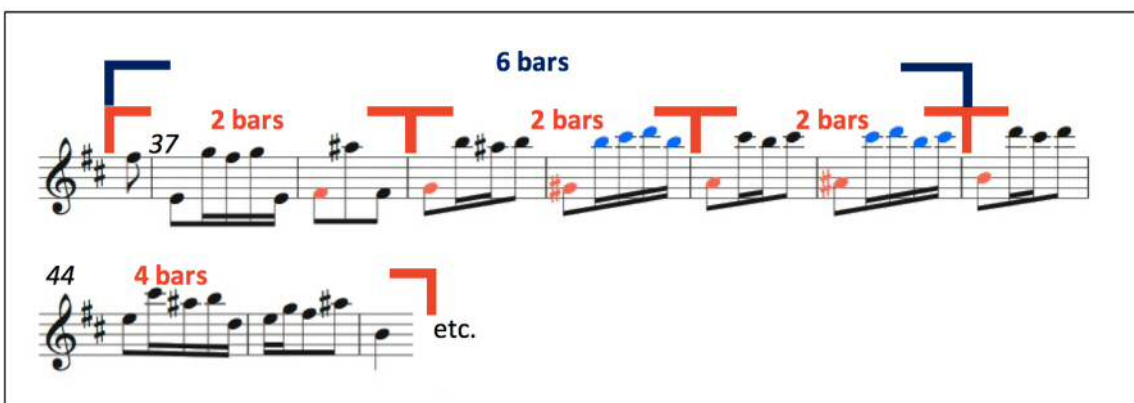


Figure 60. Bars 27-46: Cyclic Subdivision 2+2+2+4

Fundamentally, thanks to the continuous increase of tension that builds through this highly chromatic passage, there is no sense of phrasal arrival until this perfect cadence in B minor is reached in bar 46, as shown in Figure 57. This very absence of conspicuous 'sub-goals', the corresponding lack of explicit, compositional or notational indications of sub-clauses (partially thanks to the anacrusic ambiguity), and the concomitant deficiency of compelling felt shapes confirm the unusual quality of this ten-bar passage, the irregularity of the phrasal cycles within this section, and my consequent interpretative deliberations. Once again, explicit knowledge of anacrusis, chromaticism, voice-leading and the cycle schema (theory) enables a better understanding of interpretative complexities (practice). Whilst this work evidently draws on traditional musico-analytical approaches and typical considerations of historically-informed practice, the significance is the drawing of both of these into a questioning of the status of knowledge: of one epistemic form in relation with the other, and within a context that acknowledges the embodied understanding of each.

5.4.1.4. Cycles and Punctuation

It is of course important to recognise that understanding the phrasal patterns within a piece of music is certainly not an end in itself or a mere analytical pursuit. By comprehending the cyclic phrasal structures, the performer gains a significant nugget of knowledge – a composite formed from a variety of other aspects of knowledge – with interpretative, and in particular temporal, implications. Indeed, by marking off time into larger units, phrases inspire not only musical direction, emphasis and therefore goal-directed motion, but also musical punctuation (as noted in Chapter 2, specifically, Section 2.3.2.4) – in other words silence, or indeed taking time. My phrasal explorations are therefore fundamentally driven by a desire to incorporate musical commas and full stops as a means of clarifying and enhancing the musical statements. Punctuation is, after all, an integral component of all language: a cardinal ingredient for effective communication and an indispensable prerequisite for sense-making and comprehension. The performer's very conception of phrasal cycles, therefore, has a significant impact on the temporal trajectory of the music: the cycle schema and expressive timing are intimately entwined. Temporal subtleties, such as slowing down at the end of a clause (phrase-final lengthening) or taking time between clauses (rest points) will likely emerge as sonic externalisations of the performer's embodied interpretation, punctuating the different

clauses as experienced by the performer. These phrasal interpretations of course also help the performer to identify the most suitable places to breathe – an inherently temporal issue (given the time it takes to breathe and the inevitable cessation of sound), closely linked to punctuation.

To give an example that connects cyclic interpretation, musical knowledge, expressive timing and punctuation, the A# in bar 28 distinctly signals the end of a phrase, thanks to the palpable imperfect cadence that rhetorically creates a musical question, as well as the new material that is subsequently introduced at the end of the bar. The A# is therefore characterised as a punctuation mark, far more distinct than the possible commas in bars 20 and 22 that mark off the interpretatively ambiguous bridging passage. By stretching time in bar 27, I highlight the unexpected change in direction as the music deviates from the original thematic material in anticipation of the ensuing imperfect cadence. On subsequent arrival on the A#, the questioning gesture left up in the air demands space. As if asking a question and awaiting a reply, taking time between the A# and D in bar 28 delineates the phrasal cycles. This can be heard in Example 50 and is shown in the bottom line of Figure 61. (It should be noted that, due to the interpretative flexibility and ambiguity of bars 20 and 22, as discussed above, the positioning of the punctuation markings used in Figure 61 and 62 reflect my favoured interpretations, based on the potent felt-shapes that characterise my initially pre-reflective, embodied experience.)

The figure displays three staves of musical notation in treble clef with a key signature of one sharp (F#). The first staff starts at bar 15 and contains six bars of music. A blue L-shaped bracket is positioned above the first bar. A red arrow labeled "MOTION RELAXES" points left from a blue T-shaped bracket above the final bar. Below the staff, the text "V - I (in D major)" is written in red. The second staff starts at bar 21 and contains eight bars of music. A blue bracket above the first bar is labeled "[Bridge passage begins 8-bar shape] 8 bars". The third staff starts at bar 27 and contains several bars of music. A red arrow labeled "MOTION RELAXES" points left from a blue bracket above the first bar, which also contains a red question mark. Below the staff, the text "IVb - V (in B minor)" is written in red, followed by "etc." at the end of the staff.

Figure 61. Bars 15-32: Punctuation 1

Whilst this moment of punctuation in bar 28 is rather self-evident, thanks to both the compositional indications and our embodied understanding of the musical question, temporal decisions in the precursory material are notably more complicated, due to the aforementioned discrepancy between compositional and felt cycles, the ambiguity of phrasal cycles and the correspondingly less explicit quality of the musical punctuation marks hidden amidst a continuous stream of semiquavers. After all, the expressive, temporal execution of a string of understated commas is a matter of much greater subtlety than that of boldly demarcating a full stop or question mark. With this in mind, if the six-bar phrasal journeys are indeed felt more prominently than the four-bar thematic cycles, and if bars 21-22 are consequently experienced primarily as a bridging passage, the performer must decide whether the comma in bar 20 (following the cadence) or the comma in bar 22 (prior to the thematic restatement) is more prominent. Not only is this decision a practical necessity (as the performer is likely to want to breathe somewhere between bars 15 and 28) but it also prevents excessive fluctuations – namely manipulating the tempo in bars 20 and 22 alike, in response to 6+2+6 bar pattern.

In order to make this decision, it is certainly helpful to characterise the bridging passage either as an introductory prelude merging into the second shape (reflecting a six-bar + eight-bar split) or as a posterior extension to the first phrasal cycle (resonating with an eight-bar + six-bar division). Conceiving and indeed embodying the material in one of these ways will engender corresponding temporal nuances that inherently reflect the broader cyclic interpretation. The first possibility, for instance, might inspire a subtle relaxation of motion into the perfect cadence (where stability is regained), after which a notable temporal comma would allow a breath to be taken and consequently less desire or need for temporal manipulation in bar 22. This is illustrated in Figure 61. The latter option, on the other hand, would generate a mirror image: less temporal fluctuation in bar 20, followed by a relaxation of motion preceding the breath and temporal comma at the end of bar 22. This interpretative possibility is represented in Figure 62.

Figure 62. Bars 15-32: Punctuation 2

Justified both by musical analysis and by the theory of image schemata (in particular the cycle schema), each interpretative option is plausible and will be musically effective if embodied and felt within the performer.

Of course, whilst these two interpretations are particularly potent, other possibilities undeniably exist. After all, it must be recognised that the best place to breathe does not always correspond with the moment in which the performer wants to take most time. This is evidenced by Example 51, in which I clearly feel the opening phrase as a six-bar cycle, yet struggle to make the corresponding breath work effectively. Indeed, while logic might suggest otherwise, I can confirm from experience that particular temporal expressivities are often best executed without the disturbance of a breath. It may, therefore, be more effective for the performer to enjoy a subtle relaxation of motion in bar 19 and a musical comma in bar 20 but save the physical breath for bar 22, for example. This combined approach is illustrated in Example 52. Whatever the performer's ultimate decision, musical commas are characterised with flexibility, subtlety and uniqueness, thanks to expressive nuances of timing. Indeed, even if the performer's interpretation is conversely based on the four-bar thematic cycles, the same temporal considerations concerning the positioning and degree of punctuation are necessary. Most fundamentally, whatever the interpretation, it is knowledge of the cycle schema on this larger scale that facilitates musical shaping, punctuation and corresponding temporal expressivity on a phrasal level.

Another clear example that demonstrates the interrelationship between the cycle schema, musical punctuation and expressive temporal nuances (and that simultaneously exploits explicit, reflective analysis to explain my initial pre-reflective, tacit interpretation) is the passage of music between bars 55 and 66. Following a transposed four-bar cycle of the main theme in bars 55-58, a further restatement in a new guise ostensibly closes with a musical full stop after another palpable four-bar shape, as a stepwise tapering (F#-E-D) rhythmically augments, or slows down, from semiquavers to quavers and suggests a relaxation of motion on arrival at the D major chord. This can be heard in Example 53. Furthermore, as indicated by Figure 63, it is as if a colon, divides the two explicit clauses of a sentence.

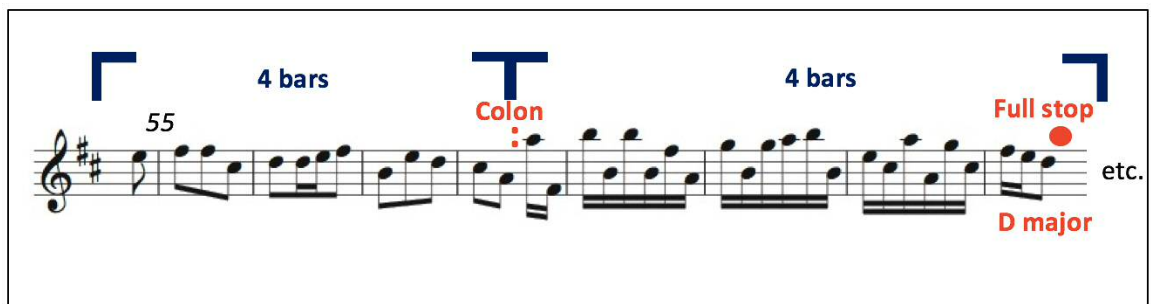


Figure 63. Bars 55-62: Punctuation 1

This initial interpretation is, however, challenged when the second half of the phrase is unexpectedly extended by 4 bars, which reinforce the return to D major with a remarkably pronounced perfect cadence, as shown in Figure 64. Bar 62 therefore relinquishes its characterisation as a musical full stop – a role now inherited by bar 66 – and instead reverts to a more subtle comma. As a result, the temporal nuances in bar 62 become far slighter than those in bar 66. This can be heard in Example 54, and the process through which I came to this realisation, reflectively considering the temporal implications of punctuation, can be seen in Example 55.

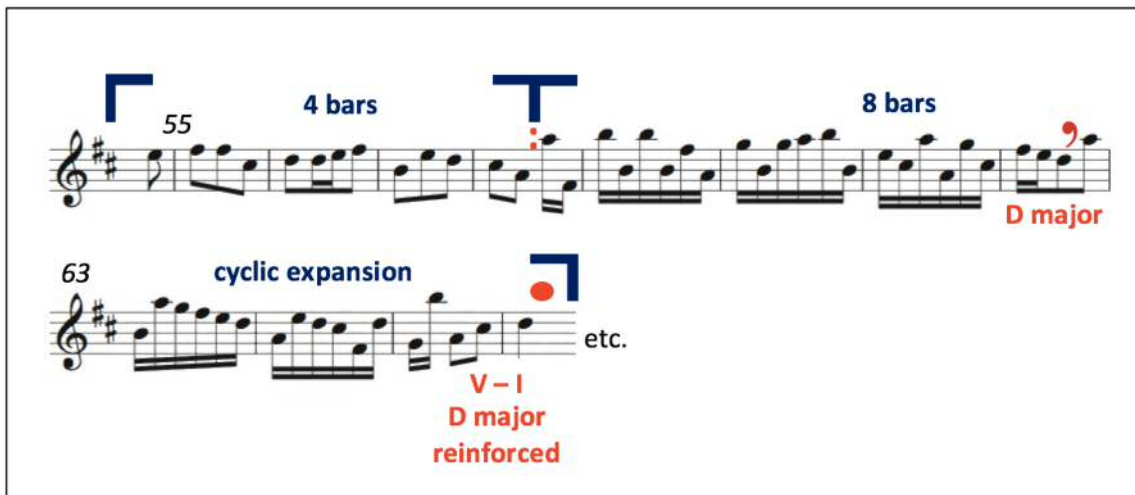


Figure 64. Bars 55-66: Punctuation 2

By understanding the phrasal expansion that fuses the four-bar thematic restatement (bars 59-62) with a four-bar extension (bars 63-66) – knowledge of the cycle schema in practice – the thematic material is interpreted primarily as part of a larger eight-bar shape as opposed to its previous six-bar format (bars 15-20 and 23-28). (Of course, when considering the broader context and including the preceding four-bar cycle (bars 55-58), it can be conceived as part of an even longer twelve-bar trajectory). Not only does this reinforce the cyclic phrasal irregularity of this section, but more importantly it hugely influences my expressive timing decisions. This serves as a reminder of the determining potential of knowledge: the pivotal role that knowledge plays in the interpretative process and the temporal possibilities that knowledge affords.

