

**Conceptualising Choral Play:
The Creative Experience of Aleatory Choral Music**

PhD thesis (Volume I)

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Abstract

This doctoral thesis aims to answer the question: How do performers undertake and experience choral aleatorism, and how might these processes suggest an emergent practice that can inform the efforts of singers, conductors, and composers? While the choral ensemble has historically been regarded as expressively unanimous (Hillier 2012), aleatorism problematises this notion through a postmodern ‘dismantling’ of a unified voice (Connor 2014). The etymology of ‘aleatory’ encapsulates both play and players; this project investigates inductively the creative contributions of singers as ‘players’ in the dismantled, fractured texture of aleatorism.

After setting out the philosophical parameters and catalysts for this line of practical examination (Introduction), choral aleatory practice is contextualised according to a performer-centric view of indeterminacy and improvisation, drawing on the field of performance studies to argue for the need to interrogate the actions and decisions of those performers (Chapter 2). Complexity Thinking (Davis and Sumara 2006) and embodiment theory (Sheets-Johnstone 2009) are discussed as concepts that usefully frame and contribute to the findings of this interrogation (Chapter 3). A two-pronged methodology is employed (Chapter 4) in order to gather qualitative, narrative data from singers involved in two iterative case studies and from analyses of the performed outcomes of select aleatory performances. This methodology enables a conceptualisation of singers’ experiences of performing works by new and established composers via Grounded Theory Method analysis (Charmaz 2014); meanwhile, analyses of recorded performances offer a critically distanced view of musical outcomes.

Findings of these two case studies (Chapters 5 and 6) are discussed and brought into circumscribed dialogue with the concepts of Complexity Theory and embodiment. Performance analyses (Chapter 7) develop and inflect the results of these findings by examining the outcomes

of aleatory techniques and singers' improvisatory decisions. This multi-methodological enquiry reveals how singers actively formulate aleatory processes, governed by a complex system of individually and socially constructed influences, the creation of which has a significant embodied dimension. The thesis concludes (Chapter 8) by showing how this music provides a site of shared creativity that may be expanded upon in future practice.

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Related Publications

Gavin Thatcher and Daniel Galbreath, ‘Essai: The Singing Body: Towards a Unified Training of Voice, Body, and Mind’, *Theatre, Dance and Performance Training*, 8.3 (2017) <<https://doi.org/10.1080/19443927.2017.1370268>>.

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PART I:
Background and Context

Chapter 1 Introduction

1.1 Research Question and Enabling Objectives

This thesis aims to answer the following question, encapsulated in the title as ‘choral play’: How do performers undertake and experience choral aleatorism, and how might these processes suggest an emergent practice that can inform the efforts of singers, conductors, and composers? While the choral ensemble has historically been regarded as expressively unanimous,¹ aleatorism problematises such unanimity through a postmodern, textural ‘dismantling’.² Choral aleatorism, as a form of extreme textural fracture, allows for the performance of postmodern meaning by a previously unified performance corpus. This shift places great importance upon the singer, as a creative bearer of agency. Yet research into the nature of musical performance has, I argue, neglected the study of singers, especially as creative musicians.

The process of answering this research question therefore involves meeting several contributing objectives. First, it is necessary to present the context and ideas surrounding aleatorism in choral music, which first emerged from its instrumental antecedents in the late 1950s, with works like Alan Hovhaness’s 1958 *Magnificat*³ and Mauricio Kagel’s *Anagrama* (1957–8). The early history of avant-garde vocal and choral music is already laid out by Istvan Anhalt in his major account, and analysis, of several key pieces, *Alternative Voices: Essays on Contemporary Vocal and Choral Composition*.⁴ I trace its development along different lines, focusing my attention on the role of the performer, while observing how choral aleatorism lost its status as a

¹ Paul Hillier, ‘The Nature of the Chorus’, in André de Quadros (ed.), *The Cambridge Companion to Choral Music* (Cambridge: Cambridge University, 2012), 61–75.

² Steven Connor, ‘The Decomposing Voice of Postmodern Music’, *New Literary History*, 32.2 (2001), 467–83 <<http://www.jstor.org/stable/20057672>> [accessed 13 October 2014].

³ Alan Hovhaness, *Magnificat for Soli, Chorus, and Orchestra* (Frankfurt: Edition Peters, 1958).

⁴ Istvan Anhalt, *Alternative Voices: Essays on Contemporary Vocal and Choral Composition* (Toronto: University of Toronto Press, 1984).

major presence in choral composition and performance since its heyday in the late twentieth century. This body of work, outlined as both a historically contingent compositional process and a performed musical event, exposes norms that suggest enduring assumptions about singers' limitations, in terms of musicianship and improvisation. The validity – and possible disruption of – these norms is addressed through the second contributing objective of this study: empirical research offers insight into how choral aleatorism is, and might further be, practised by singers. Discussion and conclusions are generally drawn from performers' accounts, rather than arrived at through the use of extant theory; this study is therefore primarily inductive rather than deductive. This inductive process yields practical notions and suggestions, addressing the objective of the second part of the question driving this research; since those concepts emerge primarily from the interaction of performers' points of view, they can be described as emergent (a term described more fully in Chapter 3.2). This inductive study is complemented by relevant literature. Finally, an analysis of the transcribed outcomes of aleatorism offers both critical distance from the singers' accounts and a glimpse into what these experimental compositional processes offer now and what they could offer in the future.

1.2 Clarification of Terminology

The terms involved in these objectives need clarification. This thesis is a study of 'performance': a word that I use to refer to any live realisation of aleatory scores by a group of singers, whether in rehearsal or performance. Those scores rely on a wide array of visual instructions to guide singers, so the term 'score' accommodates objects that provide those instructions beyond the traditional means. 'Chorus' and 'choral' are used to describe performance situations involving anything from a vocal chamber group to a large chorus, generally, but not always, *a cappella*. All

such groups allow for the kind of textural fracture and performed subjectivity which I argue is at the heart of choral aleatorism, as discussed in section 3 of this chapter. There is, undoubtedly, merit in investigating and comparing the experiences of singers in differently sized ensembles, or isolating situations including instruments from *a cappella* works, but such detailed comparison, and attempted isolation of variables, was beyond the scope of this project. It was methodologically to focus upon only certain ensembles, especially when the possibility emerged to study highly improvisatory works with smaller ensembles. More significantly,

Passages and movements of choral works, or entire pieces, employing aleatorism, are referred to under the umbrella phrase ‘choral aleatorism’ throughout this thesis. I use the term ‘aleatorism’ to mean textures that are improvisatory in such a way as shares more responsibility between performers and composer than is typical in traditionally scored music. Although the adjectival ‘aleatoric’ and its derivatives are commonly used, I follow Paul Griffith’s comment in the *New Grove Dictionary* that these are the product of an ‘etymological distortion’.⁵ Aleatorism is closely related, semantically and ontologically, to indeterminacy and improvisation, and the bounds of these three terms are blurred and overlapping. ‘Indeterminacy’ was proposed by John Cage (1912–1992) at his 1958 Darmstadt lecture;⁶ the improvisatory music that emerged in Europe from Witold Lutosławski’s partial adoption of Cage’s indeterminacy is generally termed ‘aleatorism’.⁷ Cage himself drew a sharp line between the two terms, citing divergent priorities and degrees of freedom.⁸ Questions of degrees of control and creativity are thematic among

⁵ Paul Griffiths ‘Aleatory’, in *Grove Music Online, Oxford Music Online*, 2nd edn., (2001) <<http://www.oxfordmusiconline.com/subscriber/article/grove/music/00509>> [accessed 3 November 2015].

⁶ Rebecca Kim, ‘The Formalisation of Indeterminacy in 1958: John Cage and Experimental Composition at the New School’, in Julia Robinson (ed.), *John Cage* (Cambridge: MIT Press, 2011), 142.

⁷ Sabine Feisst, ‘Losing Control: Indeterminacy and Improvisation in Music since 1950’, *NewMusicBox.org* (March 2002) <<http://www.newmusicbox.org/articles/Losing-Control-Indeterminacy-and-Improvisation-in-Music-Since-1950/>> [accessed 10 February 2017], 3.

⁸ Kim, ‘The Formalisation of Indeterminacy’, 159.

discussions of aleatorism, indeterminacy, and improvisation, and have been used to segregate them. The historical distinctions between these words' connotations is dealt with fully in Chapter 2, where I also discuss how such distinctions are not always helpful. Writings on improvisation, for instance, offer this study a great deal through their embrace of embodiment and agentive creativity. I also retain 'improvisatory' as a useful adjective for describing the nature of aleatory performance.

I use the term 'aleatorism' predominantly, for two main reasons. The first is that improvisatory choral textures derive most obviously from European aleatorism, and its strongest early advocates (Lutosławski (1913–94), Krzysztof Penderecki (b. 1933), and Luciano Berio (1925–2003), among others) are from that continent. Second, and more importantly, the semantic implications of 'aleatorism' are preferable. 'Indeterminacy' relinquishes determination; it suggests the denial of both composers' and performers' agencies. I do not argue as to whether composers can entirely preclude their own control, but I would argue against this term's implied rejection of performers' agency in *performing* a work. The corollary dehumanisation of performance raises obvious ethical concerns, whether one is writing, or writing about, music that relies so heavily upon performers' inputs.

I therefore hold that it makes more sense to define this body of music according to a sharing of control, or, better, a collaborative creation of the music – the playing of a game of both chance and strategy, as pointed to in this thesis's title. The root of 'aleatory' is the Latin *ālea*, meaning 'die, dice-play, gambling, chance, venture, risk'.⁹ Players of games balance the unknowable – the vagaries of chance and the behaviour of those with whom they play – with their own decision-making. There are rules, but the pattern and even the meaning of the game is the unpredictable

⁹ James Morwood (ed.), *Pocket Oxford Dictionary* (Oxford: Oxford University Press, 2005), 10.

result of shared agency. And, whereas ‘indeterminacy’ negates a ‘determiner’, aleatorism implies an ‘aleator’, a player.¹⁰ As such, the term also addresses the ambiguity between music composed using, or according to, chance procedures, and that which leaves ‘performer’ decisions to ‘chance’.¹¹ The latter, describing this thesis’s repertoire focus, is best conveyed by ‘aleatorism’.

1.3 Focus upon Aleatorism in Choral Music

Given the roots of choral aleatorism within instrumental aleatorism (see Chapter 2.3 and 2.4), and the similarities of process employed in both bodies of works, it is helpful to outline why this choral subset merits such focus. My own encounters with it have been as a choral conductor, and I approach it with the interest of both a practitioner and a researcher (a dual role that is relevant throughout the thesis). Two lines of thinking catalysed this particular study, representing, to an extent, poietic and esthetic dimensions of which choral aleatory scores are at least a ‘material’, if not strictly a ‘neutral’, trace.¹² ‘Trace’ refers to the point in a musical work’s disparate ontology where one provisionally fixes that ontology, in order to consider the ideas and actions that fed into that trace (occurring poietically) and those which emerge from it (occurring esthetically). Poietically, the compositional act of fracturing the traditionally unified vocal ensemble has a unique extramusical significance. Esthetically, the performance and reception by singers of aleatorism entails a uniquely embodied experience, distinct from instrumental performance. Both justifications are expanded upon below.

¹⁰ Morwood, *Pocket Oxford Dictionary*, 10.

¹¹ Terence O’Grady, ‘Aesthetic Value in Indeterminate Music’, *The Musical Quarterly* (1981), 366–81 <<http://www.jstor.org/stable/742102>> [accessed 3 November 2015], 370.

¹² Borrowing terms from Nicholas Cook’s re-reading in ‘Theorising Musical Meaning’ of Jean-Jacques Nattiez, *Music and Discourse: Toward a Semiology of Music*, trans. by Carolyn Abbate (Princeton: Princeton University Press, 1990), 11–12. Nicholas Cook, ‘Theorising Musical Meaning’, *Musical Theory Spectrum*, 32.2 (autumn 2001), 170–95 <<http://www.jstor.org/stable/10.1525/mts.2001.23.2.179>> [accessed 17 February 2014], 181.

I argue that the poietic act of composing choral aleatorism entails, foremost, the creation of meaningful textural fracture. It creates a radical disunity of performers, which, in choral music, revisits an ongoing tension between textural unity and dissolution. Paul Hillier observes that the chorus's role is traditionally to voice unanimously the concerns of a community, a purpose which can be traced from Greek choruses, through Christian church choirs, to contemporary choirs.¹³ This unity is historically bound up with texture. Texture reinforced the transmission of extramusical concepts of unity through the maintenance of textual intelligibility.¹⁴ Textures which corrupted that clarity were resisted by ecclesiastical authorities (for example at the Council of Trent, 1545–63);¹⁵ later, polyphony was legitimised as equal to chant in its capacity to express the sacred – a fractured texture co-opted by the cause of unanimity;¹⁶ later still, church music resumed its fixation with eradicating ‘the corrosive forces of liberalism and individualism’.¹⁷ Even in moments of greater textual fracture, a sort of abstract unity was maintained, a grouped emotion directed at the divine.¹⁸ Similarly, in the secular realm, unity was promoted throughout Wagner's project of humanising the universal through voices in the *Gesamtkunstwerk*, an idea inherited from Beethoven and passed to Mahler.¹⁹ Even Romantic partsongs represented the *Weltanschauung*.²⁰

¹³ Hillier, ‘The Nature of the Chorus’, 61–75.

¹⁴ Andrew Wilson-Dickson, *A Brief History of Christian Music: From Biblical Times to the Present* (Oxford: Lion, 1997).

¹⁵ Charles Winfred Douglas, *Church Music in History and Practice*, revised edn. (London: Faber and Faber, 1962), 58, 62.

¹⁶ Pope Pius X, *Motu Proprio* (1903) <<http://www.adoremus.org/MotuProprio.htm>> [accessed 28 October 2014], 5–6.

¹⁷ From a declaration of Hugo Distler (1908–41), cited in Nick Strimple, *Choral Music in the Twentieth Century* (Pompton Plains, NJ: Amadeus, 2002), 39.

¹⁸ Douglas, *Church Music*, 44.

¹⁹ Carl Dahlhaus, *The Idea of Absolute Music*, trans. by Roger Lustig (Chicago: University of Chicago Press, 1989), 18.

²⁰ Chester Alwes, ‘Choral Music in the Culture of the Nineteenth Century’, in André de Quadros (ed.), *The Cambridge Companion to Choral Music* (Cambridge: Cambridge University Press, 2012), 28.

Texture's strong association with these extramusical ideas of unanimity meant that, in order for postmodern concepts of dissolution, plurality, and subjectivity to be performed,²¹ an extreme level of textural fracture became necessary in the twentieth century. This need resulted in the advent of choral aleatorism. I contend that extramusical meaning in choral aleatorism emerges from postmodern fracture, subjectivity, and intersubjectivity. Intersubjectivity, discussed in greater philosophical detail below, is the idea that, if we take knowledge to be constructed and experience to be subjective (as I do), then relying on any notion of 'objective' truth may be unhelpful in considering what is being learned or experienced; 'intersubjectivity' proposes that various subjectivities might interact and contribute to a shared belief: an emergent, contingent 'truth'. I also contend that choral aleatorism is performed polylogically (engaging many interactive voices, as opposed to the two involved in dialogue). As in Mikhail Bakhtin's 'polyphonic novel', extramusical meaning is established within a work, which is 'a site of social intercourse, and a form of social dialogue' – or polylogue.²² Significantly, this intersubjective textural fracture can appear in ensembles of varying sizes; as shown in Chapters 5–7, it is present even in small-scale vocal ensembles. 'Choral aleatorism' is used here to describe any situation in which this dismantling of Hillier's choral unanimity is fractured in this way, allowing for the establishment of meaning polyphonically. Nicholas Cook furthers this line of thinking, building on the work of the theatre theorist Susan Melrose to assert that elements of a musical work act as connotative 'traces', interacting with other elements to form a "bundle [...] of semiotic potential".²³

²¹ See Charles Jencks (ed.), *The Post-Modern Reader* (New York: St Martins, 1992) or Thomas Docherty (ed.), *Postmodernism: A Reader* (London: Harvester Wheatsheaf, 1993).

²² Michael Chanan, *Musica Practica: The Social Practice of Western Music from Gregorian Chant to Postmodernism* (London: Verso, 1994), 13.

See also Mikhail Mikhailovich Bakhtin, *The Dialogic Imagination* (Austin: University of Texas, 1981) Iowa State Public Homepage Web Server <<http://www.public.iastate.edu/~carlos/607/readings/bakhtin.pdf>> [accessed 5 November 2014].

²³ Cook, 'Theorising Musical Meaning', 179.

Melrose's proposal is that performers themselves act as traces; Cook notes that, in Melrose's view, meaning 'is not reproduced in but created through the act of performance'.²⁴ He nevertheless opts to restrict his analysis to non-human musical elements. Doing so offers a useful way to interpret how meaning emerges from aleatory choral scores, but it also leaves the door open to evaluating how those scores – or simply various incarnations of aleatorism – impel or enable an active, performed construction of meaning more aligned with Melrose's original conception.

Specifically, a Melrose/Cook-inspired understanding of aleatorism encourages a reading of meaning within the music – whether performed hypothetically or literally – as emergent. The entire situation of a choir, in rehearsal and performance, is an intricate web of polylogical, intersubjective social constructs. Thus, that meaning must be allowed to emerge: analysing singer experience must be done with research that is inductive and which elucidates the construction of meaning *by singers*.

That inductive process seeks to offer a view of the esthetic dimension of this music. Choral aleatorism is of interest on an esthetic level because vocal performance is a unique and understudied experience. Cathy Berberian (1925–83) wrote in 'The New Vocality in Contemporary Music' that, as opposed to instruments, 'which can be locked up and put away after use, the voice is something more than an instrument, precisely because it is inseparable from its interpreter'.²⁵ Pamela Karantonis argues that the voice's 'somatic housing' in a dynamic body is 'the very reason why vocality is so performative'.²⁶ The voice, uniquely among musical 'instruments', is inseparable from the body. Roland Barthes's famous, eponymous essay endows the voice with a

²⁴ Cook, 'Theorising Musical Meaning', 179.

²⁵ Cathy Berberian, "'The New Vocality in Contemporary Music' (1966)", trans. by Francesca Placanica, in Pamela Karantonis, Francesca Placanica, Anne Sivuojä-Kauppalä, and Pieter Verstraete (eds.), *Cathy Berberian: Pioneer of Contemporary Vocality* (Abingdon: Routledge, 2014), 47.

²⁶ Pamela Karantonis, 'Cathy Berberian and the Performative Art of Voice', in Pamela Karantonis, Francesca Placanica, Anne Sivuojä-Kauppalä, and Pieter Verstraete (eds.), *Cathy Berberian: Pioneer of Contemporary Vocality* (Abingdon: Routledge, 2014), 151–65.

‘grain’.²⁷ A voice might be heard ‘which is directly the [singer’s] body, brought to your ears in one and the same movement from deep down in the cavities, the muscles, the membranes ...’ of the singer.²⁸ The voice expresses an individual’s body, and vocal sound is shorn of linguistic significance.²⁹ Barthes argues that that voice, of one singer’s body, is also experienced by the listener in a deeply embodied way.³⁰ Konstantinos Thomaidis and Ben Macpherson take up these ideas in *Voice Studies*, which seeks to explore the myriad facets of the voice as a transient ‘in-between’, existing between discourses and people.³¹ The voice is of the body, in the body, yet exists between both ontological and personal spheres. Crucially, it lives and moves: Berberian ‘propose[s] the artist as a universal fact and the voice as part of the living body, acting and reacting’.³²

The physical nature of singing in a group is, I would therefore contend, different from the experience of performing in an instrumental ensemble. Ensemble singing involves the transmission of physical sound vibrations between performers without the intermediary of instruments. Singing bodies vibrate with each other, physically influencing each other through sound. Ensemble singing is the only form of music making and one of the only human events – apart from activities such as dance or fighting – in which one body’s physical actions impact directly upon the physicality of another. By extension, singing choral aleatorism is an experience in which receiving and transmitting such corporeal information are bound together in an instantaneously improvisatory way.

²⁷ Roland Barthes, ‘The Grain of the Voice’, in Roland Barthes, *Image Music Text*, trans. by Stephen Heath (London: Fontana Press, 1977).

²⁸ Barthes, ‘The Grain of the Voice’, 181.

²⁹ Barthes, ‘The Grain of the Voice’, 182.

³⁰ Barthes, ‘The Grain of the Voice’, 188.

³¹ Konstantinos Thomaidis and Ben Macpherson, ‘Introduction’, in Konstantinos Thomaidis and Ben Macpherson (eds.), *Voice Studies: Critical Approaches to Process, Performance and Experience* (London: Routledge, 2015).

³² Berberian, ‘The New Vocality’, 49.

This experience is under-researched. The embodied voice is ‘often marginalised and even problematically feminised’, a demeaned status, deprived of any ‘authorship’ in musical creativity.³³ The composer Meredith Monk (b. 1942) even argues that Western opera imposes a regimented ‘standardisation that leaves little room for appreciation of the unique and fascinating variations in each individual performer’.³⁴ Individual authorship is vital to improvisatory music such as aleatorism. Another composer, Pauline Oliveros (1932–2016), writes that

[s]ingers have played a leading role in the development of improvised music even though their contributions do tend to be minimised in various ways through stereotyping and disparagement of the value of their musicianship: ‘Can’t keep time’, ‘doesn’t sing what’s written’, and so forth.³⁵

I thus argue that exploring aleatorism within a vocal ensemble is worthwhile because of how, according to Oliveros, singers’ training and skills are perceived. This underestimation of singers may account for why choral aleatorism and improvisation are even more neglected in scholarly literature. Such a deficit is also symptomatic of the lack of writing on aleatory performance in general.³⁶ Given the uniqueness of the performance of choral aleatorism, from both poietic and esthetic perspectives, this gap in the literature merits filling.

³³ Pamela Karantonis, Francesca Placanica, Anne Sivuoja-Kaupala, and Pieter Verstraete (eds.), *Cathy Berberian: Pioneer of Contemporary Vocality* (Abingdon: Routledge, 2014), 11.

³⁴ Kristin Norderval, ‘What We Owe to Cathy: Reflections from Meredith Monk, Joan la Barbara, Rinde Eckert, Susan Botti, Theo Bleckmann and Pamela Z’, in Pamela Karantonis, Francesca Placanica, Anne Sivuoja-Kaupala, and Pieter Verstraete (eds.), *Cathy Berberian: Pioneer of Contemporary Vocality* (Abingdon: Routledge, 2014), 195.

³⁵ Pauline Oliveros, ‘Harmonic Anatomy: Women in Improvisation’, in Daniel Fischlin and Ajay Heble (ed.), *The Other Side of Nowhere: Jazz, Improvisation, and Communities in Dialogue* (Middletown, CT: Wesleyan University Press, 2004), 63.

³⁶ To my knowledge, this type of performance has only been discussed by Amanda Bayley: Amanda Bayley and Neil Heyde, ‘Interpreting Indeterminacy: Filming Lutosławski’s String Quartet’, in Eva Mantzourani (ed.), *Polish Music since 1945* (Krakow: Musica Iagellonica, 2013), 228–43. A considerable body of practice-research on devised musical

1.4 Philosophical Orientation

These poietic and esthetic dimensions of choral aleatorism call for a particular philosophical orientation. A body of works in which meaning is emergent should be studied, I contend, through means that eschew the rigidity that marks much positivist thought. The isolation of variables, production of testable theories, and dependency on objective knowledge that define positivism make it ill-fitted to understanding the unpredictable and subjective complexities of human activity.³⁷ Jürgen Habermas rejected positivism for its neglect of ‘hermeneutic, aesthetic, critical, moral, creative and other forms of knowledge. It reduces behaviour to technicism’.³⁸ By contrast, the subjectivity and the freedom of aleatorism suggest that what is occurring is a shared act of construction. Without imposing a philosophical system in a deductive way, I argue that constructivism assists in building a methodology for studying, and a framework for interpreting, singers’ experiences as represented by those singers. While the full range of constructivist psychology and philosophy lies well outside the purview of this project, some ideas used in educational research, a field closely allied to performance studies, are relevant here.³⁹

These ideas are drawn from two primary psychologists: Russian Lev Vygotsky (Russian, 1896–1934) and Jean Piaget (Swiss, 1896–1980), both of whom studied how children learn and construct knowledge. Brief summaries of their major contributions lay the groundwork for the

performance has also been carried out by Catherine Laws, much of it appearing during the writing of this thesis. Also see Amanda Bayley, ‘Ethnographic Research into Contemporary String Quartet Rehearsal’, *Ethnomusicology Forum*, 20.3 (2011), <<http://dx.doi.org/10.1080/17411912.2011.645626>> [accessed 16 November 2016].

³⁷ Louis Cohen, Lawrence Manion, and Keith Morrison, *Research Methods in Education*, 7th edn. (London: Routledge, 2011), 7–9. Laws and McLeod also describe idiographic studies as ‘case studies focusing on the one individual or a small group of individuals’. While this study does not adhere to some of the implications of that definition – for instance, a ‘life history’ type approach – the narrow focus is something which, if recognised and exploited, was made an advantage. See Kevin Laws and Robert McLeod, ‘Case Study and Grounded Theory: Sharing Some Alternative Qualitative Research Methodologies with Systems Professionals’, in M. Kennedy, G. W. Winch, R. S. Lager, J. I. Rowe, and J. M. Yanni (eds.) *Proceedings of 22nd International Conference of the Systems Dynamics Society* (June 2004), <http://sydney.edu.au/education_social_work/research/publications/2004.shtml#sthash.9WqVX89H.dpuf> [accessed 24 November 2015], 3.

³⁸ Cohen, Manion, and Morrison, *Research Methods*, 15, citing Habermas (from 1972).

³⁹ Notably, these are unrelated to the constructivist art movement of artists like Kenneth Martin and Mary Martin.

methodological and theoretical discussions in subsequent chapters. Piaget and Vygotsky established, and can be seen to represent, two threads of constructivism: individual (Piaget) and social (Vygotsky). Piaget himself used the label of ‘constructivism’, believing that children (and, by extension, learners of any age) engage in a process of ‘inventing rather than discovering [their] ideas’.⁴⁰ Knowledge has ‘no a priori external existence’, so it cannot be gathered as such;⁴¹ a learner must adapt to a growing awareness of external factors through constant reconstruction.⁴² Vygotsky sought to provide a psychological ‘application of [Marxist] dialectical and historical materialism’,⁴³ arguing that ‘higher mental processes in the individual have their origin in social processes’.⁴⁴ Whereas for Piaget, reality is constructed within the mind, Vygotsky argues that it is built socially, only after which can it reach the ‘psychological plane’ of the individual.⁴⁵ Vygotsky was therefore concerned with the ‘interpsychological’ – often studied in one-to-one interactions, but applicable also to grouped learning situations.⁴⁶

Both ideas are only applicable in a limited way. Piaget’s ideas have been criticised for their artificial rigidity⁴⁷ and methodological problems.⁴⁸ Similar concerns have been raised against the findings offered by Vygotsky, whose scope was limited by his short life, and who may have underestimated the learners he studied.⁴⁹ Their importance lies, therefore, in the strands of thinking

⁴⁰ Howard E. Gruber and J. Jacques Vonèche, ‘Introduction’, in Howard E. Gruber and J. Jacques Vonèche (eds.), *The Essential Piaget: An Interpretive Reference and Guide* (London: Routledge and Kegan Paul, 1977), xxxvii.

⁴¹ Gruber and Vonèche, *The Essential Piaget*, xxxvii.

⁴² Gruber and Vonèche, *The Essential Piaget*, xxii.

⁴³ Michael Cole, Vera John-Steiner, Sylvia Scribner, and Ellen Souberman (eds.), *L.S. Vygotsky: Mind in Society: The Development of Higher Psychological Processes* (Cambridge: Harvard University Press, 1978), 6.

⁴⁴ James V. Wertsch, *Vygotsky and the Social Formation of Mind* (Cambridge: Harvard University Press, 1985), 14.

⁴⁵ Wertsch, *Vygotsky and the Social Formation of Mind*, 60.

⁴⁶ Fred Newman and Lois Holzman, *Lev Vygotsky: Revolutionary Scientist* (London: Routledge, 1993), 78.

⁴⁷ Anita Woolfolk, *Educational Psychology*, 13th edn., Global edition (Harlow: Pearson Education, 2016), 80–2.

⁴⁸ Woolfolk, *Educational Psychology*, 81.

⁴⁹ Woolfolk, *Educational Psychology*, 88.

they set up, yet these strands still present a problematic divide between the individual and social planes of constructions.

These strains of constructivism, the internal and the interpsychological, are arguably reconciled via Ernst von Glasersfeld's idea of intersubjectivity, upon which he builds his 'radical' form of constructivism. He sees 'objective truth', which we might reasonably replace with 'knowledge', as a shared construction resulting from individual, subjective experience.

[...] we shall have to account for a difference in conceptual constructs which, even as constructivists, we would not like to miss: the difference between knowledge that we want to trust as though it were objective, and constructs that we consider to be questionable if not downright illusory. Needless to say, this constructivist 'objectivity' should be called by another name because it does not lie in, nor does it point to, a world of things-in-themselves. It lies wholly within the confines of the phenomenal. [...] I have tentatively proposed the term 'intersubjective' for this highest, most reliable level of experiential reality.⁵⁰

Here we arrive at a more complete understanding of intersubjectivity: not only does it provide a means of establishing knowledge that we can or must trust, it also clarifies that that knowledge lies within the experience of the knowers. Through ascribing the individual's subjective construction of knowledge to the phenomenal – that is, the external – Glasersfeld aligns more closely with Vygotsky. But, in a group situation such as choral performance, phenomena can equally be seen to originate in a human's voice: internally and socially constructed ideals are

⁵⁰ Ernst von Glasersfeld, *Radical Constructivism: A Way of Knowing and Learning*, Studies in Mathematics Education Series, 6 (London: Routledge Falmer, 1995), 119.

mutually contributory. This intersubjectivity mirrors the way I argue that meaning is created in aleatory textures. While performative intersubjectivity could be considered ‘processual’ – it deals with a process rather than an object or objective – Glasersfeld’s intersubjectivity, by contrast, is ontological, having to do with the perceived bounds of a thing. As such, the conceptual overlap between performed intersubjectivity and constructivist intersubjectivity might seem superficial, but Glasersfeld invokes Alexander Bogdanov to move into the processual realm: ‘knowledge, Bogdanov says, functions as a tool. How good a tool is, or how much better it could be, comes out when a group of people work together at the same task’.⁵¹

This shared subjectivity-cum-shared experience is what I argue occurs in choral aleatorism, and what directs us towards practical considerations. Any intersubjective conclusions worth applying to future practice must be extracted from, and grounded in, the findings of ongoing practice and knowledge-creation. The process of achieving such insights draws in methodological ideas of pragmatism, which ‘conveys an image of the world brimming with indeterminacy [...], waiting to be completed and rationalised’; but pragmatists do not deny “that a certain something out there” might exist independently of social actor(s).⁵² A reflection of a present, relevant experiential reality must balance (philosophical) indeterminacy with the potential for something ‘real’; intersubjectivity offers an external reality which can be studied as a construction.

Another shortcoming of Piaget’s and Vygotsky’s descriptions of knowledge construction is that they are just that: descriptions, which cannot suggest practice.⁵³ Radical constructivism points towards practices; Glasersfeld writes, ‘in order to modify students’ thinking, the teacher

⁵¹ Glasersfeld, *Radical Constructivism*, 119.

⁵² Jörg Strübing, ‘Research as Pragmatic Problem-solving: The Pragmatist Roots of Empirically-grounded Theorising’ in Charmaz, *Constructing Grounded Theory*, 2nd edn. (London: Sage, 2014), 583.

⁵³ Brent Davis and Dennis Sumara, ‘Constructivist Discourses and the Field of Education: Problems and Possibilities’, *Educational Theory*, 52.4 (autumn 2002), 417.

needs a model of how the student thinks’, which can only ever be conjectural.⁵⁴ The singers and I (as both researcher and conductor) must engage in, and reflect on, a shared modification of thinking and practice, through collaborative conjecture. That conjecture is not enough to lead to the proposition of practical ideas, however, and it is at this juncture that Complexity Theory and embodiment theory take up that need (as detailed in Chapter 3). While constructivism, radical and otherwise, forms the foundation of the paradigm used in this thesis, Complexity Theory is used later to frame and guide findings and conclusions where constructivism falls short. Complexity Theory is combined with writings on embodiment, especially the work of Maxine Sheets-Johnstone,⁵⁵ to enrich the understanding of singers’ creative processes.

1.5 Practice-Research Context

My project sits within the larger context of an inductive, practice-research discipline, and many of these approaches either directly inform my approach, or validate the appropriation of methods from outside the musical field. This sector of musical study may be called ‘practice-research,’ a term I use here to describe study that attempts both to understand and to inform practice through observation of, and direct involvement in, performance. There is ample discussion in practice-research literature about appropriate nomenclature: writers deliberate as to whether ‘as’, ‘through’, ‘based’, or ‘led’ should appear between ‘practice’ and ‘research’ in an effort to clarify their own research approach. I will not rehearse those arguments here, except to illustrate that they are only relevant insofar as the arbitrary nature of their epistemological and methodological boundaries belie the holistic nature of iterative, inductive practice-research. Hazel Smith and Roger T. Dean cite the contention that ‘in practice-based research the creative work acts as a form

⁵⁴ Glasersfeld, *Radical Constructivism*, 186.

⁵⁵ Maxine Sheets-Johnstone, *The Corporeal Turn: An Interdisciplinary Reader* (Exeter: Imprint Academic, 2009).

of research, whereas practice-led research is about practice leading to research insights'.⁵⁶ In the research model deployed for this project (detailed in Chapter 4.3.2), the tangible outcome is a body of 'research insights'; yet its iterative nature, in which practice emerges and immediately informs subsequent practice and research, all but erases any meaningful distinction between '-led' and '-based'. Importantly, to deny that singers' activities constitute research in their own right would be to nullify the very real insights they develop and offer. The activity entails, but also leads to, meaningful and new knowledge.

A further distinction is necessary between practice-research and performance studies. The 'performative turn' of the 1970s, described by Cook, shifted both theatre studies and musicology away from its fixation with the written text.⁵⁷ But, among the 'contested and multi-accented' meanings of 'performative',⁵⁸ Mine Doğantan-Dack observes that 'the dominant discourse in [musical] performance studies is the expression of a primarily textual culture' (whether performance recordings or written texts).⁵⁹ The resultant direct line between text and researcher leaves out the performer. As such, performance studies have run the risk of 'explaining musical performance without performers' and rejecting musicians' expertise.⁶⁰ Doğantan-Dack is one of several writers to work against this norm, a movement most recently and powerfully manifested in the five-book series *Studies in Musical Performance as Creative Practice*.⁶¹ This project is

⁵⁶ Hazel Smith and Roger T. Dean, 'Introduction: Practice-led Research, Research-led Practice – Towards the Iterative Cyclic Web', in Hazel Smith and Roger T. Dean (eds.), *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh: Edinburgh University Press, 2009), 5, citing Candy (from 2006).

⁵⁷ Nicholas Cook, 'Performing Research: Some Institutional Perspectives', in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice*, *Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 11–32.

⁵⁸ Robin Nelson, *Practice as Research in the Arts: Principles, Protocols, Pedagogies, Resistances* (Basingstoke: Palgrave MacMillan, 2013), 56.

⁵⁹ Mine Doğantan-Dack, 'Recording the Performer's Voice', in Mine Doğantan-Dack (ed.), *Recorded Music: Philosophical and Critical Reflections* (London: Middlesex University Press, 2008), 302.

⁶⁰ Mine Doğantan-Dack, 'Practice-as-Research in Music Performance', in Richard Andrews, Erik Borg, Stephen Boyd Davis, Myrrh Domingo, and Jude England (eds.), *The SAGE Handbook of Digital Dissertations and Theses* (London: Sage, 2012), 263.

⁶¹ John Rink (ed.), *Studies in Musical Performance as Creative Practice* (Oxford: Oxford University Press, 2018).

situated within that movement and seeks to explore a performative meaning from ‘within’ performers. Borrowing Doğantan-Dack words, my approach here seeks to uncover a ‘system of values that do not require meaning to be primarily read but heard’,⁶² or, indeed, experienced, embodied, and constructed by performer and researcher.

A better forebear of musical practice-research than the dominant performance studies discourse is found in its methodological antecedents. Jane W. Davidson underscores the importance of social science methodologies, with their ‘cycle of research planning, acting, observing, and reflecting’, to later practice-research.⁶³ The features of such methodologies most important here are, first, that they are reflexive, and second, that they are iterative. Brad Haseman and Daniel Mafe underscore the importance of researcher reflection to expose positionality and permit knowledge-construction.⁶⁴ Reflection and contribution of their own research insights afford performers similar opportunity to construct knowledge, not least through consolidating their own awareness and processes. A reflexive approach is therefore best applied in a cyclical research format, enabling implementation and reflection to impact upon each other. Anthony Gritten argues that practice-research justifies its own existence through this ‘in-folding of research into practice’, whereby ‘it can afford itself – indeed, *must* afford itself – artistically productive potential and aesthetic merit as a form of practice’.⁶⁵

⁶² Doğantan-Dack, ‘Recording the Performer’s Voice’, 302–3.

⁶³ Jane W. Davidson, ‘Practice-based Music Research: Lessons from a Researcher’s Personal History’, in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice*, *Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 100.

⁶⁴ Brad Haseman and Daniel Mafe, ‘Acquiring Know-How: Research Training for Practice-led Researchers’, in Hazel Smith and Roger T. Dean (eds.), *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh: Edinburgh University Press, 2009), 219.

⁶⁵ Anthony Gritten, ‘Determination and Negotiation in Artistic Practice as Research in Music’, in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice*, *Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 74.

Such an interweaving of theory and practice is fundamentally inductive and facilitates theorisation out of practice, rather than merely applying theory to practice.⁶⁶ The main engine for such theorisation here is the Grounded Theory Method, especially Kathy Charmaz's constructivist approach.⁶⁷ This method of processing qualitative data grounds findings in the experiences of singers, while moving such inductive findings towards abstraction. These abstracted conclusions more readily interact with other ideas and practices. This study is therefore not strictly inductive: rather, it centres on findings grounded in singers' experiences. Theoretical ideas emerged as relevant before, during, and after work with singers. They are deployed to guide methodology, offer a useful framework and vocabulary for describing the outcomes of that methodology, and enrich those outcomes with the perspectives of other practitioners and researchers.

Davidson suggests how iterative induction might look, methodologically. Inductive reasoning can be complemented with 'real-time observation as well as recordings of creative processes, enabling interpretations based on patterns of action and the triangulation of several data sources'.⁶⁸ The importance of multi-methodological approaches, and the particulars of the methods chosen, are detailed further in Chapter 4, but it is important to clarify immediately that observations, singers' accounts, and literature all combine to inform the ultimate findings of this study. Such a triangulation, and acknowledgments of my own positionality, address Gritten's objection to most performance studies' tendency to draw practice subserviently into research, putting 'creative insight [...] at risk of becoming tomorrow's pedagogical case study or psychological data set'.⁶⁹ The case studies that follow in this thesis (Chapters 5 and 6) attempt to avoid such a reductive preference for one side of the practice-research balance. Instead, they rely

⁶⁶ Smith and Dean, 'Introduction', 29.

⁶⁷ Charmaz, *Constructing Grounded Theory*.

⁶⁸ Davidson, 'Practice-based Music Research', 100.

⁶⁹ Gritten, 'Determination and Negotiation', 84.

on ‘more modern conceptions of scientific knowing (such as complexity and emergence), as they have developed in the twentieth and twenty-first centuries’.⁷⁰ Emergence and complexity became crucial to understanding the findings of the first case study, as discussed in Chapters 3, 5, and 6.

A final facet of practice-research worth highlighting is that, in its application here, it is as concerned with people as with musical products. This emphasis is predicated on the conviction that ‘works massively underdetermine whatever emerges in performance’⁷¹ – a proposition which immediately throws up questions of musical ontology. Here I follow the lead of musical philosopher Stephen Davies. Davies maps out the historical stakes of the question of musical ontology, beginning with the disclaimer that he does so ‘without enthusiasm. The discussions are dry and difficult’.⁷² He goes on to observe that ontological arguments are as subject to their proponents’ agendas and historical particularism as to any philosophy.⁷³ Given these warnings, I am neither willing nor equipped to enter into this quagmire. However, what emerges strongly from his account is a view that a work’s existence must be at least partially considered as including its performances.⁷⁴ Cook elaborates: ‘In other words performative meaning is understood as subsisting in process and hence by definition irreducible to product’.⁷⁵ I would first argue that, even in a final performance, aleatorism is always an enacted process. I would also assert that process is embodied in the performer. Indeed, Cook continues along these lines: ‘A more direct route to understanding music as performance might be to focus on the functioning of the performing body, both in itself and in relation to the other dimensions of the performance event’.⁷⁶

⁷⁰ Nelson, *Practice as Research in the Arts*, 46.

⁷¹ Stan Godlovitch, *Musical Performance: A Philosophical Study* (London: Routledge, 1998), 82.

⁷² Stephen Davies, *Musical Works and Performances: A Philosophical Exploration* (Oxford: Oxford University Press, 2001), 37.

⁷³ Davies, *Musical Works and Performances*, 37.

⁷⁴ Davies, *Musical Works and Performances*, 37–43.

⁷⁵ Nicholas Cook, ‘Between Process and Product: Music and/as Performance’, *Music Theory Online*, 7.2 (2001) <<http://www.mtosmt.org/issues/mto.01.7.2/mto.01.7.2.cook.html>> [accessed 4 November 2016], 4.

⁷⁶ Cook, ‘Between Process and Product’, 7.

The findings of the following case studies deal in more than the bodies of performers, but singers' physicality is a key feature of the results. More pressingly, this line of thinking adjures a type of induction that assigns agency to the creators of performative meaning: the performers themselves.