Another extended phrasal cycle is bars 75-85. A sequential ascent, balanced with subsequent declivity, creates a conventionally balanced eight-bar shape. Cyclic expansion occurs, however, as a phrasal extension (bars 82-85) prolongs the arrival on the tonic (D major) through undulating arpeggiation, and acts as a linking passage, flowing seamlessly into a modified return of the slow and stately, majestic material that opens the Fantasia. This is illustrated in Figure 65 and Example 56.

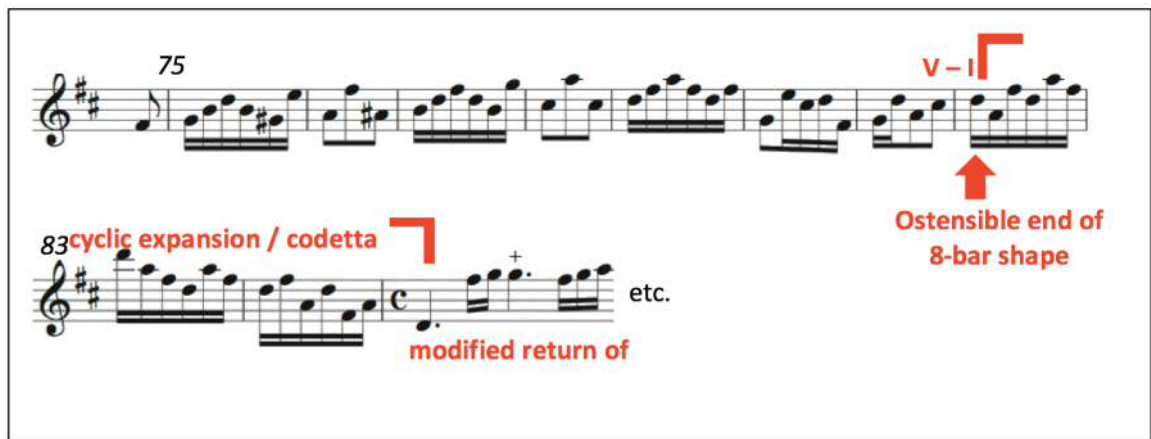


Figure 65. Bars 75-85: Cyclic Expansion

Within this extended phrasal shape, however, explicit nesting sub-cycles can of course be identified. Zooming in layer by layer, past the preliminary subdivision of ‘main clause’ and ‘codetta’, a discernible manifestation of the balance schema indicates a four-bar + four-bar partition within the eight-bar nucleus itself. This is shown in Figure 66-69, which provide different illustrations of the same passage,⁹¹¹ together reinforcing the interrelationship and entanglement of the pathway, cycle and balance schemata.

Figure 66, for example, illustrates the balance schema in terms of the juxtaposition of motion (or tension) and relaxation, whilst simultaneously representing the pathway schema. Thanks to the sequential and rather chromatic ascent, motion and tension increase for 4 bars towards the main goal of the eight-bar phrase. As the goal is, of course, the moment where tension and relaxation meet, there is immediately a subsequent four-bar relaxation away from the goal, as the music descends and reaches stability at the perfect cadence.

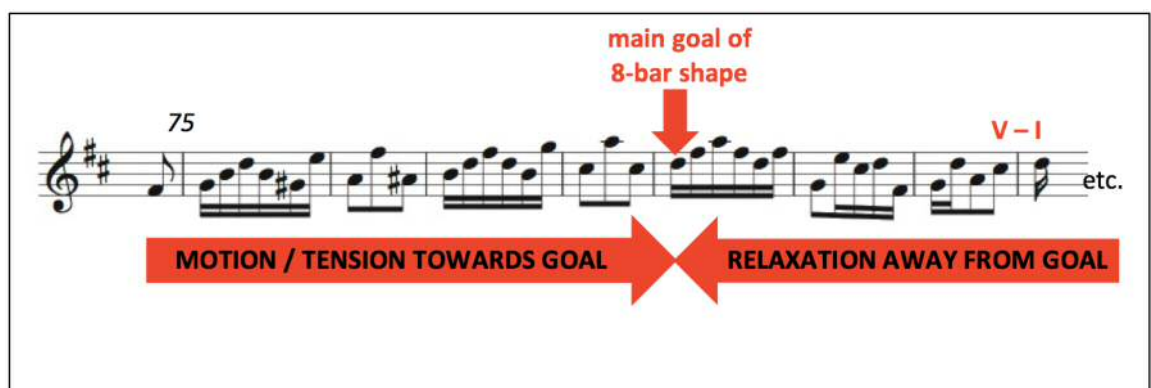


Figure 66. Bars 75-82: Balance Schema 1

⁹¹¹ It must be remembered that the goal-directed trajectory illustrated here is just one interpretative possibility. It is by no means superior to other trajectories; it simply illustrates my most prominent experience of this passage, which is reinforced through musical analysis.

Reading the cycle or curve below as if it were the contour on a graph, with the y-axis plotting the level of motion and tension and the x-axis representing distance and time, Figure 67 similarly illustrates the four-bar intensification, leading towards the goal or peak where tension and release meet, followed by the counterbalancing four-bar relaxation.

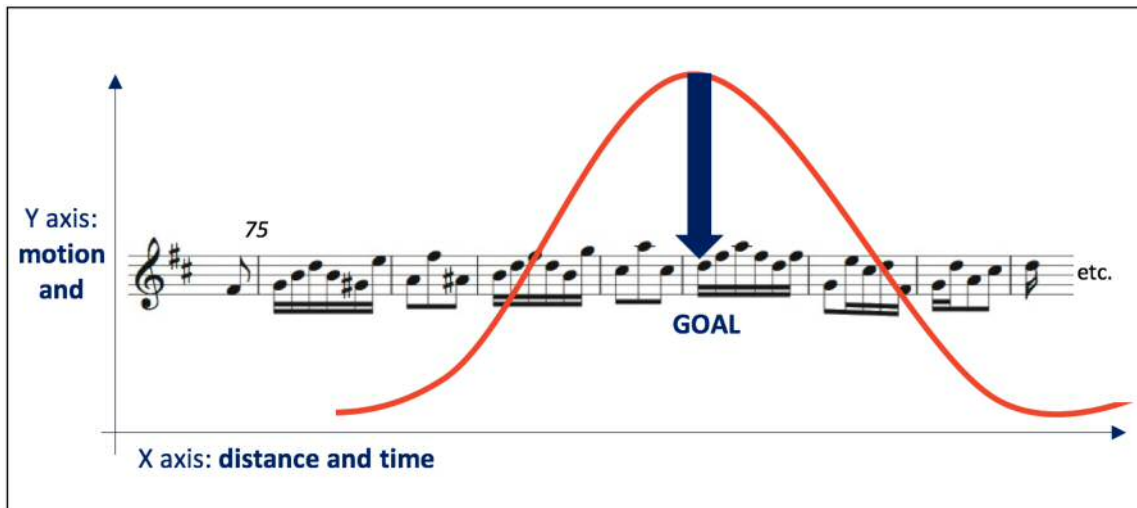


Figure 67. Bars 75-82: Balance Schema 2

Figure 68 provides a clearer and simpler depiction of the balance schema across this eight-bar trajectory, in which a four-bar period of tension is symmetrically balanced with a four-bar period of repose.

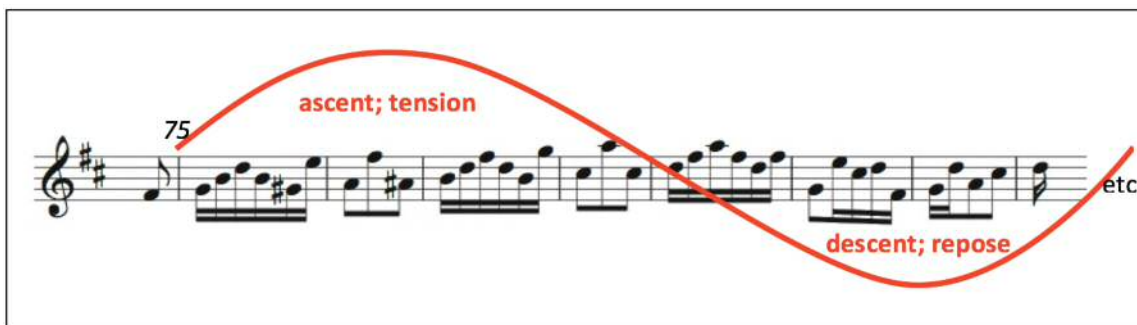


Figure 68. Bars 75-82: Balance Schema 3

This balanced formation is similarly represented by the sub-cyclic delineation in Figure 69 below.

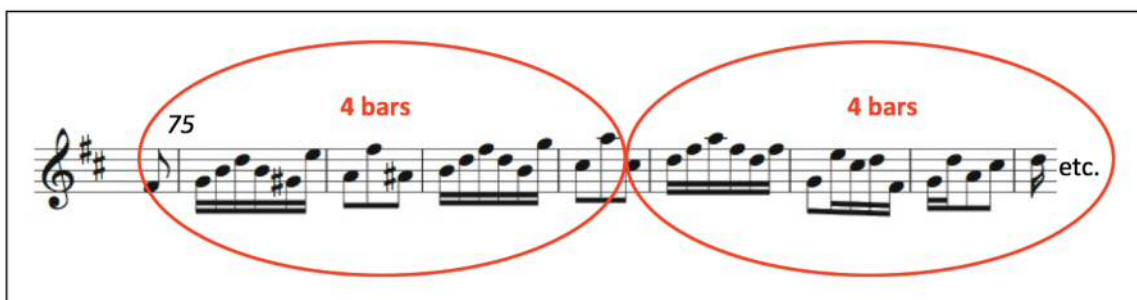


Figure 69. Bars 75-82: Sub-Cyclic Delineation

Whilst the eight-bar shape across bars 75-82 is evidently formed by balancing two four-bar sub-cycles, further magnification reveals a 2+2+4 pattern that illustrates the repetition and expansion of cycles on an even smaller, gestural scale, as illustrated in Figure 70.

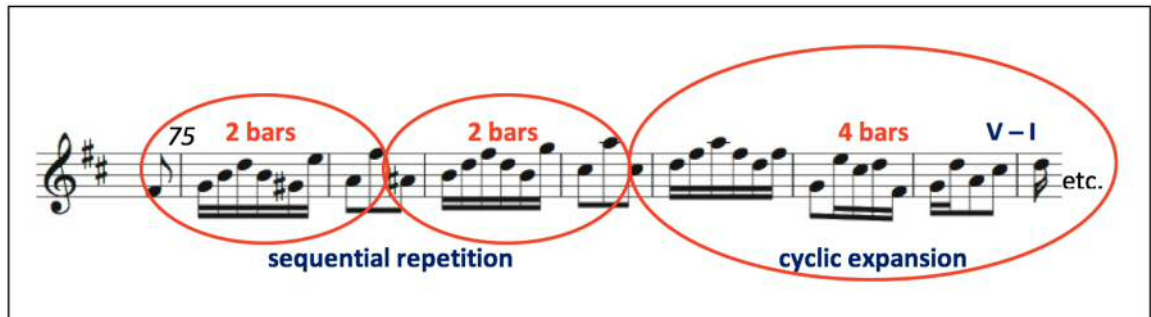


Figure 70. Bars 75-82: Cyclic Repetition and Expansion

Indeed, a two-bar cyclic shape characterises the motif that is introduced in bars 75-76 and repeated by way of sequence in bars 77-78. After hinting at another sequential appearance in bar 79, the musical direction changes: the sequence is not completed as expected, as the music deviates from the established gesture and instead travels across four bars towards the perfect cadence in bars 81-82. The pairing of short two-bar gestures is therefore answered by one longer, developed four-bar shape, exemplifying cyclic expansion on a motivic level.

Explicit musical analysis confirms the manifestation of the cycle schema on many levels within the music, including the existence of nesting sub-cycles and cyclic expansion. In terms of temporal implications, each cyclic level reflects the different stages of phrasal deconstruction, from a sentence (extended, for example with a colon or m-dash), to sentential clauses, to foundational sub-clauses respectively. Each component is of course grammatically delineated by punctuation marks that enjoy varying functions and have corresponding temporal qualities. Hence, by embodying the music by way of the cycle schema, temporal nuances are experienced as an intrinsic feature of the felt shapes. Fundamentally, our embodied knowledge of the cycle schema reminds us that, in music and language alike, clauses are repeated for emphasis, extended or condensed for expressive variety and punctuated by grammar for intelligibility, and through our use of timing, these shapes are understood and externalised effectively. Temporal expressivity therefore enables sense-making and facilitates expressive communication.

It is most evident, from cyclic analysis of the second section of Fantasia No. 7, that the phrasal cycles are largely irregular. Given the natural consistency that inheres within the cycle schema, it is not surprising that this section posed interpretative challenges in my practice, as musical goals, pathways, shapes and cycles were not always initially felt potently. Nonetheless, ambiguity and inconsistency inspire greater interpretative, and of course temporal, possibility and deliberation.

5.4.2. Repetition and Expressive Timing

Despite the phrasal irregularity that pervades the second section of Fantasia No. 7, occasional notable instances that defy cyclic uncertainty can be seen in bars 29-36, bars 47-54 and bars 67-74, as illustrated above in Figure 56 and 57. These passages, formed by balancing two four-bar cycles, in fact welcome temporal deliberations of their own. In the case of both bars 29-36 and bars 67-74, the second four-bar shape is a notationally equivalent repetition of the first, but with a *piano* dynamic marking. The *piano* direction here reinforces conventional Baroque performance expectations and corresponding rhetorical principles, in which repetition, termed '*anaphora*' in rhetorical discourse,⁹¹² demands variation. Quantz, for example, confirms that 'in repetition generally, the alternation of Piano and Forte does good service',⁹¹³ and that 'the repetition of the idea may be played somewhat more softly than the first statement'.⁹¹⁴ Despite these instructions, however, it is important to remember the notable rarity of dynamic markings in Baroque scores and the intrinsically restricted dynamic range of many Baroque instruments (in comparison to their modern counterparts), as well as the prominence of the doctrine of affections in Baroque performance literature. As a result of this, the occasional dynamic markings that do exist are interpreted as an indication not only of volume but also of character.

This rather self-explanatory affiliation between dynamic and character is once again highlighted by Quantz, who comments that 'the alternation of the Piano and Forte is one of the most convenient means ... to represent the passions distinctly',⁹¹⁵ and that, in order 'to express the sentiments properly the Piano and Forte are among the most

⁹¹² Judy Tarling, *Weapons of Rhetoric: A Guide for Musicians and Audiences* (St. Albans: Corda, 2004), 27.

⁹¹³ Quantz, *On Playing the Flute*, 133.

⁹¹⁴ *Ibid.*, 277.

⁹¹⁵ *Ibid.*, 17.

essential elements of performance'.⁹¹⁶ In bars 33-36 and bars 71-74, the *piano* dynamic marking (indicated under the anacrusis beginning each of these shapes) therefore signals a modification of volume as well as a more holistic change of sentiment. Triggered by this dynamic marking and by the 'what-it-feels-like' experience of the repetition, I pre-reflectively drew on my knowledge of expressive variety and affective contrast in my practice, intuitively characterising the repetitions in distinct ways. On occasions, however, these considerations did fall into my reflective attention, as I critically experimented with different interpretative possibilities.

Without forgetting the possibility of hesitating slightly before and after the *piano* phrase – temporal manipulation that exploits musical punctuation to put the 'echo' in parentheses and delineate the repetitive clauses – it is evident, from recordings of my own practice, that alongside dynamic modification I use three fundamental expressive devices to engender characterful variation in bars 29-36 and bars 67-74, all of which manipulate time. Again, these devices (and the correlating knowledge) were predominantly drawn on pre-reflectively, though at times, when deliberating and exploring different interpretative options, I reflectively focused on these issues. The first of these devices is articulation (or note length). Quantz himself confirms the effective interrelationship between repetition, dynamic and articulation: 'if an idea is repeated in the same key, and no variations immediately occur to you, you may remedy the resulting deficiency with the Piano and with slurred notes'.⁹¹⁷ Indeed, by drawing (both reflectively and pre-reflectively) on my knowledge of the versatility of articulation in the Baroque (as evidenced by Quantz's entire chapter titled 'Of the Use of the Tongue in Blowing upon the Flute') I juxtapose tongued notes with slurred notes, and long, smooth tongue strokes with short and light, spiky articulation, punctuating time in different ways. An illustration, taken from my practice, representing just one of the endless possibilities, can be heard in Example 57. Thanks to the continuity or separation of sound engendered by varying note lengths, different musical characters are created.

As evidenced by Example 58, another means by which I sometimes modify the repetition for expressive contrast is, of course, ornamentation – a matter of changing notation and, therefore, timing. By connecting some of the falling thirds with decorative passing notes, notational durations are inherently modified, musical time is narrated

⁹¹⁶ Ibid., 255.

⁹¹⁷ Ibid., 167.

differently, and character is once again transformed. Of course, thanks to the multitude of thirds that repeatedly undulate throughout these passages, there are numerous possibilities concerning the frequency and distribution of the additional passing notes – another interpretative decision that shapes time and influences the resultant character. This kind of variation by embellishment is once again supported by Quantz, who encourages the performer to ‘add or omit something the second time the ideas appear.’⁹¹⁸ He notes that, together with ‘the alternation of Piano and Forte’, the ‘addition of ... small and large graces’, contributes immensely to the musical character, ‘forms the musical light and shadow to be expressed by the performer, and is of the greatest necessity’.⁹¹⁹ My knowledge of ornamentation as a central part of Baroque performance practice – a broad sphere of knowledge encompassing a range of more specific interrelated elements, embodied over time via practice and experience – is, therefore, also drawn on in my practice both reflectively (as I explicitly consider different ornamental possibilities) and pre-reflectively (as I allow intuition to guide my interpretation, drawing on the epistemic web lying in my subattention).

The final notable means by which I engender expressive variety in these passages is hierarchical emphasis, inextricably linked to goal-directed motion – variations of the pathway schema, each of which is uniquely and temporally nuanced. As a four-bar phrase, created by nested cycles of repetitive undulations, there are a number of possible interpretative trajectories. During my practice, these were both externalised pre-reflectively in response to tacit felt shapes and reflectively considered in term of musical shapes, direction, phrases and clauses. Due to the rudimentary equivalence of bars 29-32, 33-36, 67-70 and 71-74, the pathways illustrated in Figure 71-73 are of course equally applicable to each of the four-bar phrases. Therefore, to avoid excessive and redundant duplication, bars 29-32 only are used in the ensuing examples.

When pre-reflectively experienced or reflectively considered as one four-bar cycle, the motion travels to the third main bar of the phrase – the mid-point of the shape. Specifically, as indicated in Figure 71 below and evidenced by Example 59, the motion travels towards the goal, which (along with dynamic intensification) is highlighted through agogic emphasis, before the motion subsequently relaxes away from the goal.

⁹¹⁸ Ibid., 152.

⁹¹⁹ Ibid., 165.

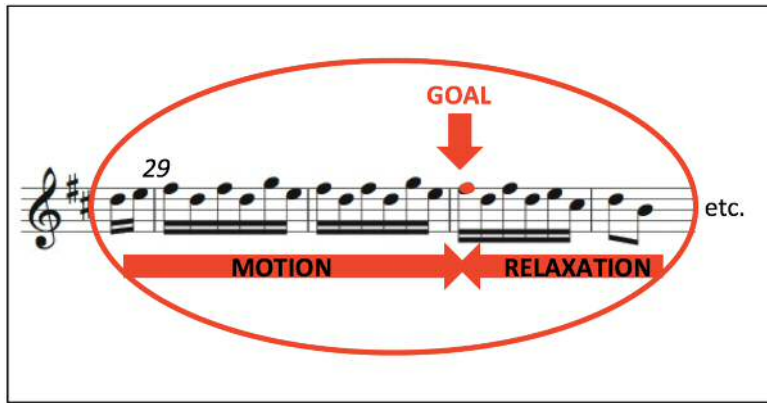


Figure 71. Bars 29-32: Pathway Schema 1

Experienced as two smaller cycles, however, each of course formed by two even shorter subcycles, the music travels either to the first and third or to the second and fourth main bars. Compare the subtle temporal inflections of Example 60 (corresponding with Figure 72) with Example 61 (corresponding with Figure 73).

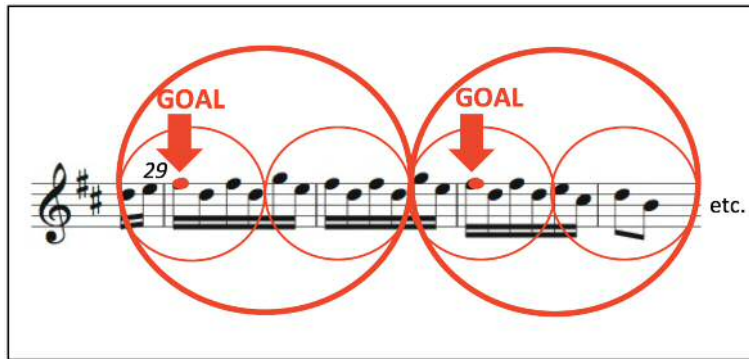


Figure 72. Bars 29-32: Pathway Schema 2

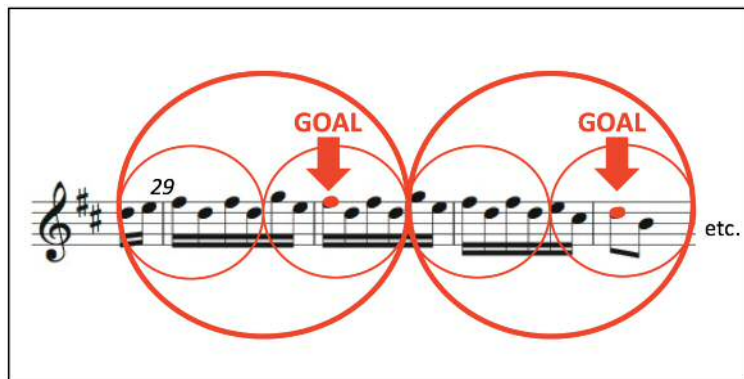


Figure 73. Bars 29-32: Pathway Schema 3

In each case, the musical motion evolves uniquely, as different goals (highlighted through durational emphasis, as well as through dynamic) are subtly anticipated with haste and followed by relaxation. By varying the goal-directed pathways between the four-bar repetitions, the different musical goals, concomitant motion and corresponding emotions

(for example of anticipation, tension, arrival and relaxation) give rise to expressive and affective variation.

Of course, as well as the many possibilities offered by variations of each device (articulation, ornamentation and goal-directed motion), the different ways in which these tools are combined affect the resultant musical expression. There is, of course, a plethora of combinations. Fundamentally, having explored a variety of articulatory, ornamental and trajectorial possibilities in practice (as can be seen, for instance, in Example 62), the particular interpretative combination chosen in the moment of performance arises pre-reflectively in response to the characters, emotions, shapes and feelings created from my execution of the preceding music. The *piano* dynamic marking simply acts as an explicit trigger that reinforces my pre-reflective desire to contrast repetitions of the same material – a tacit inclination that has, of course, developed over time, as knowledge of musical expressivity, contrast, Baroque performance practice and rhetorical principles are embodied. Ultimately, it is the performer's expressive temporal decisions, alongside his or her modifications in volume, that fulfil the changes in character indicated by the musical repetition and, of course, the explicit dynamic markings.

It is important to recognise that bars 47-54 similarly juxtapose two related four-bar phrases. In this instance, however, the second phrase is not an exact equivalent of the first, but a sequential repetition a minor third lower. It is precisely the new key, and in particular the minor tonality, that inspires a different characterisation from its preceding counterpart. As illustrated in Example 63, I enhance this character change not only through subtle dynamic contrast but also through nuances of articulation or note length – an inherently temporal matter. Furthermore, a number of possible goal-directed trajectories afford even greater opportunity for variation. The most prominent of these are illustrated in Figure 74-77 (where, once again, due to the constitutional equivalence of bars 47-50 and bars 51-54, bars 47-50 only will be used in the examples).