Such thinking returns us to the intersubjective rejection of metanarratives outlined above. Inductive, reflective studies are best, argue Smith and Dean, when 'impartiality – or, better, maximum intersubjectivity – of the traditional mode of academic discourse has a value (as long as the deception that it is a neutral truth language is avoided)'.⁷⁷ Intersubjectivity replaces the impartiality claimed by positivism and imbues practice-research with rigour. In the place of metanarratives, a robust 'plurality of micronarratives' step in to reflect on and create performed meaning.⁷⁸

1.6 Outline of Chapters and Thesis Boundaries

It is these micronarratives, and the singers from whom they come, that dictate how the following chapters unfold. Within Part I, Chapter 2 (p. 23) explores current ideas surrounding the performance of choral aleatorism. 'Indeterminacy' and 'improvisation' are discussed as musical traditions according to how both might inform aleatory performance. Aleatorism as a general compositional practice is then discussed before focusing more narrowly on the subset of choral aleatorism. The performer-centric thread of this discussion necessitates an exploration of writings on the actual practice of vocal improvisation, which makes apparent the deficit of literature probing the experience of improvisatory vocal performance. The field of performance studies is enlisted to lay the groundwork for filling this gap. Chapter 3 (p. 95) lays out the philosophical paradigm with which I do so, taking up where constructivism has left off: Complexity Theory and embodiment

⁷⁷ Nelson, *Practice as Research in the Arts*, 35.

⁷⁸ Nelson, *Practice as Research in the Arts*, 54, drawing on Wittgenstein's 'language games' and on Lyotard.

are presented, so that they might enter into dialogue with empirical findings later. In Chapter 4 (p. 113), an inductive, iterative research design, comprising two case studies with various groups of singers and the analysis of select performances, is proposed to provide those findings. Empirical methodology draws on performance studies and practice-research as well as social science methodologies to gather and process singers' impressions. A means of analysing the audible musical outcomes of aleatory performance is then outlined.

Within Part II, Chapters 5 (p. 149) and 6 (p. 183) present the two case studies, including details of the rehearsal, performance, or workshop processes alongside the preliminary conclusions that were drawn from these experiences. These findings are brought into conversation with existing theory, cultivating an understanding of aleatory performance that is fed by a wide range of thought. The main supporting documentation for these chapters may be found as Appendices A, B, and C in the accompanying Volume II of the thesis. This material is presented separately in order to aid direct comparison whilst reading Chapters 5 and 6. In Chapter 7 (p. 209), recordings of a selection of aleatory choral performances are analysed, offering critical distance from the singers' impressions and a view of the outcomes of compositional processes which are often in some way experimental. (Score samples of the works analysed may be found in Volume II, Appendix D. Extracts of these recordings are contained within Volume II as Appendix E.)

Finally, in Part III, Chapter 8 (p. 250) offers conclusions on the entire process, as well as reflecting on the research methodology and suggesting further avenues for study.

In terms of its boundaries, this thesis does not attempt to arrive at a comprehensive theory of aleatory choral performance – in fact, its methodology guards against that. Moreover, it does not seek to be purely inductive, and the additional theory enlisted is not present to be verified or refuted; it complements and interacts with findings from the case studies. As such, theory is drawn

on in a circumscribed and selective way. Embodiment theory is relied on particularly heavily in the study's conclusions, but, although the philosophical area of phenomenology is mentioned, I exclude it since its incorporation would draw the discussion away from the reflective and analytical portrayals of singers' experiences. These limitations are intended to provide focus for this study, which is, ultimately, only a starting point. Through the process outlined above, and according to the priorities and parameters set out throughout this introduction, this study sets out to open up a creative process – how it occurs, and how it might be further explored and expanded – by seeking to understanding the actions of its creators.

Chapter 2 Defining and Contextualising Aleatorism

2.1 Introduction

Providing a definition and contextualisation of choral aleatorism begins to answer the research question of this project, in keeping with my general philosophical orientation. The following sections offer an understanding of ‘aleatorism’ as it relates to arguments of depersonalisation and agency, drawing heavily on writings concerning indeterminacy and improvisation. Both the wider aleatory practice and choral aleatorism are viewed from perspectives that prioritise performer agency and shared initiative. This view is necessarily selective, delimiting what might otherwise become a historical exposition outside the ambit of this thesis; but it is also derived from my reading of the focus and intent behind many choral aleatory works. In light of this performer-centric view, the performative practice of vocal and choral improvisation is explored to indicate gaps in the understanding of singers’ experiences and practices. The field of performance studies is offered up as a starting point for addressing these gaps.

2.2 Understanding Aleatorism

In addition to the definition and semantic justification behind my use of ‘aleatorism’ offered in the Introduction (1.2), it is worth exploring the substantial variation among the historical practices associated with that term, especially in relation to ‘indeterminacy’ and ‘improvisation’. The *Grove Dictionary* defines ‘indeterminacy’ as ‘much the same as aleatory [*sic*], but specially the principle by which a decision of a performer of a composition replaces the decision of a composer’.¹ ‘Aleatorism’ is defined in the *Dictionary* according to the degree of control exercised by the composer, and dwells in particular on the composer’s ‘deliberate withdrawal’ of that

¹‘Indeterminacy’, in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<http://www.oxfordmusiconline.com/subscriber/article/opr/t237/e5150>> [accessed 3 November 2015].

control.² Notably, though both definitions take different stances on the idea of control, both deal in such terms. John Vinton's 1974 *Dictionary of Contemporary Music* offers 'aleatory' as a 'pedantic synonym for indeterminacy introduced by Pierre Boulez'.³ Tellingly, Vinton's early attempt at a full description also offers degrees of aleatorism, of sorts, along a spectrum of 'performer choice', ranging from fairly tight control to 'free improvisation'. Total performer freedom, notably, is considered a 'subordinate technique',⁴ and his focus is on ethos, concept, or philosophy – never on performance practice.⁵ Michael Nyman's canonical *Experimental Music: John Cage and Beyond* divides its discussion of indeterminacy similarly, dealing with *who* holds or relinquishes control (composer or performer), as well as how these semi-controlled processes unfold.⁶ Kostka's manual *Materials and Techniques of Twentieth-Century Music*, appearing some twenty years after Vinton's dictionary, perpetuates the idea of a taxonomy of control. It sets out the particular elements of the performer's choice (medium, expression, duration, pitch, and form), providing specific means for delineating 'types' of aleatorism.⁷ So, the entanglement between the terms 'aleatorism' and 'indeterminacy' is compounded by further complications as to which musical parameters are relinquished, why, and by whom. While disambiguating 'aleatorism' and its synonyms is, ultimately, futile, unpicking the strain of thinking that emerges – the question of 'control', of agency – is not.

Control is one of the central features of Terence O'Grady's important 1981 essay 'Aesthetic Value in Indeterminate Music'.⁸ The evaluative objective of the paper – to refute any

² Griffiths, 'Aleatory'.

³ 'Indeterminacy', in *Dictionary of Contemporary Music*, John Vinton (ed.) (Boston: Dutton Adult, 1974), 336.

⁴ Vinton, 'Indeterminacy', 336.

⁵ Vinton, 'Indeterminacy', 336.

⁶ Michael Nyman, *Experimental Music: John Cage and Beyond*, 2nd edn. (Cambridge: Cambridge University Press, 1999), 6–8.

⁷ Stefan Kostka, *Materials and Techniques of Twentieth-Century Music*, 2nd edn. (Upper Saddle River, N.J.: Prentice Hall, 1999), 283.

⁸ O'Grady, 'Aesthetic Value in Indeterminate Music'.

correlation between degree of aleatory freedom and aesthetic merit – is not relevant here. However, O’Grady also provides incidentally one of the most cogent yet broad examinations of aleatorism available in the literature. He explicitly seeks to categorise instances of aleatorism, and is clear about how one might do so.⁹ Voicing the by-now common conclusion that aleatorism can be categorised according to composer control, he problematises the ready hallmarks of that relinquished control: ‘chance’, for instance, could prevail equally within various levels of predetermination; ‘rules’, likewise, are as likely to be clear intentions as they are ‘merely suggestions or conjectures’, to borrow Kivy’s terms.¹⁰ Therefore, despite writing before Kostka, O’Grady furnishes an understanding of aleatorism that astutely problematises the questions of control and intent.

As a consequence of his disruption of notions of control, O’Grady arrives at another important insight: aleatory works are ontologically nebulous. How can a ‘work’ be a ‘work’ if it is different from performance to performance? This question recalls Davies’s ontological destabilisation cited in the Introduction (Chapter 1.5). O’Grady answers, quite plainly, that even if not entirely reproducible from performance to performance, an aleatory score ‘is not necessarily lacking in discernible order nor does it necessarily invalidate expectations built upon previous experience’.¹¹ Later, he writes of Morton Feldman’s *Duration I* (1960) that

there will be ‘family resemblances’ between performances, and the kinds of dissonances and consonances, as well as the melodic continuity of the individual parts, will remain

⁹ O’Grady, ‘Aesthetic Value in Indeterminate Music’, 370.

¹⁰ O’Grady, ‘Aesthetic Value in Indeterminate Music’, 370.

Peter Kivy, *Authenticities: Philosophical Reflections on Musical Performance* (Ithaca, NY: Cornell University Press, 1995), 31.

¹¹ O’Grady, ‘Aesthetic Value in Indeterminate Music’, 371.

stable. [...] Although this work clearly employs indeterminate elements, it nevertheless exhibits the sort of continuity which may be measured according to the traditional conventions of music logic.¹²

From experience of aleatory scores as a listener, the above conclusion seems sound, and indeed the remainder of his essay attests to that fact. O'Grady creates a useful balance between ontological freedom and coherence, which enlists performers to help create works but maintains the integrity of the work itself. Importantly, he also concisely allows one to set aside many of the questions that could belabour any attempt to define – or analyse – aleatorism: 'traditional' musical elements are still of interest. Music with a difficult ontology does not require a complete reinvention of the methodological wheel. O'Grady does not go so far as to actually suggest a means of exploring a work within its flexible-yet-stable ontology, however. He only goes so far as to state that that ontology is contingent in some way upon performers. An understanding of aleatorism according to its performers is treated more fully below, through examining recent writers on jazz and 'world music' improvisational practice. Before that, however, a further problem with aleatorism remains to be unpicked.

Several writers have convincingly highlighted the historical, paradoxical, and deeply problematic advancement of a modernist meta-narrative of control in its early manifestations. This narrative is strongly at odds with the postmodern fractured intersubjectivity which I have argued is performed through choral aleatorism, but is evident in its early history. Indeterminacy has roots in works by American composers Charles Ives (1874–1954) and Henry Cowell (1897–1965), both of whom experimented with chance procedures of various kinds, but truly became a movement of

¹² O'Grady, 'Aesthetic Value in Indeterminate Music', 373.

sorts in the 1950s with Cage.¹³ Cage had qualms with agency in music, which Sabine Feisst traces through his distaste for the idea of improvisation. Early on, she writes, Cage ‘began to reject artistic self-expression’; improvisation, for Cage, involved ‘the expression of a personal style, emotions, likes and dislikes’.¹⁴ In works like *Music of Changes* (1951), he sought a kind of musical dehumanisation.¹⁵ He dehumanises the very idea and experience of indeterminacy in his collection of stories-cum-speech ‘Indeterminacy’, writing that ‘complexity is more evident when it is not oversimplified by an idea of relationship in one person’s mind’.¹⁶ Cage preferred for music-making to describe itself anonymously: ‘art should “imitate nature in the manner of her operation”’, seeking operational, if not aesthetic, perfection.¹⁷ Indeterminacy is defined by its compositional process for Cage, rather than its outcomes¹⁸ – or, presumably, its performative process.

Such a conviction quite plainly depletes the agency of performers in a way which I have already argued is illogical. Additionally, however, it suggests a philosophical meta-narrative of composer control that is equally specious. Richard Taruskin critiques Cage’s concept of depersonalised freedom, contending that its ‘automatism’ allies Cage to the European avant-garde modernists,¹⁹ through an obsession with sound at the expense of its production, which ‘demanded the enslavement, indeed the humiliation, of all human beings concerned [...] for it demanded the complete suppression of the ego’.²⁰ O’Grady, once again, offers a pithy (and more sedate) observation on this paradox, from a slightly different angle. He argues that when Cage’s fixation

¹³ Robert P. Morgan, *Twentieth-Century Music: A History of Musical Style in Modern Europe and America*, Norton Introductions to Music History (London: Norton, 1991), 359.

¹⁴ Sabine M. Feisst, ‘John Cage and Improvisation: An Unresolved Relationship’, in Gabriel Solis and Bruno Nettl (eds.), *Musical Improvisation: Art, Education, and Society* (Urbana: University of Illinois Press, 2009), 40.

¹⁵ Feisst, ‘John Cage and Improvisation’, 42.

¹⁶ John Cage, ‘Indeterminacy’, in John Cage, *Silence*, 2nd edn. (Cambridge, MA: MIT Press, 1967), 260.

¹⁷ James Pritchett, *The Music of John Cage*, Music in the 20th Century (Cambridge: Cambridge University Press, 1993), 37.

¹⁸ Kim, ‘The Formalisation of Indeterminacy’, 158.

¹⁹ Taruskin, *Music in the Late Twentieth Century* (Oxford: Oxford University Press, 2011), 55.

²⁰ Taruskin, *Music in the Late Twentieth Century*, 62.

with music ‘of life’ led him to dismiss Ives as irrelevant, Cage ‘violated his own principle: he is refusing to accept Ives and others as relevant because they do not suggest Cage’s sense of the current “vogue for profundity”’.²¹ Even the spirituality which informed Cage’s work was paradoxical: it ran the risk of becoming either co-opted disingenuously into his ‘aesthetic programme’, or merely a pragmatic reduction of the interconnectedness and spiritual unity of individuals and their environment.²²

As the composer Christian Wolff (b. 1934) observed, those discrepancies and paradoxes are to be found throughout Cage’s ideas.²³ The performance of Cage’s music offers a clearer view of these contradictions. While actively dismantling ‘the control-freedom binary associated with the old power relationships of composer-performer and conductor-performer’,²⁴ pianist John Tilbury argued that *Music of Changes* reinforces capitalist ideologies in its proposal of sounds as ‘free to do anything, presumably to anybody and for any reason’.²⁵ Where Cage sought to neutralise individual agendas, Tilbury sees an inevitable reinforcement of ‘ideological content’²⁶ which ‘postulates unconscious individual participation as opposed to conscious class struggle’.²⁷ Pianist David Tudor, another major proponent of Cage’s work, suggested that a good performance of the *Concert for Piano and Orchestra* (1957/8) would be one in which performers ‘were more fully aware that they are individuals’²⁸ – not the same as endowing each with agency, but certainly instilling a self-awareness that contradicts Taruskin’s claim of automatism. And, in a final paradox,

²¹ O’Grady, ‘Aesthetic Value in Indeterminate Music’, 368.

²² Clarkson, ‘The Intent of the Musical Moment’, 62–112.

²³ Christian Wolff, Keynote Address, Performing Indeterminacy: An International Conference (2 July 2016, Leeds University).

²⁴ Kim, ‘The Formalisation of Indeterminacy’, 60.

²⁵ John Tilbury, ‘Introduction to Cage’s *Music of Changes*’, in Cornelius Cardew, *Stockhausen Serves Imperialism and Other Articles* (London: Latimer New Dimensions, 1974).

²⁶ Tilbury, ‘Introduction to Cage’s *Music of Changes*’, 42.

²⁷ Tilbury, ‘Introduction to Cage’s *Music of Changes*’, 42.

²⁸ Austin Clarkson, ‘The Intent of the Musical Moment: Cage and the Transpersonal’, in *Writings Through John Cage’s Music, Poetry, and Art*, ed. David W Bernstein and Christopher Hatch, University of Chicago Press, 2001, 74.

Cage did not seem to hold his own strongly-expressed convictions dogmatically: when value judgments must inevitably be made by musicians, Cage disavowed rigidity or a universal set of ‘rules’.²⁹ With these factors in mind, Cagean indeterminacy would seem to assert control either disingenuously or inadvertently over its performers even while it tries to avoid determining their behaviour. It seems improbable that a composer so dedicated to working with collaborators, such as Tilbury and Tudor, entirely deserves the aspersions of critics like Taruskin, but it remains undeniable that this ambition of depersonalisation was present in his music and thought, and was a powerful element in early indeterminacy.

However, indeterminacy and aleatorism were not created and defined only by one composer. The philosophy of aleatorism and its performance developed over its history. As its experimental ethos and practice was taken up and developed by other composers, they refined and revised its definitions. Morton Feldman (1926–87) and Wolff (b. 1934) developed the idea of ‘choice’ and performer responsiveness somewhat, and offer a loosening of Cage’s grip on performers.³⁰ Feldman’s priorities were more sonic and aesthetic than philosophical: each instrument had individuality, but was framed as being within the strictly aesthetic context of an ‘individual sound world’.³¹ Wolff, by contrast, engaged the performers in a ‘parliamentary participation’.³² He has commented that all performance has a ‘loose screw’, and indeterminacy heightens that ambiguity, requiring greater decision-making from performers.³³ He contends that his own music is best performed by composers who are involved creatively and who take

²⁹ William Duckworth, *Talking Music: Conversations with John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers* (Cambridge: Da Capo Press, 1999), 15.

³⁰ ‘Indeterminacy’, in *Dictionary of Contemporary Music*, John Vinton (ed.) (Boston: Dutton Adult, 1974), 337.

³¹ Steven Johnson, ‘Feldman, Morton’, in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<https://doi.org/10.1093/gmo/9781561592630.article.09435>> [accessed 14 March 2018].

³² Taruskin, *Music in the Late Twentieth Century*, 82.

³³ Wolff, Keynote Address.

responsibility.³⁴ That does not entail an abnegation of responsibility on his part: he ‘felt the responsibility was equally in the hands of the performers. Now, that’s not abnegating, that’s sharing, okay?’³⁵ Nyman traces this development towards aleatorism-as-social into the works of Robert Ashley, who simplified the complexity of Cage’s and Wolff’s challenging early scores³⁶ into a more democratic music, concerned with the ‘social activity’ of ensemble performance.³⁷

These objectives shifted further as indeterminacy reached Europe. Cage and Pierre Boulez (1925–2016) met on the former’s 1949 visit to Paris, when Boulez encountered a kindred interest in musical impersonality.³⁸ Lutosławski, one of Eastern Europe’s major users of aleatorism, adopted it for its sonic effect, much like Feldman had.³⁹ I would argue, in both cases, that this goal still entails a wide distribution of creative influence over musical outcomes, despite the dominating sonic motivation of the aleatorism. Performers contribute to an outcome rather than merely serving it. With slightly later European composers, full counterparts to Wolff’s social indeterminacy emerged. In the UK, Cornelius Cardew (1936–81) was among the most significant adopters of indeterminacy. He remarks somewhat disdainfully on improvisation’s ‘glamour and allure’ for composers, but also expresses a respect for jazz improvisation.⁴⁰ Elsewhere he continues, ‘[t]he score must govern the music. It must have authority and not merely be an arbitrary jumping off point for improvisation, with no internal consistency’.⁴¹ Cardew’s relationship with performer freedom was clearly complex. He elaborates most fully on improvisation in the 1971 essay

³⁴ Duckworth, *Talking Music*, 180.

³⁵ Duckworth, *Talking Music*, 199.

³⁶ Nyman, *Experimental Music*, 110.

³⁷ Nyman, *Experimental Music*, 113.

³⁸ Morgan, *Twentieth-Century Music*, 370.

³⁹ Morgan, *Twentieth-Century Music*, 375.

⁴⁰ Cornelius Cardew, ‘Rome Letter – Nuova Consonanza’, in Cornelius Cardew, *Cornelius Cardew: A Reader: A Collection of Cornelius Cardew’s Published Writings*, ed. by Edwin Prévost (Harlow: Copula, 2006), 69.

⁴¹ Cornelius Cardew, ‘Treatise: Working Notes’, in Cornelius Cardew, *Cornelius Cardew: A Reader: A Collection of Cornelius Cardew’s Published Writings*, ed. Edwin Prévost (Harlow: Copula, 2006), 102.

‘Towards an Ethic of Improvisation’.⁴² There, he observes ‘that the natural environment is itself giving birth to something, which you then carry as a burden; you are the medium of the music. At this point your moral responsibility becomes hard to define’.⁴³ Here, Cardew has reached his own way of declaring that indeterminacy (though specifically, free, non-jazz improvisation) is embedded in its context (presumably including its score), and very much *of* its human creators. The Scratch Orchestra, which he co-founded in the 1960s, was even described as ‘a microcosm of a society in which everyone is himself and brings his particular talents, virtues, and defects to the creative “pool”’.⁴⁴ Though the Scratch Orchestra was not specifically focused on aleatorism, such a mind-set is still noteworthy for its stark contrast with Cage’s thinking. Oliveros, writing in 2004, approached group improvisation more socially still, even regarding sounds as entities which could interplay in a quasi-social way⁴⁵ and ‘bring about a feeling of kinship’.⁴⁶ Oliveros brings us fully into the world of improvisation, and it is within the writings on this topic that some of the ideas most relevant to this project are found.

First, a glimpse of how ‘improvisation’ is defined is useful. Improvisation has existed in musical cultures across the globe and centuries, and it is often prized in non-Western cultures more highly than it is in Western.⁴⁷ Descriptions of improvisation often rehearse the atomising, parsing strategies found in definitions of indeterminacy. Patricia Shehan Campbell notes the existence of hierarchised taxonomies of improvisation.⁴⁸ Seemingly aligned with this rather scientific

⁴² Cornelius Cardew, ‘Towards an Ethic of Improvisation’, in Cornelius Cardew, *Cornelius Cardew: A Reader: A Collection of Cornelius Cardew’s Published Writings*, ed. Edwin Prévost (Harlow: Copula, 2006), 124–32.

⁴³ Cardew, ‘Towards an Ethic’, 128.

⁴⁴ Nyman, *Experimental Music*, 137.

⁴⁵ Oliveros, ‘Harmonic Anatomy’, 53.

⁴⁶ Oliveros, ‘Harmonic Anatomy’, 55.

⁴⁷ Bruno Nettl et al., ‘Improvisation’, in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<http://www.oxfordmusiconline.com/subscriber/article/grove/music/13738pg2>> [accessed 2 January 2017].

⁴⁸ Patricia Shehan Campbell, ‘Learning to Improvise Music, Improvising to Learn Music’, in Gabriel Solis and Bruno Nettl (eds.), *Musical Improvisation: Art, Education, and Society* (Urbana: University of Illinois Press, 2009), 124.

approach, Gabriel Solis defines jazz according to degrees of freedom and improvisatory frameworks. But, crucially, he notes that any attempt to pin down an ontology of improvisation can be a distraction, as O’Grady had also observed.⁴⁹ The challenge of categorising improvisation preoccupies other thinkers as well, many of whom place it along a spectrum between now-outdated notions of the *werktreue* (as set out by Lydia Goehr)⁵⁰ and total performer freedom⁵¹ – a spectrum, again, between control and autonomy. Bruce Ellis Benson offers a detailed categorisation of improvisation, presenting a qualitative spectrum from least- to most-improvisatory.⁵² This spectrum, notably, deviates from previous attempts in that it seeks to embrace all types of music-making as existing within it, suggesting that performers are always improvising in some way. Solis offers a more specifically practical definition of improvisation in referring to ‘interactive frameworks’: performers interact within a work-as-framework (thus building any ontology, at least in part, on performers).⁵³ Even more importantly, Solis emphasises ‘the meaning those creations take on among the musicians and audiences’.⁵⁴ The interactive creation of meaning is, as argued in the Introduction (Chapter 1.4), essential to choral aleatorism; these views on improvisation are extremely helpful in considering aleatorism in such a way.

Solis’s idea of an interactive framework is supported elsewhere. Jazz scholar Ingrid Monson outlines ‘the principal musical resources used in jazz improvisation’.⁵⁵ These include

⁴⁹ Gabriel Solis, ‘Introduction’, in Gabriel Solis and Bruno Nettl (eds.), *Musical Improvisation: Art, Education, and Society* (Urbana: University of Illinois Press, 2009), 3.

⁵⁰ Lydia Goehr, *The Imaginary Museum of Musical Work: An Essay in the Philosophy of Music* (Oxford: Oxford University Press, 2008), 231–2.

⁵¹ See, for instance, Peter J. Martin, ‘Spontaneity and Organisation’, in Mervyn Cooke and David Horn (ed.), *The Cambridge Companion to Jazz* (Cambridge: Cambridge University Press, 2002), 138, or Nettl et al., ‘Improvisation’.

⁵² Bruce Ellis Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music* (Cambridge: Cambridge University Press, 2003), 26–30.

⁵³ Solis, ‘Introduction’, 3.

⁵⁴ Solis, ‘Introduction’, 3.

⁵⁵ Ingrid Monson, ‘Jazz Improvisation’, in Mervyn Cooke and David Horn (ed.), *The Cambridge Companion to Jazz* (Cambridge: Cambridge University Press, 2002), 114.

‘licks’, ‘forms and feels’, and other basic musical resources, outlined similarly to Kostka’s separation of elements of performer choice in indeterminacy.⁵⁶ She also writes of the “‘eternal cycle’” between newly created ideas and pre-composition in improvisation’.⁵⁷ Another writer on jazz improvisation, Paul F. Berliner, writes that ‘from the outset an artist’s ongoing personal performance history entwines with jazz’s artistic tradition, allowing for a mutual absorption and exchange of ideas’.⁵⁸ This mutuality contrasts improvisation from early definitions of aleatorism: recall Vinton’s relegation of improvisation to a subsidiary role in a work. But Becker, Berliner, and (especially) Monson permit an equality between ‘work’, tradition, and player, and understand that freedom and restrictions are mutually delimiting. Taking this collaborative model still further, Benson applies ‘an improvisational model of music, one that depicts composers, performers, and listeners as partners in dialogue’.⁵⁹ Within this bounded structure, agency is distributed fluidly between composer and performer (among other parties), and it is recognition of this collaboration that marks so much thought on jazz improvisation.

Dana Reason offers just such thought, and dwells heavily on the performers themselves. She evokes contemporary artist David Rokeby’s notion of ‘navigation’ to frame ‘a musical experience as a mutable, inclusive environment where individual input can be accommodated and welcomed in the most literal sense’.⁶⁰ ‘Navigation’ occurs along decidedly postmodern lines: ‘by problematizing any centrally codified project of improvisation’, what emerges among practitioners is, essentially, intersubjectivity.⁶¹ In less abstract terms, improvisatory agency can be couched in

⁵⁶ Monson, ‘Jazz Improvisation’, 114.

⁵⁷ Monson, ‘Jazz Improvisation’, 114.

⁵⁸ Paul F. Berliner, *Thinking in Jazz: The Infinite Art of Improvisation* (Chicago: University of Chicago Press), 59.

⁵⁹ Benson, *The Improvisation of Musical Dialogue*, x.

⁶⁰ Dana Reason, “‘Navigable Structures and Transforming Mirrors’: Improvisation and Interactivity”, in Daniel Fischlin and Ajay Heble (ed.), *The Other Side of Nowhere: Jazz, Improvisation, and Communities in Dialogue* (Middletown, CT: Wesleyan University Press, 2004), 72.

⁶¹ Reason, “‘Navigable Structures’”, 75.

social considerations. Michael Snow observes that ‘improvisation’ is ubiquitous – in conversation, in daily actions – and that this intuitive quality marks the best musical improvisation.⁶² Ali Jihad Racy, a scholar and improviser, approaches his practice as being personal *and* cultural:⁶³ the person is musically embedded in a larger context. The deeply human, intuitive nature of improvisation is perhaps best summarised by Pauline Oliveros: ‘In this universe – and perhaps many others – life forms, matter and energy are constantly interacting to promote flow or movement from one moment to next. This is improvisation’.⁶⁴

This focus on agency keeps with Solis’s suggestion that improvisation study reflects the shifting musicological zeitgeist towards the ‘new musicology’ and ‘musicking’.⁶⁵ Social-justice priorities, and a democratic approach to music-as-participatory, mark the improvisation thinking of Oliveros and George E. Lewis, another performer-composer-writer and a central figure in current thought on improvisation. Though their respective feminist and Afrological perspectives are not the focus here, the liberatory qualities they propound are attractive and offer useful justifications for the focus and philosophical orientation of this project. Oliveros contends that ‘[i]mprovising with women brings about a feeling of kinship, collaboration, and cooperative listening. [...] I feel that I have been heard and included in consciousness as a collaborator rather than regarded as an intrusive competitor’.⁶⁶ She contrasts this emotive engagement with ‘cool’, a term she associates with non-emotive, virtuosity-fixated masculinity.⁶⁷ Much choral aleatorism

⁶² Michael Snow, ‘A Composition on Improvisation’, in Daniel Fischlin and Ajay Heble (ed.), *The Other Side of Nowhere: Jazz, Improvisation, and Communities in Dialogue* (Middletown, CT: Wesleyan University Press, 2004), 49.

⁶³ Ali Jihad Racy, ‘Why Do They Improvise? Reflections on Meaning and Experience’, in Gabriel Solis and Bruno Nettle (eds.), *Musical Improvisation: Art, Education, and Society* (Urbana: University of Illinois Press, 2009), 313.

⁶⁴ Oliveros, ‘Harmonic Anatomy’, 50.

⁶⁵ Solis and Nettle (eds.), *Musical Improvisation*, 8.

⁶⁶ Oliveros, ‘Harmonic Anatomy’, 55.

⁶⁷ Oliveros, ‘Harmonic Anatomy’, 58.

pursues a different skill set to that required by this kind of virtuosity (as demonstrated below, Chapter 2.4).

Lewis dwells more explicitly on a social agenda, contrasting the ‘Afrological’ perspective of jazz improvisation with experimental music’s ‘Eurological’ orientation.⁶⁸ His argument proceeds from the assertion that defining improvisatory music as beginning mid-century reinforces narrow, Western narratives.⁶⁹ Two of the ways in which Lewis elaborates further are relevant here, and will come to bear on methodological issues later. First, he cites psychologist Phillip Johnson-Laird’s argument that improvisation emerges from a vocabulary of motifs; he states that, while this theory denies ‘creative agency’,⁷⁰ its opposite, an improvisatory practice that expunges “‘known’ elements’ (the Eurological aim), denies the power of memory.⁷¹ Whereas Cage argued that memory and habit stymied performers’ discovery of new ideas, the jazz tradition in which Lewis participated used the rigours of practice and familiarity to expand the creative potentialities of a musical idea.⁷² Put differently, ‘[i]t is impossible to escape the influence of the past in the improvisations of the present’.⁷³ Physical and connotative memory irrevocably humanise improvisatory performance.

The second of Lewis’s particularly useful contributions follows his idea that ‘the Eurological notion of pure spontaneity in improvisation fails to account for [the] temporally multilaminar aspect of an improvisation’.⁷⁴ Notes, the ideas and connotations behind them, the

⁶⁸ George E. Lewis, ‘Improvised Music After 1950: Afrological and Eurological Perspectives’, in Daniel Fischlin and Ajay Heble (ed.), *The Other Side of Nowhere: Jazz, Improvisation, and Communities in Dialogue* (Middletown, CT: Wesleyan University Press, 2004), 131–62.

⁶⁹ Lewis, ‘Improvised Music after 1950’, 132.

⁷⁰ Lewis, ‘Improvised Music after 1950’, 146.

⁷¹ Lewis, ‘Improvised Music after 1950’, 146–7.

⁷² George E. Lewis, *A Power Stronger Than Itself: The AACM and American Experimental Music* (Chicago: University of Chicago Press, 2008), 363.

⁷³ Benson, *The Improvisation of Musical Dialogue*, 136.

⁷⁴ Lewis, *A Power Stronger Than Itself*, 148.

memories behind those, and so forth, are all simultaneously present in improvised music. This notion strongly refutes any segregation between improvised content and ‘deeper’ levels of musical structure. Lewis contends that the musical level of improvisation is itself multilaminar; it should not be understood as hierarchically lesser than any other musical elements.⁷⁵ The presence and interaction of these layers becomes a topic of extended discussion in the case studies below (Chapters 5 and 6); for now, Lewis’s argument is important because of the significance it gives to the improvisatory actions of performers.

Approaching improvisation as a social practice has practical ramifications. Enlisting Solis’s arguments, I have staked out improvisational music as creating performed, interactive meaning. Following on this, Thomas Turino, a musicologist, anthropologist, and improviser, defines a ‘piece’ as ‘a platform for individual and group play rather than an art object to be faithfully reproduced.’⁷⁶ This comment further broadens the ontology of a piece using improvisation (and, I would argue, aleatorism by extension), and prioritises the views of those who play in considering and creating that ontology. Recalling Lewis’s idea of memory, Oliveros comments that the performer draws on their experience to be ‘at once the composer, player, and interpreter’ of music.⁷⁷ Reason argues that musical meaning, in improvisatory music, originates from the bodies and behaviours (musical and non-musical) of improvisers.⁷⁸ Performers can ‘reveal themselves, [and] share their embodied experiences’, creating a piece on multiple levels through shared embodiment.⁷⁹ The element of sharing is more present in improvised music than

⁷⁵ Lewis, ‘Improvised Music After 1950’, 148.

⁷⁶ Thomas Turino, ‘Formulas and Improvisation in Participatory Music’, in Gabriel Solis and Bruno Nettl (eds.), *Musical Improvisation: Art, Education, and Society* (Urbana: University of Illinois Press, 2009), 104.

⁷⁷ Oliveros, ‘Harmonic Anatomy’, 64.

⁷⁸ Reason, “‘Navigable Structures’”, 73

⁷⁹ Reason, “‘Navigable Structures’”, 78.

other types, writes Bruno Nettle.⁸⁰ For Racy, these interactions are propelled by ‘emotive content’,⁸¹ further drawing aleatory performance back from the realm of depersonalisation.

A further practical consequence of prioritising the performance of improvisatory music is a need to consider how it is learned. Practical approaches to aleatorism occasionally touch on pedagogy and the rehearsal process. Campbell highlights a view that improvisational ability is acquired, and therefore unteachable.⁸² By contrast, Nyman’s description of experimental music dwells heavily on the ‘rehearsal’ processes of various ensembles, including Music Electronica Viva, which acted as a sort of ‘meeting place’ for diverse musicians,⁸³ and the Scratch Orchestra, as mentioned. This small sample of perspectives demonstrates the importance of performance in the study of improvisation/aleatorism, and points the way towards methodological priorities of inductive, performer-based research and analysis (discussed fully in Chapter 4).

Setting out the parameters of aleatorism is of more than semantic interest: it reinforces the objectives of the project at hand. What aleatorism looks like, in practice, will be detailed more below; what it fundamentally entails, for my purposes, is a process whereby meaning (or a meaningful experience) is created through the improvisatory interaction of individuals. Those individuals include performers, composers, and potentially other parties (audience, past teachers or practitioners, etc.). Their experiences, emotions, intentions, and approaches mingle and interact. Situating this project’s area of focus according to the divide between improvisation and aleatorism affords further opportunity to assert a philosophical orientation: I both define, and empirically approach, aleatorism and its performance as improvisatory. Certain genres have a historical claim to the term ‘improvisation’, often on account of the greater freedoms assumed by their performers.

⁸⁰ Solis and Nettle (eds.), *Musical Improvisation*, xii.

⁸¹ Racy, ‘Why Do They Improvise?’, 315.

⁸² Campbell, ‘Learning to Improvise Music’, 122.

⁸³ Nyman, *Experimental Music*, 128.

This fact partially dictates my use of ‘aleatorism’ rather than ‘improvisation’. But aleatorism is nevertheless reliant on improvisatory processes, in terms of both the very real creativity it requires and its human-based participatory nature. Approaching it as being closely related to improvisation opens up a paradigm (like Oliveros’s and Lewis’s) that prioritises a human-centred approach over a depersonalised one.

2.3 Wider Aleatory Practice

Christopher Fox observes that musical histories are ‘contingent on the perspectives adopted by the writers who fashion them and on the contexts in which the histories are recounted’.⁸⁴ One perspective to adopt in approaching the history of aleatorism in practice can be traced along the same lines as its philosophical history of agency, as outlined above. The progression from Cagean indeterminacy to the free improvisation of Oliveros and others is neatly rendered according to the efforts of its practitioners by Feisst, in her essay ‘Losing Control: Indeterminacy and Improvisation in Music since 1950’.⁸⁵ In this account, the loosening of composers’ control (at least, notational control) began after World War II; improvisation and aleatorism ‘seemed to threaten the conventional musical work, its structure, form, notation, and permanence’ on all fronts, including ‘collective compositions and improvisations, chance music, “graph” and text compositions’, among other approaches.⁸⁶ Reginald Smith Brindle proposes that the musical ruptures of the 1950s were as much a response to the Atomic age as serialism was a post-war ‘artistic renewal’ earlier.⁸⁷ In both instances, the musical manifestations of old ideologies were purportedly shed; what

⁸⁴ Christopher Fox, ‘Why Experimental? Why me?’ in James Saunders (ed.), *Ashgate Research Companion to Experimental Music* (Farnham: Ashgate, 2009), 9.

⁸⁵ Feisst, ‘Losing Control’.

⁸⁶ Feisst, ‘Losing Control’, 1.

⁸⁷ Reginald Smith Brindle, *The New Music: The Avant Garde since 1945*, 2nd edn. (Oxford: Oxford University Press, 1987).

aleatorism set out to achieve, and whether it did so, can be investigated via the matter of performer agency.

Feisst's essay cogently sets out four strands of aleatorism's development. These roughly delineated groups of composers and works offer a useful structure for outlining aleatory practice. As with her account, the discussion below is composer-centric; rather than diminishing the importance of performers, however, this approach allows focus on the creative work of those who either performed themselves, or acted as instigators and epicentres of types of aleatory practice. My reliance on Feisst's four-stage division of those works – Boulez's aleatorism, open forms, the experimental movement, and meditative movement, all following on from Cage's innovations⁸⁸ – exposes another risk: the arbitrary and reductive taxonomisation of works, as I have argued, occurs throughout definitions of aleatorism and indeterminacy. To be clear, however, it is employed here only as a useful expedient.

Cage's early innovations were not entirely without precedent, though the source of that precedent is not always obvious or predictable. Feisst comments on the long history of improvisation and its relationship to composition, citing Schoenberg's view that traditional composition is 'slowed-down improvisation'.⁸⁹ Doğantan-Dack comments that, historically, 'composing and performing music were not [always] regarded as clearly differentiated pursuits'.⁹⁰ These connections did not assuage the general feeling that Cagean indeterminacy was in conflict with traditional compositional techniques.⁹¹ Cage's ideas had sources outside of traditional notions about improvisation. For instance, he suggested that his ideas were inherited from the

⁸⁸ Feisst, 'Losing Control', 1.

⁸⁹ Feisst, 'Losing Control', 1.

⁹⁰ Doğantan-Dack, Mine, "'Phrasing – the Very Life of Music": Performing the Music and Nineteenth-Century Performance Theory', *Nineteenth-Century Music Review*, 9 (2012), 8.

⁹¹ Feisst, 'Losing Control', 1.

indeterminate instrumentation of Bach's *The Art of Fugue*.⁹² Other antecedents include the vogueish dice games (the *Musikalisches Würfelspiel*; see Figure 2.1) of the Classical period, whose use of dice to dictate the order of 'cells' foretells both Cagean compositional procedures and the use of the Latin *alea* by Boulez.⁹³

Figure 2.1, *Musikalisches Würfelspiel*, attributed to Mozart.⁹⁴



But perhaps a better precedent is set by Cage's proto-experimentalist compatriots, Cowell and Ives. Ives's experimentations included indeterminate numbers of repeats in works like *The Cage* (1906).⁹⁵ Cowell's 1935 *Mosaic Quartet* allows the movements to be ordered at the performers' discretion, foreshadowing later open form compositions.⁹⁶ These early instances of aleatorism entrust performers with determining proportion and large-scale ordering, but not to produce or alter musical material itself.

A wider variety of responsibility-sharing is found in the early ventures into performed indeterminacy, undertaken by the New York School (Cage, Feldman, Wolff, and Earle Brown

⁹² Feisst, 'Losing Control', 2.

⁹³ Feisst, 'Losing Control', 3.

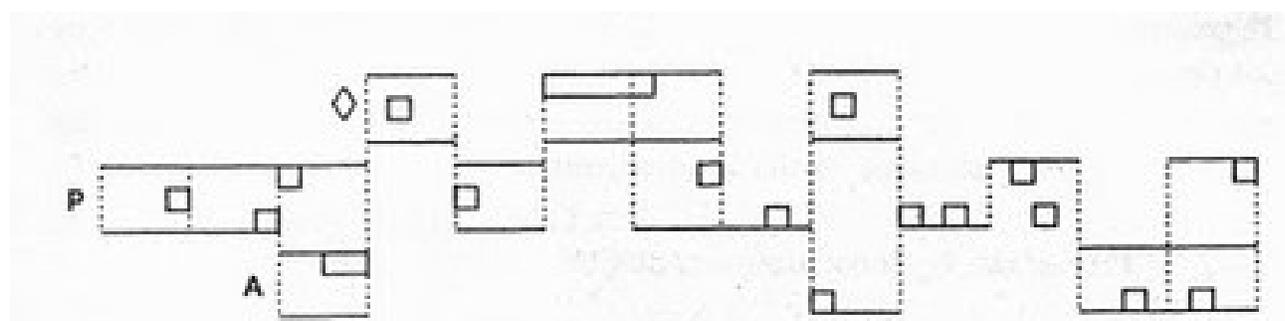
⁹⁴ Wolfgang Amadeus Mozart (attr.), *Musikalisches Würfelspiel* K. 516f, *International Music Score Library Project* (1787) <<https://imslp.org/wiki/Special:IMSLPImageHandler/20432>> [accessed 13 March 2018].

⁹⁵ Charles Ives, *114 Songs for voice and piano* (Bryn Mawr: Merion Music, 1935).

⁹⁶ Feisst, 'Losing Control', 4.

(1926–2002)). Cage had produced several of the most important works composed through chance procedures, including his *String Quartet in Four Parts* (1949–50) and the *Concerto for Prepared Piano* (1950–51), and, as discussed, was the central figure in early performed indeterminacy. This latter approach, however, was in fact instigated by Feldman.⁹⁷ Feldman's earliest score of this type was *Projection I* (1950) for solo cello, which also initiated his own and others' graphic approach to scoring (Figure 2.2).⁹⁸

Figure 2.2, Feldman, *Projection I* for solo cello, score.⁹⁹



Here, Feldman indicates duration and timbre, but only dictates register generally. Another work which influenced Cage was *Extensions I* for violin and piano (1951), which opened up performer choice in terms of sound repetitions, in addition to specific pitch.¹⁰⁰ Feldman largely abandoned graphic scoring after 1953,¹⁰¹ but soon thereafter produced works that specified pitch but not duration, including the *Piece for Four Pianos* (1957; Figure 2.3), which relates crucially to two of his major choral works (discussed below, Chapter 2.4).

⁹⁷ David Nicholls, 'Towards Infinity: Cage in the 1950s and 1960s', in David Nicholls (ed.), *The Cambridge Companion to John Cage* (Cambridge, Cambridge University Press, 2002), 102.

⁹⁸ Johnson, 'Feldman'.

⁹⁹ Morton Feldman, *Projection I: for solo cello* (New York: Edition Peters, 1962).

¹⁰⁰ James Pritchett, Laura Kuhn, and Charles Hiroshi Garrett, 'Cage, John', in *Grove Music Online, Oxford Music Online*, 2nd edn. (2012) <<https://doi.org/10.1093/gmo/9781561592630.article.A2223954>> [accessed 14 March 2018].

¹⁰¹ Johnson, 'Feldman'.

Figure 2.3, Feldman, *Piece for Four Pianos*, p. 1 of score.¹⁰²



In works such as this, Feldman sought to allow ‘each instrument [to live] out its own individual life’, within his idea of ‘soundworlds’ I have referred to previously.¹⁰³ This comment hints at a kind of subjectivity: in leaving the performer to determine duration, Feldman capitalises on the inevitable – and fruitful – disparity of individual decision-making processes. Appearing at around the same time as *Piece for Four Pianos*, Cage’s *Concert for Piano and Orchestra* (Figure 2.4)) is clearly influenced by Feldman.

¹⁰² Morton Feldman, *Piece for Four Pianos* (New York: Edition Peters, 1957).

¹⁰³ Johnson, ‘Feldman’.

Figure 2.4, Cage, *Concert for Piano and Orchestra*, orchestral trumpet parts.¹⁰⁴

The image shows a handwritten musical score for two orchestral trumpet parts. The top staff is marked with $\frac{1}{2}$ V. and NON VIB. and contains various notes, rests, and dynamic markings like ACCEL. and NON VIB. The bottom staff is marked with $\frac{1}{2}$ V. FLUTT. and NON VIB. and contains notes, rests, and dynamic markings. There are also some numerical markings like 3 and 4 and a circled D on the left side.

The events depicted in this orchestral part may be performed in any order and any number of times, including not at all.¹⁰⁵ The work opens the doors of performer decisions (of event-order and repetition) while assuming greater control over the nature of each event's execution. The *Concert*, among his most important performed-indeterminate works, represents well Cage's desire to demand depersonalised, shared compositional responsibility: Feisst contends that, while the score appears to call for improvisation, Cage in fact intended for it to be performed with a depersonalised discipline within a clear framework that Cage had 'designed'.¹⁰⁶ This ambition is clearly mingled with an ongoing exploration of sound itself.

Cage and Feldman can be seen as initiating the experimental music movement. Feisst also applies the term 'experimental' to Cardew, Richard Teitelbaum (b. 1939), Frederic Rzewski (b.

¹⁰⁴ Published as John Cage, *Solo for Trumpets in E \flat , D, C, and B \flat* (New York: Edition Peters, 1957–8).

¹⁰⁵ John Cage, *Concert for Piano and Orchestra* (New York: Edition Peters, 1957–8).

¹⁰⁶ Feisst, 'Losing Control', 2.

1938), Alvin Curran (b. 1938), and their associates, focusing on Teitelbaum's electronic experimentation in 'real time composition'.¹⁰⁷ Fundamental to these composers' works is the premise that 'improvisation and musical experiments [...] not only share common connotations, but they are often and in various ways related to one another (if, for instance, their outcome is unpredictable)'.¹⁰⁸ Such works might include Teitelbaum's 'biofeedback' piece *In Tune*, which dwells heavily on the emotional agency and physicality of its performers.¹⁰⁹ Nyman's book draws in a wider range of composers, all of whom have their own ethos and practical approach to the human experience. One notable approach involved making art out of the minutiae of that experience, a shift in focus from Cage's depersonalised theatrical pieces and 'happenings'.¹¹⁰ George Brecht (1926–2008) focused on 'the single, observed occurrence on the street'.¹¹¹ Many of his pieces comprised a small block of textual instructions ('notecard' pieces), ranging from the game-like specificity of *Spanish Card Piece for Objects* (1959/60) to the opaque freedom of *Two Exercises* (1961; Figures 2.5a and 2.5b).¹¹²

¹⁰⁷ Feisst, 'Losing Control', 5.

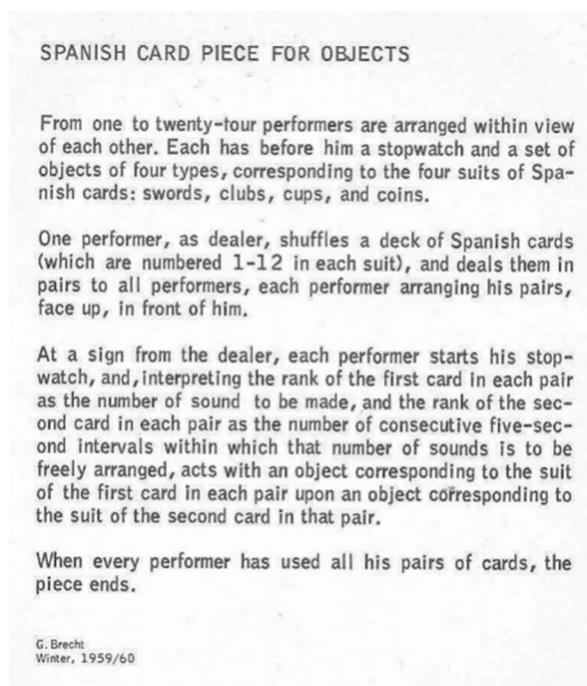
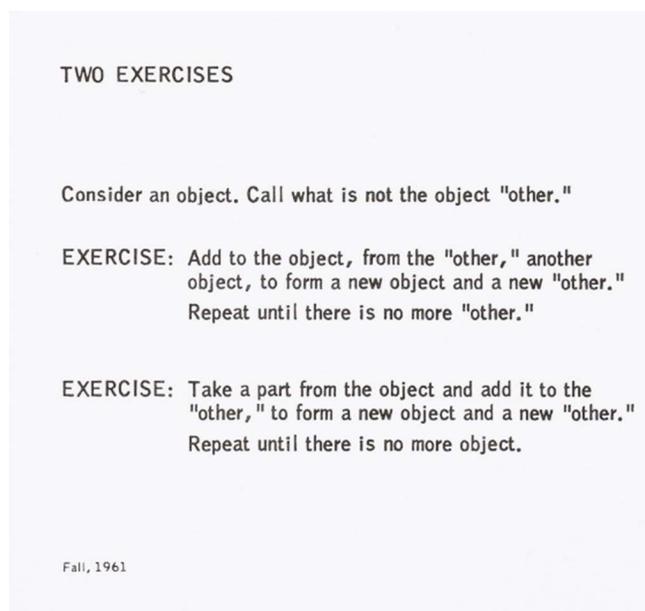
¹⁰⁸ Feisst, 'Losing Control', 5.

¹⁰⁹ Feisst, 'Losing Control', 5.

¹¹⁰ Nyman, *Experimental Music*, 73.

¹¹¹ Quoted in Nyman, *Experimental Music*, 74.

¹¹² Nyman, *Experimental Music*, 74 and 77.

Figure 2.5a, Brecht, *Spanish Card Piece for Objects*.¹¹³Figure 2.5b, Brecht, *Two Exercises*¹¹⁴

¹¹³ George Brecht, *Spanish Card Piece for Objects* (1959), reproduced in Michael Nyman, *Experimental Music: John Cage and Beyond* 2nd edn. (Cambridge: Cambridge University Press, 1999), 74.

¹¹⁴ Brecht, George, *Two Exercises* (1961), reproduced in Michael Nyman, *Experimental Music: John Cage and Beyond* 2nd edn. (Cambridge: Cambridge University Press, 1999), 77.

Pieces like these and others from the Fluxus movement set processes in motion, but they are almost entirely dedicated to the actions and decisions of performers, who dictate much about the performance of the piece. These pieces obviate certain questions of composer control by forsaking traditional musical notation – or, indeed, music as traditionally conceived – altogether. Another significant contributor to the body of ‘notecard’ pieces was LaMonte Young (b. 1935), whose output ranged from the deliberately absurd *Piano Piece for David Tudor #1* (1960), instructing the performer to attempt to feed hay to a piano, to his ‘audience pieces’, which corrode the traditional partitions between audience and performers.¹¹⁵ The humanity of how these pieces are experienced is confronted by composer Dick Higgins (1938–1998), for whom ‘boredom, violence, danger, destruction, failure, and meaninglessness’ become so much a part of his pieces that he ‘insisted’ upon endangering himself in their performance.¹¹⁶ As these works become more about performance and process than any ontologically codified work, the previously strong barriers between performer, composer, and audience are blurred to the point that creation of the piece is a shared endeavour.

A considerably more restricted approach to aleatorism is found in Feisst’s next group, the European modernists. Following on Cage’s and Boulez’s encounter in Paris, aleatorism was adopted (and given the name used here).¹¹⁷ Feisst observes the marked difference between the approach of Boulez, whose *Third Piano Sonata* (1955–57) presents performers with fairly limited options of mobile sections, and Karlheinz Stockhausen (1928–2007), whose *Klavierstück XI* (1956) provides greater freedom and asks ‘the performer to play the sections he accidentally looks

¹¹⁵ Nyman, *Experimental Music*, 84–5.

¹¹⁶ Nyman, *Experimental Music*, 86.

¹¹⁷ Feisst, ‘Losing Control’, 3.

at'.¹¹⁸ Notated musical gestures are presented on a large blank field, their positions not denoting how they relate to each other (Figure 2.6).

Figure 2.6. Stockhausen, *Klavierstück XI*, score extract.¹¹⁹

The image displays two musical staves from Karlheinz Stockhausen's *Klavierstück XI*. The top staff is in treble clef with a key signature of one sharp (F#). It features a complex rhythmic pattern with markings for '3:2' and '5:4'. The bottom staff is in bass clef with a key signature of one sharp (F#). It includes markings for '7:8' and '5:6'. The piece is marked 'T° 6' and 'p' (piano). The bottom staff has markings for 'Trem.', 'beschleunigen', 'verlangsamen', and 'äußerst lang / binden'. The piece is marked 'T° 2' and 'p' (piano). The bottom staff has markings for 'Trem.', 'beschleunigen', 'verlangsamen', and 'äußerst lang / binden'.

¹¹⁸ Feisst, 'Losing Control', 3.

¹¹⁹ Karlheinz Stockhausen, *Klavierstück XI* (London: Universal, 1957).

Figure 2.7, Schnittke, *Pianissimo*, violin 1–4 parts, opening.¹²⁰

The image shows a musical score for the opening of Schnittke's *Pianissimo*. At the top, there is a bracket labeled "sempre 4''" with a box containing the number "2" and another box containing the number "3". Below this, the "Tam - Tam" part is written on a single staff with the instruction "(lasciar vibrare)" above it, and "ppp sempre" below it. The "Violini" part consists of four staves, numbered 1 to 4. The instruction "non vibrato" is written above the first violin staff. The score shows a series of notes and rests across the staves, with vertical dashed lines indicating specific time points.

A sort of accidental agency, a partly randomised freedom, is at work in *Klavierstück XI*. Iannis Xenakis (1922–2001), who used ‘indeterminacy’ strictly to indicate music composed by formula and probability rather than composer choice,¹²¹ contended that such work was not truly ‘aleatorism’; his pedantic insistence was that the ‘alea’ root must only be applied to questions of probability, as it is in science or mathematics.¹²² Although European aleatorism did not take up Xenakis’s view, it still took on a generally limited form. Alfred Schnittke (1934–1998) explored aleatorism in several major works. In *Pianissimo* (1970; Figure 2.7), duration is notated as

¹²⁰ Alfred Schnittke, *Pianissimo* (London: Universal, 1970).

¹²¹ Bálint András Varga, *Conversations with Iannis Xenakis* (London: Faber and Faber, 1996), 76.

¹²² Varga, *onversations*, 55.

approximate, though within a careful time frame, while all other parameters are controlled. In his Concerto for oboe, harp, and strings (1972; Figure 2.8), there is a point near the end where the strings are free to progress through short gestures at their own speed. This moment is the only instance of aleatorism in the entire piece, but it does seem to draw more heavily on a Cagean or Feldman-esque sense of freedom than *Pianissimo* had done. This aesthetic is taken further in the *Serenade* (1972; Figure 2.9), in which cells are further separated and repeated at will for approximate durations, irrespective of other performers' activity (until a collective signal to cease).

Figure 2.8, Schnittke, Concerto for oboe, harp, and strings, string parts, p. 22 of score.¹²³

The image shows a page of a musical score for string parts, specifically page 22 of the score for Schnittke's Concerto for oboe, harp, and strings. The score is written for five string parts: Violin I (Vni I), Violin II (Vni II), Viola (Vle), Violoncello (Vcl), and Contrabasso (Cb.). The music is in a complex, rhythmic style characteristic of Schnittke, featuring many sixteenth and thirty-second notes. The score includes various performance instructions and dynamics. Key markings include 'Tutti: ord.' at the beginning, 'sul pont.' for the Violin I part, and 'col legno' for the Violin II, Viola, and Violoncello parts. Dynamics range from fortissimo (ff) to piano (p). There are also markings for 'pizz. ord.' (pizzicato ordered), 'arco' (arco), and 'vibr. ord.' (vibrato ordered). The score is divided into measures, with first, second, and third endings indicated by numbers 1, 2, and 3. The page number 51 is visible in the top right corner.

¹²³ Alfred Schnittke, *Concerto for oboe, harp, and strings* (London: Universal, 1972).

Figure 2.9, Schnittke, *Serenade*, opening.¹²⁴

1
 Clarinetto in sib *ff*
 Violino *ff*
 Contrabbasso *ff*
 Pianoforte *ff*
 Perc. *f*
 2 Piatti
 2 Tom-tom
 Tamburo
 Gran cassa

Musical score for the opening of Schnittke's *Serenade*. The score is written for Clarinetto in sib, Violino, Contrabbasso, Pianoforte, and Percussion. The Clarinetto part begins with a circled '1' and a *ff* dynamic. The Violino part starts with a *ff* dynamic and includes a section marked 'a tempo'. The Contrabbasso part features a *gliss* marking. The Pianoforte part includes a *glia* marking. The Percussion part is marked *f* and includes instructions for 2 Piatti, 2 Tom-tom, Tamburo, and Gran cassa. The score is divided into measures with various time signatures and includes performance markings such as *ff*, *f*, *a tempo*, and *gliss*.

Lutosławski took up aleatorism in a slightly different way. His first such effort was *Jeux Vénitiens* (1961), which was inspired by, and later presented to, Cage.¹²⁵ In the first movement, performers move between large blocks of music in order – a distinctive presentation of material, but only aleatory in that instrumentalists may progress through their notated lines at varying speeds. The second movement presents the conductor and winds with the task of accompanying the first flute’s free line, a concept not dissimilar to traditional recitative but notated in a different way. Lutosławski’s more in-depth exploration of aleatorism is perhaps best exemplified in his choral-orchestral score *Trois poèmes d’Henri Michaux* (1962–63), discussed below (Chapter 2.4). His control of performers’ activity in aleatorism has been termed ‘aleatory counterpoint’, a technique always treated as subservient to the larger objectives of the piece.¹²⁶ I argue, however, that *Trois poèmes*’s fracture of choral forces moves towards a sense of performed subjectivity.

Penderecki is another composer whose approach to aleatorism is perhaps best exemplified in his choral writing (Chapter 2.4). In orchestral works like *Polymorphia* (1961), he built upon ideas of graphic notation, creating his own carefully notated system (Figure 2.10) which, despite the ‘fields’ of sound it presents, also keeps relatively tight reins on performers’ activities.

¹²⁴ Alfred Schnittke, *Serenade*, (London: Universal, 1972).

¹²⁵ Charles Bodman Rae, ‘Lutosławski, Witold’, in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<https://doi.org/10.1093/gmo/9781561592630.article.17226>> [accessed 14 March 2018].

¹²⁶ Rae, ‘Lutosławski’.

Figure 2.10, Penderecki, *Polymorphia*, p. 23 of score.¹²⁷

The musical score for Figure 2.10 is organized into measures 63 through 67. It features three main parts: Violin (Vn), Viola (Vc), and Violoncello (Vb). The Violin part consists of two systems of staves, with the first system covering measures 63-64 and the second system covering measures 65-67. The Viola and Violoncello parts also consist of two systems of staves, with the first system covering measures 63-64 and the second system covering measures 65-67. The score includes various dynamic markings such as *ff*, *sf*, and *ord. nv*, as well as performance instructions like *sul D e G* and *sul G e C*. The Violin part includes fingerings (1-12 and 13-24) and a *ff* marking. The Viola part includes fingerings (1-4 and 5-8) and a *ff* marking. The Violoncello part includes fingerings (1-6 and 1-4, 5-8) and a *ff* marking. The score is divided into measures 63-67, with measure numbers 15'', 10'', and 5'' indicated at the bottom of the staves.

^{*)} vgl. Anmerkung S. 22 · cp. note on page 22 · cf. la remarque à la page 22

¹²⁷ Krzysztof Penderecki, *Polymorphia for 48 Stringed Instruments* (Celle: Moeck, 1961).

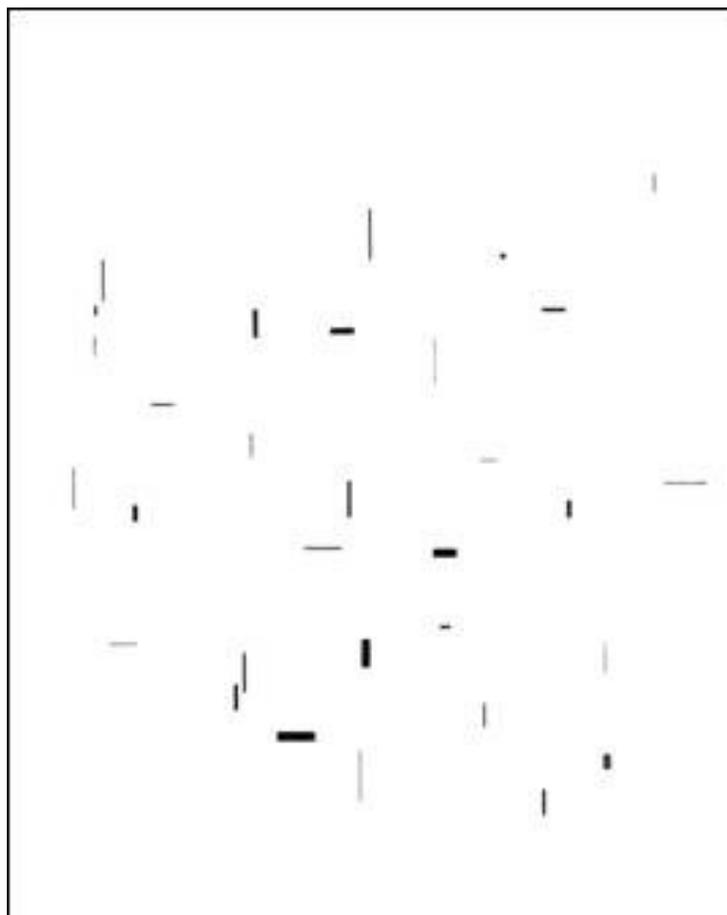
These graphic expansions of traditional notation appear throughout his works, including the choral pieces discussed below.

Feisst's next grouping of aleatory works includes compositions using 'open form' by composers such as Lukas Foss (1922–2009) and Earle Brown (1926–2002). Foss employed open forms that comprised musical modules being navigated by different performer groups, a less-improvisatory method born of that composer's work with his Improvisation Chamber Ensemble.¹²⁸ Oliveros notes that this ensemble did not actually improvise in concert, instead performing notations of previous improvisations.¹²⁹ Earle Brown's *December 1952* (Figure 2.11) is an important early score based entirely on graphics, and exemplifies one extreme of freedom given the performer.¹³⁰

¹²⁸ Raymond Yiu, 'Renaissance Man: A Portrait of Lukas Foss', *Tempo*, 221 (July 2002), 15–23 <<https://doi-org.ezproxy.bcu.ac.uk/10.1017/S004029820001562X>> [accessed 19 July 2017].

¹²⁹ Pauline Oliveros, 'Improvising Composition: How to Listen in the Time Between', in Gillian Siddall and Ellen Waterman (ed.), *Negotiated Moments: Improvisation, Sound, and Subjectivity* (Durham: Duke University Press, 2016), 77.

¹³⁰ Feisst, 'Losing Control', 4.

Figure 2.11, Brown, *December 1952*.¹³¹

Brown had a distaste for ‘chance music’, recognising the difference between human decision-making and chance.¹³² Indeed, both Cage and Brecht felt that Brown’s graphic scores were insufficiently indeterminate – either because they could be performed in inversion or retrograde (by viewing the image from different sides), a possibility seen as too traditional, or because the composer was too heavily involved in scoring decisions.¹³³ However, graphic scoring clearly leaves a great deal of room for its performers’ interpretative decisions. Writing soon after the zenith

¹³¹ Earle Brown, *December 1952* (1952), in *Folio* (Basel: Paul Sacher Foundation, 1952–3).

¹³² Feisst, ‘Losing Control’, 4.

¹³³ Kim, ‘The Formalisation of Indeterminacy’, 158–9.

of experimental music, Erhard Karkoschka observes that '[m]usical graphics, diametrically opposed to precise instructions as they are, strive to stimulate without constricting the imagination'.¹³⁴ Though he also acknowledges that graphic symbols often derive from, interact with, or are subordinate to traditional notation, it is the stimulative richness of graphic notation that sets it apart from the strong aural implications of traditional notational symbols.¹³⁵

Feisst begins the discussion of her final category, 'meditative music', with Young's musical interest in India, Japan, and Indonesia and the pieces that resulted.¹³⁶ She then moves on to Pauline Oliveros. Oliveros was steeped in Tai Chi, psychology, philosophy, and mythology, and these influences bore heavily on her improvisatory work.¹³⁷ Indeed, her focus shifted entirely towards improvisatory techniques in the middle of her career.¹³⁸ Alongside Oliveros's developments, minimalism emerged out of the growth of interest in non-European philosophies and meditation in mid-century American music. Nyman notes that composer Terry Riley (b. 1935) was rare among minimalists for his use of aleatorism, citing his additional work as a 'performer and improviser'.¹³⁹ Riley's *In C* (1964; Figure 2.12) is the most well-known of his works using improvisatory techniques.

¹³⁴ Karkoschka, Erhard, and Ruth Koenig, *Notation in New Music: A Critical Guide to Interpretation and Realization* (London: Universal, 1972), 77.

¹³⁵ Karkoschka and Koenig, *Notation in New Music*, 77.

¹³⁶ Feisst, 'Losing Control', 6.

¹³⁷ Feisst, 'Losing Control', 6.

¹³⁸ Timothy D. Taylor, 'Oliveros, Pauline', in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<https://doi.org/10.1093/gmo/9781561592630.article.20317>> [accessed 14 March 2018].

¹³⁹ Nyman, *Experimental Music*, 145.

Figure 2.12, Riley, *In C*, extract.¹⁴⁰

Though Riley's notation does not leave rhythm open, his sparse notation and the cells' undetermined repetitions leave open significant expressive and duration potential as performers create a meditative counterpoint.

2.4 Choral Aleatorism

The state and profile of aleatory choral composition relates closely to Feisst's categories, but only up to a point. Those categories are useful in helping to identify major figures and works of choral aleatorism; but the drivers of aleatorism, indeterminacy, and experimentalism produced relatively few choral works, the preponderance of choral aleatorism having appeared either after the mid-century heights of indeterminacy, or by figures who were not so strictly assigned to a 'school' as their more famous contemporaries. It is useful to identify and discuss the choral contributions of the major figures of Feisst's categories, wherever works and writings grappled with the challenges

¹⁴⁰ Terry Riley, *In C* (London: Celestial Harmonies/Temple Music, 1964).

of creating aleatorism. But these discussions give way to a wider view of the field, which includes the American composers writing largely for educational choirs, members of the Scandinavian avant-garde choral movement, and those composers who have built their innovations upon the choral tradition in Britain. A further deviation from Feisst's scheme is that the ultimate matter of concern here is practice and performance, rather than the aesthetic or philosophical motives of the composers in question.

Choral music tended to resist twentieth century innovations, its composers instead relying upon 'the harmonies and small forms of earlier centuries' or 'aleatoric [*sic*] and/or minimalist gimmicks [...] in unthreatening harmonic environments'.¹⁴¹ Even Cage, in his most significant choral work, *Hymns and Variations* (1979), returns to a hymn by William Billings (1746–1800).¹⁴² Vocal aleatorism from the New York School, and from composers associated with it, both foretold and later drew on a wide variety of indeterminate notation and styles. These works show the conservatism and cautious delegation of musical freedom to singers that would come to mark much choral aleatorism.

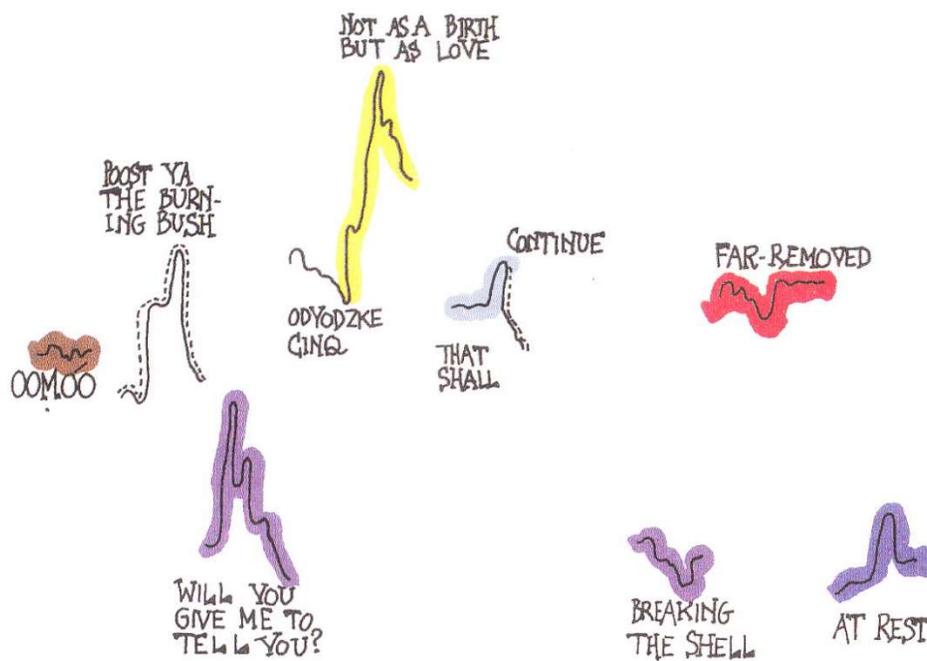
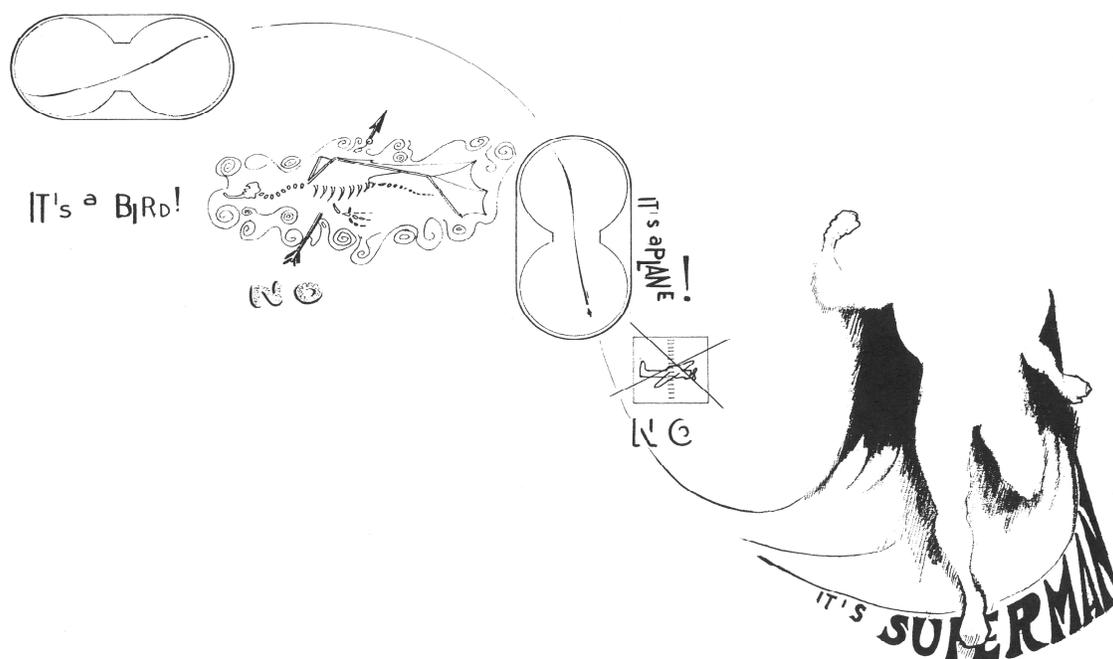
Two early solo vocal works offer a picture of the theatrical liberties aleatorism might offer, opening up new freedoms of interpretation and pitch without entrusting performers with decisions as to actual notes. Cage produced indeterminate works for solo voices more than vocal ensembles but foreshadowed significant later examples of graphic choral notation. Works such as *Aria* (1958; Figure 2.13a) enabled interpretative freedom along multiple parameters, including timbre and pitch. *Aria* was written for and inspired by Berberian, who also supplied the texts Cage used.

¹⁴¹ Nick Strimple, 'Choral Music in the Twentieth and Early Twenty-First Centuries', in de Quadros, ed., *The Cambridge Companion to Choral Music* (Cambridge: Cambridge University, 2012), 60

¹⁴² William Brooks, 'John Cage and History: Hymns and Variations', *Perspectives of New Music*, 31.2 (Summer 1993), 74–103 <<http://www.jstor.org/stable/833371>> [accessed 10 April 2017], 75–7.

Berberian's influence on contemporary vocal composition was considerable,¹⁴³ and her own compositional output contributed further to graphic vocal scores. Her *Stripsody* (1966; Figure 2.13b) exploits the potentialities of graphic scoring by drawing an array of connotative visual elements into proximity, a kind of pictorial postmodern polylogue. The cartoon-score by Eugenio Carmi emerged alongside Berberian's original performance, and has a place as a separate work of art, making *Stripsody* an important interdisciplinary collaboration between music and visual arts. Cage's *Songbooks* (1970; see extract from Volume I, Figure 2.13c) continued the freedom of graphic notation while incorporating the pitched cellular material of his *Concert for Piano and Orchestra*.

¹⁴³ Norderval, 'What We Owe to Cathy', 185.

Figure 2.13a, Cage, extract from *Aria*.¹⁴⁴Figure 2.13b, Berberian, extract from *Stripsody*.¹⁴⁵

¹⁴⁴ John Cage, *Aria* (New York: Edition Peters, 1958).

¹⁴⁵ Cathy Berberian, *Stripsody* (New York: Edition Peters, 1966).

Figure 2.13c, Cage, Solo for Voice 12 from *Songbook* volume I.¹⁴⁶

U L...I I-O

I J MUD-WISCONS I-U E-H GLORY (W)

SHERM IN FELD UND WALD SUR LE FEU AVEC DU BEURRE ERFREUEN SICH

THE COLD ASHES WATER A FICKE-FRECKLED WHO KNOWS HOW

A NAGA OR A MAGI, OR A YAKHA OR A YAKHI OR AN ASURA OR AN ASURI, A GARUDA OR A GARUDI, OR A KIMBARA OR A KIMARI, OR A MAHORAGA OR MAHORAGI, OR A GANDHARVA, OR A GANDHARVI, OR A BHUTA OR A BHUTI, OR A KUMBHANDA OR A KUMBHANDI, OR A PISARA, OR A PISARI, OR AN AUSTARAKI OR AN AUSTARAKI, OR AN APASMARI, OR AN APASMARI, OR A RAKSHASA, OR A RAKSHASI,

OR A DAKA, OR A DAKINI, OR AN ALLOHABA, OR AN ALLOHABA, OR A KATAPUTANA, OR A KATAPUTANI, OR AN AMANUSHYA, OR AN AMANUSHYI, FAR AND UNHEMMED AS IT IS WE EEN

Timbral improvisation is at the heart of these works, which dwell more heavily on extended techniques than improvisatory pitch manipulation and navigation (though other of Cage's solos do make more taxing demands in this regard).

The only one of Cage's several choral works to employ indeterminacy, *Four(2)* (1990) exemplifies the limited demands placed on choral ensembles in much aleatorism. *Four(2)* dwells

¹⁴⁶ John Cage, 'Solo for Voice No. 12', in *Songbook* Volume I (New York: Henmar Press, 1970), 43.

entirely on questions of timing, a strategy that seems to draw on the choral output of Feldman, discussed below. It requires singers to begin and end a limited gamut of pitches within a specific segment of the piece's overall timespan (Figure 2.14).

Figure 2.14, Cage, *Four(2)*, alto part.¹⁴⁷

FOUR²

0'00" ↔ 1'30"	1'00" ↔ 2'30"
2'25" ↔ 2'40"	2'35" ↔ 2'50"
4'30" ↔ 5'00"	4'50" ↔ 5'20"
4'55" ↔ 6'10"	5'50" ↔ 7'00"

¹⁴⁷ John Cage, *Four(2) for chorus* (New York: Henmar Press, 1990).

Feldman's choral output was greater than Cage's, but it explored similar sonic ideas and practical limitations. Between 1960 and 1986, Feldman produced 10 choral works, several of which included free timing. *The Swallows of Salangan* (1960) provides a sequence of pitches through which performers progress at their own pace (Figure 2.15a). Using similar notation, *Christian Wolff in Cambridge* (1963) leaves decisions of timing to the conductor, who dictates the duration of each chord (Figure 2.15b). *Chorus and Instruments II* (1967) shows a growing tendency to fully score parts (Figure 2.15c).

Figure 2.15a, Feldman, *The Swallows of Salangan*, opening.¹⁴⁸

The image shows a musical score for the opening of 'The Swallows of Salangan' by Morton Feldman. It consists of four staves, each representing a different vocal part: Soprano (S.), Alto (A.), Tenor (T.), and Bass (B.). The notation is in a free time signature, indicated by the absence of a time signature. The notes are scattered across the staves, with some notes marked with a plus sign (+) and a flat sign (b). The word 'CHORUS' is written vertically on the left side of the score, between the Alto and Tenor staves.

¹⁴⁸ Morton Feldman, *The Swallows of Salangan*, for chorus and instruments (New York: Edition Peters, 1962).

Figure 2.15b, Feldman, *Christian Wolff in Cambridge*, opening.¹⁴⁹

VERY SOFT THE CONDUCTOR DETERMINES THE DURATION (EXTREMELY SLOW) OF EACH CHORD.

The musical score consists of four staves. The top staff is in treble clef and contains a sequence of notes: G4, A4, B4, C5, B4, A4, G4. The second staff is in treble clef and contains notes: G4, A4, B4, C5, B4, A4, G4, F#4, G4, A4, B4. The third staff is in bass clef and contains notes: G3, A3, B3, C4, B3, A3, G3, F#3, G3, A3, B3. The bottom staff is in bass clef and contains notes: G3, A3, B3, C4, B3, A3, G3, F#3, G3, A3, B3.

Figure 2.15c, Feldman, *Chorus and Instruments II*, opening.¹⁵⁰

EXTREMELY QUIET

CHORUS AND INSTRUMENTS (II)

$\text{♩} = 54-63$ (♩ = ♩)

Morton Feldman

The musical score is for a chorus and instruments. It features six staves: Soprano (S), Alto (A), Tenor (T), Bass (B), Chimes, and Tuba. The tempo is marked 'EXTREMELY QUIET' and the time signature is 3/2. The score includes various musical notations such as notes, rests, and dynamic markings. The Soprano part starts with a whole note G4. The Alto part starts with a whole note G4. The Tenor part starts with a whole note G3. The Bass part starts with a whole note G2. The Chimes part starts with a whole note G4. The Tuba part starts with a whole note G2. The score is divided into measures by vertical bar lines.

¹⁴⁹ Morton Feldman, *Christian Wolff in Cambridge* (New York: Edition Peters, 1963).

¹⁵⁰ Morton Feldman, *Chorus and Instruments II* (New York: Edition Peters, 1967).

Between Cage's and Berberian's early vocal experiments and Feldman's body of choral works, two major avenues of choral aleatory freedom are laid out: timbral improvisation, and durational liberty with set pitch progressions. It is these parameters, and their limitations, that define most subsequent choral aleatorism. This fairly limited freedom may be due to the distrust in singers' musicianship, as commented upon by Pauline Oliveros, and previously cited in the Introduction (Chapter 1.3). The freedom of pitch and cell selection present in some of Cage's *Songbook* solos do not appear in later aleatory ensemble vocal writing; singers are generally entrusted only to progress through predetermined pitches, or to provide timbral effects through extended techniques. Notably, the examples above from Feldman's output also indicate a movement towards situating control of improvisatory elements with a conductor, a feature of much choral aleatorism.

Unsurprisingly, tighter conductorial control is present throughout most European choral aleatorism. This movement was foreshadowed by an American. An early example of choral aleatorism is Hovhaness's (1911–2000) *Magnificat* (1958), in which two brief passages of aleatorism (Figure 2.16) appear in an otherwise neo-Romantic work which uses a strongly European art-music traditional idiom.

Figure 2.16, Hovhaness, *Magnificat* movement, 11. 'Sicut Cervus Est', p. 35 of score.¹⁵¹

49 **Senza misura** - rapid but not together, continuously repeated for about 25"¹ (one great climax) **pp < fff > pp**

S. 1
A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

S. 2
A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

A. 1
A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

A. 2
A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

T. 1
8 A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

T. 2
8 A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

B. 1
A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

B. 2
A - bra - ham, et se - mi - ni e - jus in sae - cu - la.
A - bra - ham and his pos - ter - i - ty for ev - er - more.

¹⁵¹ Hovhaness, Alan, *Magnificat for Soli, Chorus, and Orchestra* (Frankfurt: Edition Peters, 1958).

One early critic observed that this ‘accident-music’ did not fundamentally alter the work’s conservatism.¹⁵² And indeed, this moment of aleatory freedom occurs only twice, briefly, and amid a work whose idiom is decidedly conservative.

The choral works of Penderecki present a similar stylistic anachronism but push the boundaries of choral aleatorism significantly. Though Penderecki was known for his use of neo-Romanticism, his choral works were nevertheless as significant to the development of choral music as works like *Polymorphia* were to the instrumental avant-garde. Nick Strimple posits that Penderecki’s impact upon choral aleatorism was greater than any of Cage’s innovations,¹⁵³ and that one of his largest works, the *St Luke Passion* (1963–66), is among the most significant contributions to twentieth-century music:¹⁵⁴

No one before had thought to follow simultaneously the logical consequences of Charles Ives, the impressionists, the serialists, Alois Hába, John Cage, Emil Burian, and other vocal experimenters, thereby liberating the chorus to all manner of expression.¹⁵⁵

Such liberations include reproducing instrumental sounds¹⁵⁶ and creating ‘flurries’ – ‘passages in which several parts are playing [or singing] varied fast figures simultaneously’.¹⁵⁷

These techniques of expressive freedom are further explored in the composer’s response to the atrocities at Auschwitz-Birkenau, *Dies Irae* (1967).¹⁵⁸ Recalling Hovhaness, or paralleling

¹⁵² Robert Evett, ‘Music of Alan Hovhaness’, *Notes*, 16.2 (March 1959), 323–4 <<http://www.jstor.org/stable/892768>> [accessed 15 April 2017], 232.

¹⁵³ Strimple, *Choral Music in the Twentieth Century*, 13.

¹⁵⁴ Strimple, ‘Choral Music in the Twentieth and Early Twenty-First Centuries’, 46.

¹⁵⁵ Strimple, *Choral Music in the Twentieth Century*, 125.

¹⁵⁶ Ray Robinson and Allen Winold, *A Study of the Penderecki St. Luke Passion* (Celle: Moeck Verlag, 1983), 57–9.

¹⁵⁷ Robinson and Winold, *A Study of the Penderecki St. Luke Passion*, 63.

¹⁵⁸ Wolfram Schwinger, *Krzysztof Penderecki: His Life and Work*, trans. By William Mann (London: Schott, 1989), 214.

Feldman, Penderecki frequently provides pitched ‘melodies’ with freedom of timing and repetition (Figure 2.17a). In Figure 2.17a, the conductor must necessarily control the progression through larger-scale events like the downward *glissando*, even as singers perform pitch sequences *ad libitum*. Similar limitations are present in un-sung vocal passages (Figure 2.17b); the composer’s pitch control is relinquished, but only through use of the speaking voice’s indefinite pitch.

Figure 2.17a, Penderecki, *Dies Irae*, soprano and alto parts, p. 15 of score.¹⁵⁹

A

ma - nu - ballistas *gliss*

ma - nu - ballistas *gliss*

ma - nu - bal - lis - tas *gliss*

trans - fos - sis *gliss*

trans - fos - sis *gliss*

trans - fos - sis *gliss*

77 *PPP*

¹⁵⁹ Krzysztof Penderecki, *Dies Irae: Oratorium ob memoriam in perniciem castris in Oświęcim necatorum inextinguibilem reddendam* (Celle: Moeck, 1967), 15.

Figure 2.17b, Penderecki, *Dies Irae*, chorus parts, p. 27 of score.¹⁶⁰

poco rall.

CORO

S
ORBEM: ...PROIECTUS EST IN TERRAM

A
ORBEM: ...PROIECTUS EST IN TERRAM

T
ORBEM: ...PROIECTUS EST IN TERRAM

B
ORBEM: ...PROIECTUS EST IN TERRAM

Nonrhythmic speech is a device that Berio used to permit greater freedom – as well as a kind of fracture of identity, given the polylogue of languages (Figure 2.18) – in his most extensively aleatory choral work, *Passaggio* (1961–2).