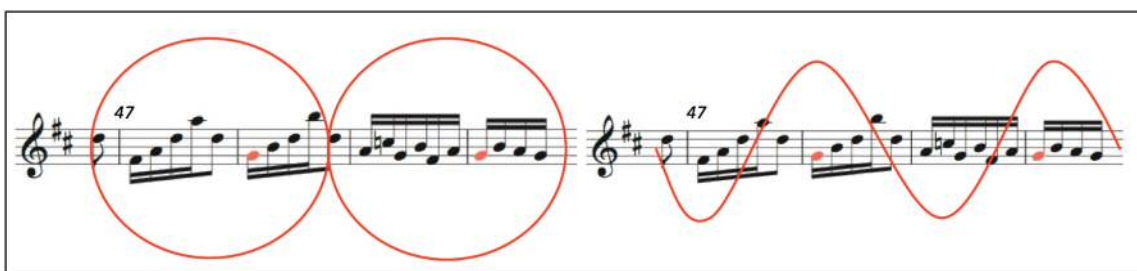


Figure 74. Bars 47-50: Pathway Schema 1

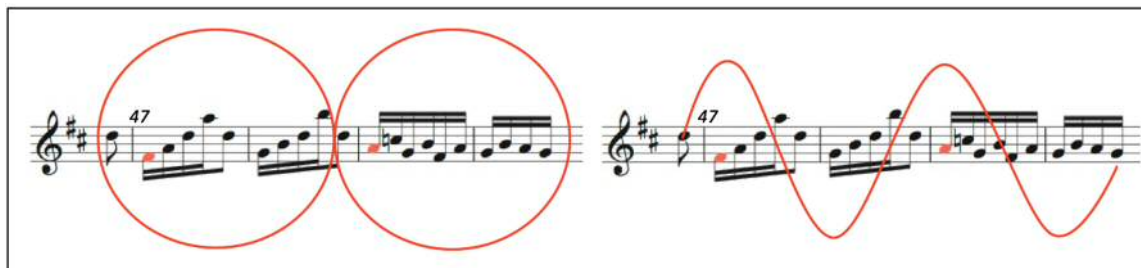


Figure 75. Bars 47-50: Pathway Schema 2

Figure 74 and Figure 75 both present two versions of one goal-directed, cyclic trajectory, in order to show visually different but intrinsically equivalent illustrations of the cycle schema. They both reveal basic hierarchical interpretations, whereby motion travels towards goals every two bars, consequently dividing the four-bar phrase into two two-bar cycles (bars 47-48 and bars 49-50). The sonic externalisation of Figure 74 can be heard in Example 64, and that of Figure 75 in Example 65.

Figure 76 and 77 on the other hand, reflect greater compositional details – motivic cycles and cyclic expansion.

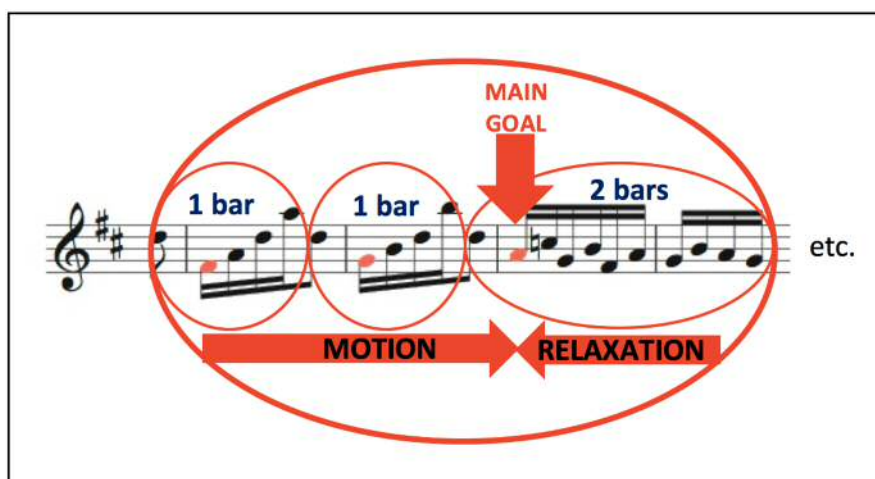


Figure 76. Bars 47-50: Pathway Schema 3

Figure 76 illustrates both the greater journey towards the main goal of the four-bar phrase, highlighted by the ascending voice-leading, as well as the smaller motivic sub-cycles (one-bar cycles reflecting the sequential pattern) and cyclic expansion (two bars). This trajectory can be heard in Example 66, thanks to the subtle manipulation of agogic emphasis working closely with dynamic stress. This cyclic expansion can alternatively be externalised by accentuating the first two motivic sub-goals and delaying the third goal within the extended cycle, as shown in Figure 77.



Figure 77. Bars 47-50: Pathway Schema 4

Indeed, by setting up an audible cyclic framework (by emphasising bars 47 and 48), and then defying expectations (by resisting emphasis in bar 49 and reserving it for bar 50), the cyclic expansion becomes more pronounced, as can be heard in Example 67. Fundamentally, thanks to the inherent temporal implications of the cycle and pathway schemata – primarily motion towards goals, relaxation away from goals, and the inherent emphasis of goal arrival – varying the goal-directed trajectories of bars 47-50 and bars 51-54 is another means of generating expressive variety by way of microtemporal nuances. These interpretative variations are indeed entwined with embodied and theoretical knowledge of image schemata, which, in turn is inextricably linked with explicit and embodied musical knowledge of phrasing, motific sequences and voice-leading.

An additional point regarding this particular passage (bars 47-54) concerns the very relationship between these smaller-scale cyclic shapes and anacrusis. Thanks to the sequential repetition, structural equivalence, and symmetrical balance between the two four-bar phrases, traditional notational analysis would suggest that the second four-bar phrase begins on the last quaver of bar 50. This would of course correspond with the palpable anacrusis at the end of bar 46, which introduces the first phrase following the conspicuous close of preceding material, as well as with the phrase-ending in bar 54 that precedes the modulated return of the main theme on the final quaver. This is illustrated in Figure 78 and Example 68.

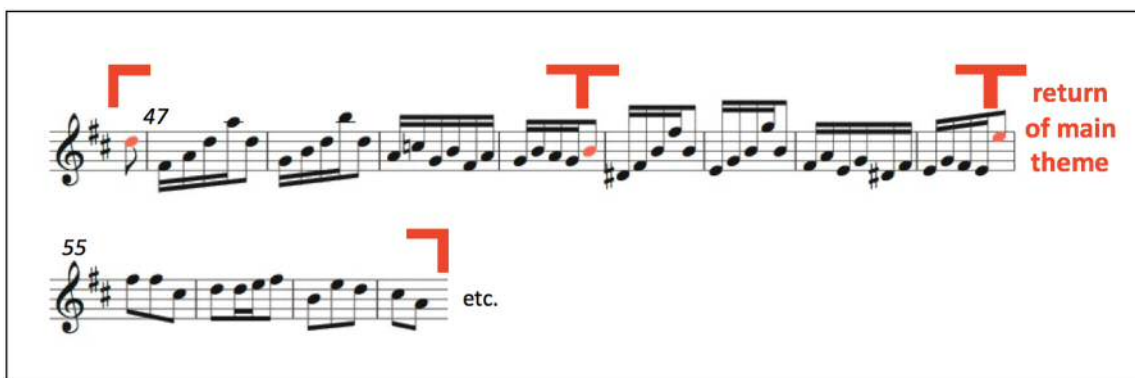


Figure 78. Bars 47-58: Anacrusis

Given the sequential repetition of smaller motivic cycles within each phrase, score analysis would also characterise the quavers in bars 47, 48, 51 and 52 as the anacrusis beginning of the smaller shapes (marked red in Figure 79), delineating cycles as follows.

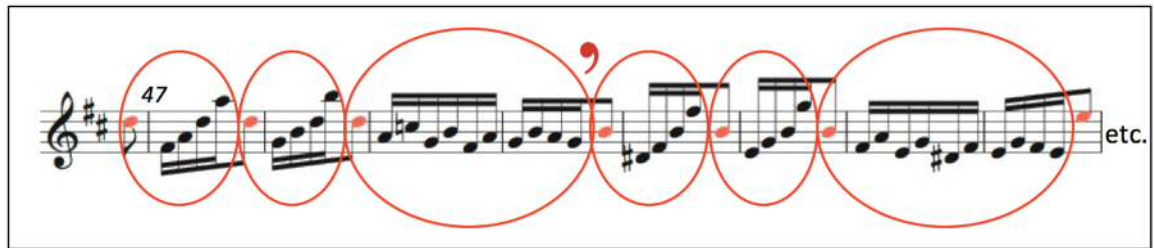


Figure 79. Bars 47-54: Smaller-Shape Anacruses

These phrasal and motivic delineations are based on explicit, reflective recognition of anacruses. When experimenting with this knowledge in practice, however, I experienced a strong conflict between this analytically justified interpretation and my ‘felt’ shapes (hence Example 69 demonstrates an exaggerated attempt to counter my intuitions). Indeed, whilst feeling the quavers of bars 46 and 54 as anacruses, I profoundly experience the quavers in bars 47, 48, 50, 51 and 52 as the end of a cycle or harmonic shape (marked red in Figure 80).⁹²⁰ In this case, my felt sense, or embodied experience of harmonic cycles is far stronger than that of upbeats, my tacit knowledge of felt shapes therefore overriding any explicit knowledge of anacruses. My intuitive execution – an overt externalisation of covert shapes – can be heard in Example 70.

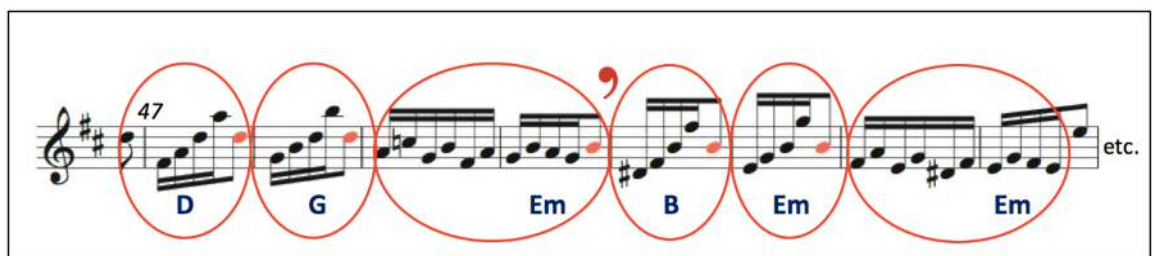


Figure 80. Bars 47-54: Anacrusic Ambiguity

This point emphasises the huge temporal implications of such an ostensibly trivial matter as a quaver. The way in which these quavers are characterised, embodied, and felt in the moment of performance crucially determines the shaping of gestures, the subtle musical punctuation between the shapes and, of course, the very place where the performer breathes (for example, before or after the final B of bar 50): compare Figure

⁹²⁰ I emphasise, once again, the inherent ambiguity of implied harmonies. Bar 50 could, of course, alternatively be experienced and harmonised as a G major (rather than E minor) chord. Whilst this would correspond with the harmonic pattern of bars 51-54, I pre-reflectively experienced bar 50 as part of an E minor chord.

79 and 80, and Examples 69 and 70. Fundamentally, different strains of knowledge lead to different interpretative possibilities, which lead to different timing decisions: knowledge affords temporal diversity.

5.5. Case Study Conclusion

This chapter discusses a specific instance: my personal experience of learning Telemann's Fantasia No. 7. It neither covers all expressive temporal possibilities, nor proposes one ideal interpretation. Rather, it articulates some of the fundamental experiences and considerations of my practice, drawing on the different forms of knowledge that influenced my micro-temporal expressivity, in order to scrutinise epistemic interaction: the process that underpins interpretative decision-making.

Chapter 6. Conclusion

Expressive microtiming, interpretative decision-making and intuition are issues fraught with complexity, subjectivity, and elusiveness: they will never be understood completely. Nevertheless, they are inextricable ingredients of every live performance and, therefore, warrant investigation. As Chapter 2 has shown, these matters lie at the heart of Baroque performance practice, thanks to the relatively underdetermined notation, the stylistic conventions of temporal manipulation, the significance of rhetorical and affective communication, and the insistence on 'taste'. Despite this, the phenomenology of temporal expressivity in the performance of this repertoire has received little scholarly attention. It is this gap that this thesis endeavours to address.

Entwining theoretical and practical perspectives, my research interrogates the phenomenological underpinnings of expressive timing decisions in the performance of Baroque music. Indeed, it is the experiential process, rather than merely the tangible product itself, that is of interest in this study. As such, the relevance of my research extends past Baroque repertoire to performance studies more generally. By exploring aspects of consciousness, and in particular the different attentional states musicians enter during performance, the relationship between temporal expressivity, intuition, knowledge and information processing is elucidated. This is particularly significant considering the omnipresence of intuition: 'lying behind all judgements which pertain to performance, to the shaping of artistic concepts are criteria of "rightness", whose roots are intuitive'.⁹²¹

The phenomenon of intuition is further scrutinised, with the ontological status of knowledge called into question and the different epistemic modes that influence temporal expressivity explored. In particular, by drawing on theories of mimetic participation and image schemata, embodied experience is highlighted as a crucial form of tacit knowing. This, in turn, gives rise to seemingly intuitive feelings of musical shapes. These shapes are primarily experienced as goal-directed journeys, cycles or arcs of motion, inherently characterised by a unique temporal trajectory that – thanks to the intimate entanglement of action-perception loops – at once stimulates and is stimulated by expressive microtiming. Importantly, this part of my discussion develops earlier cognitivist ideas of musical understanding into a more holistic perspective, exploring the

⁹²¹ Epstein, 'A Curious Moment in Schumann's Fourth Symphony', 127.

notion that musical shapes are not merely perceived mentally, but *felt* through embodied cognition. In this way, my thesis contributes to the relatively recent field of embodied music cognition, developing the work of authors such as Cox, Aksnes, Brower and Peters by adding a specific performative and temporal focus, through my examination of the relationship between performers' embodied knowledge and micro-temporal decisions.