Figure 2.18, Berio, *Passaggio*, chorus parts, p. 3 of score.¹⁶¹

¹⁶⁰ Penderecki, *Dies Irae*, 27.

¹⁶¹ Luciano Berio, *Passaggio: messa in scena* (London: Universal, 1963).

This work juxtaposes semi-notated rhythms and greater freedom on the part of vocal performers, as seen in Figure 2.18. The notation, and high levels of individual freedom, seem to put aleatorism into tension with the conductor, who nevertheless presides throughout.

While Hovhaness, Penderecki, and Berio employed aleatorism as a contained feature of their choral music, Lutosławski's only mature choral work,¹⁶² *Trois poèmes d'Henri Michaux*, relies heavily on techniques of aleatorism. Moreover, given its significance to his output, it constitutes a centre of thought and writing – from the composer and others – on choral aleatorism. The outer two movements tend towards methods similar to Penderecki's: free pacing of pitched material and limited extended techniques like *glissandi* (Figure 2.19a). The inner movement consists exclusively of speech sounds and shouts, which are themselves frequently assigned strict rhythm (Figure 2.19b).

Figure 2.19a, Lutosławski, *Trois poèmes d'Henri Michaux*, I. 'Pensées', soprano parts, p. 12 of score.¹⁶³

The image shows a musical score for five soprano parts (I-V). Part I is marked with a '(Soli)' instruction and a measure number '51'. The lyrics are: 'Om - bres de de mon - des ...des ...des ...des in - fi - mes'. The notation shows various rhythmic patterns and slurs across the staves.

*) Immediately upon the conductor's signal Soprano I begins to sing alone. The entries of the other sopranos are indicated by cues given in the parts. The whole section should be spoken rather than sung, though keeping to the pitches indicated. This applies both to short as well as longer notes. Particular care should be taken to execute the latter with the minimum of force and without vibrato.

¹⁶² Charles Bodman Rae, *The Music of Lutosławski* (London: Faber, 1994), 84.

¹⁶³ Witold Lutosławski, *Trois poèmes d'Henri Michaux* (Brighton: Chester, 1963).

Figure 2.19b, Lutosławski, *Trois poèmes*, II. ‘Le grand combat’, chorus parts, p. 31 of score.¹⁶⁴

The image shows a musical score for two parts: S. A. (Soprano Alto) and T. B. (Tenor Bass). Both parts are written on a single staff with a treble clef. The music consists of a series of notes, many of which are marked with a double fermata (ff) and the word 'fouille,'. Above the notes, there are several downward-pointing arrows, some of which are grouped by double arrows. The notation is minimalist, focusing on pitch and dynamics rather than complex rhythmic patterns.

What is remarkable about the piece is not the types of aleatorism used, but their extent. The composer's structural control maintains O'Grady's 'family resemblances' between performances.¹⁶⁵ Lutosławski commented on the control he maintained over pitch material, whereby a 12-note chord remained a reliable presence or starting point.¹⁶⁶ Indeed, control of pitch is never fully relinquished in the outer movements of the work.¹⁶⁷ He suggested the term 'controlled aleatorism', commenting that 'individual parameters are not entirely accidental but are always determined to some extent. We could call it a technique of approximation'.¹⁶⁸ Though Lutosławski refers here to his own control, his term exposes the fact that greater composer control often correlates to greater conductor control. Determination of structural progress and timing is strongly centralised in *Trois poèmes*. Yet he espouses an important degree of creative independence for performers. In his definition, an 'ideal' performer of contemporary music could either adhere masterfully to the minute dictations of Boulez, or assume improvisatory agency; but in his opinion – and certainly in his work – 'fidelity towards the composer's text, though essential,

¹⁶⁴ Lutosławski, *Trois poèmes*.

¹⁶⁵ Rae, *The Music of Lutosławski*, 78.

¹⁶⁶ Tadeusz Kaczyński, *Conversations with Witold Lutosławski* (London: Chester, 1984), 5.

¹⁶⁷ Kaczyński, *Conversations with Witold Lutosławski*, 86.

¹⁶⁸ Kaczyński, *Conversations with Witold Lutosławski*, 6.

is not enough in itself. A performer should be something of a resonator, sensitive to the deeper layers of a piece of music'.¹⁶⁹

His approach to *Trois poèmes* centred on the realities of performance and coordination. Though his embrace of performer freedom resulted from hearing Cage's *Concert* on the radio, Lutosławski was interested in how that freedom achieved its aural outcomes rather than any philosophical motives.¹⁷⁰ His foremost objective was to achieve complex sounds without unnecessarily complex scores,¹⁷¹ eschewing what he saw as the unnecessary difficulty of 'serialist and post-serialist' choral works.¹⁷² Such intentions clearly point towards achieving his desired effect through practical means. Strimple observes that the piece's technical challenges are so 'well-conceived' as to evidence a performer-centred compositional approach.¹⁷³ A significant part of that conception was to limit what was left to 'chance' (or performer decision), and to coordinate carefully how the ensemble and conductor interact during this freedom.¹⁷⁴

Arguably the most significant contributor to choral scores in Feisst's next category – those employing graphic elements – Canadian composer R. Murray Schafer (b. 1933) has taken an even more explicitly practical approach to performer-centred aleatorism. Works such as *Snowforms* (1982) and *Epitaph for Moonlight* (1968) are composed specifically for youth voices, and provide clearly defined, manageable challenges for singers less experienced in the freedoms often presented by graphic scores. *Epitaph for Moonlight* makes specific pitching requirements on singers, but, as seen in Figure 2.20, also prompts them to explore sounds, timing, and other

¹⁶⁹ Kaczyński, *Conversations with Witold Lutosławski*, 115.

¹⁷⁰ Rae, *The Music of Lutosławski*, 75.

¹⁷¹ Rae, *The Music of Lutosławski*, 77.

¹⁷² Rae, *The Music of Lutosławski*, 85.

¹⁷³ Strimple, *Choral Music in the Twentieth Century*, 124.

¹⁷⁴ Rae, *The Music of Lutosławski*, 75.

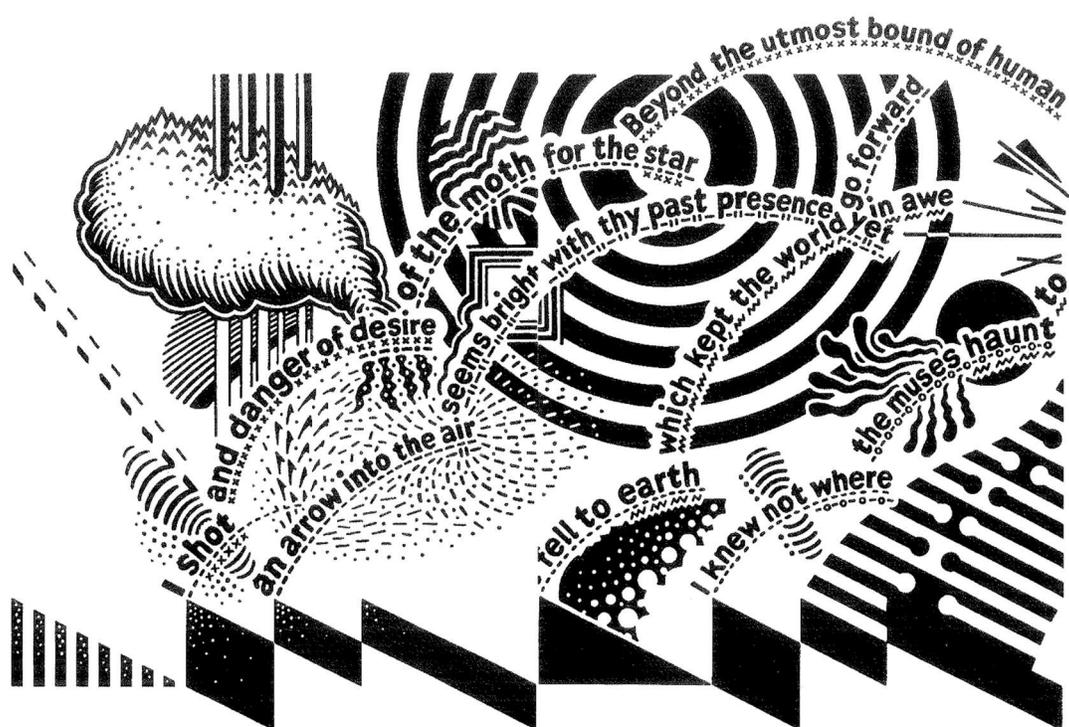
Figure 2.21, Schafer, *Gita*, pp. 16–17 of score.¹⁷⁶

The image displays a complex musical score for the piece *Gita* by R. Murray Schafer. The score is organized into two main sections, each with multiple staves. The upper section consists of two systems of staves, with the first system having 8 staves and the second having 7. The lower section has two staves labeled 'Vox' and 'Ssas'. The score includes various musical notations such as notes, rests, and dynamic markings like *pp* (pianissimo) and *mf* (mezzo-forte). Two callout boxes provide performance instructions: one notes 'Suddenly very soft. Free notes with glissandi as indicated, but preserving the general contour of the foregoing page. Leisurely and blending with tape.' and the other notes 'Soft whistling effects, blending with tape.' A circular annotation 'Pause 2" 3' is also present. At the bottom, a visualization of a tape recording shows a series of horizontal lines representing sound waves over time, with a 'STOP TAPE' marker at the 140-second mark. The time axis is marked from 135" to 140" in 5-second increments.

¹⁷⁶ R. Murray Schafer, *Gita* (Scarborough: Berandol, 1967).

Skempton highlight the fact that greater quantities and detail of (especially traditional) notation can often result in fewer improvisatory options for singers. Skempton's choral output typically does not use graphics, but this is an exception worth commenting upon. It was written for amateurs, who are accommodated in the extreme freedom of the graphics; those graphics impel expression in much the way that Berberian's *Stripsody* does.

Figure 2.22, Skempton, *The Flight of Song*, opening.¹⁷⁷



Graphic scoring is present in much other choral music, perhaps because this kind of musical notation makes aleatorism accessible to participants with less musical training.

Without using graphics, composers who might fit into Feisst's 'meditative' category also tend to reject standard notation. Pauline Oliveros, herself a singer, dwelt heavily on the

¹⁷⁷ Howard Skempton, *The Flight of Song* (Oxford: Oxford University Press, 2005).

democratising potential of meditative choral aleatorism, not only as a composer but also in her Deep Listening practice. Deep Listening exercises include ‘Breath Improvisation’ and ‘Shifting Accents Improvisation’, wherein participants produce breaths of varied lengths and become mindful of the resultant texture.¹⁷⁸ Improvisation, for Oliveros, is a fundamentally embodied experience, and these activities seek to highlight that idea.¹⁷⁹ The *Deep Listening* manual contains numerous pieces, by Oliveros and others, that explore grouped vocal/physical improvisation from numerous angles.¹⁸⁰ A similarly experience-oriented, meditative instance of choral aleatorism is found in Cornelius Cardew’s *The Great Learning* (1968–70). Though the openness of this piece to a variety of performers and the Confucian texts it employs place it safely in the ‘meditative category’, its use of an array of notational and performance styles over the course of its approximately seven-hour duration¹⁸¹ make it a sort of summary of the available devices of choral aleatorism.

¹⁷⁸ Pauline Oliveros, *Deep Listening: A Composer’s Sound Practice* (Lincoln: Deep Listening, 2005), 10 and 25.

¹⁷⁹ Oliveros, *Deep Listening*, 11.

¹⁸⁰ Oliveros, *Deep Listening*, 29–54.

¹⁸¹ John Tilbury, ‘Cardew, Cornelius’, in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<https://doi.org/10.1093/gmo/9781561592630.article.04912>> [accessed 14 March 2018].

Figure 2.23b, Cardew, *The Great Learning* Paragraph 7, p. 23 of score.¹⁸³

→ sing 8 IF
 sing 5 THE ROOT
 sing 13(f3) BE IN CONFUSION
 sing 6 NOTHING
 sing 5 (f1) WILL
 sing 8 BE
 sing 8 WELL
 sing 7 GOVERNED
 hum 7
 → sing 8 THE SOLID
 sing 8 CANNOT BE
 sing 9(f2) SWEEP AWAY
 sing 8 AS
 sing 17(f1) TRIVIAL
 sing 6 AND
 sing 8 NOR
 sing 8 CAN
 sing 17(f1) TRASH
 sing 8 BE ESTABLISHED AS
 sing 9 (f2) SOLID
 sing 5 (f1) IT JUST
 sing 4 DOES NOT
 sing 6 (f1) HAPPEN
 hum 3 (f2)
 → speak 1 MISTAKE NOT CLIFF FOR
 MORASS AND TREACHEROUS BRAMBLE

NOTATION

→ The leader gives a signal and all enter concertedly at the same moment. The second of these signals is optional; those wishing to observe it should gather to the leader and choose a new note and enter just as at the beginning (see below).
 "sing 9(f2) SWEEP AWAY" means: sing the words "SWEEP AWAY" on a length-of-a-breath note (syllables freely disposed) nine times; the same note each time; of the nine notes two (any two) should be loud, the rest soft. After each note take in breath and sing again.
 "hum 7" means: hum a length-of-a-breath note seven times; the same note each time; all soft.
 "speak 1" means: speak the given words in steady tempo all together, in a low voice, once (follow the leader).

PROCEDURE

Each chorus member chooses his own note (silently) for the first line (if eight times). All enter together on the leader's signal. For each subsequent line choose a note that you can hear being sung by a colleague. It may be necessary to move to within earshot of certain notes. The note, once chosen, must be carefully retained. Time may be taken over the choice, if there is no note, or only the note you have just been singing, or only a note or notes that you are unable to sing, choose your note for the next line freely. Do not sing the same note on two consecutive lines.
 Each singer progresses through the text at his own speed. Remain stationary for the duration of a line; move around only between lines.
 All must have completed "hum 3 (f2)" before the signal for the last line is given. At the leader's discretion this last line may be omitted.

¹⁸³ Cardew, *The Great Learning*, 23.

The instructions in the right-hand column read:

NOTATION

→ The leader gives a signal and all enter concertedly at the same moment. The second of the signals is optional; those wishing to observe it should gather to the leader and choose a new note and enter just as at the beginning (see below).

"Sing 9 (f2) SWEEP AWAY" means: sing the words "SWEEP AWAY" on a length-of-a-breath note (syllables freely disposed) nine times; the same note each time; of the nine notes two (any two) should be loud, the rest soft. After each note take in breath and sing again.

"Hum 7" means: hum a length-of-a-breath note seven times; the same note each time; all soft.

"Speak 1" means: speak the given words in steady tempo all together, in a low voice, once (follow the leader).

PROCEDURE

Each chorus member chooses his own note (silently) for the first time (IF eight times). All enter together on the leader's signal. For each subsequent line choose a note that you can hear being sung by a colleague. It may be necessary to move to within an earshot of certain notes. The note, once chosen, must be carefully retained. Time may be taken over the choice. If there is no note, or only the note you have just been singing, or only a note or notes that you are unable to sing, choose your note for the next line freely. Do not sing the same note on two consecutive lines.

Each singer progresses through the text as his own speed. Remain stationary for the duration of a line; move around only between lines.

All must have completed "hum 3 (f2)" before the signal for the last line is given. At the leader's discretion this last line may be omitted.

Whereas Paragraph 5 of the piece uses graphic notation implying pitch contours (Figure 2.23a), Paragraph 7 only provides text and instructions (Figure 2.23b). The freedom of movement, pitching, rhythm, text speed – ultimately, of expression and experience – of Paragraph 7 particularly emphasises John Tilbury’s observation that Cardew ‘was moving away from the purely aesthetic concerns of the avant garde [*sic*] towards a recognition of the social and political roots of musical life’.¹⁸⁴ A final note should be made on the meditative nature of Robert Ashley’s (1930–2014) *She Was a Visitor* (1967),¹⁸⁵ which allows groups of singers to improvise clusters of sound, sustaining phonemes from a speaker’s repetition of the title text. Though neither *She Was a Visitor* nor *The Great Learning* permits the improvisation of melodic material, or of rhythms in the way that Oliveros’s works and exercises do, both do cede control over many musical parameters to the singers.

Out of these significant, mid-century experiments in choral aleatorism came an American stream of works written in a choral culture centred more on university- and college-level ensembles than church or professional choirs. This group of composers are not sufficiently aesthetically aligned to create a ‘school’ as such, but the importance of these types of ensembles creates a general emphasis on comparatively performable works. Two indicative examples are offered in *Exsultet Caelum Laudibus* (1967) by John Paynter (1928–1996) and Michael Hennagin’s (1936–1993) *The Unknown* (1968/72). Paynter’s work, for mixed voices, soli, and optional percussion, creates Pendereckian ‘clouds’ from freely repeated pitch sequences, set against traditionally scored material (Figure 2.24).

¹⁸⁴ Tilbury, ‘Cardew’.

¹⁸⁵ Robert Ashley, *She Was a Visitor* (Robert Ashley, 1967).

Figure 2.24, Paynter, *Exsultet Cælum Laudibus*, chorus parts, p. 1 of score.¹⁸⁶

The musical score for the chorus parts of *Exsultet Cælum Laudibus* is presented in a multi-staff format. It includes parts for Soprano (S.), Alto (A.), Tenor (T.), and Bass (B.), each with two vocal lines (I and II). The lyrics are: ** Alleluya // - - - ya* and *Al-le-lu - ya*. The dynamics are marked as *mf*, *ff*, *mp*, and *ppp*. The score is written in a key signature of one sharp (F#) and a common time signature (C).

Hennagin's *The Unknown*, for choir accompanied by winds, percussion, and electronics, includes two different scorings for unified chanting to undetermined rhythm and pitch (Figures 2.25a and 2.25b).

¹⁸⁶ John Paynter, *Exsultet Cælum Laudibus* (Oxford: Oxford University Press, 1967).

Figure 2.25a, Hennagin, *The Unknown*, chorus parts, p. 38 of score.¹⁸⁷

5+5+9+5
16

Angrily
Free Chant in rhythm

ff

tak-en, tak-en, tak-en

Our young men, once so handsome,
Once so handsome and so joyous,
Taken from us, taken from us,
Taken from us-]

Figure 2.25b, Hennagin, *The Unknown*, soli tenors, p. 43 of score.¹⁸⁸

4 Solo Tenors [in rear of hall]
Quasi chant - Approx. Pitch

f

[e]

There will be | There will be | There will be a rusty gun on the wall,

Tape

Both of these instances bear an obvious resemblance to European aleatorism, in which the objective is textural rather than experiential, yet with a stronger focus on ease of performance by diverse ensembles. This vein of aleatorism is, nevertheless, occasionally seen as providing the opportunity for individual agency, as discussed below (Chapter 2.5). The tendency to contain performer freedom in American choral aleatorism can be seen more recently in *Cloudburst* (1996) by Eric Whitacre (b. 1970), a work that has found a place in the mainstream of American choirs' repertoire. As seen in Figure 2.26, the aleatorism is contained within the orthodoxies established by 1960s European choral music.

¹⁸⁷ Michael Hennagin, *The Unknown* (Chicago: Walton, 1972).

¹⁸⁸ Hennagin, *The Unknown*.

Figure 2.26, Whitacre, *Cloudburst*, p. 5 of score.¹⁸⁹

*Speaker: Hay que dormir con los ojos abiertos,
hay que soñar con las manos,*

Free time, (Sops: soft, staggered entrances)

des - pi - er - *ta_O_(m) hay que dor - mir hay que dor - mir hay que dor - mir

des - pi - er - *ta_O_(m) hay que dor - mir con los o - jos a - bi - er - tos,

des - pi - er - *ta_O_(m) hay que dor - mir con los o - jos a - bi - er - tos,

des - pi - er - *ta_O_(m) hay que dor - mir con los o - jos a - bi - er - tos,

*Slowly close to 'm' by beat 7.

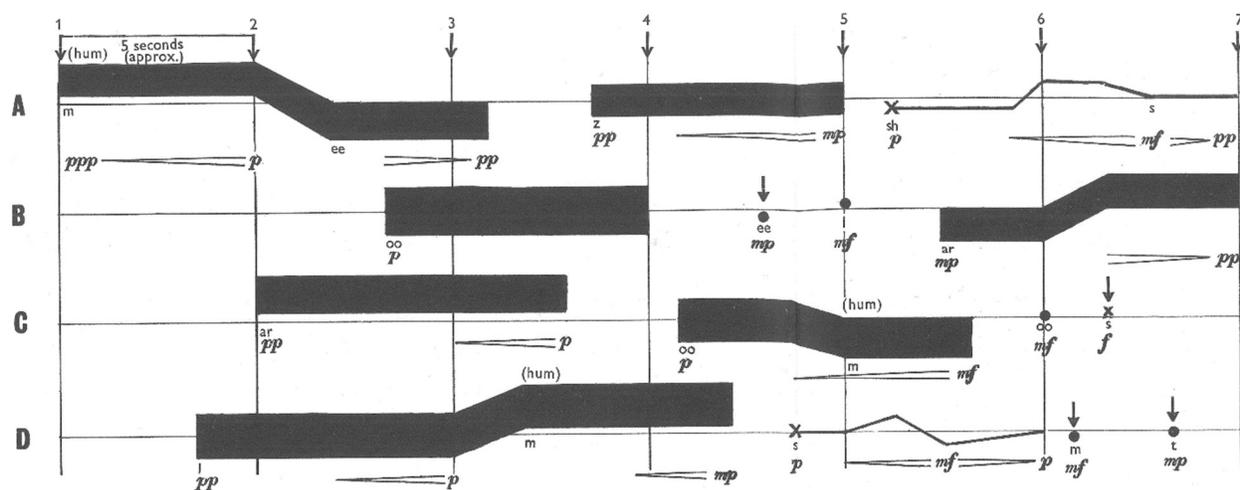
**Sopranos chant at individual tempi, legato. Speaker begins approximately 4 seconds later.
All other parts hold fermata until cue then chant slowly, legato.

Developments in Britain, following Cardew, have been somewhat more adventurous. Bridging the divide between America and Great Britain, Bernard Rands (b. 1934) was born in England and educated in England and Wales but spent much of his career in America.¹⁹⁰ While still in Britain, he produced a series called *Sound Patterns* (1967–9), which used ‘graphic and time-space notation to elicit spontaneous creativity from young players [or singers]’.¹⁹¹ *Sound Patterns* 3, for mixed choir, uses graphic notation for educational purposes as Shafer does, but, as seen in Figure 2.27, also encourages cluster melodies and shouts using notation similar to what Penderecki had devised for strings.

¹⁸⁹ Eric Whitacre, *Cloudburst* (Chicago: Walton, 1996).

¹⁹⁰ Roger Marsh, ‘Rands, Bernard’, in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<http://www.oxfordmusiconline.com/subscriber/article/grove/music/22877>> [accessed 6 April 2017].

¹⁹¹ Marsh, ‘Rands’.

Figure 2.27, Rands, *Sound Patterns 3*, extract.¹⁹²

Paul Patterson (b. 1947) also produced several choral works using aleatorism, including a *Kyrie* (1972; Figure 2.28). This work leaves its liberation of musical timing in the hands of a conductor, who is responsible for coordinating events among sections of the choir.

¹⁹² Bernard Rands, *Sound Patterns 3: Project for voices* (London: Universal, 1990).

Figure 2.28, Patterson, *Kyrie*, p. 3 of score.¹⁹³

The musical score for Paul Patterson's *Kyrie*, page 3, is presented in three measures, each enclosed in a dashed box. The first measure (5 bars) features vocal parts (S.I., S.II, A.I.) and piano accompaniment (T., B., I. Pf., Pf.). The second measure (8 bars) shows vocal parts with lyrics 'Ky - ri - e - le - i - le - i - son' and piano accompaniment. The third measure (6 bars) features vocal parts with lyrics 'Ky - ri - e - le - i - le - i - son' and piano accompaniment. The score includes dynamic markings such as *f*, *ff*, and *sub. p*, and various musical notations like slurs and accents.

Both of these techniques quite palpably draw on Penderecki's innovations in both choral and orchestral notation.

The stage for British composers' more robust embrace of aleatorism, as compared with their American counterparts, was set by David Bedford (1937–2011). Bedford had met Lutosławski, and it may not be coincidental that his most significant choral work, *Two Poems* (1963), settings of American poet Kenneth Patchen, appeared immediately on the heels of the former composer's *Trois poèmes*. A similarity to the aleatorism of *Trois poèmes* can be seen in Bedford's 1966 work *Wide, Wide in the Rose's Side* and the 1972 work *Star Clusters, Nebulae and Places in Devon* (Figures 2.29a and b).

¹⁹³ Paul Patterson, *Kyrie*, (London: Josef Weinberger, 1972).

Figure 2.29a, Bedford, *Wide, Wide in the Rose's Side*, voice parts, opening.¹⁹⁴

Figure 2.29b, Bedford, *Star Clusters, Nebulae and Places in Devon*, chorus parts, opening.¹⁹⁵

¹⁹⁴ David Bedford, *Wide, Wide in the Rose's Side* (London: Novello, 1966).

¹⁹⁵ David Bedford, *Star Clusters, Nebulae & Places in Devon* (London: Universal 1972).

In an interview with Cardew, Bedford commented that Lutosławski ‘influenced the way I write things down, but not, I think, the way they sound’.¹⁹⁶ This is a somewhat surprising statement, given Bedford’s comment soon thereafter that space-time notation was a way to create complexity without unnecessarily complex notation – exactly as Lutosławski said about his own application of aleatory techniques. Bedford continues, saying that he was also attempting to mitigate against ‘the complexity that the players found [when] facing’ complicated metric notation, and to ease performers’ acceptance of metrically nebulous notation.¹⁹⁷ Bedford was acutely aware of the practical ramifications of this kind of notation, shown in his observation of performers’ concern that, if there is no ‘wrong’ moment to enter, it is impossible to know the correct moment (though this problem is reduced with less educated children).¹⁹⁸ A creative way of scoring dense textures to convey the sound to the singers, and to make plain to them the objectives at hand, is evident at another moment in *Star Clusters* (Figure 2.30).

¹⁹⁶ David Bedford and Cornelius Cardew, ‘A Conversation’, *The Musical Times*, 107.1477 (March 1966), 198–200 <<http://www.jstor.org/stable/953357>> [accessed 6 March 2017], 198.

¹⁹⁷ Bedford and Cardew, ‘A Conversation’, 198.

¹⁹⁸ Bedford and Cardew, ‘A Conversation’, 198.

Figure 2.30, Bedford, *Star Clusters*, chorus parts, p. 13 of score.¹⁹⁹

As seen here, Bedford worked to produce music which best visually resembled the sounds he imagined,²⁰⁰ using aleatory notation to wed sonic objectives and performance viability. Bedford struck a balance that uncovers a paradox: in achieving an idiomatic complexity, choral aleatorism both exposes and reinforces the assumptions about singers' limited abilities I have cited previously in the Introduction (Chapter 1.3).

Bedford used aleatorism in his later educational pieces, relying on techniques developed in *Two Poems*.²⁰¹ His interest in educational music was bound up with his musical philosophy; believing that music students should perform, not just listen to, music, he explained the difference between his approach and Cage's:

¹⁹⁹ Bedford, *Star Clusters*.

²⁰⁰ Bedford and Cardew, 'A Conversation', 199.

²⁰¹ Keith Potter, 'Bedford, David', in *Grove Music Online, Oxford Music Online*, 2nd edn. (2001) <<http://www.oxfordmusiconline.com/subscriber/article/grove/music/02501>> [accessed 6 April 2017].

I admire Cage, and no contemporary composer can ignore him. There is a great difference between my work and his, however. I use my notation to give the players more confidence and freedom to produce the sounds I want. Although I would not say a mistake had been made if a player came in half a second too late or too soon I would say quite definitely that one had been made if he played a wrong note, or played loudly instead of softly.²⁰²

For Bedford, aleatory notation was not conceptually proscriptive, but it was sonically prescriptive. Of course, distribution of execution is not the same as democratisation of agency: Bedford's focus is still on the sounds *he* wants, and the comment above suggests that the freedom he affords performers only goes so far as to empower them to achieve that goal. But it is worth noting that a letter co-written by Bedford and George Self states emphatically that classist divides between popular and avant-garde music are largely nullified when post-serialist music is made accessible through 'the use of aleatoric [*sic*] and new conducting techniques'.²⁰³

A more recent British composer who embraces both the sonic and open-access potential of aleatorism is Kerry Andrew (b. 1978). 'Open-access' is used here to describe scores which are freely available, whether through a particular project or more generally, and accessible by a wide range of performers; they exemplify a particularly strong vein of overtly democratisation-orientated aleatorism. These two objectives are met, respectively, in *O Lux Beata Trinitas* (2004) and *CoMABlues* (2016). The former juxtaposes freely-executed melodic cells with more traditional writing, not dissimilarly to many of the above examples. *CoMABlues*, written for another

²⁰² Bedford and Cardew, 'A Conversation', 200–1.

²⁰³ George Self, and David Bedford, 'Down with School Music!', *The Musical Times*, 105.1455 (May 1964), 362 <<http://www.jstor.org/stable/949946>> [accessed 6 April 2017].

instalment of the open-access project for which Skempton produced *The Flight of Song*, is considerably bolder in its use of aleatorism. In a manner similar to Riley's *In C*, performers progress through musical cells (seen in Figure 2.31) at their own pace.

Figure 2.31, Andrew, *CoMABlues*, opening.²⁰⁴

The figure shows six musical cells from the opening of *CoMABlues*. Cell 1 is marked 'A', 'equally pulsing', and 'mp', with a tempo of quarter note = 104. It features a rhythmic pattern of eighth notes with lyrics 'eh eh eh' and 'or' above. Cell 2 has lyrics 'oh oh oh'. Cell 3 has lyrics 'eh eh eh' and 'oh oh oh'. Cell 4 has lyrics 'oh eh' and a '(4/5)' time signature. Cell 5 has lyrics 'oh oh oh oh oh oh' and 'oh eh oh' with a '(4/5)' time signature. Cell 6 has lyrics 'uh uh'.

While the musical material is fairly rigidly set, this piece offers one of the few examples of performers dictating the pacing of events, and proportions of the piece, from within.

A final centre of aleatory choral composition, which has been actively cultivated by the recent appearance of several new high-level professional choirs, is the region encompassing Scandinavia and the Baltic states. So many Scandinavian aleatory choral scores have emerged that it is only possible to show a small representative sample here. Strimple ties this group of composers, once again, to Cage, citing the latter's influence on Norwegian composer Alfred Janson (b. 1937). Janson's *Tema* (1966) was, like Penderecki's *Dies Irae*, a Holocaust response.²⁰⁵

²⁰⁴ Kerry Andrew, *CoMABlues* (unpublished, 2016).

²⁰⁵ Strimple, 'Choral Music in the Twentieth and Early Twenty-First Centuries', 59.

It explores a similarly wide palette of expressive techniques. The work's 'lingering emotional impact' is heightened by its accessibility, providing 'functional experience in basic entry-level avant-garde techniques' for a generation of singers.²⁰⁶ Another Norwegian, Knut Nystedt (1915–2014), produced a major work that introduced a manageable form of aleatorism to singers. *The Path of the Just* (1998) provides pitched material in controlled time spans which are only general recommendations, leaving the singers to achieve a modest level of independence (Figure 2.32).

Figure 2.32, Nystedt, *The Path of the Just*, soprano parts (exemplifying techniques found across the score), p. 3 of score.²⁰⁷

Egil Hovland (b. 1924) is another significant composer from Norway; his *Saul* (1972) explores a wide range of aleatory techniques.²⁰⁸ A major figure in Finnish music, Einojuhani Rautavaara (1928–2016) produced a sizeable catalogue of choral works, of which *Katedralen* (1983) is the most notably ambitious with its aleatorism (Figure 2.33).

²⁰⁶ Strimple, *Choral Music in the Twentieth Century*, 155.

²⁰⁷ Knut Nystedt, *The Path of the Just* (Oslo: Norsk Musikvorlag, 1998).

²⁰⁸ Egil Hovland, *Saul* (Chicago: Walton, 1971).

Figure 2.33, Rautavaara, *Katedralen*, soprano parts, showing the end of a word prolonged using aleatorism, p. 2 of score.²⁰⁹

The image shows a musical score for soprano parts, numbered 1 through 8. The score is in 4/4 time with a tempo marking of $\text{♩} = 100$. The first three staves (1, 2, 3) are for soprano parts, each with lyrics: "stjä - r - nor - na" and "star - - ry night". The fourth staff (S4) is for a vocal part with lyrics "e - n" and "time". The fifth staff (5) is for another vocal part with lyrics "e - n" and "time". The sixth staff (6) is for a vocal part with lyrics "e - n" and "time". The seventh staff (7) is for a vocal part with lyrics "a - tt - en" and "igh - t - time". The eighth staff (8) is for a vocal part with lyrics "a - tt - en" and "igh - t - time". The score includes dynamic markings *p* and *f*, and a key signature of one sharp (F#). The score shows a complex structure with aleatorism, indicated by wavy lines and vertical dashed lines connecting the staves.

Timings are largely at the discretion of the conductor, including the pacing of aleatory and scored events (which often coincide), but the free, individual execution of melodic material consumes a long portion of the piece. While none of these instances include the type of freedom found in the works of Cardew, Ashley, or Andrew, they are slightly later products of the aleatory ‘movement’ in choral music, and are consequently refined in both notation and practicality. They coincided

²⁰⁹ Rautavaara, Einojuhani, *Katedralen* (Helsinki: Edition Frazer, 1982).

with the growth of high-level choral ensembles in Northern Europe, and this refinement is clearly drawn from direct contact with singers.

2.5 Literature on Choral Improvisation

Having established that performer experience and practice regularly factor into choral aleatory composition, it is worth briefly reviewing what is currently written on the practice of vocal and choral improvisation and aleatorism. Writings which propose methods for solo vocal improvisation are a useful starting point, as they make explicit a fundamental tension between limitations and freedom of the imagination. Sharon Mabry's volume on contemporary vocal performance encourages singers to regard indications of contour (when specific pitch is indeterminate) as obligatory; imagination and the 'will to experiment' should supply the remaining musical information.²¹⁰ Indeterminate durations should be adhered to, but intuitively rather than with 'stopwatch accuracy'.²¹¹ Nicholas Isherwood's *The Techniques of Singing* (also a sort of treatise on contemporary vocal technique) observes that, typically, 'the vocal improvisation in art music since 1950 is in the realm of guided improvisation. The most important thing for the performer to do is to follow the rules'.²¹² He also advocates heavy reliance on learning first-hand from established practitioners,²¹³ balanced with the 'rules' of a piece, to devise a system for studying and progressing through the piece.²¹⁴ These examples of advice to improvising vocal soloists share useful commonalities. They both highlight, for the individual singer, the need to

²¹⁰ Sharon Mabry, *Exploring Twentieth-Century Vocal Music: A Practical Guide to Innovations in Performance and Repertoire* (Oxford: Oxford University Press, 2002), 32.

²¹¹ Mabry, *Exploring Twentieth-Century Vocal Music*, 32.

²¹² Nicholas Isherwood, *The Techniques of Singing* (Kassel: Bärenreiter-Verlag, 2013), 157.

²¹³ Isherwood, *The Techniques of Singing*, 155.

²¹⁴ Isherwood, *The Techniques of Singing*, 155–61.

balance carefully compositional control and performer freedom. They also propose that performers should construct a process through that combination of the composed resources at hand and the equipment of a singer's creativity.

Much of the literature that moves from solo to ensemble vocal improvisation is written from a 'world music' or jazz perspective. While these perspectives have great value, they do not confront many issues faced in the performance of music written in the vein of experimental or avant-garde art music. And, of course, none of the sources mentioned thus far deal with group improvisation. Those that meet these needs are typically to be found in the field of education. Such writings are useful in that they confront the experience of performers, but are limited by their (necessarily) prescriptive approach. They either do not transform singers' reflection into practice, or do not suggest a practice built upon empirical findings from experience.

Patrick K. Freer's 2010 essay 'Choral Improvisation: Tensions and Resolutions' offers a robust argument for the benefits of using improvisation in choral teaching, and confronts some of the philosophical arguments underpinning its use. These arguments accord strongly with my own philosophical outlook in undertaking this study into aleatory performance. Freer states that 'the individual improvisatory act, at once cognitive, corporeal, and affective, [...] is uniquely liberating for performers and listeners'.²¹⁵ This assertion allows Freer to build his arguments around the questions of individual and shared responsibility as outlined by Mabry and Isherwood. Freer then focuses on choral improvisation as a participatory activity that fulfils a social role and involves mutual responsibility among performers.²¹⁶ These arguments suggest that choral improvisation can best be thought of as belonging to a domain freed from the orthodoxies of music which *represents*

²¹⁵ Patrick K. Freer, 'Choral Improvisation: Tensions and Resolutions', *Choral Journal*, 51.5, 18–31 <http://www.scholarworks.gsu.edu/music_facpub/51> [accessed 13 April 2017], 20.

²¹⁶ Freer, 'Choral Improvisation', 20.

ideas; Freer's interest is in music that *performs*, even entails, social ideas. He discusses the 'society' of the choral classroom, emphasising both the democratising potential for non-notated improvisation²¹⁷ and the distribution of knowledge among conductor and individual singers.²¹⁸

Freer regards these outcomes as musically and educationally beneficial, an argument implicit in educational contributions by recent writers who encourage improvisation in various forms and to various ends. In an essay from 2004, Regina Antunes Teixeira Dos Santos and Luciana Del Ben, for instance, propose improvisation as a means of developing student's Solfège sight-singing skills.²¹⁹ By contrast, Jeffrey Agrell's and Patrice Madura Ward-Steinman's more recent *Vocal Improvisation Games for Singers and Choral Groups* (2014) offers a wide range of activities aimed specifically at encouraging improvisation.²²⁰ Christopher D. Azzara, writing four years after Dos Santos and Del Ben, addresses the probable discomfort felt by choral directors when approaching choral improvisation²²¹ through a systematic method of using familiar musical elements and tunes to free students gradually, thereby allowing them to embrace improvisation.²²² He painstakingly outlines how a knowledge of rhythmic variation and melodic interaction with harmonic fundamentals can yield improvisational skill.²²³ Azzara might agree with Mabry and Isherwood that musical 'rules' are the foundation of improvisation, but he is particularly adept at guiding singers towards using those rules as tools for creative freedom.

²¹⁷ Freer, 'Choral Improvisation', 25.

²¹⁸ Freer, 'Choral Improvisation', 22.

²¹⁹ Regina Antunes Teixeira Dos Santos and Luciana Del Ben, 'Contextualized Improvisation in Solfège Class', *International Journal of Music Education*, 22.3 (2004), 266–76 <<http://ijm.sagepub.com/content/22/3/266>> [accessed 13 April 2017].

²²⁰ Jeffrey Agrell and Patrice Madura Ward-Steinman, *Vocal Improvisation Games for Singers and Choral Groups* (Chicago: GIA Publications, 2014).

²²¹ Christopher D. Azzara, 'The Vocally Proficient Choir: Part Two: Improvisation and Choral Musicianship', in Michele Holt and James Mark Jordan (eds.), *The School Choral Program: Philosophy, Planning, Organising, and Teaching* (Chicago: GIA Publications, 2008), 201.

²²² Azzara, 'The Vocally Proficient Choir', 201–39.

²²³ Azzara, 'The Vocally Proficient Choir', 201–39.

These writers offer valuable ideas for actively approaching choral improvisation and aleatorism, but stop short of indicating an empirical basis in singers' experiences, or acknowledging the sources of an emergent practice. Moreover, they either impose improvisation onto an existent type of music or teaching²²⁴ or focus exclusively on non-classical music.²²⁵ An article appearing nearly three decades before any of the above writings fills both of these gaps. James D. May's 'Independence and Creativity in the Choir', published in 1976, offers a solution to teachers' desire to introduce independence and creativity by means of

those avant-garde choral compositions that include such techniques as improvisation, chance occurrences, indeterminacy, or aleatoric [*sic*] events. Composers who incorporate such techniques in their compositions call on the performers to use their creativity and to enter into compositional processes.²²⁶

May argues that the strong musical framing asserted by composers, and the resultant limitations on improvisation, are an advantage for performers unprepared for freer improvisation.²²⁷ He then describes an event in which over 1,500 secondary school students performed Gordon Lamb's *Aleatory Psalm* (1973). Many singers and teachers responded positively, embracing the style as a viable addition to their repertoire and expressing appreciation for the freedom it offered.²²⁸ The difficulties they cited on reflection are more telling, and are echoed by the findings of studies outlined in Chapters 5 and 6:

²²⁴ Azzara 'The Vocally Proficient Choir', 205; Dos Santos and Del Ben, 'Contextualized Improvisation in Solfège Class', 266–76. <<http://ijm.sagepub.com/content/22/3/266>> [accessed 13 April 2017].

²²⁵ Freer, 'Choral Improvisation', 22.

²²⁶ James D. May, 'Independence and Creativity in the Choir', *Music Educators Journal*, 62.7 (1976), 54.

²²⁷ May, 'Independence and Creativity', 54.

²²⁸ May, 'Independence and Creativity', 55–7.

As was to be expected, in the beginning stages of rehearsal there was a confusion as to what should be done, much chaos, and a lot of giggling. Also, a wall of inhibitions had to be broken down. Since the singers were to act independently, something never before required of them, they felt some reluctance and voiced an uncertainty about ‘doing it right.’²²⁹

The inhibitions May touches on recall the ‘psychological block’ which Cardew suggested Bedford sought to overcome (see Chapter 2.4). May offers some solutions,²³⁰ which could be augmented by the more thorough ideas of the works cited above. Though useful, May’s study has limitations. His findings are based upon one event, limiting their scope as well as their applicability to other situations. His study points to a need for further research in this area.

May’s study is not iterative; he does not base any further study upon the reflections of performers. Carole Ott’s 2015 essay ‘Connection, Communication, and Context: Improvisation in a Choral Setting’, while not focusing specifically on an aleatory choral work as May had, confronts the experience of vocal ensemble improvisation according to a more thorough and effective methodology.²³¹ Seeking to investigate whether improvisation can increase ‘connection and communication’ within a choir, and to understand how individuals go about doing so, she sets out a clear method through which to lead singers.²³² Following a sequence of exercises, two outcomes are assessed: ‘musical elements of the improvisations themselves and the effect of improvisation

²²⁹ May, ‘Independence and Creativity’, 57.

²³⁰ May, ‘Independence and Creativity’, 57.