This fundamental relationship between knowledge and embodiment is further highlighted in the case study – an exploration of the French Overture section of Georg Philipp Telemann's Fantasia No. 7 for solo flute – which provides an example of epistemic interaction in practice. By theorising practice and practising theory, the many elements of my research are ultimately interconnected and clarified – my thesis synthesised. Inevitably, traditional musico-analytical and historically-informed approaches are drawn upon. However, these are salient forms of knowledge, integral to the very topic under scrutiny. At once codified and explicit, yet embodied through practice, these traditional methods of musical understanding interact intimately with experience and hence encompass a tacit dimension. Confirming the fluid ontology of knowledge and the significance of epistemic interaction, they are, therefore, considered always in relation to the phenomenology of interpretation or, more specifically, to the epistemic dynamism that underpins expressive timing decisions in performance.

It is this multidimensional, immersive, interdisciplinary quality of my case study that clarifies why it offers more than that of reflective practice diaries (such as those now often required by undergraduate or master level performance students at conservatoires and universities, as evidence of critical practice and the learning process). Indeed, rather than simply noting the explicit knowledge that influenced my practice, or the fact that my decisions intuitively 'felt right', my thesis takes these very real experiences as objects of study, exploring their interrelationship and probing them as part of bigger questions, in relation to a range of disciplines and a variety of theoretical concepts. In this way, the case study serves a meta-purpose in its attempt to elucidate the more complex phenomenological processes that remain undeveloped in reflections typical of a mere practice diary. Furthermore, whilst this case study could be criticised as solipsistic, it is important to remember not only its function (the elucidation of experiential process, which relies on the researcher adopting an inside perspective) but also that, by studying myself, I am inherently drawing on objective influences – everything that has shaped my life-world. After all, as argued by Judith Butler, and evidenced in the context of musical

practice by Naomi Cumming in *The Sonic Self: Musical Subjectivity and Signification*, no one can never be a completely free and liberal subject: the individual is always shaped by external structures and ‘laws’ – whether social, cultural, or (as in this case) of musical practice – that in some ways become part of us.⁹²²

In addition to its significance in the field of embodied music cognition, my thesis offers a contribution to the growing debate concerning the relationship between analysis and performance. Whilst traditional explorations of this relationship examine the somewhat linear and causal application of analysis to performance (for example in the work of Nicholas Cook, John Rink and Tim Howell),⁹²³ the more recent emergence of ‘performer analysis’ places the performer at the forefront of the analytical process, creating music analyses specifically from the performer’s perspective.⁹²⁴ Guided by my own musical experiences and understandings, this thesis resonates with the principles of performer analysis. My performer perspective is, however, often explored in relation to specific musico-analytical issues, as previously stated. After all, my performer analysis is heavily conditioned by my knowledge of traditional musical analysis. This not only highlights the entwinement of the two approaches, but it more significantly emphasises the influential, malleable and interactive qualities of knowledge. The epistemic and ontological underpinnings of different forms of musico-analytical study are harder to segregate than they may initially appear.

More specifically, my work contributes to discourse on analysis and performance thanks to the particular image-schematic quality of my performer analysis. Whilst authors such as Brower and Echard do indeed analyse music in terms of image schemata,⁹²⁵ their

⁹²² Tracy McMullen, ‘Improvisation within a Scene of Constraint: An Interview with Judith Butler’, in *Negotiated Moments: Improvisation, Sound and Subjectivity*, ed. Gillian Siddall and Ellen Waterman (Durham and London: Duke University Press, 2016), 23; Naomi Cumming, *The Sonic Self: Musical Subjectivity and Signification* (Bloomington and Indianapolis: Indiana University Press, 2000).

⁹²³ Nicholas Cook, ‘Analysing Performance and Performing Analysis’, in *Rethinking Music*, ed. Nicholas Cook and Mark Everest (Oxford: Oxford University Press, 1999), 239-261; Howell, ‘Analysis and Performance’, 692-714; Rink, ‘Analysis and (or?) Performance’, 35-58.

⁹²⁴ Examples of this can be seen in the work of pianists Alessandro Cervino and Ian Pace. Alessandro Cervino, ‘Mapping the Performer’s Creative Space: An Exploration in and through Piano Playing’, (PhD dissertation, Leuven University, 2012); Alessandro Cervino, ‘Performer’s Harmony: Towards a Performance of Elliott Carter’s Piano Sonata’, in *The Practice of the Practising*, ed. Catherine Laws (Leuven: Leuven University Press, 2011), 33-48; 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. Darla Crispin (Leuven: Leuven University Press, 2009), 151-192.

⁹²⁵ Brower, ‘A Cognitive Theory of Musical Meaning’, 323-379; Candace Brower, ‘Pathway, Blockage, and Containment in “Density 21.5”’, *Theory and Practice* 22-23 (1997-1998): 35-54; William Echard, ‘An Analysis of Neil Young’s “Powderfinger” Based on Mark Johnson’s Image Schemata’, *Popular Music* 18, no.1 (1999): 133-144.

discussions are not presented from the perspective of a performer. Despite basing their analyses on embodied theories of image schemata, these theories are applied in a somewhat detached manner, analysing musical shapes from a theoretical, cognition-based perspective, rather than from an experiential and embodied, inside perspective.

As well as contributing to literature on the relationship between analysis and performance, this thesis offers a methodology that highlights not only the role performance can have in musical scholarship, but more significantly, the value of methodological synergy – of entwining theory and practice. Indeed, it is through this interdisciplinary entanglement of doing and thinking that my work probes those elements of performance that are at once routine and customary, yet magical and enigmatic, ultimately paving the way towards a more holistic understanding of the phenomenology of temporal expressivity. This thesis may, therefore, be of particular relevance to performer-researchers who seek a theoretically-underpinned yet holistic understanding of the elusive and experiential processes that underpin the interpretative process, or to performer-researchers who are interested in methodological approaches that afford such an interplay between theory and practice. After all, the value of this work lies largely in the methodology itself, rather than in the specificities of content. Indeed, this is not primarily a study of Baroque performance practice; it is an examination of performer knowledge and experiential processes. Whilst my thesis simply offers one case in point, a similar approach could indeed be applied to a greater number of pieces, different styles of repertoire, or even to the study of multiple performers, as matters of further research.

Particularly interesting extensions could include explorations of inter-performer epistemic interaction in ensemble settings, or qualitative studies that examine other performers, observing them through the process of learning a piece and forming an interpretation, and conducting interviews to record how they describe their experiences. This would allow examination of the similarities and differences in individual experiences. After all, Elisabeth Le Guin (who adopts a similar performer's perspective in her book *Boccherini's Body*) does indeed mention issues relating to motion, tension, repose, expectation, balance and gravity, in her descriptive accounts of her experiences as a performer.⁹²⁶ Specific explorations of other performers could indeed help to clarify the extent to which my findings are shared amongst musicians.

⁹²⁶ Le Guin, *Boccherini's Body*, 8, 9, 18, 19, 21, 22, 23, 26, 27, 31.

Of course, the limits of the application of my methodology must also be considered. In the very broad sense that *all* practice is based on the interaction of different epistemic forms, my methodology is widely relevant: the interactive process is the same; the epistemic content different. My methodology is, however, culturally entangled. It undoubtedly has most value in relation to Western practice. Indeed, many of the processes this thesis interrogates (such as epistemic embodiment and interpretation formation) are inherently nuanced by culture. The very way in which music is taught, learned and performed is culturally-dependent; the manner in which interpretation is viewed, encouraged and formed is influenced by culture; and the way in which knowledge is regarded, transferred, acquired and embodied is inextricably bound with cultural practice. Culture therefore determines not only the content of the explicit musical knowledge brought to the process, but also the very ontology of tacit knowing, the experience of epistemic acquisition and embodiment, the formation of interpretation and, therefore, the making of expressive decisions. Whilst there may, of course, be certain cross-cultural similarities between certain types of knowledge (in particular embodied knowledge related to physiological experience, such as heart-beat and breathing) it must not be forgotten that even the body is not an objective, universal entity: it is situated in and moulded by cultural practices. Just as Le Guin acknowledges, 'what a bodily sensation *is*, as an experience, can only be approached through what it *means* within the culture that introduced that body to itself in the first place'.⁹²⁷ The very manner in which physiological experiences interact with both explicit knowledge and culturally idiosyncratic routines and rituals will, for example, determine the specific image-schematic properties of the embodied knowledge that comes into play.

Having established the culturally situated quality of my methodology, it is important to consider its historical status by addressing the extent to which it is relevant to other repertoires of the Western tradition. I contend that this methodology could be widely applied to Western music, thanks to the similarities of the underlying interpretative process. Indeed, whilst the epistemic content is, of course, specific to the repertoire in question, the rudiments of the process are not. Zooming out from Telemann's Fantasia No.7 layer by layer, it could firstly be argued that my methodology is applicable to all Baroque music: explicit knowledge would be drawn on from similar

⁹²⁷ Ibid., 6.

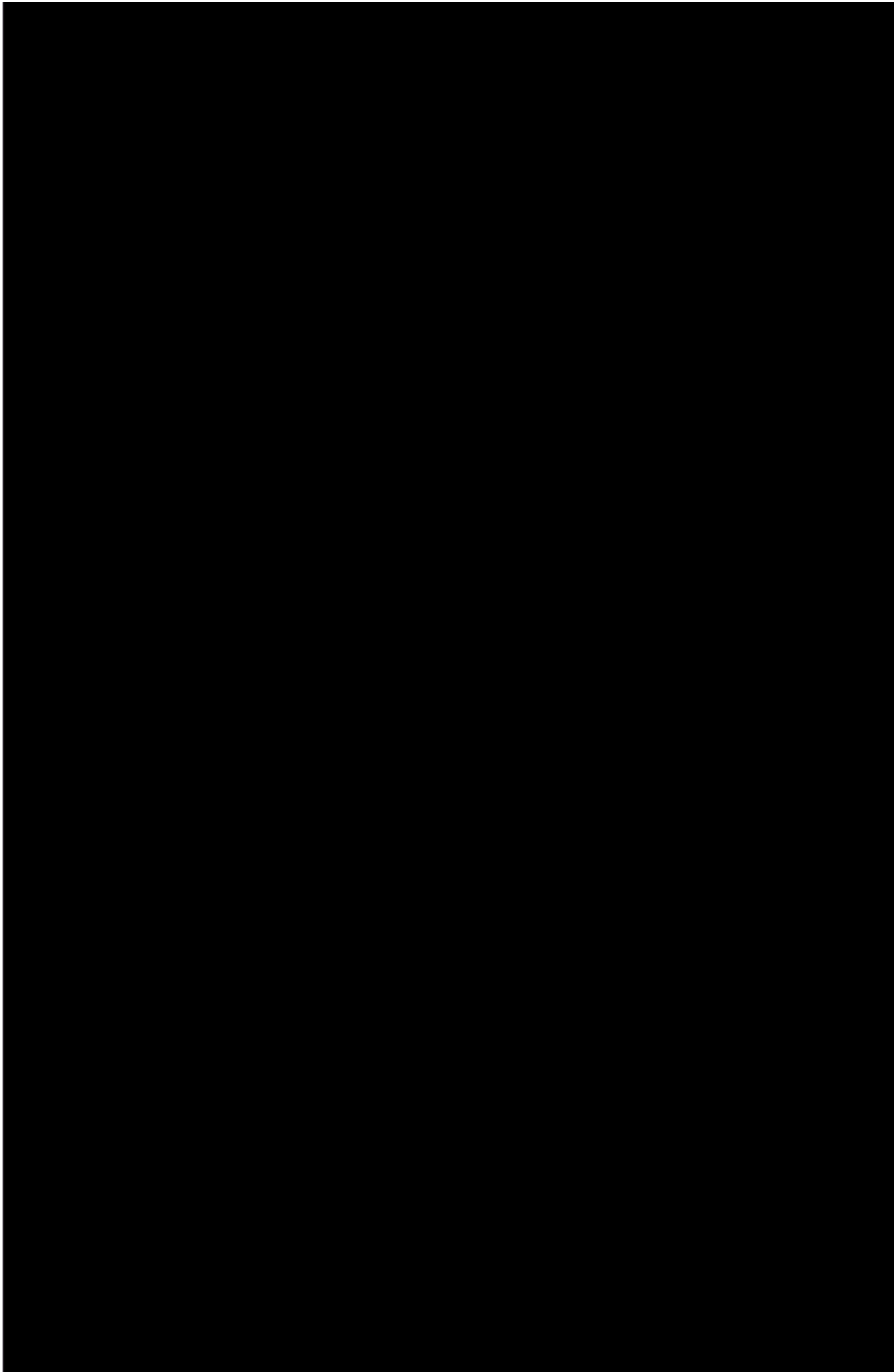
primary sources; the same musico-analytical devices would be exploited; and the balance, cycle and pathway schemata could remain as prominent considerations, given the way in which Baroque music appears to shape and structure time (through, for example, temporally-delineating phrases, surges of tension and release, and trajectorial harmonic progressions).

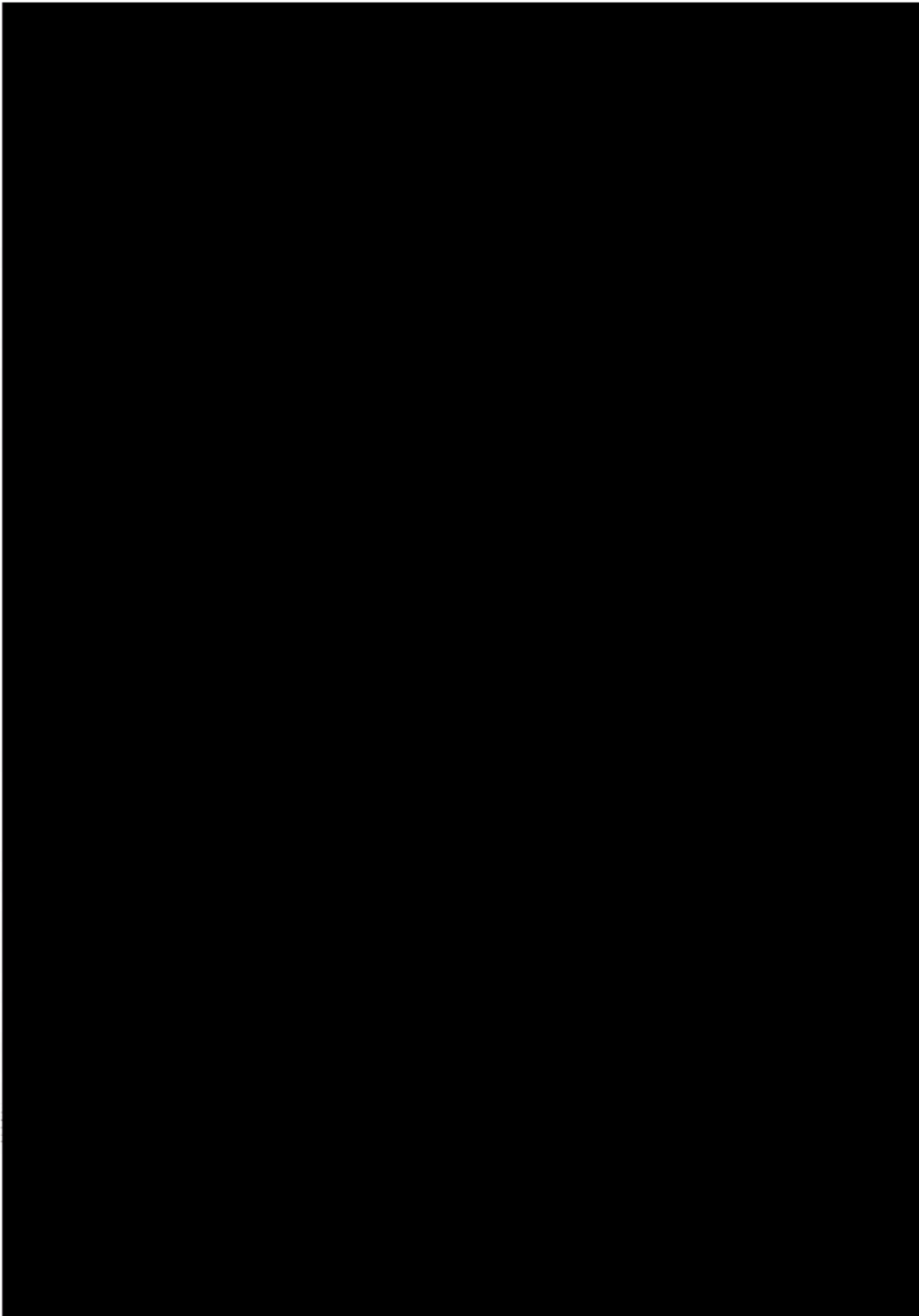
Zooming out one layer further, this methodology could be applied more generally to Western classical tonal music. Whilst the epistemic specificities would indeed diverge from Baroque particulars, the fundamental forms of knowledge and their interactions would persist. After all, Western classical music appears to embody similar image-schematic properties. Not only repertoire of the Classical and Romantic periods but also much contemporary music continues to revolve around waves of tension and release, gravitational structures and tonal centres. Particularly interesting would be the application of this methodology to a non-diatonic contemporary piece (particularly one that is markedly gestural, formed of noticeable shapes that are clearly visible in the score) or even to music of a non-classical musical genre, such as jazz. These explorations would, of course, incorporate a plethora of other considerations, including, for example, genre-specific explicit musical knowledge as well as idiosyncratic understandings of interpretation, expression, subjectivity and intuition (particularly in relation to the potentially more ambiguous composer-performer divide). In any case, it would be intriguing to examine whether similar shapes or image schemata are experienced here. Are certain schemata more prominent than others in music from particular periods or genres? Is there a relationship between musical period or genre and image-schematic salience? These are, indeed, compelling avenues for further research.

Overall, by synthesising a variety of theoretical perspectives with critical reflections on practice, my research begins to pave a way towards a holistic, phenomenological understanding of interpretative temporal expressivity in the performance of Baroque flute music. Contributing primarily to the field of embodied music cognition and to scholarship exploring the relationship between analysis and performance, this thesis opens a number of avenues for further research and offers a methodology for practice-researchers to continue to investigate performer knowledge and its role in the interpretative process.

Appendices

Appendix 1. Fantasia No. 7 by Georg Philipp Telemann: Wiener Urtext Edition





Georg Philipp Telemann *Fantasien für Flöte solo*

© Copyright 1999 by Wiener Urtext Edition Ges.m.b.H. & Co. K.G., Wien/ UT50187

Alto Francese. FANTASIA 7.

The image shows a facsimile of the first edition of Fantasia No. 7 by Georg Philipp Telemann. The score is written for three staves (treble, alto, and bass clefs) and consists of 12 systems of music. The tempo is marked "Alto Francese." and the piece concludes with a "Presto" section. The notation includes various rhythmic values, accidentals, and dynamic markings.

Appendix 3. Excerpt from Log Book

12/1/17

FANTASIA NO. 7.

Last night 11/1 I read more on gesture from Goddard + Leman's book.

Development of practice from yesterday (11/1)

1st section - becoming more familiar, natural, felt, intuitive, absorbed

2nd section - bodily cycles = every 2 bars / every 1 bar / reaching forward (bar 1) and backward (bar 2) cycles help consolidate pulse / tempo / rhythm

- breathing - affects timing, emphasis, direction, dynamic, tapering. Bar 15 - 28. Breathe bar 20 or 22? Affects emphasis / direction / everything.
- 'Upbeats' - last 5 of bar or last 5 5s? 5 allows < 1 doesn't really
- emphasis from 21 = strong - weak in 2 bar shapes? or weak - strong? strong - weak fits well with 5 5 upbeats to < into e.g. 23 etc. 1 5 eg bar 22 may shift emphasis to weak²³ - strong²⁴
- How does breathing, upbeats, emphasis, dynamic etc. all interrelate / interdepend
- At bar 28 = Question
- Emphasis bar 29 - 32? 1+3 / 2+4/3.
- Characterisation bar 29 → artic, dyn. etc
- emphasis + silence bar 37 - 46.
- bar 47 → combinations of artic + dynamic. Many possibilities. Use baroque flute for more knowledge.

Bar 58 → is main theme decorated. Match emphasis from beginning of section.

Recap of opening section - becoming more familiar, consolidated, felt etc.

- General:
- cycles + emphasis (actual + perceived)
 - ^(smaller?) cycles + pulse/tempo/security/establishment
 - interrelationship/interdependence of expressive decisions - influences shape
 - Extended cycle - uncertainty, build, momentum?
 - understanding function/role of notes in relation to smaller shapes → conviction - does have an influence on interpretative outcome / expressive outcome. Power of subattention.
 - Question - image schemata? Shape (on one level)
 - Experimenting with different shapes / felt shapes / interpretative possibilities
 - Less movement when greater technical complexity
 - smaller cycles when working on smaller details / smaller shapes - body movement helps to consolidate - embodiment allows decisions to start to move from superficial attention to tacit, felt subattention. Embody your interpretative thoughts/ideas / knowledge.
 - smaller cycles help to establish / consolidate tempo/rhythm/pulse/beat. Can then adapt to larger cycles to match / enrich / enhance / consolidate larger shapes.

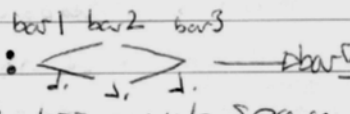
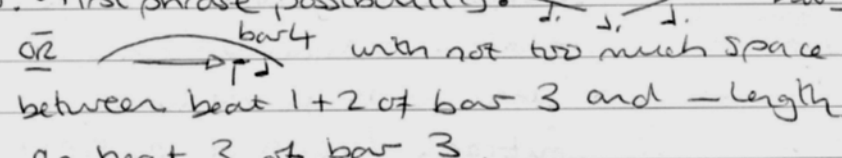
WORK ON TECHNICAL ISSUES; SEE EDWINA. DRAW ON OUR KNOWLEDGE; LISTEN TO + ANALYSE RECORDINGS FROM 11/1 + 12/1.

17/1/17

FANTASIA NO. 7.



1) Technique practice + warm up for lesson - NO RECORDING
REVELATION: bars 23-28 = MAIN THEME! Breathe bar 22
Match direction/emphasis of main theme. Worked out
when practicing semiquaver leap technique.

2) LESSON WITH EDWINA - RECORDING (for almost all
of lesson)

FIRST SECTION: • First phrase possibilities: 
 
with not too much space
between beat 1+2 of bar 3 and - length
on beat 3 of bar 3.

• Ornamental runs - imagine on violin - Dan
Edgar. Bowed/articulated flourish - energy
beat 4 = short. loud but short going
to - on beat 1 bar 5+6.

• Bar 6, 7, 8 beat 4 = LIGHT UPBEAT -
not too heavy/loud/long. Lift up.

• Bar 7 + 8  doesn't add up. Meant
to be very short + crushed (see Quartz
etc.). Facsimile of manuscript? / first edition
 - doesn't add up ever more!

• Bar 11. Set expectation of D#/
chromatic voice leading by making D
special - place it.

• Bar 12 E - attack will always be
different - that's on. Sometimes louder
of D → D# → E; sometimes lighter here >

• First time bar. Emphasis → bar 1
could emphasise beat 3 (and 4) of
first time bar. 3 AND 4 = heavier. Imagine bushes

- Trills bar 1+2 ornamental. F# = crushed because of eg. Quartz. If trill started slower than, F# it would slow it down. All F# + F# = part of the decoration. Long appog would slow it/halt it @ v. beginning

SECOND SECTION: • correlation between tempo (section 1 → section 2)

d of section 1 = 2 bars of section 2.

I didn't consciously recognize my correlation. Feet right?

- 2nd line bar (of 1st section) - determines emphasis of 2nd section. Waiting for a full ~~bar~~ ^{2 (2 bars)} helps emphasis on FIRST of every 2 bars eg 15, 17 etc. Waiting for ~~downbeat~~ only shifts emphasis to 2ND of every 2 bars eg 16, 18 etc. Both would work. Consider these 2 bullet points ^{together}

- Bar 28-32. Consider as 4 bar phrase - breaking the usual, established cycle. $\leftarrow \text{bar 31} \rightarrow$ F# repetition builds. Sometimes ~~perhaps~~ start ~~in~~ then →. Perhaps always take a little more time between ideas eg. A# ending phrase and F# starting new idea (bar 28) F# of e.g. 28 = 4 GHT UPBEAT. Not too strong hearing. Maybe think e.g. m/plmf cre. < Many articulation + ornament options. Do even more on repeat?

- Bar 36-46. Different possibilities. Could keep an 'every 2 bar' feel eg. Eduina offer thinks ~~over~~ 37 38 39 40 41 but my ~~idea~~ ^{on} 37 is ok! DON'T BREATHE on barline of 40-41 as spoils G# - A chromaticism. Sneak breath in bar 38 between A# and F#. Breathe on barline of 41-42 too IF NECESSARY. Could build intensity with chromaticism. Do different ways depending on repeat? 2 chance, 2 options?

• bar 46 - 50 + 51 - 54. Bar 46 → character depends on how I finish previous idea. Strong/lighter for either 46-50 or 51-54 works. D# = NOT FORCED FINGERING CT. Can't get louder than D but not a particularly needed note. So 46-50 or 51-54 could be louder/softer. Use length too. Could do opposite on repeat.

Bar 50 - 51. Feels most natural to start bar 50 on the downbeat, rather than with an upbeat. Notation / bar 46 would suggest upbeat but doesn't seem to feel right / not a strong feet shape. Would have to take lots of time to make up-beat work. Edwina says it feels a little like I'm lost. Takes too much time. She advises to do no up-beat in 50-51.