²³¹ Carol Ott, ‘Connection, Communication, and Context: Improvisation in a Choral Setting’ *Choral Journal*, 56.1 (August 2015), 38–45 <<http://www.jstor.org/stable/24580577>> [accessed 13 March 2018].

²³² Ott, ‘Connection, Communication, and Context’, 39.

on the rehearsal and performance of traditional choral music'.²³³ Although Ott's study has a focus beyond improvisation in its own right, her results are nevertheless of interest for several reasons. She focuses on the improvisatory use and exploration of extended techniques,²³⁴ a common element in choral aleatorism. She also based one phase of the study around singer journals,²³⁵ a strong example of inductive methodology. Finally, she balances her assessment of musical outcomes with behavioural outcomes, underscoring the extent to which non-musical elements and impressions are part of the construction of an improvisatory piece.²³⁶ Behavioural outcomes expose many of the same issues faced in May's study:

I started by creating a duet between myself and one of the strongest singers in the choir. Our duet was successful and the group responded well, so I asked for volunteers to join us. Some were excited to participate, some reluctantly willing, and some completely opposed.²³⁷

She observes that the succession from resistance to comfort is typical among classical musicians confronted with improvisation, and indicates a few simple strategies to help students become comfortable – avoiding the term 'improvisation', for instance.²³⁸ Ott concludes by outlining ideas for incorporating improvisation into performance and the overall benefits of 'creative exploration'.²³⁹

Ott's study is an example of the kind of iterative investigation of the experience of aleatorism that can inform future endeavours. She does not go so far as to alter her methodology

²³³ Ott, 'Connection, Communication, and Context', 40.

²³⁴ Ott, 'Connection, Communication, and Context', 40–1.

²³⁵ Ott, 'Connection, Communication, and Context', 39.

²³⁶ Ott, 'Connection, Communication, and Context', 41–2.

²³⁷ Ott, 'Connection, Communication, and Context', 41.

²³⁸ Ott, 'Connection, Communication, and Context', 41.

²³⁹ Ott, 'Connection, Communication, and Context', 42–3.

based upon findings, which are themselves not robustly processed, but she does proffer an arresting glimpse of how singers might be led into improvisation and aleatorism. Ott and the other writers discussed above therefore offer several perspectives on how aleatorism might be taught or led, relying on a balance of rules and creativity, on grounding the learning process in solid musical ideas and elements, and on mutual creativity. They offer less insight as to how the practice might be understood reflexively, and none on how reflection might direct future practice. Methods for addressing this gap in knowledge are offered by the fields of performance studies and practice-research. These areas of study allow an understanding of how performer experience is already studied in the wider, typically instrument-specific realm, and in turn enable the creation of a methodology that iteratively examines both experience and practice in choral aleatorism.

2.6 Performance Studies

The traditional heft of musicological thought offers little insight into performer experience and offers even less into how that experience might be further investigated. Doğantan-Dack criticises traditional musicology for failing to acknowledge that a recording of a performance ‘inheres an intelligible, rational and creative performer as its generating cause’.²⁴⁰ Performance as a whole, recorded or live (with or without audience), is still often seen as the result of a composer’s intentions – a fallacy aggravated when it occurs in descriptions of improvisatory music. Practice-research (primarily via recent offerings from its musical subset, performance research) redresses this gap to a significant extent, asserting performer agency and subverting composer-primacy. It therefore offers a useful context in which to situate this project.

²⁴⁰ Doğantan-Dack, ‘Recording the Performer’s Voice’, 297.

As quoted above (Introduction, Chapter 1.5), Cook sets out the paradox of contemporary performance trends, where even performers fixate upon composers' intentions at the expense of attaining a personal involvement with the work. Doğantan-Dack asserts that the study of performance remains enthralled to composer intention, ignoring the fact that it is

a creative practice shaped by complex factors that include not only expert knowledge about performance traditions, but also a continual striving towards singularity driven by an embodied aesthetic-epistemological quest to create musical meaning.²⁴¹

Replacing a simplistic focus on the intentions of one individual, Doğantan-Dack highlights the complexity of shared and individual knowledge. Moreover, embodiment enters into the argument, and 'the collapse of the Cartesian' mind (as separated from the body) not only unifies body, mind, and affect in performance, it opens the possibility of thinking and knowing via that unity (this idea becomes particularly important in Chapter 3.3).²⁴² An important ethnographic study by Amanda Bayley into performer interactions during contemporary music performance takes certain of these issues into the realm of relational music-making,²⁴³ positing that such study might 'provide the starting point for constructing [contemporary music's] history'.²⁴⁴ Her attitude in many ways validates the presence of practice-research thinking in this project, explaining how and why it might provide a useful set of tools for discovering and interpreting performer experience in choral aleatorism.

²⁴¹ Doğantan-Dack, 'Recording the Performer's Voice', 294–5.

²⁴² Doğantan-Dack, Mine, 'In the Beginning was Gesture: Piano Touch and the Phenomenology of the Performing Body', in Anthony Gritten and Elaine King, *New Perspectives on Music and Gesture* (Farnham: Ashgate, 2011), 244.

²⁴³ Bayley, 'Ethnographic Research', 385.

²⁴⁴ Bayley, 'Ethnographic Research', 386.

Robin Nelson's *Practice as Research in the Arts* summarises his aims as confronting 'the schism in the Western intellectual tradition between theory and practice' through a merger of the two – 'what some call intelligent practice or material thinking [...]'.²⁴⁵ This objective can be seen as the goal of practice-research in general. Practice-research presupposes the limitations of 'the natural and intuitive enquiring of the artistic mind', but the 'more systematic methods and explicitly articulated objectives of research'²⁴⁶ that augment a performer's intuition can and should be comingled with the analyses and reflections produced by those musicians. The idea of 'inarticulate musicians' is no longer workable, and theoretical discourse must incorporate 'a *performer's* discourse', writes Doğantan-Dack.²⁴⁷ Practice and research of music can and must mirror each other.²⁴⁸ Anthony Gritten clarifies: while practice-research 'cannot be wholly Cartesian in its approach and begin by establishing clear foundations and explicit first principles', it also 'cannot just get on with itself and leap into action'.²⁴⁹ To enfold broad-based knowing into its findings and conclusions, practice-research typically uses a multimethodological approach (embraced in the Grounded Theory Method),²⁵⁰ an approach I adopt for this research. Indeed, argues Baz Kershaw, 'the more rigorously consistent the research design[,] the *greater* may be the chances of missing out on producing reflexive results'.²⁵¹

Knowledge of performance is constructed by performers as well as researchers, imbricating 'outsider' empiricism and 'insider', embodied knowledge. This mutuality demands answers to how

²⁴⁵ Nelson, *Practice as Research in the Arts*, 5.

²⁴⁶ Darla Crispin, 'Artistic Research and Music Scholarship: Musings and Models from a Continental European Perspective', in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice, Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 56.

²⁴⁷ Doğantan-Dack, 'Recording the Performer's Voice', 302.

²⁴⁸ Doğantan-Dack, 'Practice-as-Research in Music Performance', 268.

²⁴⁹ Gritten, 'Determination and Negotiation', 80.

²⁵⁰ Baz Kershaw, 'Practice as Research through Performance', in Hazel Smith and Roger T. Dean (eds.), *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh: Edinburgh University Press, 2009), 115.

²⁵¹ Kershaw, 'Practice as Research', 117.

one grapples with the ontology of a work: what is the musical object being studied? When multiple agents hold considerable creative responsibility in performing a work, as in aleatorism, this question becomes more vital. And when the object of study originates in multiple sources, a framework methodology for understanding it must embrace that shared agency. In the case of something so ontologically nebulous as aleatory practice-research (including analysis), a practice-research approach meaningfully questions not only the ontology of both the musical work and knowledge itself,²⁵² but also the nature of musical work/performance *as* knowledge. Hazel Smith and Roger Dean observe that practice-research

must also include the idea that knowledge is itself unstable, ambiguous and multidimensional, can be emotionally or affectively charged, and cannot necessarily be conveyed with the precision of a mathematical proof. This concept of knowledge as unstable is fundamental to a postmodernist view of the world.²⁵³

Knowledge is bound up with individuals' creative process, and the subjectivity of knowledge creation and transmission has profound implications on methodology. Such a methodology does not produce the kind of knowledge that can be dichotomised along what Nelson calls 'an impervious "knowledge/not knowledge" binary'.²⁵⁴ Instead, 'knowing' encompasses 'practical and theoretical knowledge',²⁵⁵ as well as the idea of corporeal knowing, discussed further in Chapter 3.²⁵⁶

²⁵² Hazel Smith and Roger T. Dean (ed.), *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh: Edinburgh University Press, 2009), 1.

²⁵³ Smith and Dean, *Practice-led Research, Research-led Practice*, 3.

²⁵⁴ Nelson, *Practice as Research in the Arts*, 39.

²⁵⁵ Nelson, *Practice as Research in the Arts*, 39.

²⁵⁶ Borrowing an idea from Sheets-Johnstone, *The Corporeal Turn*, 20.

Performer agency may be central to my adoption of practice-research principles, but Gritten conditions that idea, writing that a practice-researcher

can easily become obsessed with clarification and determination of subjectivity and the subject (read: their own status as subjects), and that as a consequence attention to the presentation of phenomena – the very business of [practice-research] insofar as it must be a form of practice – can easily be given short shrift [...], at which point phenomenology is displaced by yet another form of identity politics.²⁵⁷

Gritten asserts certain methodological imperatives: researcher positionality and performer subjectivity can be so fastidiously framed as to distract from the actual experiences of those performers. For my purposes, it is important to situate singers' experiences within the ensemble's intersubjectivity, enlisting the latter to help frame and understand how the former contributes to emergent phenomena. By recognising and reconciling individual agency and shared emergent phenomena, this project might circumvent David Toop's worry that collectivism in improvisation can be restricting.²⁵⁸ In the same vein, dwelling too heavily on my own complicity in constructing findings can homogenise performers' responses to their experiences, and deny them constructive opportunities.

Balancing these concerns with ethical issues of my positionality and performers' confidentiality is a matter dealt with in Chapter 4.2.1. The methodology detailed therein uses this balance to attempt to continue practice-research's project of unpicking the complex phenomena of

²⁵⁷ Gritten, 'Determination and Negotiation', 80–1.

²⁵⁸ David Toop, 'FLAT TIME/sounding', in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice*, *Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 237.

performance. This methodology is also designed to carry their paradigm into the study of singers. The major figures in performance research have focused on instrumental performance. Doğantan-Dack studies cited above focus on her instrument, the piano, as do Nicholas Cook's²⁵⁹ and Julian Hellaby's studies,²⁶⁰ invoked below. This focused work with singers has brought to light two important areas of thought: Complexity Thinking and embodiment. These fields proved useful in framing inductive outcomes; their relevant principles are set out in the following chapter, which narrows the contextualising focus of this chapter. Therefore, while it may seem incongruous to the reader to move out of sequence into material which emerged during, rather than before, the action research, concepts of Complexity and embodiment need to be offered at this juncture to allow for discussion of their application in later case studies. The material presented in Chapter 2 frames and contextualises the approach to this study; the ideas presented in Chapter 3 continue this objective by framing and contextualising its findings. A methodology can then be presented which flows directly into the case studies and analyses of Part II.

²⁵⁹ For instance, Nicholas Cook, 'Structure and Performance Timing in Bach's C Major Prelude (WTCI): An Empirical Study', *Music Analysis*, 6.3 (1987), 257–72, <http://www.jstor.org/stable/854205> [accessed 14 October 2016].

²⁶⁰ Julian Hellaby, *Reading Musical Interpretation* (Farnham: Ashgate, 2009).

Chapter 3 Improvisation, Complexity, and Embodiment

3.1 Introduction

The performance-studies paradigm outlined in Chapter 2 precedes the case studies (Chapters 5 and 6) and analyses (Chapter 7) that form the bulk of this study's findings; this chapter explores two bodies of theory which, by contrast, emerged alongside and after those findings. As practice-research progressed, Complexity Thinking and embodiment theory arose as fields that could usefully enrich inductive findings. Since they are themselves largely to do with practice – in fact, they are often presented in the context of practice-research – they can engage in discourse with singers' responses in the case studies of Chapters 5 and 6. What arises from this 'conversation' is an understanding of the performance of choral aleatorism that is at once immanent to the experience of singers as investigated below and open to comparison with other phenomena that may be described as Complex and embodied. This chapter lays out important tenets of Complexity Thinking and notions of embodiment, which all serve to point towards practical considerations.

3.2 Complexity Thinking

The generally constructivist bent of this project is carried into practice with the help of Complexity Thinking: a field of thought and study that helps reconcile the different levels on which constructions occur (recalling the main streams of constructivism represented by Piaget and Vygotsky, discussed previously in the Introduction 1.4), and which can help steer findings towards practical outcomes. In essence, Complexity Thinking deals with the unpredictable outcomes of a system born of the interaction of its component parts. Its incarnation in educationalist writing accords with my inductive orientation by enfolding previous studies of practice and group behaviour (most often in the classroom or school) into this new understanding of the unpredictable

outcomes of choral aleatorism. It also offers a useful framework in that it seeks to elucidate performer agency – the parts within a system – without presupposing the nature of that agency’s enactment or outcome.

It is worth tracking in detail how Complexity Thinking may answer questions that the constructivist view cannot. Mordechai Gordon faults education-orientated constructivism for overlooking the fact that ‘knowledge construction involves an integration of individual cognition processes and social processes’.¹ The constructive acts of individuals within an ensemble, and of that ensemble as a whole, are clearly mutually effective. Brent Davis and Dennis Sumara offer a fuller objection to constructivist-based activity than Gordon’s, writing that ‘these perspectives were never intended as sources of practical advice’;² they are merely descriptive. Piaget- and Vygotsky-inspired notions of knowledge-construction can only ‘operate more as *critiques* of any deliberate, institutionalised attempt to affect individual knowing or collective knowledge’.³ When teachers – or conductors – attempt to enact constructivist learning, they typically only reinforce behaviourist or cognitivist training.⁴ The conditioning of performers’ behaviour (behaviourism) and the systemisation of pedagogy (cognitivism) are inevitable, even valuable, aspects of musical training – yet the view held here is that music-making also involves construction. Two objectives emerge in promoting a practice that facilitates and even expands the constructions already occurring in aleatorism, then: first, bringing singers’ constructions into conversation with helpful additional discourses that might begin to render them into practice; and second, orientating such practice towards the simultaneously individual and grouped nature of aleatory construction.

¹ Mordechai Gordon, ‘Toward a Pragmatic Discourse on Constructivism: Reflections on Lessons from Practice’, *Educational Studies*, 45 (2009), 48.

² Davis and Sumara, ‘Constructivist Discourses’, 417.

³ Davis and Sumara, ‘Constructivist Discourses’, 418.

⁴ Davis and Sumara, ‘Constructivist Discourses’, 418.

Gordon offers John Dewey's idea of pragmatic constructivism to encourage constructions practically. He cites Dewey's belief that 'genuine knowledge comes neither by thinking about something abstractly nor by acting uncritically, but rather by integrating thinking and doing, by getting the mind to reflect on the act'.⁵ Knowledge, then, can be constructed through critically engaged rehearsal. This notion might vindicate the involvement of singers in the research process and encourage a certain rehearsal tactic, but still falls short of a complete, useable paradigm. Davis and Sumara therefore recommend Complexity for its 'emphasis on the pragmatics of effecting transformations in complex situations'.⁶ Not only does Complexity Thinking reconcile individual and social knowledge-construction,⁷ it also provides a realm of discourse in which one might proactively 'incorporate constructivist insights into educational discourses'.⁸ Concepts from Complexity Science may be usefully co-opted to this end without pretending to any comprehensive presentation of a vast field. The adoption of specific, circumscribed ideas is limited by the scope of this project and by a cautious need not to apply this thinking to aspects of the choral situation which are not truly complex.

Built on the work of physical chemist Ilya Prigogine (1917–2003), Complexity Science derives from the idea that phenomena emerge out of the interactions of agents in a way that cannot be deterministically predicted.⁹ It is usefully adapted to educationalist research,¹⁰ and it holds comparable appeal for understanding group musical practice, especially when a work is as actively constructed as in aleatorism. It can act as an opening into understanding the constructions

⁵ Gordon, 'Toward a Pragmatic Discourses', 49.

⁶ Davis and Sumara, 'Constructivist Discourses', 424–5.

⁷ Davis and Sumara, 'Constructivist Discourses', 426–7.

⁸ Davis and Sumara, 'Constructivist Discourses', 427.

⁹ Complexity contrasts from 'hyper-complication', or high levels of mechanistic – and therefore still predictable – complication. Michel Alhadeff-Jones, 'Three Generations of Complexity Theories: Nuances and Ambiguities', in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 73.

¹⁰ For instance, Cohen, Manion and Morrison, *Research Methods in Education*.

occurring during aleatorism, rather than as a deductive descriptor. Indeed, Lesley Kuhn prefers the term ‘Complexity Thinking’ to ‘Complexity Theory’ and considers it a ‘style of thinking or a paradigmatic approach’¹¹ rather than a testable assertion. It is for this reason that I use her preferred designation. As a ‘theory’, it runs the risk of imposing the kind of metanarrative that might run afoul of aleatorism’s general sense of postmodern plurality;¹² it is more helpfully enlisted as an orientation that ‘does not *rise over*, but *arises among* other discourses’.¹³ It therefore supports the inductive mode used here as it affords tools to guide thinking rather than ‘imposing verdicts’.¹⁴

Complex systems are not mechanised – not borne of the stable responses of their agents. They are described as indeterminate and resemble more closely clouds than ‘finite and predictable’ clocks.¹⁵ They exist in a state of imbalance, which yields change and adaptability; the inherent self-organisation of the system, born of spontaneous interactions of ‘autonomous agents’, is what brings change.¹⁶ This change is considered ‘emergent’,¹⁷ meaning that its source is ‘within’ the system and it derives from that system’s self-organised behaviour. Thus far, the performance of indeterminacy might reasonably be so described.

Less intuitively obvious is the connection between aleatorism and the ‘autocatalytic’ nature of emergent change.¹⁸ ‘Autocatalytic’ describes a system which is self-defining or driven by the interaction of its parts. Change within that system emerges from such interactions as the emergent

¹¹ Lesley Kuhn, ‘Complexity and Educational Research: A Critical Reflection’, in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 170.

¹² Davis and Sumara, *Complexity and Education*, 7 and 35.

¹³ Davis and Sumara, *Complexity and Education*, 8. I will not confront here Davis and Sumara’s problematising of ‘intersubjectivity’ in favour of ‘interobjectivity’, which seems to me to miss intersubjectivity’s notion that even if reality is subjectively constructed, it can still qualify as ‘a grander, more-than-human’ context, and which does not provide a thorough epistemic answer to the experience of reality.

¹⁴ Kuhn, ‘Complexity and Educational Research’, 173, citing Morin (from 2001), 25.

¹⁵ Mike Radford, ‘Complexity and Truth in Educational Research’, in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 143–4.

¹⁶ Davis and Sumara, *Complexity and Education*, xi.

¹⁷ Davis and Sumara, *Complexity and Education*, xi.

¹⁸ Cohen, Manion, and Morrison, *Research Methods in Education*, 28, citing Kelly and Allison 1999, 28.

function of autocatalysis. In a situation with clear leaders (such as a conductor) and authors (such as a composer) this autocatalytic emergence is arguably less palpable. Yet autocatalysis might still occur within the ensemble as a whole, especially between singers. Autocatalytic scenarios are those in which there is a self-defining system which is nevertheless not *systematised*. They capitalise on ‘collective intelligence’, but avoid the dangers of ‘mob mentality’ by eschewing the hegemony of consensus.¹⁹ The actions of agents both mutually influence each other²⁰ and feed into group behaviour which itself influences individuals’ behaviour²¹ – reciprocity operating on multiple levels. In a choral setting, leadership is both imposed (by the conductor, for instance) and emergent. Singers in a choir have agency in creating autocatalytic change. But, for Davis and Sumara, true learning emerges at multiple levels which might interact in a Complex way.²² Citing Vygotsky, they consider the site of learning is ‘the *individual-and-environment* as [a] dynamic unity’.²³ The conclusion that even authority is just one layer of a larger complex system of learning is no less cogent for seeming facile; the emergent nature of power and leadership binds it to the complex interactions within a system. Just as it deals with authority, Complexity pertains to authorship. Its attention to the site of creative drive in performance reveals the importance of *shared* complicity: ‘[J]ust as learning is distributed, so is *authorship*’.²⁴ In an autocatalytic situation of choral performance, both leadership and creativity are impelled from multiple levels.

Shared creativity – authorship, in a deliberate sense – in aleatorism is usefully addressed in several particulars of Complexity Thinking. Those particulars are: (i) *emergence*, the idea that phenomena emerge non-deterministically ‘from interactions within and among self-organising and

¹⁹ Davis and Sumara, *Complexity and Education*, 84.

²⁰ Davis and Sumara, *Complexity and Education*, 11.

²¹ Cohen, Manion, and Morrison, *Research Methods in Education*, 28.

²² Davis and Sumara, *Complexity and Education*, 85.

²³ Davis and Sumara, *Complexity and Education*, 119.

²⁴ Davis and Sumara, *Complexity and Education* 145.

adaptive systems’;²⁵ (ii) the importance of *proximity* and *agency* to those interactions; and (iii) the *nested* situation of complex systems within complex systems.

i. Emergence

Emergent outcomes cannot be predicted.²⁶ Complexity Thinking, along with its cousin chaos theory, argues

against the linear, deterministic, patterned, universalisable, stable, atomised, modernistic, objective, mechanist, controlled, closed systems of law-like behaviour which may be operating in the laboratory but which do not operate in the social world of education [...].²⁷

Conductors’ impositions upon singers, for instance, are disrupted by the disorder of aleatorism. Michel Alhadeff-Jones writes that the components of a complex situation are ordered, in that they are closely linked and follow an internal logic, but disordered because they ‘evolve and vary according to some forms of inequality, agitation, turbulence, chance encounter, rupture, catastrophe, fluctuation, instability, disequilibrium, diffusion, dispersion, etc.’.²⁸ Yet the performance of aleatorism is concerned with permitting patterns, just as studies (including this one) are concerned with discerning those patterns.²⁹ A pattern might gain enough momentum

²⁵ James Horn, ‘Human Research and Complexity Theory,’ in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 125, citing Barlow and Waldrop (from 1994); Richardson (from 2005).

²⁶ Lindsay Hetherington, ‘Complexity Thinking and Methodology: The Potential of ‘Complex Case Study’ for Educational Research’, *Complicity: An International Journal of Complexity and Education*, 10.1/2 (2013), 71–85 <<https://ejournals.library.ualberta.ca/index.php/complicity/article/view/20401/15672> > [accessed 28 Jan 2016], 73.

²⁷ Cohen, Manion, and Morrison, *Research Methods in Education*, 29

²⁸ Michel Alhadeff-Jones, ‘Complexity, Methodology and Method: Crafting a Critical Process of Research’, *Complicity: An International Journal of Complexity and Education*, 10.1/2 (2012), 19–44 <<https://ejournals.library.ualberta.ca/index.php/complicity/article/view/20398/15669>> [accessed 28 Jan 2016], 29.

²⁹ Horn, ‘Human Research and Complexity Theory,’ 125.

among agents to become ‘locked in’, but this eventuality cannot be predicted.³⁰ Therefore, a conductor’s impositions can only ever be catalytic perturbations – but even those cannot be said to determine their own outcomes.³¹ Outcomes and patterns are the products of interactions within the system.

ii. Proximity

Those interactions are most fruitful when part of a network of ‘short-range relationships’, in which information is ‘exchanged among close neighbours’.³² Feedback occurs between these neighbours; positive feedback ‘brings increasing returns’ and ‘amplifies small changes’.³³ Given the reciprocal nature of interaction in complex systems, a choir can feasibly create a positive feedback loop whereby emergent musical patterns gain momentum. These connections occur at all levels and are contingent on commonalities among members beyond physical proximity.³⁴ Connectedness in a choral situation might take place between those of similar voice parts, perceptually bound by the acoustics of tessitura and timbre, or those whom the score assigns similar processes at similar times.

Proximity, in its various forms, might be mapped. Davis and Sumara summarise varieties of ‘network architectures’ of complex systems according to how information is transmitted through ‘neighbour interactions’.³⁵ Different architectures have different levels of centralisation: high centralisation shares information slowly, via a central hub, whereas denser webs with a mixture of strong and weak connections between neighbours allow for richer, if still not especially

³⁰ Mark Mason, ‘Complexity Theory and the Philosophy of Education’, in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 2.

³¹ Davis and Sumara, *Complexity and Education*, 99–100.

³² Davis and Sumara, *Complexity and Education*, xi.

³³ Cohen, Manion, and Morrison, *Research Methods in Education*, 29.

³⁴ Cohen, Manion, and Morrison, *Research Methods in Education*, 29.

³⁵ Davis and Sumara, *Complexity and Education*, 142.

rapid, information transmittal.³⁶ Additional weak links – between singers, or between a singer’s individual process and collective acts of construction – can imbue the system with strength from redundancy.³⁷ This richness is reinforced further by internal diversity and specialisation:³⁸ ‘Specialisation entails a balancing of individual obsession and collective necessity – that is, a balancing of internal diversity and internal redundancy’.³⁹

iii. Nesting

Connections and reciprocity also occur between multiple strata in ‘nested structures’, where ‘complex unities are often composed of and often comprise other unities that might be properly identified as complex’.⁴⁰ In essence, a complex system might contain, and be contained by, other complex systems, with which it interacts. Complex systems are closed, contained systems, but they openly and ‘continuously exchange matter and energy with their surroundings’.⁴¹ Understanding how these interactions occur, and how nested systems generally impact and bound each other, is fundamental to understanding complex systems,⁴² including how performers’ individual processes unfold themselves into the ensemble’s process of performing an aleatory piece, or into a larger situational or historical context.

³⁶ Davis and Sumara, *Complexity and Education*, 52.

³⁷ Davis and Sumara, *Complexity and Education*, 52. They also deal with ‘self-similar’ fractals, in which relationship patterns on all levels are similar, according to a fractal pattern. This idea, though interesting on a larger scale, does not readily apply to choral rehearsals (43–4, 51–2).

³⁸ Davis and Sumara, *Complexity and Education*, 137–8.

³⁹ Davis and Sumara, *Complexity and Education*, 140.

⁴⁰ Davis and Sumara, *Complexity and Education*, xi.

⁴¹ Davis and Sumara, *Complexity and Education*, xi.

⁴² Jay L. Lemke and Nora H. Sabelli, ‘Complex Systems and Educational Change: Towards a New Research Agenda’, in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 115. Also Davis and Sumara, *Complexity and Education*, xi.

It is worth discussing briefly the ways in which Complexity Thinking may enrich or condition the methodology of this iterative study. (Notably, iterative study is valued in Complexity Thinking.⁴³) Just as Complexity Thinking suggests that changes must be brought about on numerous levels, it also corroborates the need for a holistic, multi-level study of phenomena.⁴⁴ As such, it ‘suggests the need for case study methodology, narratives, action research and participatory forms of research, premised in many ways on interactionist, qualitative accounts’.⁴⁵ The field’s suggestion that the ‘whole’ situation of aleatory performance should be studied is practically impossible and ignores the (presumably Complexity-compliant) problematisation of trying to delineate a discrete ‘whole’. But, even beyond the reasonable multi-methodological implications of the above suggestions, Complexity Thinking advocates an expanded pool of participants in aleatorism, as well as a thorough investigation of ‘multiple causality, multiple perspectives and multiple effects’.⁴⁶

Complex situations arguably require equally complex representations, resulting in a ‘need to observe complex human systems as comprised of fully embodied interactive agents’.⁴⁷ Given the convoluted, nested nature of a choir within its context and history, this admonition would require an absurd and impossible research artefact. However, another line of Complexity Thinking acknowledges that only local solutions may be possible,⁴⁸ suggesting a more contained research response. Moreover, it recognises that ‘what is measured is already history’; variables are not fixed, and conclusions can only contribute to a stream of evolving discourse.⁴⁹ Contrasting with

⁴³ Lemke and Sabelli, ‘Complex Systems and Educational Change’, 119.

⁴⁴ Cohen, Manion, and Morrison, *Research Methods in Education*, 29.

⁴⁵ Cohen, Manion, and Morrison, *Research Methods in Education*, 30.

⁴⁶ Cohen, Manion, and Morrison, *Research Methods in Education*, 30.

⁴⁷ Horn, ‘Human Research and Complexity Theory,’ 134.

⁴⁸ David Byrne, ‘Thoughts on a Pedagogy of Complexity’, *Complicity: An International Journal of Complexity and Education*, 11.2 (2014), 40–50, <<https://ejournals.library.ualberta.ca/index.php/complicity/article/viewFile/22963/17094>> [accessed 28 Jan 2016], 42.

⁴⁹ Morrison, ‘Educational Philosophy,’ 25, and Radford, ‘Complexity and Truth’, 142.

‘hyper-complication’, Complexity implies ‘the impossibility of defining the list of potential states of a system, or the list of contributing factors’.⁵⁰ And the mere act of studying can be part of a process ‘whereby boundary judgments and contestations continually occur’.⁵¹ Therefore, even given an expanded pool of participants, Complexity Thinking is important in that it emphasises that these case studies are necessarily limited and can only offer contingent and limited findings, which may nevertheless drive further findings.

3.3 Embodiment and Complexity Thinking

It is worth recalling that a driving interest behind this study is the powerfully embodied nature of singing. It will become apparent in Chapters 5 and 6 that the nature of choral aleatory performance also has an important embodied dimension, in addition to having characteristics of a complex system. I therefore draw on the work of several writers who have confronted embodiment in such a way as helps to frame improvisatory singing as a Complex act.

In placing this act in the body, I suggest it is helpful first to review the historical dichotomisation of mind and body – the essence of Cartesian dualism. The theatre-maker Gavin Thatcher and I have argued elsewhere that the voice is subject to this segregation: ‘the *expressing* body (vocal technique, stagecraft) is separated from the *expressive* soul (interpretative instinct, entrained musical/dramatic exegesis)’.⁵² Singing, especially when considered from a technical perspective, is a means of putting the body at the service of the *rational* soul – the mind residing within, and directing, a subordinate body.⁵³ David Borgo reconciles this dichotomisation by

⁵⁰ Alhadeff-Jones, ‘Three Generations of Complexity Theories’, 72.

⁵¹ Kuhn, ‘Complexity and Educational Research’, 176.

⁵² Gavin Thatcher and Daniel Galbreath, ‘Essai: The Singing Body: Towards a Unified Training of Voice, Body, and Mind’, *Theatre, Dance and Performance Training*, 8.3 (2017) <<https://doi.org/10.1080/19443927.2017.1370268>> [accessed 19 January 2018], 360.

⁵³ Thatcher and Galbreath, ‘Essai: The Singing Body’, 360.

outlining how cybernetics, a complexity-adjacent field, has been drawn into understandings of improvisation,

either by exploring the interrelationship between mind and body or by theorising the interpersonal and intersubjective dynamics of performance. However, after one comes to the realisation that the mind is in the body and the body is in the mind (or, more precisely, that our conceptual, sensory, and motor capacities are intertwined and have coevolved), and that the mind extends beyond skin and skull into the social, cultural, physical, and technological environments that influence human experience, it can be unclear where to go next.⁵⁴

His suggestion as to ‘where to go next’ recalls the Complexity idea of nesting: in his cybernetics-based framework, systems (here, improvisers) are closed and self-determining (autonomous) only inasmuch as they are open to their context, or the systems in which they are nested (ensemble, physical context, tradition).⁵⁵ The mind-body of a singer might therefore be seen as complex.

The active, improvisatory processes of singers might be interpreted similarly. Maxine Sheets-Johnstone elaborates on this idea throughout her anthology *The Corporeal Turn*, arguing that we learn and think through movement, contradicting Cartesian dualism to propose a new mode of discovery of the self and the world.⁵⁶ She collapses discovery-as-thought and discovery-as-movement into one another, observing that the idea that thoughts ‘exist separately from and prior

⁵⁴ David Borgo, ‘Openness from Closure: The Puzzle of Interagency in Improvised Music and a Neocybernetic Solution’, in Gillian Siddall and Ellen Waterman (ed.), *Negotiated Moments: Improvisation, Sound, and Subjectivity* (Durham: Duke University Press), 113.

⁵⁵ Borgo, ‘Openness from Closure’, 115.

⁵⁶ Sheets-Johnstone, *The Corporeal Turn*, 2.

to their [corporeal] expression[...] has been justly criticised by philosophers such as Wittgenstein and Merleau-Ponty'.⁵⁷ As an alternative, Sheets-Johnstone asks whether an acutely 'first-person', embodied experience can liberate us from the burdens of prescriptions set on our bodies by third- and second-person societal narratives, and help us come to know our world.⁵⁸ Using this line of reasoning, improvisatory music-making would involve various forms of thought and discovery, with actual singing being as important a facet of these processes as considerations of what, or how, to sing.

Sheets-Johnstone unseats dualism in another important way, opening another door to a Complexity view of embodiment. Rebuking notions of the body as a machine, which, in viewing it from the 'outside', leaves it 'devoid of intentionality, of affections, of autonomous power',⁵⁹ Sheets-Johnstone's proposition of first-person corporeal knowing and thinking accommodates a non-mechanistic, Complex emergence. She writes that, in the corporeal processes of self-discovery, actions are non-deterministic;

there is no cause-effect sequence that might be said to underlie them. After experiencing one of these moments, one cannot say, 'because I did this, I discovered that', or, 'because I did this, that happened'. Moments of illumination or insight that come in attending or listening to the body are not within our direct control.⁶⁰

So, even as Borgo offers a view of the complexity of influences acting on singers' embodied minds, Sheets-Johnstone contends that the outcomes of those influences (especially the agency of an

⁵⁷ Sheets-Johnstone, *The Corporeal Turn*, 38.

⁵⁸ Sheets-Johnstone, *The Corporeal Turn*, 19–20.

⁵⁹ Sheets-Johnstone, *The Corporeal Turn*, 18.

⁶⁰ Sheets-Johnstone, *The Corporeal Turn*, 22.

improvising singer) in an unfolding, improvisatory process are unpredictable. In this view, improvisation cannot be seen as only an intellectual process of pitching and rhythmic decisions any more than it can be seen as a subconscious, physical process. Instead, improvisatory musical creativity occurs not just in a mind or a body; it might occur in both, as a unified whole.

At this juncture, writings specifically on improvisation again become pertinent. As argued above, even if choral aleatorism cannot be described as improvisation, it *is* improvisatory. This idea holds especially true when considering its embodied nature. Gillian Siddall and Ellen Waterman state quite plainly that ‘musical improvisation is ineluctably embodied’,⁶¹ a claim that underpins the collection of essays, *Negotiated Moments: Improvisation, Sound, and Subjectivity*.⁶² Pauline Oliveros’s reflection that, during improvisation, ‘bodies merge with the vibrational complexity of a deep ocean’,⁶³ draws Siddall’s and Waterman’s embodied subjectivity into a physical intersubjectivity. Performers of improvisatory music are engaged in a physically relational activity. Oliveros provides an account of her sensory experience of improvisation – in this case about improvisation with other women – as both an internal and an external, shared event.

sharing [of] space/time, sharing states of consciousness and body consciousness, elevating the sensuous nature of sound onto a par with the technical mastery of the music. This process is of the body, in the body, and out of the body. The [...] syntax comes through inner and outer dialogue with self, space, and others through weaving and sharing in the moment; the forms arise and shape themselves from the energy of the body.⁶⁴

⁶¹ Gillian Siddall and Ellen Waterman (eds.), *Negotiated Moments: Improvisation, Sound, and Subjectivity* (Durham: Duke University Press), 2.

⁶² Siddall and Waterman, *Negotiated Moments*.

⁶³ Oliveros, ‘Harmonic Anatomy’, 61, quoting her conversation (for this article) with Anne Bourne.

⁶⁴ Oliveros, ‘Harmonic Anatomy’, 61.

This reflection suggests that, in sharing one's individual physicality through improvisation, there occurs a certain forfeiture of the self. As I have discussed, choral aleatorism offers performers the opportunity to enact their individual subjectivity more than in traditional choral music; yet Oliveros points out that an improviser nevertheless can still participate in the intersubjective, shared experience of the ensemble. These observations are not mutually exclusive: a performer might impact upon the system which mutually impacts upon them. Performers are not closed from their context, but rather interact through their bodies. For Oliveros, agency in improvisation does not amount to closedness.

Siddall and Waterman comment on this loss of individual agency through improvisation, replacing it with a 'fluidity of identity', as well as 'the capacity for individuals and communities to change based on their willingness to engage with others, embrace the intimate chaos', a conceptualisation that 'is founded on the necessary unpredictability of human connection'.⁶⁵ Emergent changes in an individual and the adaptive shifts of a complex system are coterminous: Sheets-Johnstone's unknowable, complex body becomes an entire unknowable, complex performing corpus.

Several writers deal with the way in which the vocal ensemble and an individual's identity interact. Robert Faulkner and Jane W. Davidson carried out a study of participants in a men's choir, suggesting compellingly that singing was a means of constructing a holistic self.⁶⁶ Liz Garnett evokes Barthes's notion that the voice is 'a site where social processes and individual

⁶⁵ Siddall and Waterman, *Negotiated Moments*, 18.

⁶⁶ Robert S. C. Faulkner and Jane W. Davidson, 'Men's Vocal Behaviour and the Construction of Self', *Musicae Scientiae*, 8.2 (autumn 2004) 231–55 <<http://journals.sagepub.com/doi/pdf/10.1177/102986490400800206>> [accessed 15 February 2018].

identify meet most intimately'⁶⁷ to suggest that choral singing is an experience whereby performers' bodies are brought into line with 'ideological imperatives',⁶⁸ through both training regimes and the presence and contributions of other singers. In this argument, the individual is allowed to be included in choral efforts only through the exclusion of many of their individual behaviours, according to imperatives originating with a conductor.⁶⁹ I would problematise Garnett's top-down view of choral practice, proposing instead that the interpretative constructions of singers are at least as relevant and powerful as a conductor's enforcement of ideology. But her underlying thesis, that choral singing is a 'bodily regime', remains relevant to the performance of choral aleatorism, in that the individual body is a crucial site of interaction for multiple influences.

Rather than reducing singers to victimhood at the mercy of a supposed hegemony of choral expectations, I posit that Complexity Thinking offers an understanding of their complicity in creative music-making. The complex mind-body of the improviser is nested within the greater complex system of the ensemble, and the performer's own personal influences and memory emanate out to proximal fellow-performers, to be bolstered or negated by feedback. Siddall and Waterman echo George E. Lewis's argument, cited previously (Chapter 2.2), in writing that improvisation involves repetition of past learning, and that performers 'cannot escape from [their] enculturation and our histories'.⁷⁰ Performers bring their individuality and experience to a performance, and their own characteristics and habits impact upon the group.

An improviser's internal history is an important aspect of Complexity Thinking. Jérôme Proulx cites the constructivist discourses of Humberto Maturana and Francisco Varela, which

⁶⁷ Liz Garnett, 'Choral Singing as Bodily Regime', *International Review of the Aesthetics and Sociology of Music*, 36.2 (December 2005) 249–69, <<http://www.jstor.org/stable/30032171>> [accessed 9 October 2015], 250, citing Barthes, 'The Grain of the Voice'.

⁶⁸ Garnett, 'Choral Singing as Bodily Regime', 249.

⁶⁹ Garnett, 'Choral Singing as Bodily Regime', 268.

⁷⁰ Siddall and Waterman, *Negotiated Moments*, 3.

distinguish biological cognition – the phylogenetic reasoning of members of a species – from individual-specific reasoning – ontogenesis.⁷¹ Phylogenetic reasoning, in this case, refers to the way in which singers’ bodies have become built, over the course of our evolution as a species, to produce sounds and express ourselves through those sounds. The web of influences on a species’ evolution is self-evidently complex and would naturally impel emergent behaviours in singers as they discover their bodies through improvisatory acts. Ontogenetic reasoning here encompasses local, individual-specific traditions, and the ways in which singers draw on their own learning and habits. The interaction between the phylogenetic and ontogenetic elements of complex reasoning may not solve the eternal quandary of ‘nature versus nurture’, but Complexity Thinking does provide an insight into their nested cooperation in the creation of emergent outcomes in singers and ensembles. Both are part of cognition,⁷² and living participants are more than materially essentialised automatons. Instead, singers drive, and are driven by, an ‘autopoietic’ system, one which creates and continues to realise itself through the interaction of its parts.⁷³

Sheets-Johnstone pulls memory towards movement, admitting habit into her conception of corporeal discovery. At this point, a tension becomes apparent between training and spontaneity. She ties the deeply engrained nature of movement – corresponding here to singers’ entrainments and traditions – to their biological propensities and inclinations.⁷⁴ Moreover, using an apt term, she describes experience as unfolding through ‘kinetic melodies’, which she borrows from Alexander Luria to describe the unfolding of kinaesthetic memories which ‘are inscribed in the

⁷¹ Jérôme Proulx, ‘Some Differences between Maturana and Varela’s Theory of Cognition and Constructivism’, *Complicity: An International Journal of Complexity and Education*, 5.1 (2008), 11–26, <<https://journals.library.ualberta.ca/complicity/index.php/complicity/article/view/8778/7098>> [accessed 2 April 2018], 18.

⁷² Proulx, ‘Some Differences’, 17.

⁷³ Morrison, ‘Educational Philosophy’, in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 17.

Alhadeff-Jones, ‘Three Generations of Complexity Theories’, 70, citing Maturana and Varela (from 1992).

⁷⁴ Sheets-Johnstone, *The Corporeal Turn*, 56–60.

body as specific bodily dynamics'.⁷⁵ Yet Siddall and Waterman write that the trained body is a site of resistance to training, 'through sonic and physical gestures that are often coterminous'.⁷⁶ Kinaesthetic discovery is therefore both an improvisation and a reification of entrainment. Greg Downey points towards how this conflict might be reconciled. He puts forth a notion, based on his study of Afro-Brazilian *capoeira*, which he terms 'the body's apprenticeship in listening'.⁷⁷ 'Music emerges in a field of corporeal potential rather than in a cognitive space';⁷⁸ in this field of corporeal potential, musical traditions are reflected in a performer's behaviour, from which they then improvise.⁷⁹

As will be seen in Chapter 6, disruption is of vital importance to singers. It is worth emphasising now, however, how bodies both receive and disrupt complex influences. Physical bodies experience sound as spatial and material. Rebecca Caines's view of Henri Lefebvre's 'spatiality' – the notion that we construct the meanings of spaces just as we often literally, physically construct them – is refracted through her conviction that '[o]ne of the most fluid ways we experience spatiality is through sound. Our bodies are immersed in and penetrated by sound'.⁸⁰ Improvisers construct their physical context through their sonic experience of it; that sonic experience is a physical one. Sound is 'a physical phenomenon: the materialities of air pressure and solid media such as strings or membranes vibrate the body through tactile impression. Sound penetrates and vibrates the body through and through'.⁸¹ Improvisers' experience of their context,

⁷⁵ Sheets-Johnstone, *The Corporeal Turn*, 258.

⁷⁶ Siddall and Waterman, *Negotiated Moments*, 5.

⁷⁷ Greg Downey, 'Listening to Capoeira: Phenomenology, Embodiment, and the Materiality of Music', *Ethnomusicology*, 46.3 (autumn 2002), 487–509 <<http://www.jstor.org/stable/852720>> [accessed 21 June 2016].

⁷⁸ Downey, 'Listening to Capoeira', 499.

⁷⁹ Downey, 'Listening to Capoeira', 497.

⁸⁰ Rebecca Caines, 'Community Sound [e]Scapes: Improvising Bodies and Site/Space/Place in New Media Audio Art', in Gillian Siddall and Ellen Waterman (ed.), *Negotiated Moments: Improvisation, Sound, and Subjectivity* (Durham: Duke University Press, 55–74).

⁸¹ Siddall and Waterman, *Negotiated Moments*, 2.

and of each other, is vitally contingent on their bodies' aural experience: sound-as-material is something 'we cannot easily separate [...] from our experience of it'.⁸²

Our experience of that sound is dependent largely on mimetic perception, argues Arnie Cox in *Music and Embodied Cognition*.⁸³ For Cox, our bodies respond to music we hear in a physical way. We perceive the physical efforts behind the sounds we hear and, even when we do not act them out, we have a kinaesthetic response to those efforts as well as a sense of general musical 'motion'.⁸⁴ Borgo might disagree, contending that we can 'only connect to the communication of others', not to the communicators themselves⁸⁵ – singers can share knowledge, even establish proximity, via sound, but they cannot actually connect to another singer. Yet Cox reminds us that we infer a musical agent when we respond mimetically to music that we hear.⁸⁶ I will argue in later chapters that physically relational sound is enough to establish a very real connection between performers, creating not just an exchange of information through the filter of mimesis, but a physically connected, complex whole.

Improvisatory musical performance can therefore be understood not only through a Complexity lens, but through the additional lens of embodiment theory. This perspective, a development on the constructivist philosophical orientation outlined above, remains firmly centred on the experience and agency of singers. It calls for a methodology that affords an understanding of what occurs within, and between, singers during complex situations.

⁸² Siddall and Waterman, *Negotiated Moments*, 7.

⁸³ Arnie Cox, *Music and Embodied Cognition* (Bloomington: Indiana University Press, 2016).

⁸⁴ This hypothesis is elaborated upon in great detail in Cox, *Music and Embodied Cognition*, 11–57; musical motion is dealt with later (134–62).

⁸⁵ Borgo, 'Openness from Closure', 125.

⁸⁶ Cox, *Music and Embodied Cognition*, 143.

Chapter 4 Methodology: Interrogating Choral Aleatory Practice

4.1 Introduction

This methodology has been designed to interrogate the performance of choral aleatorism, both through performer study and performance analysis. Encompassing the empirical methods employed in two composite case studies with singers and a comparative analysis of several recorded performances of aleatory choral music, it has been used to yield an understanding of singers' experiences not previously provided by musical practice-research. These case studies comprise discussions of workshops, rehearsals, and performances (detailed in Chapters 5 and 6). The first study involves Via Nova, a contemporary vocal ensemble based in Birmingham; the second involves various choirs from around the United Kingdom. Analyses centre on select recordings from these workshops.

Many tools from outside the musical field have proved useful in gathering and processing information from the singers in these studies. In particular, Grounded Theory Method (hereafter, GTM), especially the constructivist version employed by Charmaz,¹ has been used to process data through a sequence of coding to allow findings to emerge inductively. While GTM deals in terms of 'theory' and 'theorisation', this methodology does not seek to arrive at a verifiable, refutable theory (see Chapter 1.6). Instead, it aims to use data and performance analyses to yield findings that are sufficiently *theorised* to apply meaningfully to future situations and practice, while being grounded in the performance activities of the two case studies. My data has been gathered via an interview- and questionnaire-based methodology that draws upon GTM and Holstein and Gubrium's 'active interviewing' technique.² Both methods are fundamentally predicated upon a

¹ Charmaz, *Constructing Grounded Theory*.

² James A. Holstein and Jaber F. Gubrium, *The Active Interview*, Qualitative Research Methods Series, 37 (Thousand Oaks, CA: SAGE, 1995).

complicity in meaning-construction that is shared between researcher and participants. As such, these methodologies successfully meet the demands of the inductive and constructivist philosophical orientation detailed in the Introduction (Chapter 1.4). As methods used frequently in sociological research, they also address indirectly Bayley's contention that ethnomusicological methods are a vital component in understanding the experience of musical performance, especially contemporary music.³ Given the focus of this project on experiences that might be better described as 'personal' than as musical, these sociological methods lead much of the discussion that follows. Musical practice-research ideas offer relevant detail and highlight, where necessary, the validity of non-musical methods in a musical sphere.

Two principles of musical practice-research helpfully initiate the following discussion. First, Solis and Nettle observe that there are certain enduring problems facing the study of improvisation. They outline these problems:

The mainstream discourse of scholarly literature about improvisation has revolved around three questions: (1) whether something is properly improvisation, and how we can find out; (2) the relationship between some point of departure learned by an improviser and the product that is created in the course of performance; and (3) the methods of combining, juxtaposing, and otherwise arranging building blocks to create music.⁴

Point 1 has already been addressed in Chapter 2; points 2 and 3 indicate the importance of understanding the habits and tools that singers use in performing new works, without creating a deductive straightjacket for what those means might be.

³ Bayley, 'Ethnographic Research', 385.

⁴ Solis and Nettle, *Musical Improvisation*, xi–xii.

The second practice-research idea to set up this methodology is Doğantan-Dack's observation that the difficulties of understanding performance can be addressed by 'contextualis[ing] the live event through multi-modal means so as to implicate its liveness'.⁵ What follows is my discussion of these multi-modal means. I outline the ideas and models used in the design of the case studies and provide a summary of that design; I then discuss the methodological literature that informed my processes for gathering and processing data, explaining how they apply to the unique situations of these case studies and touching on points of tension within them. I also enumerate the ideas that inform my analysis of aleatory performances, before discussing my own analytical model. At the core of this process is GTM, which directed my approach even prior to its main implementation during data processing.

4.2 Interrogating Performers' Experiences

4.2.1 Case Study Research Design

Data has been gathered from the performance and rehearsal events of two case studies with the intention of generating grounded conclusions and an applicable practice. The objective has been to generate detailed 'rich data', embracing developments over time and permitting multiple points of view.⁶ Arguably, case studies are best used to understand a 'contemporary phenomenon within the real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident'.⁷ The choral rehearsal and performance *is* a real-life context for choral aleatorism; aleatorism cannot somehow be extracted for separate study. This particular case study design attempts to take advantage of that obfuscation, nesting aleatory performance within its

⁵ Mine Doğantan-Dack, 'The Art of Research in Live Music Performance', *Music Performance Research*, 5 (2012), 40.

⁶ Charmaz, *Constructing Grounded Theory*, 33.

⁷ Laws and McLeod, 'Case Study and Grounded Theory', 6.

greater context. The specificity and limitations of the rehearsals and workshops also obviate questions of bounding the research situation, a necessary step to ensure the data's validity.⁸ My focus is on aleatory choral performance as I have defined it in the Introduction (1.2), and as it occurs in the situations described in each case study.

Performance is not a sterile laboratory situation, where variables and influences can be controlled and isolated. The nature of rehearsals, which are uncontrolled in the sense that any such scientific isolation and control of factors is rendered impossible both by the need to prepare a score and by what is often a fairly casual social atmosphere, presents a good opportunity to clarify the role of theoretical (music-specific) conversation, background knowledge and rehearsal strategies. A central tenet of GTM, valuable to my purposes, is 'theoretical sensitivity'. Laws and McLeod warn that the language of the researcher's field itself 'contain[s] assumptions, values and priorities that [respond] to institutional arrangements, historical developments, and the contradictions of existing social conditions'.⁹ In the inductive studies of this thesis, insights must be generated from inside of the participants' points of view, rather than affirming biases, or extraneous variables,¹⁰ while still acknowledging them. Cathy Urquhart offers a procedural clarification:

As [GTM] is an inductive, emergent method that is located mainly in post positivism, [...] researchers need to carefully consider their own philosophical position. That said, it is primarily a method, and can be used in several different paradigms.¹¹

⁸ Laws and McLeod, 'Case Study and Grounded Theory', 6.

⁹ Laws and McLeod, 'Case Study and Grounded Theory', 12, citing Thomas S. Popkewitz, *Paradigm and Ideology in Educational Research* (Sussex: The Falmer Press, 1984).

¹⁰ Charmaz, *Constructing Grounded Theory*, 24.

¹¹ Cathy Urquhart, 'An Encounter with Grounded Theory: Tackling the Practical and Philosophical Issues', in Eileen M. Trauth (ed.), *Qualitative Research in IS* (Hershey, PA: Idea Group International, 2001), 131.

Therefore, she argues, it may be wise to postpone full immersion in literature, which might confine understanding of the concepts emerging from the data itself.¹² Citing Glaser, however, she observes that complete ignorance of the literature is ‘a corruption’ of this ‘theoretical sensitivity’.¹³ As Ian Dey puts it pithily, ‘we should not confuse an open mind with an empty head’.¹⁴

It would be impossible to practise or discuss music without theoretical knowledge. This holds especially true for a field with such a heft of history and tradition as choral music. The intensely theorised context of choral practice is not something to be overturned or resisted, but rather a further area in which to situate findings; it also emerges as an aspect of constructed understanding to be acknowledged explicitly.¹⁵ Charmaz advocates the open recognition of the researcher’s ‘background assumptions, proclivities and interests’ in order ‘to sensitise them to look for certain issues and processes in their data’.¹⁶ Likewise, Dey reminds us that findings from participants are laden with ‘meaning [from] underlying cognitive models’,¹⁷ such as musical training and vocabulary. Incorporation of literature and additional documents (analysed as one might do interview or questionnaire responses) are vital aspects of Charmaz’s ‘methodological eclecticism’,¹⁸ which enriches a GTM-based enquiry study¹⁹ and ‘can strengthen a study with a small number of interviews’.²⁰ Literature from Complexity Thinking and embodiment theory helps to meet that need here. The conclusion best drawn from both writers’ suggestions is that theoretical sensitivity can be derived from literature that clarifies the *how* of data collection without tainting

¹² Urquhart, ‘An Encounter with Grounded Theory’, 122.

¹³ Urquhart, ‘An Encounter with Grounded Theory’, 129, citing Glaser 1978.

¹⁴ Ian Dey, ‘Grounding Categories’, in Antony Bryant and Kathy Charmaz (eds.), *The Sage Handbook of Grounded Theory*, paperback edn. (London: Sage, 2007), 176.

¹⁵ Charmaz, *Constructing Grounded Theory*, 156.

¹⁶ Kathy Charmaz, ‘The Search for Meaning: Grounded Theory’, in J. A. Smith, R. Harré, and L. Van Langenhove (eds.), *Rethinking Methods in Psychology* (London: Sage, 1996), 32.

¹⁷ Dey, ‘Grounding Categories’, 176.

¹⁸ Charmaz, *Constructing Grounded Theory*, 27.

¹⁹ Charmaz, *Constructing Grounded Theory*, 45–6, 52.

²⁰ Charmaz, *Constructing Grounded Theory*, 107.

the *what*. Moreover, theoretical sensitivity must be regarded as substantively different in the current case studies from that in many other GTM-based studies, since the participants shared much theoretical knowledge (musical training) with me, as a conductor. It has thus been incumbent upon me, as a researcher, to present all participants' theoretical knowledge as part of emergent findings, rather than to steer the participants in any way – even while, as a conductor, I have had to deal in such theoretical terms.

This modification of the idea of theoretical sensitivity recognises the participants' complicity in constructing musical and non-musical meaning: 'The researcher and the participants collaborate to generate the data which in turn generates the theory'.²¹ (My own complicity, as a conductor-researcher, is discussed more fully in Chapter 4.3.2, Data Processing). That complicity, paralleling the mode of meaning-construction in choral aleatorism itself, suggests an iterative research structure, in which the outcomes of one event steer those that follow. This cyclical, emic approach maintains singers' agency in building knowledge,²² and, when it involves the singers in the research and me (as researcher) in the practice (as conductor), the information can be richer, be more reflexive, and have a more cogently practical bent. Additionally, the ability to compare findings may increase their validity; indeed, the potential for contradiction that some practitioners of GTM find to be a problem provides a wealth of useful ways to frame and reinterpret singers' mind-sets from a constructivist stance.²³

Charmaz outlines a process whereby successive interviews are undertaken, with progressively refined questions.²⁴ As participants' involvement progresses, so does their impact

²¹ Laws and McLeod, 'Case Study and Grounded Theory', 9.

²² Laws and McLeod, 'Case Study and Grounded Theory', 13.

²³ Laws and McLeod, 'Case Study and Grounded Theory', 15–6, and Glasersfeld, *Radical Constructivism*, 186.

²⁴ Charmaz, *Constructing Grounded Theory*, 88.

upon the study.²⁵ This study has been designed to allow potential for ‘constant comparison’, during which data has been consistently corroborated or clarified until a category of information could be fully developed, or ‘saturated’.²⁶ In the case studies, multiple sources have been used, including questionnaires (‘elicited documents’²⁷) and interviews. I have also consistently reflected on the process, often from a less inductive stance; this ‘memoing’ has also admitted some external theory into my thinking, offered distance from the material at hand, and aided the inductive process. Memos, along with constant analysis, allow ‘the lines between what constitutes data collection and what constitutes analysis [to] blur’.²⁸

Such a cyclic model is present throughout the field of musical practice-research. Robin Nelson draws a cyclic relationship between practical knowledge and knowledge gained as an outsider (or from outsiders), processed through critical reflection.²⁹ In this model, theory and practice are not only mutually informative but also merged, coeval entities ‘imbricated within each other’.³⁰ For Hazel Smith and Roger T. Dean, an iterative pattern ‘is particularly relevant to the sub-cycles but also to the larger cycle’,³¹ suggesting that practice and reflection are comingled within rehearsals and over the course of a case study.

Creativity is central to this blended methodology. The link between practice and research in Smith’s and Dean’s book is the creative act of ‘idea generation’, foretelling the idea of abduction, discussed below (Chapter 4.2.3). Bayley holds musicians’ ‘reflection and evaluation’ as having a part in the rehearsal process of shared interpretation:³² methodology mirrors

²⁵ Charmaz, *Constructing Grounded Theory*, 104.

²⁶ Urquhart, ‘An Encounter with Grounded Theory’, 108.

²⁷ Charmaz, *Constructing Grounded Theory*, 47.

²⁸ Charmaz, *Constructing Grounded Theory*, 93.

²⁹ Nelson, *Practice as Research in the Arts*, 37, 44.

³⁰ Nelson, *Practice as Research in the Arts*, 62.

³¹ Smith and Dean, *Practice-led Research, Research-led Practice*, 20.

³² Bayley, ‘Ethnographic Research’, 406.

phenomena. Darla Crispin's use of a cyclical methodology addresses the need for reflection thrown up by the non-teleological nature of research carried out in a performance situation, with its lack of isolated variables and the impossibility of a fully controlled research situation.³³ She nests diagrammatically musical practice inside reflective practice, both of which are inside research practice.³⁴ This model offers a non-linear way of considering practice-research via an inductive approach mirrored by the processes detailed below. An iterative approach has allowed me to remain abreast of how the performance process develops in a comparatively uncontrolled environment, through the combination of observation and reflection.

My own dual role as the conductor of Via Nova and as a practising researcher has thrown up certain methodological challenges throughout the case studies. My insider status has resulted in a blurring of lines between my position as a conductor and my removal as a researcher. The differential of authority between the singers and myself compounded this blurring and posed ethical dilemmas. Such quandaries, recalling questions of theoretical sensitivity, are not uncommon in educational settings. Kevin Laws and Robert McLeod even seem to make this an advantage, writing that the immersed educational researcher's 'lack of control [...] means that it is necessary to adopt a holistic approach to the issue, one that is grounded in the reality of the situation and one that illuminates the meaning' of that situation.³⁵ Although they address this comment to the 'outsider' researcher, the need for a complex situation to be illuminated holistically is surely only magnified when the researcher is an 'insider', as I am here. Derek Layder observes 'the danger [of] the relative neglect of the power of external-structural forces to shape behaviour and events'³⁶ in interactive research. In this study, however, the singers' interaction with, and

³³ Crispin, 'Artistic Research and Music Scholarship', 70.

³⁴ Crispin, 'Artistic Research and Music Scholarship', 58.

³⁵ Laws and McLeod, 'Case Study and Grounded Theory', 4.

³⁶ Cohen, Manion, and Morrison, *Research Methods in Education*, 21.

interpretation of, that power structure is itself an issue of interest. Pitfalls of complicity and power have been further obviated by encouraging the singers' active agency in practice-creation. Gritten writes that the practitioner-researcher's job is to take 'events as events', allowing, rather than compelling, actions to unfold.³⁷ My role has been to encourage meaning-making rather than to force meanings to emerge – a seemingly obvious axiom, which rehearsal settings provide ample opportunity to violate.

Musical practice-research has dealt with the issue of intervention as it appears in rehearsal and performance situations. Bayley's adoption of ethnographic concepts leads to an approach to her own positionality in which she, an 'insider', might

demonstrate the merits of a constructive, cooperative collaboration between 'musicologist' and 'performer', with the aim of eliminating the 'them and us' approach that may prevail when analysing and theorising about performance [...].³⁸

Doğantan-Dack enlists autoethnographic ideas of balancing personal experience with external forces, whether those are 'the experiences of others' or the body of literature,³⁹ once again making an asset of the combination of one's 'insider' status, first-hand accounts, and additional literature. Crispin even argues that achieving the 'hard-won equilibrium' between one's role as a researcher and an artist can 'resituate the practice of performance within a continuous, developmental trajectory' rather than as an end point in itself.⁴⁰

³⁷ Gritten, 'Determination and Negotiation', 85.

³⁸ Bayley, 'Ethnographic Research', 392.

³⁹ Doğantan-Dack, 'The Art of Research', 40.

⁴⁰ Crispin, 'Artistic Research and Music Scholarship', 57.

A simplified outline of the iterative research model can be seen below (Table 4.1). This outline presents details including the method of data collection, but full information on the implementation of this methodology is dealt with in each case study (Chapters 5 and 6). Necessary adaptations to methodology are also described in their respective case study. Case Study 1 (hereafter CS1) focused on three events with the contemporary vocal ensemble Via Nova (VN1, VN2, and VN3), involving workshops, rehearsals, and performances. Case Study 2 comprises a more focused set of workshops with three amateur choirs: Quinton Community Choir (abbreviated as QCC), ETC. Civil Service Choir (ETC), and Ex Urbe Choir (EUC). These workshops confronted the choirs with more established choral works using aleatorism: Kerry Andrew's *O Nata Lux* (2005) and Cornelius Cardew's *The Great Learning*, Paragraph 7 (1968–70).

Table 4.1, Basic outline of iterative case study research plan.

Stage of research	Dates	Data collection method
Case Study 1 (CS1): Piloting, Conceptualising, and Via Nova workshops		
Piloting and conceptualising	June 2015–July 2016	Group discussion; reflections upon workshops; questionnaires.
VN1	March 2016	Questionnaires
VN2	April 2016	Questionnaires
VN3	May 2016	Interviews and rehearsal discussion transcripts.
Case Study 2 (CS2): The Improvising Choir workshops		
Quinton Community Choir	March 2017	Questionnaires
ETC. Civil Service Choir	March 2017	Questionnaires
Ex Urbe Choir	October 2017	Questionnaires

Case Study 1 included a phase of piloting and conceptualising, in addition to the three major performance events. This phase was as much a part of early theorisation as it was a test of research instruments: those research instruments were adapted throughout CS1 and CS2 to suit each event and to pursue emergent areas of theoretical interest. The most important of these adaptations are discussed within each case study; all research instruments used can be found in Volume II, Appendix A. Questionnaires and rehearsal transcripts were designed along the principles laid out below (Chapter 4.2.2) and processed using the GTM (see Chapter 4.2.3).

4.2.2 Data Gathering (Questionnaire and Interview Design)

Initial investigation uncovered general terms and considerations for singers in an aleatory situation. Bram Oppenheim refers to this process, wherein participants determine the terms of the research, as ‘*conceptualisation* of the study’.⁴¹ Conceptualisation has been carried out through questionnaires, which sought to encourage the kind of free reflection that can suggest syntactical and conceptual threads worth further pursuit. Wordings and layouts were also given a ‘test run’ with singers and colleagues to ensure they were clear and did not seem to compel certain answers – a difficult aim, given the theoretical narrowing that makes GTM so efficient. During this stage, ethics clearance was obtained; information sheets were written to provide participants with necessary information and to allow them to give informed consent. Conceptualisation was present beyond the beginning of a study: the information gathered following each workshop or event was interpreted and allowed to inflect the practice of the subsequent event.

During both conceptualisation and the case study itself, information was gathered primarily through questionnaires, which progressively narrowed over the study to focus on particular

⁴¹A. N. Oppenheim, *Questionnaire Design, Interviewing and Attitude Measurement*, new edn. (London: Pinter Publishers, 1992), 7.

questions and pursue areas of interest (for samples, see Volume II, Appendix A). How the questionnaires were narrowed will be explained in each case study. All questionnaires were intended to resemble an ‘active interview’ in their openness (discussed below), thereby providing richer information and beginning to engage the singer in a reflection on their process, encouraging a fruitful interview later. A central concern in administering these questionnaires was sampling: Oppenheim suggests selecting a ‘representative sample’,⁴² but this current study has necessitated and invited a different approach. While the distribution of certain characteristics was noted (singers’ gender, experience, and so on; see Volume II, Appendices A1–3 and 5, pp. 2, 7, 12, and 17), of greater importance here has been the GTM preference for selecting respondents according to their potential to develop certain findings – for their ‘*theoretical relevance*’.⁴³

This approach has been applied more to the overarching research design than to the selection of individual singers. Amateur singers (CS2) have been contrasted with early professionals (CS1); those professionals were involved in devising new scores (VN1), performing works without collaboration (VN2), and working with composers but without the level of collaboration present in VN1 (VN3). In CS2, Quinton Community Choir, which learns primarily by rote, was contrasted with the ETC. Civil Service Choir, which, though amateur, performs major classical works and contains strong sight-readers. Ex Urbe Choir performs to a similar level as ETC but is a much smaller group based outside London. Respondents self-volunteered, in contrast with more typical sampling strategies, which are more mechanistic and less orientated towards theorising.⁴⁴

⁴² Oppenheim, *Questionnaire Design*, 44.

⁴³ Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (London: Weidenfeld and Nicolson, 1967), 49.

⁴⁴ Bill Gillham, *Developing a Questionnaire*, 2nd edn., Real World Research series (London: Continuum, 2007) 18–9. Holstein and Gubrium, whose interviewing technique is discussed below, also question the merits of representativeness, preferring consideration of ‘people, as opposed to populations’: Holstein and Gubrium, *The Active Interview*, 25.

At the end of CS1, it was possible to conduct interviews, and group discussions were recorded in rehearsals. (An interview guide may be seen in Volume II, Appendix A4, p. 16.) The objective of these interviews was to capture, in Doğantan-Dack's words, 'what otherwise would not be articulate in the discipline, i.e. the phenomenology of performing and the performer's perspective on the cognitive-affective dimensions of music making'.⁴⁵ The approach in these conversations has been based upon the 'active interviewing' technique. Active interviewing was developed by James A. Holstein and Jaber F. Gubrium, who hold that

[t]reating interviewing as a social encounter in which knowledge is constructed suggests the possibility that the interview is not merely a neutral conduit or source of distortion, but is instead a site of, and occasion for, producing reportable knowledge itself.⁴⁶

Holstein and Gubrium describe an interviewee's narration as an improvisation that connects 'disparate parts into a coherent, meaningful whole'.⁴⁷ Just as aleatorism is intersubjective and improvised to varying degrees, any verbal reconstruction of that process and experience must be likewise. As such, the interviewer facilitates an improvised process, allowing the respondent to interpret their own understanding reflexively,⁴⁸ while seeking to detect and pursue 'horizons' of meaning (clusters of undeveloped thoughts or concepts, which, as will be seen, strikingly resemble the emergent categories of Grounded Theory technique).⁴⁹ Thus, in active interviewing, questions – and the entire interview – must remain open. Using exploratory interviews, with a descriptive

⁴⁵ Doğantan-Dack, 'Recording the Performer's Voice', 303–4.

⁴⁶ James A. Holstein and Jaber F. Gubrium, 'Active Interviewing', in Darin Weinberg (ed.), *Qualitative Research Methods*, Blackwell Readers in Sociology (Malden, MA: Blackwell, 2002), 112.

⁴⁷ Holstein and Gubrium, *The Active Interview*, 28.

⁴⁸ Holstein and Gubrium, *The Active Interview*, 33.

⁴⁹ Holstein and Gubrium, *The Active Interview*, 59.

rather than analytic intent,⁵⁰ singers have been able to reconstruct their experiences in a thorough way.

4.2.3 Data Processing: Grounded Theory Method (GTM)

The Grounded Theory Method (GTM) of processing data was created by Anselm L. Strauss and Barney Glaser in their 1967 volume *The Discovery of Grounded Theory: Strategies for Qualitative Research*.⁵¹ It is, in essence, a means of coding and analysing qualitative data in such a way as to ground any eventual theorisation firmly in that data. Data has been processed here using GTM and rendered anonymously,⁵² though in certain respects GTM had to be modified, as is not uncommon in practice-research.⁵³ Charmaz's model of GTM, introduced earlier, offers a constructivist means of interpreting data, in keeping with my philosophical orientation. Her stance (also adopted notably by Urquhart)⁵⁴ is that Grounded Theory formation is 'a social construction of the social constructions found and explicated in the data'.⁵⁵ She is, arguably, opposed to the more positivist attitude of Glaser and Strauss.⁵⁶ Grounded Theory processing accommodates non-positivist empiricism via constructivism, which Glasersfeld argues restores empiricism to its original purpose: 'to examine the world of experience'.⁵⁷ The arrival at a Grounded Theory is, for Charmaz, the most constructivist phase of the GTM process:

⁵⁰ Oppenheim, *Questionnaire Design*, 67 and 12.

⁵¹ Glaser and Strauss, *The Discovery of Grounded Theory*.

⁵² Doğantan-Dack, 'The Art of Research', 39. Doğantan-Dack criticises the anonymising of results, since doing so might deprive singers of personhood; I would argue, however, that the resultant benefits in candour and protection outweigh this concern.

⁵³ Haseman and Mafe, 'Acquiring Know-How', 212.

⁵⁴ Urquhart, 'An Encounter with Grounded Theory', 179.

⁵⁵ Laws and McLeod, 'Case Study and Grounded Theory'.

⁵⁶ Charmaz, 'The Search for Meaning', 30.

⁵⁷ Glasersfeld, *Radical Constructivism*, 118.

Unlike [Glaser and Strauss's] position [that theory emerges as separate from the researcher], I assume that neither data nor theories are discovered either as given in the data or the analysis. Rather, we are part of the world we study, the data we collect, and the analyses we produce. We *construct* our grounded theories through our past and present involvements and interactions with people, perspectives, and research practices.⁵⁸

Similarly, Jacqueline Fendt and Wladimir Sachs objected to early, objectivist GTM, disliking its quest for a 'grand narrative'⁵⁹ – a distaste exhibited generally in postmodernism.

Urquhart outlines the process of grounded coding, in which the researcher describes segments of responses in increasingly abstracted terms, or 'codes'.⁶⁰ Open coding, immediately following data collection, involves 'looking at each line, allocating codes to words or groups of words [...]'.⁶¹ Urquhart suggests that this coding should be aimed toward 'describing, classifying and connecting'⁶² the information at hand. Drawing conclusions begins with coding, and codes are among the researcher's explicitly acknowledged constructions.⁶³ Although Charmaz advocates rapid and spontaneous line-by-line coding,⁶⁴ I came to find that more thoughtful processing which moves information toward abstraction, parsing the data according to concepts rather than physical presence of type on a page, permitted an earlier, stronger theoretical engagement. This approach kept with Phyllis Noerager Stern's suggestion to allow the 'cream of the data' to rise to the surface,

⁵⁸ Charmaz, *Constructing Grounded Theory*, 17.

⁵⁹ Charmaz, *Constructing Grounded Theory*, 238 (citing Fendt and Sachs 2008, 440–41).

⁶⁰ Urquhart, 'An Encounter with Grounded Theory', 110–17.

⁶¹ Urquhart, 'An Encounter with Grounded Theory', 110.

⁶² Urquhart, 'An Encounter with Grounded Theory', 111.

⁶³ Charmaz, *Constructing Grounded Theory*, 113–14.

⁶⁴ Charmaz, *Constructing Grounded Theory* 118, 124.

warning that Glaser's 'worrisome accuracy' actually inhibits theory formation.⁶⁵ Interpreting the data took precedence over pedantically atomising it.

Axial coding begins to categorise information and establish categories' relationships, a process that Urquhart calls 'the main engine of theory building'.⁶⁶ Axial coding uncovers and exploits those relationships: 'Open codes are grouped into categories and subcategories, and indeed some open codes become categories in their own right'.⁶⁷ Eventually, categories become 'dimensions of the research problem [...]'.⁶⁸ Creating categories, according to Charmaz, allows the researcher

(1) to explicate [the category's] properties, (2) to specify conditions under which it arises, is maintained and changes, (3) to describe its consequences and (4) to show how this category relates to other categories [...].⁶⁹

Dey elaborates further that categorisation goes beyond a merely indicative role, becoming 'both "analytic" and "sensitising"'.⁷⁰ Categories do not simply flag up emergent theory, but analyse it and sensitise the researcher to further data collection and processing. As such, they must remain flexibly bounded.⁷¹ Much of this flexible analysis takes place through 'memoing' (see my own examples in Volume II, Appendix B12, p. 76; B13, p. 78; and Appendix C), a means of reflecting

⁶⁵ Phyllis Noerager Stern, 'On Solid Ground: Essential Properties for Growing Grounded Theory', in Antony Bryant and Kathy Charmaz (eds.), *The Sage Handbook of Grounded Theory*, paperback edn. (London: Sage, 2007), 118.

⁶⁶ Urquhart, 'An Encounter with Grounded Theory', 112.

⁶⁷ Urquhart, 'An Encounter with Grounded Theory', 115.

⁶⁸ Urquhart, 'An Encounter with Grounded Theory', 117.

⁶⁹ Charmaz, 'The Search for Meaning:', 41.

⁷⁰ Dey, 'Grounding Categories', 168.

⁷¹ Dey, 'Grounding Categories', 169.

on events and ideas during case studies which helps the researcher remain orientated towards theory formation even in the midst of practice-research.⁷²

Grounded coding usefully addresses my dual role as conductor and researcher. Line-by-line coding ('open coding') prevents the researcher from "going native", or from becoming so immersed in respondents' categories or worldview that one fails to look at one's data critically and analytically'.⁷³ Coding in a manner similar to a line-by-line method dislodged certain entrenched assumptions and expectations that I held as a conductor. Additionally, the reading of complex data can be eased by 'understanding multiple layers of meanings of [respondents'] actions'.⁷⁴ That understanding may be divided into stated and unstated explanations for actions, respondents' intentions, and actions' consequences.⁷⁵ The unstated corollary of this parsing is acknowledged by Charmaz later when she repeatedly notes that GTM is focused on understanding processes.⁷⁶ Choral aleatorism, as a process and a performance of ideas, can naturally be understood in this way. Unpicking assumptions and musical backgrounds was an ongoing effort in data analysis.

The objective of this process is to reach 'theoretical saturation'. Theoretical saturation occurs when 'no additional data are being found whereby the sociologist can develop properties of the category'.⁷⁷ Saturation is contingent on repetitions in the data, as well as on the ability to 'establish patterns that not only are insightful, but also demonstrate analytic precision and establish abstract theoretical relationships'.⁷⁸ As discussed, there is a danger in this context of applying the term 'theory', with its invitations of refutation, reproduction, and confirmation as 'fact'. Theorising, by contrast, is a less rigid process, one that is indeterminate upon multiple levels.

⁷² Urquhart, 'An Encounter with Grounded Theory'.

⁷³ Charmaz, 'The Search for Meaning', 39.

⁷⁴ Charmaz, 'The Search for Meaning', 35.

⁷⁵ Charmaz, 'The Search for Meaning', 35.

⁷⁶ Charmaz, 'The Search for Meaning', 39, 41.

⁷⁷ Glaser and Strauss, *Grounded Theory*, 61.

⁷⁸ Charmaz, *Constructing Grounded Theory*, 213.

Haseman and Mafe write that, ‘while traditional methods are designed to manage and contain complexity by seeking to control, limit and even deny ambiguity, practice-led researchers must take these qualities into the heart of their research enterprise’.⁷⁹ Eschewing the usual rigid terms on which theories are proposed, I nevertheless use the term ‘theorising’ to best represent the process of synthesising findings into something usable elsewhere.

Glaser and Strauss offer four useful ‘requisite properties’ of GTM findings: fit (with the data), generality (of applicability), control, and understanding.⁸⁰ They elaborate practically on ‘understanding’ by describing it as ‘engender[ing] a readiness to use’ research outcomes through ‘sharpening [...] sensitivity to issues faced by future practitioners.’⁸¹ This is a criterion worth highlighting: any findings of this study need to be generally understandable to musicians. Equally important is ‘control’, whereby the researcher ensures that findings would give future practitioners ‘enough control in everyday situations to make its application worth trying’.⁸² In short, findings and conclusions must be readily applicable, even if only to the non-generalised context (in this case, the performance of a particular subset of the choral canon) from which it emerges.⁸³

Whilst not necessarily permitting the reproducibility of more positivist approaches, the inductive orientation of this study is advantageous in that it

opens the possibility of novel understandings, and, increasingly, researchers acknowledge that 1) their observations include how they see and define the observed phenomenon, 2)

⁷⁹ Haseman and Mafe, ‘Acquiring Know-How’, 220.

⁸⁰ Glaser and Strauss, *Grounded Theory*, 238–49.

⁸¹ Glaser and Strauss, *Grounded Theory*, 240.

⁸² Glaser and Strauss, *Grounded Theory*, 245.

⁸³ Charmaz, *Constructing Grounded Theory*, 232.

they move between creating inductive categories and making deductions about them, and 3) explicitly invoke abductive reasoning.⁸⁴

The abductive reasoning mentioned in Charmaz's third point, above, is important here. Joe Reichertz posits that, when the data does not provide an answer or useful point of connection between findings, 'a new one must be invented or discovered by means of a mental process'; Reichertz indicates that GTM cannot be regarded as exclusively inductive and that abductive leaps are necessary.⁸⁵ While this notion reads like an abnegation of the researcher's responsibility to maintain empirical rigour, it is in fact an inevitable admission that rigour cannot be entirely divorced from well-informed intuitive effort. Within the researcher, the balance of 'musical instinct' and 'cognitive rationale' is a methodological necessity.⁸⁶ Darla Crispin reconciles intuition and 'a rigorous methodological framework' in her argument that the latter, rather than weakening the former, 'render[s] it communicable'.⁸⁷ Graeme Sullivan observes that

'insight', which we might call the product of abduction, is a consequence of precisely the opposite approach to the thinking advocated by the clinical model of inquiry that promotes [...] the elimination of confounding variables and distractions and exercising control.⁸⁸

⁸⁴ Charmaz, *Constructing Grounded Theory*, 243.

⁸⁵ Jo Reichertz, 'Abduction: The Logic of Discovery of Grounded Theory', in Antony Bryant and Kathy Charmaz (eds.), *The Sage Handbook of Grounded Theory*, paperback edn. (London: Sage, 2007), 218–20.

⁸⁶ Crispin, 'Artistic Research and Music Scholarship', 61.

⁸⁷ Crispin, 'Artistic Research and Music Scholarship', 59.

⁸⁸ Graeme Sullivan, 'Making Space: The Purpose and Place of Practice-led Research', in Hazel Smith and Roger T. Dean (eds.), *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh: Edinburgh University Press, 2009), 48.

He ties this contention to theoretical sensitivity, asserting that it can be ‘productive to explore creative possibilities that are informed by, but not captive to, existing frameworks of knowledge’.⁸⁹

A researcher’s experience, reality, and intellect are both inevitable and profitable factors in theorisation.

GTM and the questionnaire and interview techniques employed here (as illustrated in Volume II, Appendices A and B) interact in numerous ways. Charmaz offers a set of methodological suggestions, complementary to Holstein and Gubrium’s, encompassed by her term ‘intensive interviewing’.⁹⁰ In this line of thinking, interviews and questionnaires balance an imperative to construct meaning collaboratively with the need to ground the interview in contextual awareness and orientate it towards theorisation. Intensive interviewing ‘results from [an] interviewer’s and interview participants’ co-construction of the interview conversation’,⁹¹ and she offers a mitigated rejection of Glaser’s disavowal of prepared interview strategies.⁹² Put simply, although theoretical sensitivity prevented me from steering the interview, it has been important to know about the subject and event that I wished to interrogate.⁹³ Active interviewing has helped begin the theoretical distillation and consolidation of concepts.⁹⁴

The constructivism in an active (or ‘intensive’) interview is a shared one. Charmaz very nearly quotes Holstein and Gubrium when she emphasises the point that ‘I assume that the interaction between the researcher and the researched *produces* the data, and therefore the meanings that the researcher observes and defines’.⁹⁵ In the case of my own interviews, shared experience was concomitant with a shared theoretical knowledge of the event. My case studies

⁸⁹ Sullivan, ‘Making Space’, 48.

⁹⁰ Charmaz, *Constructing Grounded Theory*, 56–9.

⁹¹ Charmaz, *Constructing Grounded Theory*, 58.

⁹² Charmaz, *Constructing Grounded Theory*, 32.

⁹³ Charmaz, *Constructing Grounded Theory*, 59.

⁹⁴ Charmaz, *Constructing Grounded Theory*, 61–2.

⁹⁵ Charmaz, ‘The Search for Meaning’, 35.

have taken that mutual involvement one step further in attempting to make my role as a conductor advantageous, thereby simultaneously reinforcing and refining emergent meaning by translating it into conductorial practice as a researcher.

The researcher's complicity extends to methodological adaptations of both GTM and questionnaire and interview technique. Neither my pre-determined philosophical orientations nor strictures of my responsibilities as a conductor have locked the research into a rigid, *a priori* framework for deduction. Instead, they have offered constant justification for an otherwise philosophically independent methodology combining active interviewing and GTM. Strauss's belief that 'the researcher is actively involved with the method' suggests, for Urquhart, a methodological relativism that ties GTM to active interviewing.⁹⁶ Just as singers have engaged in reflection, I, as researcher-conductor, have played an active role in interviews.

4.3 Interrogating Musical Outcomes

4.3.1 Performance Analysis

Enquiry into performers' experiences offers a vital view of the practice of choral aleatorism, but this view risks being perceived as one-sided. It can be meaningfully deepened through an analytical interpretation of musical outcomes. The objective of such analyses, undertaken for this project, has not been to usurp findings from the case studies, but to ground those findings in the music which is my object of study. Conversely, the method outlined below also grounds *itself* in performer experience. Performance analysis has been used to account for, and to compare with the score, singers' testimonials. Such potential for comparison also promises a further advantage, that of critical distance between myself and the singers with whom I often work closely. No less an

⁹⁶ Urquhart, 'An Encounter with Grounded Theory', 125.

advantage, analysis also offers compositional insight, exposing the potential of aleatory composition.

My first objective, to ground analysis in performer experience, has a precedent in existent performance analyses. Joel Lester makes the useful point that both musical analysis and performance are improvised if their practitioners engage in dialogue.⁹⁷ While this point is certainly true, it does not go so far as to directly relate that analysis to the performers. In attempting to do so, it is important to avoid a ‘vertical’ relationship between analysis and performance, in which the former exclusively instructs the latter.⁹⁸ Doğantan-Dack has undertaken a project in which ‘embodied pianistic expertise’ becomes central to analysing works as sites of creativity and interaction.⁹⁹ For her, ‘all musical knowledge originates in the embodied act of performance making, when the hand makes contact with the musical material, and begins to mould it’.¹⁰⁰ John Rink pushes Doğantan-Dack’s placement of musical knowledge within the performer to an analytical level with his suggestion that performers engage in their own sort of analysis, a less deductive tack than the numerous ‘analyses for composers’ in existence.¹⁰¹ This type of analysis may be the product of ‘informed intuition’ rather than ‘rigorous analysis’, but the findings it offers are no less useful for that.¹⁰² Janet M. Levy also considers performance to be ‘an analytic act’.¹⁰³

⁹⁷ Joel Lester, ‘Performance and Analysis: Interaction and Interpretation’, in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press, 1995), 198.

⁹⁸ Cook, ‘Between Process and Product’, 7.

⁹⁹ Mine Doğantan-Dack, ‘The Role of the Musical Instrument in Performance as Research: The Piano as a Research Tool’, in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice*, *Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 196.

¹⁰⁰ Doğantan-Dack, ‘Recording the Performer’s Voice’, 308.

¹⁰¹ John Rink, ‘The (F)utility of Performance Analysis’, in Mine Doğantan-Dack (ed.), *Artistic Practice as Research in Music: Theory, Criticism, Practice*, *Sempre Studies in the Psychology of Music* (Farnham: Ashgate, 2015), 132.