- Time before up-beat bar 54-55 works well
- Possible hemiolas bar 44 - 46 and bar 64 - 66
- Bar 66 TIME before 53, 4 bar shape.
- Bar 74 TIME before f#
- Bar 81 snatch breath is good
- Bar 86 gap/space before D# for impact. D# on baroque flute is NOT FORCED BUT cannot be louder than the D, really, so time/space gap is used to give D# its impact.
- Lyrical melt could be bar 87 (end of) as I initially thought. Could, however melt from C# of 86 into E. E on baroque flute would be a little quieter. C# also needed. If C# → E = lyrical, no gap on bar line - interesting use/no use of timing/space/silence to different affect, effect, impact. Could be lyrical from C# or could grow more lyrical. Explore.
- Bar 88' - 90 = 1 main beat in a bar works nicely. Then 2 in 91. Change of tone colour on A of bar 92 is ok / would be ok

- Ending of this section strong/bold/in character
- repeat in 94 is important - changes structure from ABA to ABABA
 - ↑
 - MIDDLE
 - ↑
 - column changes.
- My observation = interesting that section 1+2 are linked without suggestive ending because no gap + new title + no new bar numbering from 1. Bar numbers continue. This may support correlation of tempo.

- SECTION THREE: • Tempo. I was relating the tempo. About $\delta = 0$. This does NOT give a hurried, hasty PRESTO feel. Perhaps here is a place NOT to correlate/relate the tempo. NOT only to create presto feel, but it may be supported by separation - new line, title + new BAR NUMBERS - CHECK FACSIMILE.
- EMPHASIS. I was almost emphasising the ~~upbeat~~ together either 1st beat of bar 1 or 2. If $\downarrow \downarrow \downarrow$ of bar 1 all short, lengthen 1st beat of bar 2. Waiting until bar 2 for - (rather than 1) helps to create \rightarrow presto feel.
 - B section - C to \uparrow A or +? Probably + as he put it there for a reason? Maintains "gang to every 2nd bar" setup.
 - Bars 11-12: $\leftarrow \downarrow \downarrow \downarrow \rightarrow$ or heavily-guilty by emphasising every A.
 - If "gang to every 2nd bar" setup, could break cycle in bars 13-14, leaning on 1st beat of bar - more cheeky. Could be a tempo here if \sim in bars 13-14.

Appendix 4. Table 1

The following table documents the written recording and categorisation of my temporal manipulations (in bars 1-14 of Telemann's Fantasia No. 7) in relation to different forms of knowledge. This was a central part of my research process and helped to develop the discussions in the case study. The sources used in the table are referred to by author name and page number. The full details of these sources are as follows:

- Bach, Carl Philipp Emanuel. *Essay on the True Art of Playing Keyboard Instruments* [1753 and 1762]. Translated and edited by William J. Mitchel. New York and London: Norton, 1949.
- Couperin, François. *L'Art de Toucher le Clavecin: The Art of Playing the Harpsichord* [1716-1717]. Edited and translated by Margery Halford. New York: Alfred Publishing, 1974.
- Donington, Robert. *The Interpretation of Early Music*. new rev. ed. New York and London: W. W. Norton & Company, 1992.
- Geminiani, Francesco. *The Art of Playing on the Violin: Containing All the Rules Necessary to Attain to a Perfection on That Instrument, with Great Variety of Compositions, Which Will Also Be Very Useful to Those Who Study the Violoncello, Harpsichord &c.* London: Printed for the author by J. Johnson opposite Bow Church in Cheapside, 1751. Microform. *Eighteenth Century Collections Online*. Range 14700. Accessed January 25, 2017. <http://find.galegroup.com/ecco/quickSearch.do?now=1485367292054&inPS=true&prodId=ECCO&userGroupName=uniyork>.
- Hotteterre le Romain, Jacques. *Principles of the Flute, Recorder & Oboe* [1707]. Edited and translated by David Lasocki. London: Barrie & Rockliff, 1968.
- Mozart, Leopold. *A Treatise on the Fundamental Principles of Violin Playing* [1756]. 2nd ed. Translated by Editha Knocker. Oxford and New York: Oxford University Press, 1951.
- Quantz, Johann Joachim. *On Playing the Flute: The Classic of Baroque Music Instruction* [1752]. 2nd ed. Edited and translated by Edward R. Reilly. London: Faber and Faber Limited, 1985.
- Tosi, Pier Francesco. *Observations on the Florid Song; or, Sentiments on the Ancient and Modern Singers* [1723]. Translated by Mr. Galliard [1734]. William Reeves: London, 1967.
- Türk, Daniel Gottlob. *School of Clavier Playing; or, Instructions in Playing the Clavier for Teachers and Students* [1789]. Translated by Raymond H. Hagg. Lincoln & London: University of Nebraska Press, 1982.

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACTIC KNOWING
1-14	French Overture style. Over dotting; late, crushed short notes Dotted note = longer than notation (possibly lengthened with rest); short note = shorter than notation.	Majestic character.	Communicates the overall majestic <i>Affekt</i> of this section.	'dotted notes, usually more suitable for majesty The note after the dot must be very short' Quantz, 158 'Majesty is represented with ... dotted notes. ... The dots are held long, and the following notes are made very short' Quantz, 133 'always play the note after the dot very short and sharply' Quantz, 222 'the semiquavers that follow must be executed very briefly and sharply' Quantz, 245 'Dotted notes are played heavily, but the notes following them briefly and sharply' Quantz, 290 'Short notes which follow dotted ones are always shorter in execution than their notated length' C. P. E. Bach, 157 '[After dots] the three-stroked notes [demi-semiquavers] are played very late' Leopold Mozart, 77 'certain notes and rests should be extended beyond their written length, for affective reasons' C. P. E. Bach, 160 'In most cases, the dot is regarded as a rest, and the last note taken shorter than its strict value' JCF Rellstab, in Donington, 445	French Overture Style	Intuitive feelings of rhythmic alteration and majestic character (perhaps explicit knowledge engrained in subbattention)
1-2	First two semiquavers left late and shorter, crushed (first note therefore prolonged). Trill continues speed of semiquavers and speeds up gradually (no prolonged upper note).	Adhere to majestic French over dotting style/character, leaving short notes late and crushed. Semiquavers and trill are all part of the same gestural unit / decoration. Decorative gesture rather than cadential trill with harmonic function. Creates build up of motion towards beat 1. Semiquavers and trill are all part of the same decorative gestural unit.	Communicates the overall majestic <i>Affekt</i> of this section. Connects notes together as a small gestural unit / unified shape. Conveys motion towards goal	'certain notes and rests should be extended beyond their written length, for affective reasons' C. P. E. Bach, 160 'If demisemiquavers follow a long note and a short rest, they must be played very rapidly, both in Adagio and in the Allegro. Hence, before playing the quick notes, you must wait to the very end of the time reserved for them, so that you do not lose the beat' Quantz, 226 'Although the trills are written in equal note values in the table of ornaments in my first book, they should, however, begin more slowly than they end; but this gradation should be imperceptible' Couperin, 38 'one starts with a slow beating and increases the speed by a kind of gradation' F. W. Marpurg, in Donington, 244 'Sometimes the appoggiatura of the shake is just as fast as the other notes which form the shake' Quantz, 104	French Overture Style	Embodied feeling of over-dotted French character Feeling of the statement and its purpose e.g. decorative cadential introduction

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
	Final two semiquavers match the end speed of the trill (or even a little faster).		Connects notes together as a small gestural unit / unified shape.	<p>'The ending of each shake consists of two little notes which follow the notes of the shake, and are added to it at the same speed They are called the <i>termination</i>' Quantz, 103</p> <p>'The suffix must be played as rapidly as the trill proper' C. P. E. Bach, 104</p> <p>'the termination ... should not be played slowly and feebly. Most music teachers would therefore have it played as fast as the trill itself. ... A few require the termination to have an even shorter value' Türk, 251</p>		Feeling of one connected gesture. Semiquaver terminations are part of the same decorative gesture
3-4	All dotted quavers = short (rather than lengthening beat 3). (This is my most prominent interpretation. Other options were explored (as suggested in final column) as explicit knowledge (examples of which are given in the 'Primary Source Evidence' column) was recalled).	Voice leading A-G-F#-E. Harmonic drive to dominant. Shows forward direction towards beat 1 bar 4. 1 rather than 2 strong beats per bar, the latter of which would make the motion more restrained. Hierarchy of beats.	Conveys motion towards goal.	<p>'Each meter has strong and weak beats, although according to their external value or duration, they are equal to each other However, more emphasis (internal value) is given to one than to the other' Türk, 90</p> <p>'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91</p> <p>'four-part meters have two strong beats, namely, the first and the third, of which the first gets the greater emphasis' Türk, 91</p> <p>'What tones are to receive a special emphasis (accent)? It would be difficult to specify every one, but those which are especially to be so treated are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324</p> <p>'aside from the first and most important note in a measure, the second strong beat is also played with emphasis, although not as noticeably as the first beat which is always more important' Türk, 325</p> <p>'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328</p> <p>'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328</p> <p>'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328</p>	Music Theory: harmonic progression and voice leading to dominant chord (A major bar 4).	Embodied feeling of gesture, direction and motion in the moment. 1 st option = all short = greater sense of forward motion; 2 nd option = more restrained.
	→ towards beat 1 bar 4, then ←	Harmonic drive towards dominant.	Conveys motion towards goal; subsequent relaxation of motion.	<p>'[Certain passages] can be effectively performed by gradually and gently accelerating and immediately thereafter retarding' C. P. E. Bach, 161</p> <p>'certain purposeful violations of the beat are often exceptionally beautiful ... in solo performance and in ensembles made up of only a few understanding players, manipulations are permissible which affect the tempo itself' C. P. E. Bach, 150</p>	Music Theory: harmonic progression to dominant (A major bar 4).	Feeling of harmonic motion journeying towards dominant.

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
	Crotchet length: bar 4 beat 1 = longer; beat 2 = slightly shorter = variable execution of same notation.	E establishes arrival on the dominant chord. A is part of the same chord/shape/gestural unit, which has already been reached, and is therefore less important Hierarchy of beats.	Connects notes together as a small gestural unit / unified shape. Conveys goal arrival; subsequent relaxation of motion.	'Each meter has strong and weak beats, although according to their external value or duration, they are equal to each other However, more emphasis (internal value) is given to one than to the other' Türk, 90 'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat. ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91 'four-part meters have two strong beats, namely, the first and the third, of which the first gets the greater emphasis' Türk, 91 'those which are especially to be so treated [emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324 'lingering ... depends [s] primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328 'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328 'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328 'the execution of a musical thought can be made unclear or even wrong through incorrect punctuation' Türk, 329	Music Theory: chords, harmony.	Feeling of arrival on dominant chord on E with repercussion on A, the shape ending. Feeling of shape / gesture / phrase rather than individual notes.
4-6	Demisemiquaver rests prolonged; demisemiquaver run left late and therefore executed more quickly.	Adheres to the majestic French overdotting style/character, where little notes are left late and crushed. Gestural, ornamental flourish rather than a series of important melodic notes to be played metronomically. Creates a greater sense of motion towards the high A (the upbeat leading to F# bar 5).	Communicate the overall majestic <i>Affekt</i> of this section. Conveys motion towards goal.	'if three or more demisemiquavers follow a dot or a rest, they are not always played with their literal value, especially in slow pieces, but are executed at the extreme end of the time allotted to them, and with the greatest possible speed, as is frequently the case in overtures' Quantz, 291 'if demisemiquavers follow a long note and a short rest, they must be played very rapidly, both in Adagio and in the Allegro. Hence, before playing the quick notes, you must wait to the very end of the time reserved for them, so that you do not lose the beat' Quantz, 226 'When four or more short notes follow a dot (or rest), they are played with dispatch' C. P. E. Bach, 157 'certain notes and rests should be extended beyond their written length, for affective reasons' C. P. E. Bach, 160 'in slow or moderate tempos, caesurae are usually extended beyond their normal length ... it is customary to ... depart somewhat from a strict observance of the bar ... the rest itself is extended beyond its notated length' C. P. E. Bach, 375 'If a musician would play through a point of rest in the music without breaking the continuity – in one breath as it were – this would be as faulty and contrary to purpose as if,	Understanding of written-out ornamentation	Feeling of dramatic musical gesture of the ornamental flourishes. Feeling of travelling upwards towards A (and then to F#) Feeling of musical punctuation, musical breaths.