¹⁰² John Rink, ‘Analysis and (or?) Performance’, in Rink, John (ed.), *Musical Performance: A Guide to Understanding* (Cambridge: Cambridge University Press, 2001), 39

¹⁰³ Janet M. Levy, ‘Beginning-ending Ambiguity: Consequences of Performance Choices’, in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press, 1995), 150.

This notion is echoed in the analysis-based exploration of string teaching by Deborah Mawer. (Mawer, Deborah, ‘Enlivening Analysis through Performance: “Practising Set Theory”’, *British Journal of Music Education*, 20.3 (2003), 257–76).

Cook holds that performance may instruct analysis as much as the reverse.¹⁰⁴ Although these various perspectives touch on the important theme of *performer*-analyses (as different from, and even driving, *performance*-analyses), here Doğantan-Dack's approach returns to progress the argument towards two key points: those analyses are embodied and they delve into musical layers as deeply as might any traditional analysis.

So, performance analysis can meaningfully probe both a piece and the way it is physically performed. But this conclusion leaves two questions: what is the musical object to be analysed and which of its parameters warrant attention, given the objectives of this study? Graeme Sullivan observes that

[i]f taken from the perspective of the artist, both knowledge production and the functions to which knowledge is put are best seen to be a dynamic structure that integrates theory and practice and contributes to personal, social and artefactual systems of understanding.¹⁰⁵

Thus any analysis I undertake, borne of artistic perspectives, should engage in this multifaceted integration. Performances are ephemeral; it is difficult to pin down the event and still more challenging to analyse it: Levy remarks on the ambiguity of musical performance, contrasted with music theory's historical fixation with disambiguation.¹⁰⁶ A recording is of course helpful, but that is already one tier removed from the event itself; an analysis is removed by one further tier (though this is also part of how it may offer critical distance).

¹⁰⁴ Cook, 'Structure and Performance Timing in Bach's C Major Prelude', 257.

¹⁰⁵ Sullivan, 'Making Space', 47.

¹⁰⁶ Levy, 'Beginning-ending Ambiguity', 151–4.

The ontological difficulties confronting aleatorism, in particular, impact on analysis. Solis and Nettle state plainly that ‘we haven’t found ways to study improvised music as efficiently as we do music composed and recorded in writing or memory’.¹⁰⁷ My analyses attempt to respond to this challenge, grappling with the ‘dynamic structure’ inherent in any performance analysis, while also artefactually confronting the extreme levels of dynamism, fluidity, and contingency of aleatorism. Additionally, they have to confront the embodied ontology of the work: Rink reminds us that the physical ‘unfolding’ of the piece’s performance is fundamental to the work’s ontology and can usefully inform analyses as well.¹⁰⁸

The second of the above questions – which parameters in particular deserve attention? – has been examined extensively by Rink. His foundational thesis is that musical structure must ‘be seen as constructed, not immanent; as pluralistic, not singular’.¹⁰⁹ He regards this reconceptualised structure as processual, given music’s ‘time-dependency’.¹¹⁰ Musical structure, in short, is constructed *in performance* over time. This tenet destabilises the primacy of traditional analyses, which regard the work as ontologically fixed and address structure as ‘architectural’¹¹¹ – that is, as a part of the identity of the work itself and somehow present in the work synchronically. Doğantan-Dack even warns against graphic representations in performance analysis, regarding them as dismissive of the temporal dimension of music performance.¹¹² Thus, instead of reaffirming the notion of performance as a superficial layer beneath which the true work exists, a good performance analysis for Rink embodies the notions that I have touched on earlier (Chapter 2.6): in improvisatory music, the performance is very much *of* the work. Crucially, in aleatorism, Rink’s

¹⁰⁷ Solis and Nettle, *Musical Improvisation*, x.

¹⁰⁸ Rink, ‘The (F)utility of Performance Analysis’, 137.

¹⁰⁹ Rink, ‘The (F)utility of Performance Analysis’, 129.

¹¹⁰ Rink, ‘The (F)utility of Performance Analysis’, 129.

¹¹¹ Rink, ‘The (F)utility of Performance Analysis’, 129.

¹¹² Doğantan-Dack, ‘Practice-as-Research in Music Performance’, 262.

notion of diachronic construction is important. With these ideas in mind, my analyses look to prioritise the temporal aspect of the works' unfolding, treating moment-to-moment relationships and decisions as being as important as the comparison of elements from 'across' the work. While, as will be shown, these analyses are distinctly score-like, they do not reduce the work to a set of rigid performance instructions; moreover, notation has been used to situate improvisatory music-making at the foreground, making it of the music. The analyses have been built around musical emergence, from which further parameters are drawn.

Improvisatory elements, as co-defined by composer and performer, are therefore central to each work's analysis. Rink emphasises that constructing a useful performance analysis incorporates the priorities and approaches of that performance.¹¹³ In his analytical models, 'the premises of the analysis emerge from the performer's work rather than predetermined analytical procedures being applied to a given performance'.¹¹⁴ For Deborah Mawer, performance is 'more than the mechanics of musical execution', and the one-way relationship whereby analysis informs performance is problematic: a diversity of musical parameters, including the phenomenological, are equally of interest.¹¹⁵ Structural elements of the music offer a starting point, and may be interpreted as interacting with performative features of the music's delivery,¹¹⁶ but do not impose parameters upon the analysis.¹¹⁷ Lester prefers analytical models that relate directly to performance,¹¹⁸ embracing the countless possible interpretations of these elements in delivery. This openness also welcomes the ontological ambiguities discussed above: 'the focus of analysis

¹¹³ Rink, 'The (F)utility of Performance Analysis', 130, quoting John Rink, 'Review of Wallace Berry's *Musical Structure and Performance*', *Musical Analysis*, 9.3 (1990), 321.

¹¹⁴ Rink, 'The (F)utility of Performance Analysis', 130.

¹¹⁵ Deborah Mawer, 'Bridging the Divide: Embedding Voice-Leading Analysis in String Pedagogy and Performance', *British Journal of Music Education*, 16.2 (1999), 181.

¹¹⁶ Rink, 'The (F)utility of Performance Analysis', 136, 143.

¹¹⁷ Rink, 'The (F)utility of Performance Analysis', 134.

¹¹⁸ Lester, 'Performance and Analysis', 203.

[can] shift from finding “the” structure of a piece to defining multiple strategies for interpreting pieces’.¹¹⁹ The philosophy espoused by Rink, Mawer, and Lester is appealing: it restores performer agency even in analysis. It also sets up a methodological route into analysing the performances at hand here, favouring elements that emerge from each performance.

A performance analysis of aleatorism is therefore extraordinarily contingent, in a way even ‘ordinary’ performance analysis could not be. Cook observes that ‘we have little in the way of a rigorous methodology for extrapolating from a performance the analytical judgments, or misjudgements, that are embodied in it’.¹²⁰ The models available offer insight into what sort of analytical artefact might meet the above imperatives and objectives, but they tend to be overly selective in representing those judgments. Cook presents models such as ‘prolongational reduction’ and ‘time span reduction’, both of which represent, graphically, issues of musical timing in a hierarchical way – complete with a comparison to Schenkerian analysis.¹²¹ The useful emphasis on performers’ treatment of musical time is outweighed by these models’ collapse of that time into the kind of graphic representation that Rink and Doğantan-Dack warn against. A representation of timing is still needed, but one constructed with mindfulness of Roy Howat’s caution that analytical diagrams are only ‘useful if we can distinguish between where they reveal the music and where they merely prop up their own theories’.¹²² A more diachronic approach to performer timing, which lets that timing and other aspects of musical creativity appear to unfold of their own accord, is preferable.

¹¹⁹ Lester, ‘Performance and Analysis’, 214.

¹²⁰ Cook, ‘Structure and Performance Timing’, 257.

¹²¹ Cook, ‘Structure and Performance Timing’, 265 (citing the prolongational analysis of Lerdahl and Jackendoff, 1983, 263).

¹²² Roy Howat, ‘What Do We Perform?’ in John Rink (ed.), *The Practice of Performance: Studies in Musical Interpretation* (Cambridge: Cambridge University Press, 1995), 4.

If timing is one particularly contingent feature of aleatorism, then performer physicality is another. Once again, models do exist. Rink outlines several, the most interesting being a graphic analysis of hand-contour in a Chopin piano work.¹²³ This idea is of less use with singers, whose physical means of sound production are not visible. Janet K. Halfyard provides one solution to this problem, using the ‘gestural vocabulary’ of Laban movement analysis to assess musical gestures in Berio’s *Sequenza III*, according to the type of physical, vocal effort they entail.¹²⁴ Halfyard’s method is useful for performers to represent their own experiences and demonstrates that rich description can proffer useful insights into embodied performance. The analyses that I have undertaken have followed that lead, but from the perspective of a viewer and listener.

Bayley and Heyde distil the quandary as to which musical, temporal, and physical parameters are of interest: different performers will have different ‘starting points’ according to their knowledge of style or composer.¹²⁵ Significantly, they say as much in an analysis of a performance of indeterminacy. Doğantan-Dack re-emphasises the importance of observing musicians’ physicality in analysing their performances. She notes (citing Rink) that performance analysis’s typical orientation towards tempo and dynamics is a hangover from ‘traditional’ analytical practice,¹²⁶ but ‘[p]erceptually, the *physical cause* of a sound is most directly revealed in its timbre rather than in its pitch or duration’.¹²⁷ Pitch and duration are, I would argue, still relevant to the physicality of singers, for whom both are profoundly anatomically bounded, by voice type, muscular training, and breath support. But a challenge remains: to create a model for

¹²³ Rink, ‘The (F)utility of Performance Analysis’, 144.

¹²⁴ Janet K. Halfyard, ‘Before Night Comes: Narrative and Gesture in Berio’s *Sequenza III* (1966)’, *National Arts Education Archive: Occasional Papers in the Arts and Education*, 8 (2000), 81.

¹²⁵ Bayley and Heyde, ‘Interpreting Indeterminacy’, 396.

¹²⁶ Doğantan-Dack, ‘In the Beginning was Gesture’, 38, 49.

¹²⁷ Doğantan-Dack, ‘In the Beginning was Gesture’, 248.

performance analysis that draws on this diverse range of parameters of how a work is performed, without becoming overwhelmed by them.

4.3.2 Project's Adaptation of Analytical Models

What emerges from the above discussions is a set of analytical priorities. A useful analysis of choral aleatorism, for my purposes here, looks to offer insight into the following:

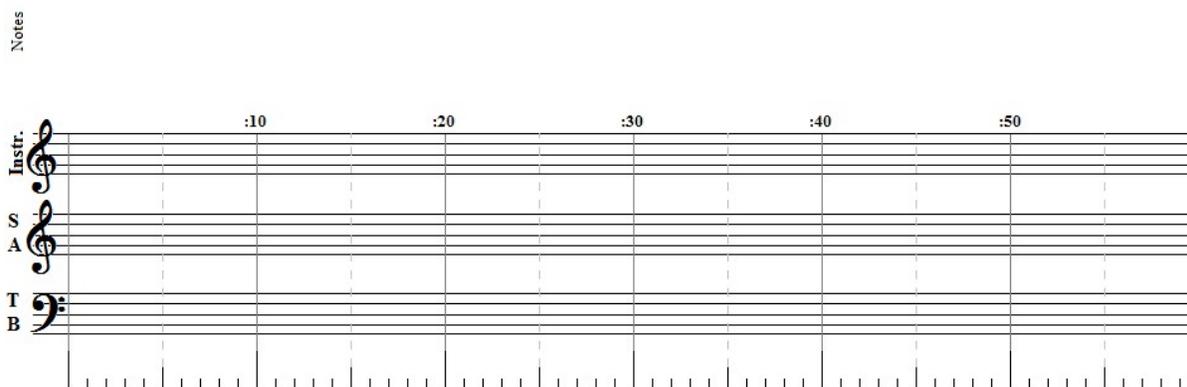
1. the temporal unfolding of the piece, as produced moment-by-moment,
2. improvised details, on an equal footing with scored details (such as they are),
3. the musical parameters which vary in importance from case to case, and which are contextually emergent,
4. the physical experience of performers, and
5. decision-making.

No rigid model can feasibly incorporate all of these with any formality. Instead, it must leave room for them.

As such, at the most basic level, I have chosen to represent unfolding, improvised music in the most basic way: with a transcription of aleatorism on a grand staff (Figure 4.1). Such an approach runs the risk of reducing both contingency and phenomenology to orthodox notes on a page – a risk dealt with below – but I would contend that the best way to allow certain musical elements to appear (pitch, volume, articulation) is to employ a vocabulary whose ordinariness keeps it neutral and unobtrusive. The temporal unfolding of these elements has been represented by the simple addition of a timeline, offering an alternative to rhythmic strictures (metre and relative rhythmic values) which may not be relevant.

Cook cites Ingrid Monson's use of 'prose commentary' to 'put the music back into performance analysis'.¹²⁸ 'Aesthetic judgments and choices informing them' are conjecturally drawn and incorporated into descriptions of the sounds themselves, offering a more rounded assessment of a performance.¹²⁹ Research that aims to understand the sounds of a performance – and the physical movements generating the sounds – without considering the judgments informing them is bound to fall short of accounting for what happens in a musical performance. A final layer, a space for verbal notes on physical details, has touched on the embodied nature of performance in a way redolent of the rich performer narratives of Chapters 5 and 6. The tremendous advantage of this flexible model is not that it embraces, or directly confronts, emergent musical parameters, but that it leaves that room for them to come to the fore.

Figure 4.1, Basic transcription template for performance analyses.



An aspect of point 2, above, needs further discussion. Permitting elements of the score to be present in the transcription allows for critical comparison between how performers indicated

¹²⁸ Cook, 'Between Process and Product', 8.

¹²⁹ Doğantan-Dack, 'Practice-as-Research', 263.

they related to the score, and how the recorded evidence might suggest otherwise. These transcriptions rely on traditional notation to represent performance that has occurred (descriptive notation), yet it is important to include the scored elements that impelled singers' decisions (the prescriptive notation). This balance grounds the analysis in performer and composer ideas, intentions, and experience. Therefore, notation from the score is presented. In scores with text-based instructions, those steps are presented numerically at the appropriate point on the timeline (step 1, step 2, etc.); major score events could be presented in a similar way (with bar number, movement shifts, brief description, etc. placed on the timeline). For comparison, crucial, generalisable points of performer experience could be similarly indicated. These points of interest emerged from a GTM processing of CS1 data and are fully detailed in Chapter 5.4.1. They have emerged directly from the comments and responses of singers. Just as these points of interest have been derived from the subjective experience of performers, how they are seen to be present in scores is based, inevitably, on the shared subjectivity of performer testimonials and on my own informed intuition as conductor-researcher.

Point 5 from the above list touches on the difficult issue of analysing conjecturally the performers' decision-making. Notating the outcomes of singers' decisions does a great deal to afford understanding of the execution and experience of a piece and can provide a basis for meaningful commentary. Moreover, Benson regards making choices as fundamental to the improvisatory act of music-making.¹³⁰ But the most significant act of analysis entails interrogating and interpreting those decisions. Hellaby's *Reading Musical Interpretation* (2009) outlines a model that can be adapted to this end.¹³¹ Monson writes that, in analysing improvisatory music, 'the formal features of musical texts are just one aspect – a subset, so to speak – of a broader sense

¹³⁰ Benson, *The Improvisation of Musical Dialogue*, 118.

¹³¹ Hellaby, *Reading Musical Interpretation*.

of the musical, which also includes the contextual and the cultural'.¹³² She espouses an 'interactive, relational theory of music and meaning' in which the score and the context of its delivery interact.¹³³ Hellaby begins by addressing this issue, building his efforts to interpret musical performance on the foundation of ontology. He confronts the difficulty of defining a musical 'work' with the declaration that 'I find it less easy to disregard [the work]; after all, a "work" is surely the product of work'.¹³⁴ As such, the score is still a useful object for analysis, providing a basis for both performers and the 'informed reception of performance', permitting (if not embracing) the contextual connotations of improvisatory acts.¹³⁵ The act of interpretation is by its very nature an act of agentive deviation from any perceived rigidity of the score;¹³⁶ according to this reasoning, of course, improvisatory elements are simply extreme acts of personal interpretation. Benson makes a similar suggestion in placing improvisation in the same spectrum as those acts usually regarded as interpretative.¹³⁷ If this seems too easy or glib an accommodation, another of Hellaby's ideas ties improvisation even further to his approach to interpretation: he writes that

expression is a means by which performers may project their artistic identities, but it cannot operate in isolation and, in a Western art music context, it needs to have a recognizable link with a work if performance and score may be heard to interface.¹³⁸

¹³² Ingrid Monson, *Saying Something: Jazz Improvisation and Interaction* (Chicago: University of Chicago Press, 1996), 186, quoted in Cook, 'Between Process and Product', 8–9.

¹³³ Martin, 'Spontaneity and Organisation', 186, 190.

¹³⁴ Hellaby, *Reading Musical Interpretation*, 8.

¹³⁵ Hellaby, *Reading Musical Interpretation*, 10.

¹³⁶ Hellaby, *Reading Musical Interpretation*, 14.

¹³⁷ Benson, *The Improvisation of Musical Dialogue*, 26–30.

¹³⁸ Hellaby, *Reading Musical Interpretation*, 17.

Identity and agency are intact for Hellaby, but he usefully re-establishes a balance between score and interpretation.

He does so through what he terms the ‘interpretative tower’ (Figure 4.2).¹³⁹ At the bottom level are elements that he considers to be based more in the work itself, more inherent to the ontologically stable dimensions of its identity. These create the base level of ‘authorial meaning’,¹⁴⁰ and ‘style’, or the ‘dictates’ of stylistic norms.¹⁴¹ The layer above this includes ‘genre’,¹⁴² and ‘topic’ (e.g. dance)¹⁴³; both of these are regarded as less fixed than elements at the lower level. He then moves up to ‘topical mode’ (expressive markings and ideas), which moves us further towards performer freedom, in the third hierarchical level.¹⁴⁴ Sharing this level are identifiable ‘characteriser[s]’, which include characteristic musical ideas that also suggest certain types of expression (rhythmic figures, for instance).¹⁴⁵ The top tier includes those elements most open to the freedom of the performer: tempo, ‘duration manipulator’ (rubato, for instance), and ‘sonic modulator’ (timbre-as-physical, recalling Doğantan-Dack’s notion).

Hellaby’s procedure is to trace a performer’s decision from the level of performer freedom to its more pre-determined roots according to how it might have been informed by more obdurate musical features (Figure 4.3), with arrows of varying thickness to suggest the strength of the relationship between variables. So, an interpretative tempo change might be traced strongly to ‘characteriser’, if a rhythm seems to suggest it. Such a response to this characteriser might be further traced to genre or topic, and so forth.

¹³⁹ Hellaby, *Reading Musical Interpretation*, 47.

¹⁴⁰ Hellaby, *Reading Musical Interpretation*, 33.

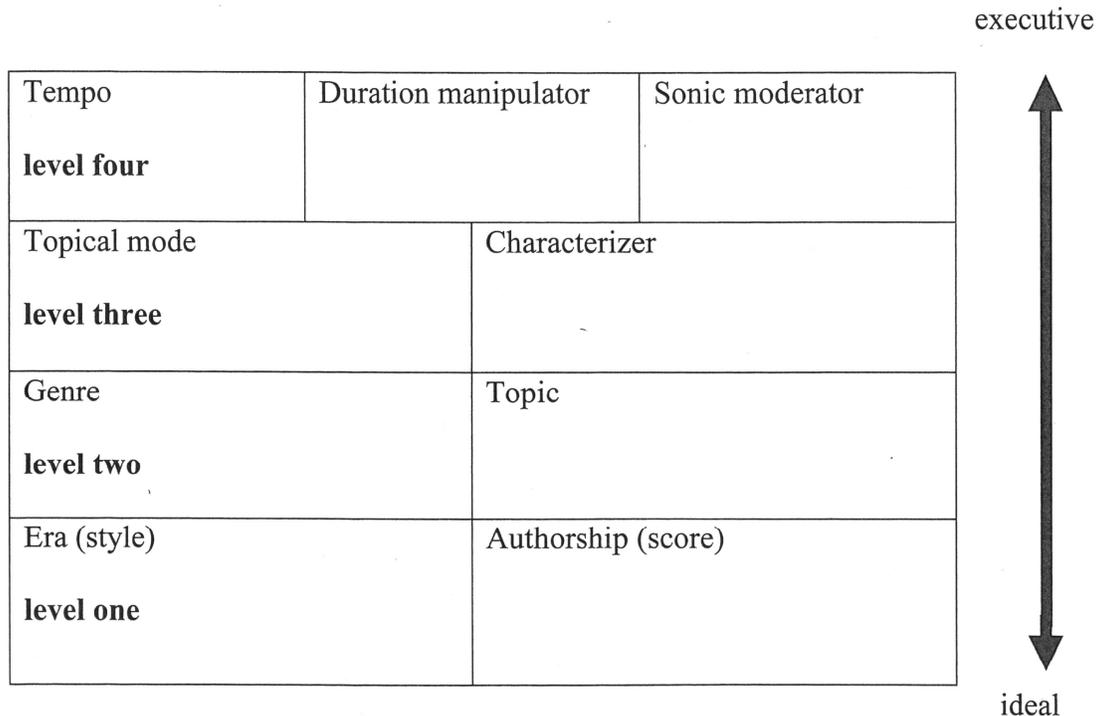
¹⁴¹ Hellaby, *Reading Musical Interpretation*, 31.

¹⁴² Hellaby, *Reading Musical Interpretation*, 35.

¹⁴³ Hellaby, *Reading Musical Interpretation*, 36.

¹⁴⁴ Hellaby, *Reading Musical Interpretation*, 38.

¹⁴⁵ Hellaby, *Reading Musical Interpretation*, 40.

Figure 4.2, Hellaby's interpretative tower.¹⁴⁶

Although Hellaby in no way claims that this approach regards lower-level elements as being of greater importance to the ontology of the work than the upper-level ones, it cannot fully escape the risk of giving such an implication, especially given the direction of arrows. Performer decisions could be seen as overly determined, the result of a causative chain originating in some sort of *werktrueue*. However, if treated carefully, this model does offer an extremely useful tool for hypothesising influences on performer decisions. Crucially, the elements at play have to be seen as (often conjectural) influences on, not dictators of, behaviour and decision-making. Moreover, it must be emphasised strongly that, especially in the adaptation of Hellaby's model that I advocate below, no single element is seen as more important to the work than any other; some are simply seen by performers, or presented by composers, as being more fixed than others.

¹⁴⁶ Hellaby, *Reading Musical Interpretation*, 47.

Finally, it should be noted that I regard those elements on the lower tier as being the constructions of performers: performer agency remains at the core of my use of this model.

Figure 4.3, The interpretative tower, adapted for use in analysing choral aleatorism.

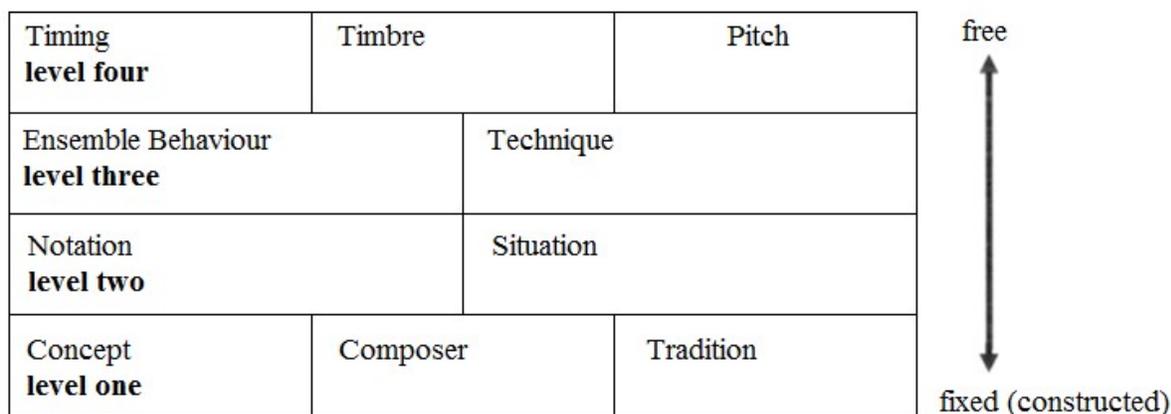


Figure 4.3 presents my adaptation of Hellaby's interpretative tower. At the bottom are concept, composer, and tradition. 'Concept' refers here to what is seen or presented as the idea behind the work, and it applies to pieces beyond those in the conceptual art tradition. As will be discussed (in Chapter 5), the construction of a tradition is particularly important to how performers approach choral aleatorism, as is their perception of the composer. Above this level are issues that may be seen to derive from the lower level: notation and situation (meaning the context of the performance). These elements are more fluid than those on the first level, but more fixed than those above. More fluid still, but not completely within a performer's remit of improvisatory decisions, are 'ensemble behaviours' (the actions of others) and 'technique' (the behaviour of one's body, which is as much discovered as controlled, as discussed in Chapter 3.3 and the findings of Chapters 5 and 6). At the topmost level are those elements that are, depending on the type of aleatorism, the

freest: timing, timbre, and pitch. Although different instances of aleatorism encompass freedom and fixedness of these elements in varying ways, providing them all on one ‘tower’ does create a usefully diverse model.

It is worth working through how that model works in application. In Chapter 7.3, an interpretative tower is used to describe a timing decision made by an alto soloist. This tower appears as Figure 7.17 in Chapter 7.3, and is also presented here as Figure 4.4.

Figure 4.4, Interpretative tower hypothesising the improvised alto solo, ‘Eggs’.

Timing level four	Timbre	Pitch
Ensemble Behaviour level three	Technique	
Notation level two	Situation	
Concept level one	Composer	Tradition

In the analysis, I regard the alto’s timing decision as being strongly a result of both her technical/physical response, and of the behaviour of the ensemble. Therefore, a thick line connects ‘Timing’ to both ‘Ensemble Behaviour’ and ‘Technique’ (it is deliberately placed between the two). I read the performance situation at hand as having impacted upon her response to her own technique and to ensemble behaviour, more than had the piece’s notation, so there is a further line reaching ‘Situation’. Since I do not regard the situation as having the singer’s reading of the higher variables as having been as strong as the connection between timing and ensemble or technique, this line is not as thick. Finally, I perceive the alto’s experience of the situation at hand as having been inflected weakly by her conceptualisation of the composer and his wishes (shown by a thin

connecting line), but more strongly by her notion of the concept of the work (shown by a stronger connecting line). This model therefore displays graphically my understanding of the singer's decision around timing as relating to both a technical process and the ensemble's behaviour (variables which, being higher on the tower, I suggest are more flexibly constructed and deviated from by performers). In turn, these timing decisions are impacted upon by how the situation at hand (seen as a more fixed constructed element of the work being performed) is affected by the composer and concept of that work (seen as more fixed still). Notably, this model can be used to hypothesise about singers' decision making, or to represent their own accounts of their decision-making processes; it is used for both purposes in Chapter 7.

This model, in combination with the breadth and richness of information provided by the mode of transcription described above, offers a useful means of analysing performances of choral aleatorism. It is as deeply grounded in performer experience as it is in the work being performed (and in a way which strives not to dichotomise the two). It also offers critical distance and elucidates outcomes of compositional efforts. The model can therefore lend a view of the bounds of what performers are routinely capable of, by indicating what actually occurs in the performance of aleatory works.

PART II:
Case Studies and Analyses

Chapter 5 Case Study 1: Via Nova Vocal Ensemble

5.1 Introduction

This chapter details the process and outcomes of CS1, the first of two case studies. Unlike the second case study (discussed in Chapter 6), CS1 includes a preliminary phase of piloting and conceptualising: see Table 5.1. The objectives of this first stage were to test research instruments and to draw out areas of singers' experience for particular focus (as discussed in Chapter 4.2.3).

Conceptualising flowed naturally into the main portion of CS1, which consists of three successive events (VN1, VN2, VN3; see Table 4.1) with the contemporary vocal ensemble Via Nova. These events sought to elucidate further some preliminary principles and aspects of singers' experiences of rehearsing and performing choral aleatorism. Focused, iterative work with Via Nova allowed these experiences to be interrogated in some depth and focus, benefitting especially from singers' own growing awareness of their actions as they responded to my questions. Moreover, the collaborative nature of the events, where singers and composers came into contact and experimented together, provides not only a contrast from the established repertoire used in CS2, but also a fruitful amplification of the quality of shared creativity that I argue marks this repertoire. Where data was collected, both questionnaires and interviews were used; all questionnaires referred to are found in Volume II, Appendix A, along with sample coded questionnaire responses and interview transcripts in Appendix C. Findings from these questionnaires were processed using GTM; conceptualisation yielded axial codes (see Chapter 4.2.3), and VN1–VN3 allowed those codes to be consolidated into categories. This chapter first outlines the design of the events that yielded these findings, which are then discussed in detail through a discussion of those codes and categories. Finally, these categories are further refined

into two main themes, which are discussed using the framework offered by Complexity Thinking (outlined in Chapter 3.3).

5.2 Event Design

Questionnaires were piloted with colleagues to ensure that questions were clear and not leading, and were further refined as the case study progressed. As well as piloting, the other activities carried out in addition to VN1, VN2, and VN3 were orientated towards conceptualising as described in Chapter 4.2.2. A brief outline of this stage of the research is presented below in Table 5.1.

Table 5.1, CS1 Piloting and conceptualising events.

Event	Performers	Location of Event	Date
Grey Matter physical theatre performance, incorporating aleatory ensemble singing	Nine performers of mixed vocal ability	Birmingham Rep Theatre	June 2015–April 2016 (workshop-rehearsals and performance)
Spring Concert	Approx. 20 un-auditioned singers from Royal Birmingham Conservatoire Camerata	Royal Birmingham Conservatoire and St Alban’s Church Birmingham	February 2016 (concert)
CoMA (Contemporary Music for All)	Approx. 20 Birmingham-area amateur singers; five mentors from Via Nova	CBSO Centre, Birmingham	March 2016
YCP (Young Composers Project)	Four singers from Via Nova	Royal Birmingham Conservatoire	July 2016

These events enabled conceptualisation and refinement of the workshop process in various ways. Choral warm-ups were combined with physical-theatre warm-ups, merging into a routine that encouraged improvisation and helped singers feel more familiar with each other. Additionally, while each event revealed creative new avenues composers and improvisers might take, especially in collaboration, they also pointed towards the limits of what could be asked of singers in terms of technique and musicianship. Conceptualising overlapped with the chronology of the VN events, allowing me to remove myself somewhat from data collection and reassess certain aspects of process.

Grey Matter was a physical theatre performance, devised and directed by Gavin Thatcher, a Midlands-based theatre-maker, as part of the Birmingham Rep Theatre's Foundry artist development programme (June 2015–April 2016). Workshop-rehearsals focused on vocal and physical improvisation, a process which supplied material for the final performance. Original music, performed live by the ensemble, was supplied for the performance by James Oldham, a Birmingham-based composer who also participated in the workshop-rehearsal sessions. I acted as a vocal performer and musical director. Time was allocated in each session to discuss the process, exposing me to very general themes in singers' experiences. The process of creating *Grey Matter* also led to the formalisation of the physical warm-up mentioned above.¹

The Royal Birmingham Conservatoire Camerata Concert (February 2016) contrasted sharply with *Grey Matter*. It was followed by a pilot of the questionnaire that I would come to use in further studies and was focused on more restricted aleatorism. Preceded by four months of weekly rehearsals, it included the performance of Karen P. Thomas's *Lux Lucis* and Kerry Andrew's *O Nata Lux*, both of which contain melodic line-independence in the upper voices' parts.

¹ Detailed in Thatcher and Galbreath, 'Essai: The Singing Body', 360.

Performers included undergraduates and postgraduates from the Royal Birmingham Conservatoire.

CoMA was a day-long workshop and performance under the auspices of Birmingham Contemporary Music Group (March 2016), involving amateur singers from across the Midlands in the performance of Howard Skempton's *The Flight of Song* (see Chapter 2.4) and a movement of Percy Pursglove's *Tender Buttons* (2016; discussed further in Chapter 7.4). Singers were invited to respond to a questionnaire via email; only two responded, both experienced amateurs, providing a modest start to conceptualising. This event included aspects of the warm-up devised earlier and allowed for its adaptation for amateurs. Demographic information was not collected, but performers covered a wide range of ages and levels of experience; five singers from Via Nova acted as section-leader mentors.

A different set of singers from Via Nova acted as mentors and collaborators for a group of approximately ten composers (aged 13–18) for a Young Composers Project one-day event (July 2016). I led the event and involved composers in a short workshop exploring singing, physicality, and improvisation, which had developed during *Grey Matter* and CoMA, aiming this time to proffer compositional insight and perspective. The event also posed various scoring and technical difficulties for the singers, broadening my awareness of the vagaries of performing scores that freely used graphics, verbal instruction, and traditional notation.

Based on the experiences detailed above, three events with Via Nova allowed for focused, in-depth data collection. Table 4.2 presents an outline of these events.

Table 5.2, CS1 events with Via Nova.

Event	Location of Event	Date	Reference Abbreviation
Royal Birmingham Conservatoire Frontiers Festival	Eastside Projects Gallery, Birmingham	March 2016	VN1
Festival of Improvisation	Royal Birmingham Conservatoire	April 2016	VN2
Ikon Gallery Performance	Ikon Gallery, Birmingham	May 2016	VN3

A small vocal ensemble of between 8 and 12 members, Via Nova performs regularly throughout the UK. I founded it in 2013 at the Royal Birmingham Conservatoire, with a focus on performing contemporary (especially aleatory and experimental) repertoire throughout the United Kingdom. Members of Via Nova include both undergraduate and postgraduate singers; most are first-study vocalists, though one composer and I also performed as singers with the group.

Singers' responses were anonymised, but Table 4.3 nevertheless offers an indication of the consistency of personnel.² Events for which singers filled out a questionnaire or participated in an interview are shaded in dark grey; those who also completed an interview are shaded light grey.

² Any response specifically cited below uses the numbering in the first column of Table 3.1 as follows: VN1.11.3 signifies that the responses followed VN1, was supplied by singer 11, in response to question 3; VN3.6i9 signifies that the response followed VN3, was supplied by singer 6, and can be found in the interview transcript on page 9 (see Volume II, Appendix B for representative interview transcripts). Page numbers refer to the original pagination of the transcripts, not the pagination appearing in the Volume II appendices in which representative data samples are found. Singers were randomly ordered for numbering.

Rehearsal transcripts (Volume II, Appendix B) are cited as follows: the rehearsal number is followed by a comma, then the number of the page from the transcript on which the particular reference is found. So, Reh2,1 indicates that the cited comment or idea can be found on page 1 of the transcript of the second rehearsal.

Table 5.3, Via Nova questionnaire and interview responses.

	Responses by event		
Singer number	VN1	VN2	VN3
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
Total:	9	7	6

VN1 was a daylong collaborative project (March 2016) occurring soon after CoMA. I led a group of Royal Birmingham Conservatoire composition students (undergraduate and postgraduate) through several vocal exercises to give them a basic understanding of how one might compose idiomatically for singers, after which the composer Percy Pursglove (a co-leader of the event) led vocal improvisation exercises. The rest of the day consisted of time to write and workshop new pieces, which included mentoring and advice from Pursglove and myself; experimentation on

compositional ideas with small groups of Via Nova singers; workshopping pieces with the full ensemble; and a final culminating performance. The performance was in the main gallery space. Singers and composers were then asked to fill out a questionnaire, which drew nine responses from singers and seven from composers. Composers' responses were ultimately not processed, in order to limit the scope of the project.

VN2 (April 2016) entailed more limited contact between jazz composer-performers – who only discussed drafts and sketches with Pursglove and myself – and members of Via Nova. The final performance of four scores, each of which used aleatorism and traditionally scored material to a different degree, involved a different jazz combo for each piece (each including the work's composer) and Via Nova. This performance occurred in the Adrian Boult Hall, a large concert hall in the old Birmingham Conservatoire building. Singers and composers were again given a questionnaire; seven singers responded.

While both VN1 and VN2 provided useful findings, the richest body of data, and most-cited below, was provided by the questionnaires (six) and interviews (four) that followed VN3. Comprising four new pieces written for a performance at the Ikon Gallery, Birmingham, VN3 (May 2016) involved more composer-singer interaction than VN2, but less direct compositional input from singers than VN1. The works included two strongly aleatory scores by Royal Birmingham Conservatoire-based postgraduate composers, my own primarily text-based score *Undismantling* (2016; discussed further in Chapter 7.3, and presented in full in Volume II, Appendix D1, p. 87), and a physical theatre performance devised by Gavin Thatcher, which used improvisatory vocal gestures alongside external physical gestures. Like VN1, the performance was in an open gallery space.

It is worth commenting on the adaptations that the methodology described in Chapter 4 underwent *in situ* during CS1. This case study – piloting, conceptualising, and the three VN events – made apparent that the boundaries between conceptualising and the main case study itself were blurred. The very term ‘conceptualising’, discussed in Chapter 4 as the elucidation of early threads in the emergent discourse of a study, is ideal in application to this blurring, permitting as it does early theorisation according to the singers’ constructions or reconstructions of their experience. Oppenheim places conceptualisation early in the research process,³ but leaves its structure deliberately open.⁴ Conceptualisation naturally occurred throughout this iterative study, and the level of abstraction reached never strove to yield what Glaser and Strauss would call a ‘formal theory’.⁵ The result of CS1 is instead itself a conceptualisation of a particular areas of singers’ experiences, using the abstraction of coding to progress toward, and reach, a more trenchant interrogation (pursued in CS2, Chapter 6).

The methodology, necessitated by this diversity of events and the small sample size, compelled a flexible mixture of approaches, and that diversity became an asset. Charmaz writes that ‘mixed qualitative methods can strengthen a study with a small number of interviews’;⁶ interview findings were augmented with parallel questionnaires,⁷ memos (offering a loosely autoethnographic perspective), and rehearsal transcriptions. Grounded coding, processing, and memoing helped to pull findings towards abstraction efficiently, yielding a transferable, usable view of performer experience that is nevertheless in touch with its specific origins. The efficient pursuit of findings was further abetted by my ongoing adjustment of the questionnaires given to

³ Oppenheim, *Questionnaire Design*, 7.

⁴ Oppenheim, *Questionnaire Design*, 51.

⁵ Glaser and Strauss, *The Discovery of Grounded Theory*, 32.

⁶ Charmaz, *Constructing Grounded Theory*, 107.

⁷ Gillham, *Developing a Questionnaire*, 2.

singers. Questions were expanded to prompt greater specificity of responses between piloting, VN1, and VN2 (these questionnaires are fully presented in Volume II: Appendices A and B). Although such alterations risked forcibly hamstringing responses into existent categories, this risk was outweighed by the benefits of encouraging respondents to explore a theoretical area more thoroughly than they had previously. A further refinement of the questionnaire took place during VN3, when a sort of ‘questionnaire fatigue’ presented itself among a group of singers. Since these singers had embraced the task of helping me to explore certain details, I determined that they did not require as much prompting as before. More open, casual questions invited greater ease of responsiveness.

5.3 Findings

5.3.1 Conceptualisation

Conceptualisation yielded enough data to establish axial codes (seen in Table 5.4 overleaf). I interpreted four of these emergent codes, indicated in bold typeface, as having the greatest potential for further development (often subsuming other categories); to best translate into future questions and interview prompts; and to best enable theorisation that could inform practice in addition to describing phenomena.

Table 5.4, Codes and explanations from VN1–VN3.

Axial Code	Explanation
Finding the composers' intentions	Perceptions of composers' intentions, and how those perceptions motivated actions
Comparing with traditions	Comparison with music considered traditional, or with one's own habits
Feeling lost	Feeling lost, or feelings while lost, in aleatory textures or processes
Hearing the 'effect'	An aural goal perceived by singers as different from typical musical outcomes
Understanding self and group	Understandings of the self in relation to the group, the group in relation to the self, and the means of that mutual impact
Contextualising and functionalising	Construing a purpose and appropriate place for aleatorism
Assuming one's own levels of ability	Assuming both one's ability and one's success in a situation of less familiar or clear 'rules'
Becoming aware of technique	The awareness of technical issues that arise while performing aleatorism
Playing a game	Describing aleatory processes as game-like, or involving play
Conceptualising	Conceptualising aleatorism or its performance as an idea

Code: Finding the composers' intentions

Composers' intentions were construed by singers as being communicated both through notation and through personal interaction with composers. However, in all cases, the notation still required extra explanation, so those intentions were often interpreted and communicated via my directions as a conductor. (I was, however, only mentioned once in a written response as a further live interpreter, coded 'learning from conductor *as* conduit' of information.) Notable throughout was the aspect of decision-making: intentions were read or assumed in the process of deciding how to best or most 'faithfully' execute the score.

When aleatorism was notated, the result was often a feeling of *assuming* the composers' intentions. Singers made assumptions about process as well as expressive details. Assumptions

emerged as a necessary interpretive tool, but without paratextual norms or traditions, singers had to rely either on a lateral comparison with tradition (see below) or on new inferences. Previous knowledge of the composer, either through their music or their genre, created a certain set of practical expectations and assumptions, which could be met or violated. Composers could clarify their own intentions, when they were present. Intentionality was shared: singers construed themselves as decision-makers and influencers in a collaborative process. Yet there was a lingering perception that pieces had a certain ontological stability – or, at least, that their concepts did – which eased the learning process for many. This preference for ontological stability suggests an equivocality about sharing authorship.

Code: Comparing with traditions

Performers often employed some form of tradition, operating as another interpretative tool, a means of approaching something unfamiliar from a familiar vantage point, or a tool to conceptualise it in a more digestible way. A wide array of personal and musical traditions came into play. Singers internally constructed conceptual methods of comprehending and executing the music.

Code: Understanding self and group

Responses touching on the perception of self and the group were wide-ranging. They touched on how one differentiated or aligned oneself within a group; how one felt exposed or safe in groups; and the spontaneity of shared creation. One of my repeated rehearsal directions, stated out of necessity, was: ‘be sure *not* to sing exactly with anyone around you’. Eventually several singers seemed to arrive at this conclusion unprompted and took a more deliberately contrary approach

compared with the creative responsiveness that would emerge later in the VN events. Many also observed the emergence of leaders in their ensembles, to whom responses were both positive and negative. There seemed to be a necessary balance between senses of exposure and safety in numbers, suggesting that the self was most acutely perceived within the context of, or as against, the whole. The presence of a group of singers allowed some to feel less exposed, or to feel a loss of individual vocal identity; others felt liberated by the individualised role they held. Many only recounted hearing singers who were close by, rather than the whole ensemble.