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
	second demisemiquaver rest a little shorter than the first.	Creates an increased sense of motion; a sense of haste and urgency, which matches the building of intensity created by the ascending sequence. Joins the two gestures of the sequence together as a larger unit.	Conveys motion towards goal.	while reading, one would read beyond the point where a phrase or a sentence ends without interruption musical punctuation' Türk, 329 'Musical ideas that belong together must not be separated; on the other hand, you must separate those ideas in which one musical thought ends and a new idea begins' Quantz, 122	Music Theory: sequence. Rhetorical principles: ascending repetition / sequence = emphasis etc. Punctuation e.g. Georg Puttenham	Feeling of connectivity and building of intensity between shapes, as a result of rising musical sequence and corresponding harmony. Feeling of musical punctuation
	Sometimes trill inserted on beat 1 bar 6.	Emphasises heightened sense of arrival on beat 1 due to the intensifying effect of the rising sequence. Saying something again but in a different and more emphatic manner.	Conveys goal arrival.	'There are still a variety of single tones which must be played with emphasis. ... intervals which do not belong to the diatonic scale of that key those tones which are distinguished by their ... highness' (G#) Türk, 326	Understanding of performer's ornamentation. Understanding of decorative trills. Music Theory: harmony, sequence Rhetorical principles e.g. ascending repetition and emphasis.	Tacit feeling of appropriate decorations e.g. intuitive decorative trills. Tacit feeling of intensifying, rising sequence. Tacit feeling of rhetorical principles e.g. ascending repetition and emphasis; saying something again but not quite the same – contrast.
	Dotted quaver beat 4 of bars 4, 5, 6 shorter than dotted quaver beat 1 of bar 5, 6 = variable execution of same notation.	One long upbeat towards arrival on beat 1. Hierarchy of beats.	Conveys motion towards goal; goal arrival.	'Each meter has strong and weak beats, although according to their external value or duration, they are equal to each other However, more emphasis (internal value) is given to one than to the other' Türk, 90 'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat. ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91	One long upbeat to beat 1. Music Theory: harmonic progression.	Feeling of long upbeat travelling to beat 1.

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
	Dotted quavers beat 1 of bars 5, 6 longer than crotchet beat 2, despite shorter written note value.	F# / G# on beat 1 establishes the D/E major chord (tonic of preceding A/B major dominant harmony). The D/E is part of the same shape / gestural unit which has already been reached and is, therefore, less important. Hierarchy of beats.	Connects notes together as a small gestural unit / unified shape. Conveys goal arrival; subsequent relaxation of motion.	<p>'four-part meters have two strong beats, namely, the first and the third, of which the first gets the greater emphasis' Türk, 91</p> <p>'What tones are to receive a special emphasis (accent)? It would be difficult to specify every one, but those which are especially to be so treated are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324</p> <p>'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328</p> <p>'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328</p> <p>'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328</p> <p>'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat. ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91</p> <p>'those which are especially to be so treated [emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324</p> <p>'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328</p> <p>'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328</p> <p>'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328</p>	Music Theory: harmony.	Feeling of arrival at beginning of beat 1 with subsequent repercussion. Feeling of shape / gesture / phrase rather than individual notes.
7-8	Dotted quavers = variable execution of same notation. Beat 1 = long; beats 2, 3 and 4 = short.	Skeletal line = A-F#-D / B-G#-E = part of same shape / gestural unit. Beat 4 = light upbeat leading towards beat 1 = arrival; beats 2, 3 are less important (the natural	Connect notes together as a small gestural unit / unified shape. Conveys motion towards goal;	<p>'Each meter has strong and weak beats, although according to their external value or duration, they are equal to each other. ... However, more emphasis (internal value) is given to one than to the other' Türk, 90</p> <p>'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat. ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91</p>	Music theory: harmony; reduction to skeletal voice-leading.	Feeling of shapes.

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
		fading away / repercussion of the shape). Hierarchy of beats. 1 rather than 2 strong beats in the bar because of gestural shape.	goal arrival; subsequent relaxation of motion.	'those which are especially to be so treated [emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324 'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328 'tones on which a brief hesitation may take place which is basic to them' Türk, 328 'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328		
	Beat 4 → Beat 1 ← (even more in 7-8 than 6-7).	Harmonic direction Beat hierarchy. More in 7-8 because of rising, building musical sequence. → at end of 7 (and 8) joins the units of the sequence together as larger related idea.	Conveys motion towards goal; subsequent relaxation of motion.	'[Certain sequential passages] can be effectively performed by gradually and gently accelerating and immediately thereafter retarding' C. P. E. Bach, 161 'certain purposeful violations of the beat are often exceptionally beautiful ... in solo performance and in ensembles made up of only a few understanding players, manipulations are permissible which affect the tempo itself' C. P. E. Bach, 150	Music Theory: harmonic progression and sequence.	Feeling of harmonic motion. Feeling of intensity building, as a result of the rising sequence.
9-12	Dotted quavers = variable execution of same notation. Bar 9, 10 beat 1 long, beat 3, 4 short; bar 11, beat 1 and 3 long, beat 2, 4 short. Changes emphasis of beat hierarchy from 1 to 2 main beats per bar.	Hierarchy of beats. Bar 9, 10, beat 1 = important / arrival; beat 3 and 4 = light upbeat leading to beat 1. Bar 11, beats 1 and 3 = important because of unexpected chromatic voice leading D-D#-E. This change of emphasis from 1 to 2 main, strong beats per bar adds a greater sense of progression / movement / pace – sense of moving forward.	Conveys motion towards goal; goal arrival.	'Each meter has strong and weak beats, although according to their external value or duration, they are equal to each other However, more emphasis (internal value) is given to one than to the other' Türk, 90 'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat. ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91 'four-part meters have two strong beats, namely, the first and the third, of which the first gets the greater emphasis' Türk, 91 'those which are especially to be so treated [emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324 'aside from the first and most important note in a measure, the second strong beat is also played with emphasis, although not as noticeably as the first beat which is always more important' Türk, 325 'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328	Compositional cycles: 1bar-1bar-2bars. Music Theory: harmony; voice leading	Felt shapes / cycles. Felt progression of voice leading. Felt importance and special quality of D#.

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	<p>→ ← (beat 4 bar 8 → beat 1+2 bar 9 ← ; beat 3+4 bar 9 → beat 1+2 bar 10 ← ; beat 3+4 bar 10 → → beat 1+2 bar 12 ←)</p>	<p>Harmonic direction, beat hierarchy, voice leading and expanding compositional cycles.</p>	<p>Conveys motion towards goals; subsequent relaxation of motion.</p>	<p>'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328 'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328 'There are still a variety of single tones which must be played with emphasis. ... intervals which do not belong to the diatonic scale of that key ... the intervals which become important because of the basic harmony' (D#) Türk, 326 'a note becoming important enough to receive an accidental ... an unexpected change of harmony' Türk, 328</p>	<p>Music Theory: harmony; harmonic relationships / progressions; voice leading.</p>	<p>Felt shapes / cycles. Feelings of travel, journeying, tension and relaxation.</p>
	<p>Beat 1 bar 12 placed slightly (with slight gap just before)</p>	<p>Arrival at harmonic goal after voice-leading; its importance emphasised by the deliberately large interval.</p>	<p>Conveys goal arrival</p>	<p>'[Certain sequential passages] can be effectively performed by gradually and gently accelerating and immediately thereafter retarding' C. P. E. Bach, 161 'certain purposeful violations of the beat are often exceptionally beautiful. ... in solo performance and in ensembles made up of only a few understanding players, manipulations are permissible which affect the tempo itself' C. P. E. Bach, 150</p>	<p>Music Theory: harmony; harmonic relationships / progressions; voice leading</p>	<p>Feeling of important arrival.</p>
	<p>Dotted quavers beat 1 of bars 9, 10, 12 longer than crotchet beat 2, despite shorter written note value</p>	<p>Part of same shape / gestural unit so once it has been established on arrival beat 1, the other notes are a repercussion, ending the shape Hierarchy of beats.</p>	<p>Connects notes together as a small gestural unit / unified shape Conveys goal arrival; subsequent relaxation of motion</p>	<p>'certain notes and rests should be extended beyond their written length, for affective reasons' C. P. E. Bach, 160 'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91 'those which are especially to be so treated[emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324 'lingering ... depend[s] primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328</p>	<p>Music Theory: harmony</p>	<p>Feeling of arrival at beginning of beat 1 with subsequent repercussion. Feeling of shape / gesture / phrase rather than individual notes</p>

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
12-13	Dotted quavers = variable execution of same notation. Beat 4 bar 12 = short; beat 1 bar 13 = long; beat 2 bar 13 = short.	Beat 4 bar 12 = light upbeat leading to emphatic feeling of arrival on beat 1 bar 13; high note = even more important. Hierarchy of beats. A is joined to following semiquavers as part of same descending gesture / shape / gestural unit. A is perhaps prolonged even longer (particularly if whole 1 st beat is slurred). E of beat 2 = unimportant end of falling gesture	Conveys motion towards goal; goal arrival; subsequent relaxation of motion. Connects notes together as a small gestural unit / unified shape	'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328 'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328 'Each meter has strong and weak beats, although according to their external value or duration, they are equal to each other However, more emphasis (internal value) is given to one than to the other' Türk, 90 'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91 'those which are especially to be so treated [emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324 'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328 'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328 'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328 'There are still a variety of single tones which must be played with emphasis. ... those tones which are distinguished by their ... 'highness' (A bar 13) Türk, 326 'a note becoming important ... is already marked by the height of its pitch' (A bar 13) Türk, 328	Music Theory: upbeats; harmony e.g. A-E part of same chord (A major scale)	Feeling of upbeat leading to beat 1. Feeling of arrival on high A. Feeling of falling gesture from A to E (end of gesture).
	Trill bar 13, long upper note / appoggiatura (just over 2/3rds), fast trill.	Final, cadential, 'prepared' trill with harmonic function. Prolonged dissonance and tension (through implied, imagined harmony) creates, on a small scale, an inherent sense of motion towards the resolution and signals arrival at the phrase / section closure.	Conveys motion towards goal; goal arrival.	'[The appoggiatura] is found before cadential trills' C. P. E. Bach, 88 'on final Cadences, it [the preparation] is always necessary' Tosi, 48 '[the preparation may extend to] about half the value of the [main] note, principally in slow movements' Hotteterre, 48 'the appoggiatura is held for half the value of the following principal note. If the note to be ornamented by the appoggiatura is dotted, it is divisible into three parts. The appoggiatura receives two of these parts, but the note itself only one part, that is, the value of the dot' Quantz, 95	Music Theory: cadences; harmony; dissonance of appoggiatura, consonance of resolution.	Feeling of important phrase / section / cadential ending. Feeling of tension and release of dissonant appoggiatura → resolution.

BARS	WHAT	WHY	GENERAL PURPOSE / EFFECT	EXAMPLES OF PRIMARY SOURCE EVIDENCE	OTHER EXPLICIT KNOWLEDGE	TACIT KNOWING
14 (1 st time)	Dotted quavers of 1 st time bar: beats 3, 4 both light and short (This is my most prominent interpretation. Other options were explored (as suggested in final column) as explicit knowledge (examples of which are given in the 'Primary Source Evidence' column) was recalled)	1 rather than 2 strong beats in bar = flowing direction and subsequent emphasis on arrival at beat 1 bar 1.	Conveys motion towards goal; goal arrival.	<p>'The usual rule of duration for appoggiaturas is that they take from a following tone of double length one-half of its value, and two-thirds from one of triple length' C. P. E. Bach, 90</p> <p>'The Superior Appoggiatura is supposed to express Love, Affection, Pleasure, etc. It should be made pretty long, giving it more than half the Length of Time of the Note it belongs to' Geminiani, 7</p> <p>'With regard to the rule covering the length of appoggiaturas, there are a few situations in which the ornament must be extended beyond its normal length because of the affect. Thus it may take up more than half the value of the following tone' C. P. E. Bach, 94</p> <p>'strong beats are ... said to be internally long, or are called struck or accented beats. In beating time, they occur as the downbeat ... Weak beats are also called internally short, passing or unaccented beats, etc.' Türk, 91</p> <p>'four-part meters have two strong beats, namely, the first and the third, of which the first gets the greater emphasis' Türk, 91</p> <p>'those which are especially to be so treated [emphasised] are: (1) those tones which fall on a strong beat or on an important part of the measure' Türk, 324</p> <p>'aside from the first and most important note in a measure, the second strong beat is also played with emphasis, although not as noticeably as the first beat which is always more important' Türk, 325</p> <p>'lingering ... cannot, of course, always be of the same duration, for it appears to me to depend primarily upon (1) the greater or lesser importance of the note, (2) its length and relationship to other notes, and (3) the harmony which is basic to them' Türk, 327-328</p> <p>'tones on which a brief hesitation may take place must be felt by the player himself, for who is able to demonstrate every possible case?' Türk, 328</p> <p>'Holding a note for a longer or shorter time depends ... on the length of the note and its relationship to the others' Türk, 328</p>	<p>Music Theory: upbeats; harmony; relationships / progression.</p>	<p>Embodied feeling of gesture, direction and motion in the moment. 1st option = all short = greater sense of forward motion, like one long upbeat; 2nd option = all emphasised = draws more attention to heavy bassline with more restrained motion; 3rd option = emphasise beats 1 and 3 = least characterised, matches and continues established cycle.</p>

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