Code: Becoming aware of technique

This code did not initially appear to be of great theoretical significance, but processing findings from VN1, 2, and 3 revealed its importance retrospectively. There was some early discussion of technical issues, and singers placed great value in the composer and in the rehearsal process itself, helping them arrive at a technical means of performing aleatorism. This category comes to assume greater importance among the more experienced singers of Via Nova, as seen below.

5.3.2 Outcomes of Via Nova Events 1, 2, and 3

The four axial codes that emerged during conceptualisation were developed and refined during VN1, VN2, and VN3 into ‘categories’. ‘Finding composers’ intentions’ expanded into more active and diversified interactions with those intentions, a shift reflected in its new name, ‘Interacting with composers’ intentions’. The other three codes did not shift in direction, but did nevertheless develop considerably. In this summary, parenthetical references to singers’ responses are given as exemplars to demonstrate groundedness. A majority of these are drawn from VN3, in part because

this was the stage of research where the workshop process was most refined for yielding results, and in part because of the richness of information contained in the interviews.

Category: Interacting with composers' intentions

The benefit of direct contact with composers remained strongly evident in Via Nova singers' responses. Interviews further revealed: varied forms of perception and interpretation of intentions (i), concepts of adherence or failure (ii), and forms of critical interaction with composers (iii), in person or via the score. This category came to include acts of conceptualising aleatorism (previously its own category) as such acts became part of how singers construed composers' intentions.

i. Perception and interpretation of intentions

To help in constructing pieces, singers inferred composers' intentions regarding process, timing, and overall effect. Perceptions of the composer's intentions served as an armature on which one singer built their process, creativity, and further inferences; one singer then reversed this process, assuming these intentions via the piece's structure (VN3.11i11 and 12; a transcript of VN3.11i may be seen in Volume II, Appendix B7, p. 53). The strong presence of a composer's intentional control made for 'a bit of fun and a tiny risk' for one singer, making the performance easier for the singer (VN1.4.1). By contrast, many other responses divorced the composer from their intentions, leaving the latter for the singers to understand independently or even construct. One respondent wrote, 'I wasn't entirely confident at the timing and [...] how long it had been and how fast the piece wanted to be' (VN3.11i3): the piece was endowed by this singer with identity – even an agency – independent of the composer, by 'wanting' a structural unfolding.

ii. Adherence or error

Responses, generally speaking, dichotomised the adherence to (constructed) parameters of the piece from deviation from those parameters, which was considered to be an error. The conceit of error was flexibly conceptualised, however. ‘Incorrect’ behaviours were described as ‘fun’ (Reh2,6) and offered several singers creative control. One singer wrote that

[a]t first there’s the anxiety of thinking you (one) may do something wrong and everyone will hear and this turns into excitement that one can do anything and everyone will listen. Obviously ‘anything’ needs to still fall within the parameters (VN2.7.4a).

Singers formulated safe limits to bound decisions, often derived from notions of composers’ proscriptions. Indeed, proscription was read into prompts in my own instructions for *Undismantling*. These instructions had been intended only as an improvisational starting-point, but one singer wrote that ‘you’re so used to working within the brackets, that sometimes you forget the brackets aren’t actually there; like, there’s just kind of music’ (VN3.2i7; the full text VN3.2i may be found in Volume II, Appendix B6, p. 43). Singers engaged with composers directly to ascertain the limits of interpretation, valuing composers’ potential to mitigate freedom and serve as another input to their decision-making. Those bounds, often presented as interpretative constructions more than rules, offered usefully concrete areas of exploration for many. As one singer succinctly put it, ‘[t]he more freedom we were given and the more explanation was given – the more enjoyable it was and more successful’ (VN1.7.1).

Singers dealt with what they considered to be error in various ways. One singer exhibited resignation to its inevitability, using the score to perpetually correct mistakes (VN3.11i3,

VN3.11i4 and 12). Other responses, unsurprisingly, echo this use of the score as error-prevention, delimiting singers' piece-constructions. Interestingly, this process was framed by one singer as a type of engagement, rather than proscription (VN3.2i12), and by another as the outcome of a dedication to the piece's process and effect (VN3.10i7; VN3.22). These responses suggest that singers' efforts to avoid errors in aleatorism lack some of the negativity present elsewhere. Moreover, defining boundaries as points with which to be engaged hints at the possibility of creative manoeuvring within and around 'rules'.

Discussion of 'getting it right', however that objective is perceived, inevitably led to discussion of one obvious means of ensuring accuracy: rehearsal. Following discussion with one singer, I included rehearsal in subsequent interview discussions, and these discussions factored significantly into the emergent practice discussed in Chapter 8.3.1. Responses were widely variable, but trended towards the idea that preparation of aleatorism should open up possibilities without falling into routine. Rehearsing risked creating a sense of ordinariness, which was expressed several times as undercutting the concept of the piece in question. Habit-formation posed the threat of rehearsing away spontaneity (yet was, for some, a source of ease). For several members of Via Nova, unknown factors could usefully create fodder for improvisation, and rehearsals could be used to generate ideas rather than, or in addition to, simply preventing error. One respondent simply stated: 'I feel more open to explore in rehearsals, that's probably the main thing' (VN3.2i9). Error and rehearsal – means of both exploring and moving away from habits – became part of process-construction. Using

iii. Critical interaction with composer and score

Composers and their scores were not regarded as fixed entities; singers' responses suggest that they were, in many ways, constructed by the singers. The composer's role as arbiter of 'truth' (VN3.10i10) was not unassailable, and several singers expressed a need to balance composers' authority against other factors like audience or ensemble.⁸ Singers often gave their idea of the work's concept deference, making it a focal point for their understanding of the piece and how they brought it to fruition. A concept or sound perceived as weak or unclear made a piece less approachable for one (VN1.7.1), whereas success could be achieved in part from composers' competence (VN2.5.2b; this completed questionnaire is presented in full in Volume II, Appendix B3, p. 30). This latter respondent later observed that the jazz composers of VN2 generally wrote more idiomatic music than those in the Frontiers event (VN1), because the VN1 composers were too concept-oriented, rather than practical (VN2.5.2b). Composers were viewed critically through the lens of both concept and instructions.

The physical score was often seen to embody the composers' intentions, offering clarity about processes. For the singers interviewed, the composer was subconsciously present (VN3.6i11), and was even 'placed' in the score to gain a sense of their intentions:

the piece is the composer, in my head. When I'm thinking about the score, or the piece as a whole, [...] that is the presence of the composer [...]. I may not speak of them by name or think of their face in my head, but I'm thinking of their views through their piece (VN3.10i7).

⁸ The repertoire for CS1 was all new, which might explain this vulnerability of the composer as compared with other stages of the study, in which more established works were performed.

Empathic decision-making, based on a relationship with a composer who was internalised via his or her score, could occur.

Composers' intentions were regarded as a flexible starting-point for a process of co-composition. Singers valued their role in the collaborative nature of these events, one singer contending that 'when we work on the music with the composer, it doesn't really feel as though it's their music anyway' (VN3.2i9). When respondents adhered to their own senses of proportion, the collaborative nature of piece-building became even more evident. That ownership was considered vitally important throughout responses.

Category: Comparing with traditions

Some sense of comparison with tradition, and the use of traditions and novelty in improvisatory decision-making, remained unaltered throughout VN1–3. The meaning of 'tradition', however, expanded into more localised traditions. It could refer now to a singers' own training (itself likely drawn from a pedagogical tradition and forming a sort of internal orthodoxy) or to what had become normal within Via Nova. Such constructions of tradition naturally subsume, are enriched by, or simply imply conceptualisations of the very nature of aleatorism and its performance. Responses were generally divisible into considerations of (i) Novelty and Tradition, (ii) Own or Local Tradition, and (iii) Conceptualising Aleatorism.

i. Novelty and tradition

General feelings of novelty were present throughout most responses and contributed alongside traditions to improvisatory decision-making. Exploring that which felt new was a matter of obligation for one singer (VN3.3i7) and was seen to inhere the very nature of aleatory performance

for another (VN3.3i8). But beyond the unsurprising comments on unusual notation or unfamiliar sounds, novelty afforded pleasure for many.⁹ Enjoyable, creative unorthodoxy was represented as enabling group bonding (VN3.11i13). It made for better performances, according to one singer: ‘generally such creativity during the performance is a bad thing but here it worked in the choir’s favour to produce a great concert’ (VN1.8.4).

If novelty was a motivating device, then learning was enabled by more traditional elements. Various respondents noticed such elements, which could then be objects of refinement. They were also tools: ‘regular’ ensemble skills and choral (physical) unity were tapped into. Those tools could then help build less orthodox musical ideas or processes. These were also areas that singers often commented on as difficulties (for instance VN3.3i8) (c.f. Becoming aware of technique, Chapter 5.3.1).

ii. Own and local traditions

Singers drew on a wide array of habits and traditions to guide them through the novel textures and processes of aleatorism. Recollections of singers’ training appeared frequently in interviews, often in terms of technique. Intuition born of training was evident in rehearsal (Reh1,5). Another singer, well-versed in contemporary vocal performance, compared VN3 with their own ‘tradition’ of performance and habits (VN3.3,1, i5). Aleatorism (including extended vocal techniques) was contrasted with one singer’s training (VN3.6i1). Singers also began to draw on a localised sense of tradition in their decision-making, or compared each new score with a sense of ‘normal’ that had emerged during their time performing with Via Nova. A telling instance of this shift was one respondent’s comment that what had been ordinary for them before CS1 had come to feel odd

⁹ One singer (VN3.6i8) later recalled enjoying the experience *despite* novelty.

(VN3.11i8). Personal knowledge of the composer was frequently enlisted, as before, to understand the repertoire. A sense of an aleatory norm emerged, for one, during the unfolding of performance:

The performance of the piece always feels like the first time we have properly given the piece a go, as it is when we really push the length of the aleatorism. But the longer it is left the more perceptive it can become. And the sound begins to go through stages which are completely unplanned but can then effect [*sic*] the next section of the piece. So even if the aleatoric [*sic*] sections are only briefly practised in rehearsals you still hear the effects and emotion of the music [...] when left for longer periods of freedom[;] it allows the music to really build itself which is a really interesting thing to be part of as a performer (VN1.2.1; this completed questionnaire is presented in full in Volume II, Appendix B1, p. 23).

This account of events strongly suggests the emergent nature of practice. That practice, for this singer, emerges as a function of time and a perception of the piece's own natural development. Importantly, local traditions are increasingly seen as tools, rather than 'rules', which singers might actively construct to provide useful points of reference or ensemble contact in 'building' a piece.

iii. Conceptualising aleatorism

One singer extrapolated their presumptions of a composer's intentions into a concept of aleatorism, writing that a particular composer 'clearly didn't want [a humorous technique] in his piece and so in the future I will be more careful of using aleatoric [*sic*] music to make the audience laugh unless it is intentional' (VN1.8.3). I am aware of no evidence that the composer felt this way; this response was a construction of intention and concept, which facilitated the singer's nascent creation of a

tradition. Singers often conceptualised a tradition of aleatorism in this way, which bounded decision-making and provided parameters to interact with. One singer proposed a localised etiquette for aleatorism (VN3.3,2 and i3). Another declared that ‘[d]uring aleatorism as a singer you listen out for what others are doing so you can develop and fulfil the composer’s wishes’ (VN1.6.3), effectively conceptualising via perceived intentions, which are themselves arrived at via the ensemble. Novelty was given conceptual importance also, for instance in the form of spontaneous interaction (VN1.4.3) or the inevitable newness of each performance (VN2.1.4a).

Category: Understanding self and group

Understanding of the group, and of the self in relation to the group, was extensively developed in interviews and questionnaires during this phase of the study. Consistent with previous findings, singers expressed senses of safety in numbers, liberation in individuation, and fear of exposure. Developments in these concepts were found in how singers regarded the interactions (i) between the Self and Others, and (ii) within the Group Itself.

i. Self and others

The primacy of the individual is, to an extent, inevitable in singers’ responses. This primacy was nuanced, however. Individuality was sacrificed for the success of the whole (VN3.11,2)¹⁰, or reworked through actively seeking textural fracture or forging (and enjoying) moments of unity. Individuality was also framed as a challenge, notably for one singer who found that ‘it was difficult to maintain a blend while singing independently clashing notes’ (VN2.4.3b).

¹⁰ Coded ‘de-selfing for success’.

The reinterpreted ‘self’ perceived and construed the group in various ways, indicating multiple means by which singers connected to the ensemble in which they, and their individual decision-making, were ‘nested’. Singers both actively observed and presumed the group during performance. Conscious awareness was recurrent in VN3, one rehearsal extract even meriting the code ‘broadening awareness of awareness’ (Reh2,3), a reflexivity likely due in part to involving singers consciously in the research process. Singers’ awareness was broadened, and they came to rely on both aural and visual faculties to perceive the behaviour of colleagues. That aural reliance was also reflexive: one singer felt an aural reward from their contribution to the group (VN3.6i2). Peripheral awareness became an arena for technical communication – a transference of technical ideas through primarily aural perception. A further transfer of ideas occurred through improvisatory activity, which created a strengthened dynamic of group awareness for one singer (VN3.6i4).

A recurrent concern of particular importance to singers’ decision-making was determining how and when to become exposed – discernibly independent, in some way, from the texture. The careful pacing of exposure, either through postponement or hastening, or the complete avoidance of isolation both occurred. Both imply a conclusion one singer arrived at: exposure and initiative (leadership) required considerable courage (VN3.2i3). Such exposure, however, resulted for numerous singers in enjoyment, most often when they felt supported by colleagues.

Playful contrariness often yielded that freedom. Some singers deliberately negotiated against the group, sometimes even expressing dislike for unity. Singers often recalled moving in opposition to someone nearby in the room, to someone close to them in their progress through a musical procedure, or to a section mate. One singer wrote ‘[...] as I start to move with [a section mate], and our journeys are the same, part of me was thinking “oh I don’t want to follow [their]

journey, I want my own” (VN3.10i5). Both physical proximity and sightlines were a source of physical empathy. One singer expressed that they felt energy from proximity (VN3.6i10). This multi-sensory proximal input resulted in a phenomenon that was commented on several times: through an anonymous mutuality, a change of connections/catalysts occurred whereby ideas, musical shifts, and expressive details were rapidly transmitted through the group.¹¹ This mutuality provided information that singers might deviate from creatively, disrupting patterns and habits from a clear starting point.

These proximal interactions are inherited by relational dynamics, which emerged as a driving force of singers’ interactions. Singers relished the relational aspect of performing, happily forging bonds with other individuals during performance (VN3.2i6 and 2) and ‘sharing’ with colleagues (VN3.6i6). Improvisational ideas were transmitted between individuals. A sort of intersubjective landscape of others’ processes, or progress through procedures, was something several singers expressed having been aware of, based upon presumption of those processes.

A result of this network of proximal relations was a collaborative exploration of ideas and techniques, a necessity in the performance of much aleatorism. Rehearsal 2 evidenced the construction of a process *in situ*, based on the activity of others (Reh2,2). Ideas were ‘borrowed’ in rehearsal and performance. One singer described a process of building a lexicon of ideas during the progress between steps of *Undismantling* (VN3.10i2), reflecting a recurrent idea of building and abridging a vocabulary through group exploration. Another singer commented:

I wouldn’t say that I immediately kind of copied what other people were doing, but I make a mental note: ‘oh they made that noise that’s quite a cool noise’, and then I would try to

¹¹ VN3.2i5 also drew my attention to the anonymity of many of these interactions.

find a way, [but] if I found something else on the way I would do that instead (VN3.2i1–2).

Idea-borrowing might lead to personal exploration, which, presumably, can result in further new ideas for others to glean from. Exploration occurred in rehearsal as well, offering room for group idea-generation (VN3.10i9) and even discovering new ideas out of errors (VN3.3i8; see also the above discussion of rehearsals).

Group physicality was a central feature of the VN3 performance, a useful exaggeration of what was fleetingly commented upon in VN1 and 2. (The physicality of an individual’s technique is dealt with below under the heading ‘Becoming aware of technique’.) The physical needs of vocal technique were balanced against group phrasing.¹² One singer observed the shared impact of that physicality on each individual performer (VN3.10,1). Another observed that shared vocal physicality was also seen as impacting upon the whole interpersonal dynamic of the group (VN3.9,1).

Physicality and visible gesture led to further sharing of technical exploration. The requisite input for that exploration was physical empathy: a singer in Rehearsal 1 observed that when group members needed to

stay in unison without actually looking at each other or talking to each other, you listen to each other’s breathing, and tomorrow when we start doing it in a bigger capacity, you’re going to be breathing a lot more, you’re going to be noticing your own breathing[...] (Reh1,4).

¹² Similar mitigation of one’s own process against group processes was shown by VN3.6i9 and VN3.10i11.

Interestingly, one singer commented explicitly that connections were also made through sound (VN3.6i10).

ii. Group itself

As already stated, several singers' comments referred to sensing other individuals' processes, observing how those inputs impacted upon their constructive decision-making. Awareness of the conductor, audience members, and the ensemble as an entity detached from, or moving irrespective of, the individual, were all mentioned. In VN1 and 2, connections with other performers were predictably seen as occurring through visual contact or dialogue.

As the conductor, I was of limited importance to the singers. In VN1, I acted as a facilitator of the event's collaborations, and in VN2 and VN3 singers commented that I was necessary for giving cues. Of greater interest was one singer's expression of a feeling of liberation from a conductor (VN3.6i1). Engagement with me as conductor was otherwise fairly scantily commented upon.

Awareness of, and interaction with, the audience was more substantially discussed throughout VN1 and VN3 than in VN2 (which, notably, was the only auditorium performance). Singers presented views of how the audience felt during performance, one noticing confusion and intrigue (VN3.6i3). Humour was offered as a means of ameliorating audience discomfort and permitting subjective reactions (Reh2,7). Performers were reciprocally made to feel certain ways by the audience. Awareness of the audience's responsiveness and physical presence helped define the situation and its negotiation. Some performers deliberately ignored the audience, creating a sort of protective barrier during an exposed and unusual performance situation. Singers also,

however, recalled observing, even deliberately eliciting, reactions, and expressed a desire to abet the audience's understanding.

A sense of 'grouped-ness' emerged, whether in the form of pressure from the ensemble for an individual to progress through the piece (VN3.10i6), or of a unanimity borne of a 'magical' ineffability (VN3.6i4). Aleatorism was seen as dissolving 'barriers' and affording 'confidence to a performer both individually and as an ensemble' (VN1.9.1). Group familiarity was valued (Reh2,5), as was an interpersonal and aural communality. One singer described a process of decision-making based upon group progress (VN3.6i9). Shared exploration also occurred more explicitly through group discussion (Reh1 and Reh2). Grouped problem solving was considered a physical act by one singer (VN3.10). Another observed the instant creation of empathy that impelled collective shifts (VN3.11i2 and 5). One singer wrote

you were always thinking 'oh I may do it soon, but I'm going to stick on this for now', and then you'd...before you'd initialised it yourself, you'd hear it the other side of the room, and like 'oh, we're here now'[...]' (VN3.10i3).

Many singers spoke to the physical and emotional experience of waiting for the ensemble to collectively reach a particular stage.

A further aspect of emergent group dynamics was that of emergent leadership. One singer commented on feeling less pressure from authority to perform in a certain way (VN3.11i8), and another explored the piece more in the absence of a firm leader (VN3.10i7). Yet the presumption that *someone* must hold authority emerged early in Rehearsal 1 (Reh1,2). Many singers actively sought leadership from within the ensemble to guide them. That position of leadership was fluid

and was constantly balanced against the needs or process of the individual assuming leadership. Singers often assumed leadership roles simply by taking initiative, which one singer avoided for fear of the burden and exposure of such a role. Singers, therefore, made decisions based on emergent leaders as much as any other element, including the composer.

Category: Becoming aware of technique

Discussion of technical awareness broadened considerably over the course of CS1. (Approaches to extended techniques were discussed, but are only elaborated on here where they pertain to aleatorism.) A wider physical awareness came to light, partly because of the more physical nature of the VN3 performance; all singing can be seen as physical, and VN3's magnification of this perspective was experimentally useful. For instance, one singer commented that '[w]hen singing in normal formation I found myself generally connecting a lot easier with the other performers as you begin to bounce of[f] one another with energy or new momentum' (VN1.2.3). Physical improvisation was a shared activity, occurring through technical communication and varied levels of affective-emotional interaction. This ensemble, through physical empathy, shared in a gradual process of unearthing new technical processes. Singers' progress through pieces occurred not only via constructions of variables which impacted on their individual decision making, but also through an embodied process: a central outcome of responses falling under this code is this notion of embodied process-construction. Importantly, this category overlaps with 'Understanding self and group': physicality was a shared feature of performance (see above), and, more specifically, exploration became a shared embodied activity.

Aleatorism posed particular technical issues to singers. A singer commented that this music made it 'more obvious to me as to when I was using my full body and properly connecting to my

voice, as the music could be quite demanding, however that was only on some pieces' (VN1.2.4). This often heavily conceptualised mode of performance resulted in one singer putting their own usefulness in executing that concept above physical comfort (VN3.6i7). By contrast, some singers identified personal limitations as limitations to the piece's performance (Reh1,1). Beyond predictable references to vocal health and technical 'basics', singers mentioned altering their perception of tuning (Reh1,4), technically solving problems, and experiencing greater auditory awareness and cooperation during aleatorism. However, many of their concerns were with the kind of technical and musicianship-related difficulties that they would encounter in any style of choral music.

This latter group of responses suggests the construction of technical processes. The music performed in this phase of study was heavily process-based, compositionally; as a result, it was also often technically processual. Individual processes were created in a unique way by each singer and were used by one to provide a distraction from vocal issues (VN3.6i7); for another, these processes were both physicalised and used to mitigate against a sense of chaos. (VN3.11i6). These varied processes were born upon by various internal(ised) influences.

Physicality was, once again, a key concern for singers' technical awareness and process-construction. Numerous comments were made on the physicality of singing, whether in direct reference to pieces which called for outward movement, or implicitly as an aspect of 'ordinary' singing. Singers frequently described the piece, and their processes, kinaesthetically. Additionally, improvisation was described as being physically enjoyable, for one participant becoming a fulfilling unification of emotion, voice, and body (VN3.6i8). Physicality itself became improvised, modified on site as a contextually contingent element. One singer responded to their own body's

behaviour (VN3.11i2) – an internally reciprocal physical negotiation. Movement and music were incorporated by some, while others dichotomised them.

5.4 Discussion

5.4.1 Impact upon Analytical Thinking

One outcome of the data from CS1 was the discovery of several points that the singers identified as useful and pivotal to their own performers' analyses (as discussed in Chapter 4.3.1). This outcome, though unforeseen, usefully grounds the analyses of musical outcomes (presented fully in Chapter 7) in singers' experiences. These parameters are:

- A. Points of musical focus, impetus, or injection of energy; points where the fractured texture seems to consolidate.
- B. 'Checkpoints', where technical or processual shifts occur and progress relating thereto may be compared among singers.
- C. Points of unity, where scored or, more interestingly, accidental (marked as 'Ca').
- D. Areas of textural fracture.
- E. Points (and levels) of exposure of singers.
- F. Timings of events, especially as compared with singers' impressions thereof.

5.4.2 Aleatorism and Complexity

These findings suggest that the elements at play in the performance of choral aleatorism, including the composer, the work's concept or central ideas, the ensemble, and even the score itself, are to some extent constructed by singers. This notion is not tantamount to total epistemological

relativism, however. Instead, it simply means that, as singers make decisions, those decisions appear to be born upon by how they have critically construed, interpreted, or reinterpreted those factors. Such an involved web of constructions does, however, entail significant ontological destabilisations of musical elements and agents. Performers co-create a work in choral aleatorism.

During this co-creation, singers' adherence to their constructions can shift, and so too shift the constructions themselves. This adherence occurs more through creative, proscriptive bounding of what such adherence entails than it involves fear of error. The unfolding of the work, and of the rehearsal process, both enables and necessitates constructive shifts, while also potentially calcifying them into habits and routines. It provides a span of time in which novelty can be explored. Novelty both creates obstacles and, as a source of enjoyment, offers entry into the pieces by cultivating a sense of play. Awareness of novelty is clearly vital to performing aleatorism and spurs active creativity within an ensemble when mingled with referential points of normalcy. The latter, in the form of personal, locally emergent, or more general traditions, are important facets of an epistemically complex process.

This process's complexity is compounded by the dual planes on which singers' constructions occur: the individual plane, where they influence many decisions of process and technique; and the social plane, where they result in the ensemble's shared performance. The reinterpreted self builds an interpretation of the group, with which it then engages in a reciprocal, reflexive manner. That proximal interaction originates in a singer's awareness of technique, which is simultaneously liberated by the freedom of aleatorism, and restricted by (constructions of) the concept at hand. The creation of technical (physical) processes through which improvisatory passages are navigated also originates with the individual, but there is mutual impact between individual and group physical processes. An important feature of this process is how the

physicality (the technical and acoustic realities) of a piece is a product of shared, embodied empathy. The experience of the self within that network of processes is based upon numerous inputs – tradition, habit, multiple senses, and, importantly, the (temporal and technical) accommodation of other singers.

Two features emerge as central to this construction during improvisatory choral music:

1. **Multiple inputs in Decision-Making:** Improvisatory construction is impacted upon simultaneously by a network of multiple influences, including various sensory inputs and (constructions of) external parties and entities. These inputs and parties may include composers, conductors, other singers, audience members, musical (and extramusical) concepts, notation, traditions, and the performer's embodied self. All of the factors within this network do not necessarily impact upon each decision equally, but instead gain and lose importance from decision to decision. This network suggests that aleatory performance is not only able to be described constructivistically; it is also largely a product of knowledge and ideas which emerge on a social, interactive level. From this angle, the social construction of pieces may be seen to precede, or supersede, individual constructions, except where an input is another individual's internally constructed process.
2. **Embodied constructions:** A work is constructed not only through physical processes, but also through how that construction of (technical and affective) process is ramified throughout the ensemble. Singers, in essence, construct the processes through which they navigate aleatory situations in large part via technique and embodied tradition. From this perspective, individual constructions might be seen to drive the co-creation

of an aleatory piece. The embodied constructions that occurred ‘within’ singers (recalling general notions of individual construction), discussed especially with regard to their awareness of their own technique, and perceptions of how the self related to the group, suggest that the construction of a piece occurs within an individual, after which it reaches the ensemble. There is a reciprocity, however, in how the group’s, and other individuals’, constructions then impact upon a singer’s.

These two preliminary conclusions begin to address how singers experience and undertake choral aleatorism by highlighting the complex, layered nature of this area of performance. They also point to the parameters (for instance traditions or perceived limits of musical or physical possibility) which singers can critically interact with or expand upon. Complexity Thinking, as outlined in Chapter 3.2, offers a useful framework for grappling with this network of constructions. It is worth noting again that the parameters discussed at that early point – emergence, proximity, and nesting – were selected because of how they related to these findings.

There is a strong case to be made for the performance of aleatorism to be considered complex, in the sense of the word espoused by Complexity Thinking. Complexity Thinking applies especially to situations which are non-mechanised – which do not presume stable behaviours and consequential, predictable outcomes. Aleatorism is inhered with this unknowability, and even singers engaged in improvisatory actions cannot always predict their own behaviours. Even where the freedom afforded performers is limited, there is a deliberate relinquishing, by all parties, of the comparatively high levels of foresight offered by traditionally notated and performed choral music. Instead, singers have increased individual, improvisatory autonomy, whereby they collectively

create an autocatalytic, self-defining system.¹³ The creative outcomes of this agency develop over time, reinforced or negated through positive or negative feedback loops.¹⁴ Their actively constructed processes feed into an emergent, collective process. To revisit an idea cited earlier – that, in complex systems, ‘[J]ust as learning is distributed, so is *authorship*’¹⁵ – it is now abundantly clear that the co-creativity of aleatorism can be described as complex.

Aleatory choral performance is, in many ways, self-defining, recalling Alhadeff-Jones’s assertion that complex situations follow an internal logic, which is in part defined by disorder and disruption.¹⁶ Singers set the course of the performance of aleatorism through their constructions of process, which are what fundamentally drive the ensemble’s construction of an emergent interpretation. Non-singer inputs upon their decision-making – conductors, audience, or composers, for instance – could be seen as usurping that internal self-definition. However, I would argue that, first, those influences are agents in a further complex, nested layer (explored further in the discussion of nesting, below); and second, these inputs on their decision-making could be better described as perturbations than as usurpers. Constructions, creative disruptions, and external perturbations might all gain enough positive feedback to become emergent trends, habits, or traditions.

A transmission of constructions and perturbations is necessary for that momentum to occur, and this transmission occurs largely between singers who are, in one way or another, proximal. Interactions among individuals, and between individuals and a generalised group, occur through proximity. As CS1 progressed through conceptualisation and the three VN events, two overarching

¹³ Cohen, Manion, and Morrison, *Research Methods in Education*, 28, citing Susanne Kelly and Mary Anne Allison, *The Complexity Advantage: How the Science of Complexity Can Help Your Business Achieve Peak Performance* (New York: McGraw Hill, 1999), 28.

¹⁴ Cohen, Manion, and Morrison, *Research Methods in Education*, 29.

¹⁵ Davis and Sumara, *Complexity and Education* 145.

¹⁶ Alhadeff-Jones, ‘Complexity, Methodology and Method’, 29.

evolutions in group (and self-group) dynamics were notable: a more deliberate and creative bent to what had previously been a necessary opposition to certain perceived influences; and a reconsolidation of proximal relations, into proximal mutuality and proximal leadership. Singers' contributions to the collective process became creative; these contributions influenced other singers nearby, but these dynamics were more nuanced than a straightforward network of influence among equals. Not only the sharing of ideas, but also leadership and authorship, were products of nearness, through which ideas could be asserted, followed, and could gain momentum. That momentum is compounded by the number of possible connections within a group: within a group of 12 singers like Via Nova, there are 66 connections; within a choral group of 35 members, there are 595 connections.¹⁷ It is also important to recall that proximity includes not only geographic nearness; as shown above, it can exist between similar voice parts, or the particular strength of a note can make one singer feel nearer another. The aural and physical nature of sonic proximity will be explored further in Chapter 7.

The 'network architectures'¹⁸ of proximity and interaction in aleatory situations can vary widely. In cases where the conductor is responsible for a high level of logistical details – cueing and timings, for instance – there is arguably a high level of centralisation, with relatively strong links with singers, created by that concentrated imperative. But even this situation is complicated by the additional connections between singers, through their vocal and visual transmission of musical ideas. These connections are weak, using the logic that clear lines of instruction make singers' contact with the conductor or composer comparatively strong, but are robust inasmuch as

¹⁷ Mark Mason offers the formula $y_n = 1/2 (n^2 - n)$, where n is the number of members of a group, to calculate the number of connections. Mark Mason, 'What is Complexity Theory and what are its Implications for Education Change?', in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 35.

¹⁸ Davis and Sumara, *Complexity and Education*, 142.

they are part of the creation of the audible musical product, whereas conductors can only indicate and hope to be followed. It is perhaps more useful to think of the network architecture of the ensemble as being enriched by internal diversity and specialisation,¹⁹ in which different members of a group have variable, shifting roles in creating the piece at hand.

This architecture exists on multiple nested levels. Singers' performances of aleatorism impact, and are impacted by, a network of audience members. This network itself might also be complex. Moreover, the construction of a given piece may be nested, in a way, within a larger tradition. Davis asserts that phenomena which permeate multiple nested, interacting complex unities should be understood as transphenomenal:²⁰ in choral settings, this would mean grasping the ways in which singers bring with them multiple traditions and physical entrainments, as well as how the rehearsal and performance situation itself reifies numerous external, often extramusical phenomena. Nesting describes the study of choirs within a larger context and interactions within the choir:

[...] the rich interactions within the system, which have non-linear cause-effect relationships, lead to emergence as a result of self-organisation in which different emergent levels all exhibit complex system behaviour – in other words, the system does not become less complex if it is analysed at a smaller scale or 'lower' organisational level.²¹

Singers' own traditions and bodies possess complexity, just as do the overarching traditions of indeterminate performance – and the latter can and do inform the former. Davis and Sumara warn

¹⁹ Davis and Sumara, *Complexity and Education*, 137–8.

²⁰ Brent Davis, 'Complexity and Education: Vital Simultaneities', in Mark Mason (ed.), *Complexity Theory and the Philosophy of Education* (Chichester: John Wiley and Sons, 2008), 50–1.

²¹ Hetherington, 'Complex Thinking and Methodology', 73.

that ‘Complexity [T]hinking points to the inadequacy of nesting personal understanding within collective knowledge’, given ‘the presence of several intermediary layers of nesting coherence that are of vital relevance to educators’.²² The layers between singers’ understandings and that of the group – their web of mutual intellectual and affective relationships – and that of the larger discourse (including this thesis) remain important.

It is at this juncture that it becomes plain that a Complexity-based understanding of singers’ responses still leaves several gaps in understanding. The emergence of aleatory performance can be considered to be the result of proximal interactions and perturbations among diverse agents. But the above discussion of singers’ accounts of their experiences has shown that a crucial location of singers’ constructions is their bodies. While this discussion reveals the importance of this aspect of the experience of aleatory choral performance, the area merits further, focused study. Moreover, the actual nature of transmissions is largely unexplored: what is the means by which singers share and receive improvisatory musical information and ‘energy’? I would argue that these questions are best answered by way of interrogating singers’ physical experiences of aleatorism. This theme therefore steered how I developed the understanding of the performance of choral aleatorism in CS2, which invites singers to consider their minds and bodies as sites of embodied construction and decision-making.

²² Davis and Sumara, *Complexity and Education*, 73.

Chapter 6 Case Study 2: Amateur Choral Ensembles

6.1 Introduction

The main objective of this later case study has been to develop the findings of CS1 through a more focused interrogation of singers' experiences of embodiment and decision-making. It has also provided the opportunities to work with amateur singers rather than the early professionals of Via Nova; to confront singers with more established works of choral aleatorism, rather than collaborating on new works as in CS1; and to present this still-unfamiliar music to singers with whom I had not previously worked.¹ It was not possible to isolate and compare variables, for example by presenting a body of established works to both amateur choirs and Via Nova. Nonetheless, the variety of events does create a cumulative impression of how diverse singers might approach a range of choral aleatory scores. Three main vocal ensembles are involved here, with two based in main cities and a third within a rural district: Quinton Community Choir (Birmingham, March 2017); ETC. Civil Service Choir (London, March 2017); and Ex Urbe Choir (Warwickshire, October 2017). This chapter will outline the workshops used in this case study, thereafter discussing findings from those workshops, according to main themes of CS1's outcomes. Finally, these findings will be considered in light of the writings on Complexity and embodiment, presented in Chapter 3.

6.2 Workshop Design

This case study comprised three 30-minute workshops, each fitted into the different amateur choir's regular rehearsal, and having taken place between March and October 2017. These

¹ I sang with Ex Urbe Choir, also leading a short pre-performance warm-up, prior to this workshop. This might explain the greater receptiveness I perceived in their questionnaire responses as compared with ETC, but this possibility seems less likely in light of the lack of perceptible difference in enthusiasm between QCC and EUC.

workshops were entitled ‘The Improvising Choir’; despite problems of semantic blurring (as discussed in Chapters 1.2 and 2.2) between ‘aleatorism’ and ‘improvisation’, this name quickly clarified what the workshop would entail, using terms that these choirs’ conductors and leadership committees would recognise and potentially find appealing. During the workshop itself, singers were introduced to the term ‘aleatorism’ through a basic definition and a frame of reference, including mention of works using aleatorism by composers with whom they might be familiar, such as *Cloudburst* by Eric Whitacre. This approach ensured the event might be useful for the singers, who were allowing me to deprive them of valuable rehearsal time designated for their other programmed repertoire. As such, it was necessary to be flexible in timings, occasionally speeding up or omitting particular steps.

Further details about the participating ensembles are summarised in Table 6.1, below. The column on the far right indicates the abbreviation that will be used to refer to both the choir and the workshop they participated in, for the remainder of this chapter. Participants’ responses are cited with these codes, along with the number they were randomly assigned (so, QCC3 is a singer from Quinton Community Choir to whom I had assigned the number 3):

Table 6.1, CS2 events with amateur choirs.

Choir Name	Location of Event	Date	Reference Abbreviation
Quinton Community Choir	St Boniface Church, Quinton, Birmingham	6 March 2017	QCC
ETC. Civil Service Choir	DEFRA, Nobel House, London	18 March 2017	ETC
Ex Urbe Choir	Fentham Hall, Hampton-in-Arden, Warwickshire	29 October 2017	EUC

Unlike the events of CS1, each of these workshops followed the same model as closely as was possible. In each, I outlined ethical issues including consent, confidentiality, permission, and withdrawal, drawing the singers' attention to an information sheet, consent form, and questionnaire. Singers were then led through a warm-up routine that explored explicitly the physical nature of singing, based upon my previous experience gained during CS1. This warm-up comprises successive exercises encouraging body awareness and movement, accompanied first by breathing, later by vocal, exercises which all require each individual to improvise sounds independently.² Due to shortness of time, and a strong physical warm-up from their regular conductor, this step was excluded from the QCC workshop. Following this warm-up, the singers were invited to walk freely around the rehearsal space, making eye contact with colleagues and avoiding predictable walking patterns. They were then asked to choose a sound to sustain or repeat; while walking, they were instructed to try swapping that sound with anyone with whom they made eye contact. This routine aimed not only to make them aware of their whole bodies' role in producing sound, but also to make them more aware of their colleagues.

We briefly rehearsed and performed two pieces using choral aleatorism: Kerry Andrew's *O Nata Lux* (discussed in Chapter 5.2) and Cornelius Cardew's *The Great Learning* (see Chapter 2.4). *O Nata Lux* requires each soprano to sing the same written melody independently, while the rest of the choir sings homophonically; at the end, the altos and tenors oscillate freely between two notes, the basses hold a pitch, and the sopranos sing a new line, still independently. For each workshop, I rehearsed the sopranos first, allowing them to sing their melody together before singing it independently. Independent singing often required encouragement, even the cueing of individual singers. It was sufficient here for singers of the non-aleatory lines to sight-read their

² See Thatcher and Galbreath, 'Essai: The Singing Body'.

parts, so the choir then simply performed the entire score. In *The Great Learning*, for reasons of efficiency I opted to provide a verbal explanation of the score's instructions (see note 180, Chapter 2); these instructions carefully matched the score text which they summarised, though inevitably they elicited questions seeking clarification. I then asked singers to choose a pitch on which to begin, and verbally initiated a performance. In all three performances, despite my instruction to stand in place and only move to hear and align to a new pitch, singers unexpectedly decided to walk around the room continuously as they had in the warm-up. This occurrence exposes a potential shortcoming of preceding this piece with the warm-up routine as described, and possibly a lack of clarity in my verbal instructions.

Data was collected by questionnaire, then coded and processed using the GTM. Following ETC, it was possible to record part of a discussion with singers; and following EUC, one singer agreed to participate in such a discussion. However, since these discussions could not adequately explore issues in the time given, were responded to unevenly across workshops, and often duplicated information from participants' questionnaire responses, they were excluded from data processing. Questionnaires asked singers first (Question 1) to provide their name (for record-keeping purposes), age, gender, and musical ability. Space was provided for responses to Questions 2–4, which sought to encourage free reflection while still pursuing a theoretical saturation in the areas set out during CS1:

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2. What are some general impressions you have after the Improvising Choir workshops?
3. Please pick 3 or 4 moments where you were aware of making a decision (of any kind) during these pieces; who or what influenced your decision?
4. Please tell me about how you felt physically during these performances. How did it feel to sing the works? How did it feel in relation to others in the room? To the sounds you experienced?

The second and third workshops were timed to give participants an opportunity to fill out the questionnaire on site, guaranteeing a healthy number of responses. QCC, the subject of the first workshop, was asked to fill out a questionnaire via email (they were also asked to provide suitable times for interviews). Only five questionnaires were returned, and no participant indicated further interest to participate in an interview. Of these five respondents, all were female, ranging in age between 28 and 64, with an average age of 47. Levels of musical experience ranged from being self-taught to holding a master's degree in vocal performance. Most respondents more closely matched the former description, and it should be noted that the ensemble's focus is on learning by rote, and it does not focus on classical repertoire. By contrast, ETC performs challenging classical repertoire frequently. Experience levels of its members range from rote-learners to those with considerable (including professional) experience. Twenty-one of the 39 respondents were also instrumentalists, and the majority had sung, or sang at the time of collecting data, in other choirs. Respondents were aged 23–65 (average 44; 4 non-responses), and consisted of 24 females, 14 males, and one who opted not to indicate their gender. EUC, also oriented towards standard

classical repertoire, had a higher age range and mean (31–66 and 51, respectively, two non-responses), and a generally higher level of musical experience, including those with considerable solo experience and the majority being, or having been, involved in additional music-making (instrument playing and/or other choirs). Of the 15 respondents, seven were female and six male.

6.3 Findings

Since the questions were designed to explore particular categories which emerged from CS1, each will be dealt with in turn. Question 2 affords a broad view of experience, lending an understanding of how amateur singers, who were unfamiliar with either me or this music, respond to choral aleatorism. Confronting the two strands of findings that emerged from CS1, Question 3 provides a view of the multiple layers of singers' decision-making and how those layers interact, and Question 4 gives insight into their embodied experience. These findings will be discussed according to an organisational structure that emerged during coding; however, since they seek to help existent categories reach saturation rather than formulate new ones, they will not always be presented with mention of the active codes seen in Chapter 5 (sample coded questionnaires for this case study may be found in Volume II, Appendix C).

General impressions (Question 2)

These impressions touched overwhelmingly on singers' levels of comfort with the novel performance styles they encountered during workshops. The terms 'weird' and 'interesting' appeared frequently, but there were as many different reactions to novelty as respondents, including enjoyment, indifference, ambivalence, and distaste. In particular, the high level of freedom provided by aleatorism was thematic. Some felt liberated in the absence of traditional

strictures, one singer writing that ‘[i]t’s good to be able to make a noise in a completely non-judged space. Even my own judgment was suspended’ (ETC18). Others felt challenged or unmoored by the lack of notational rigidity or clear leadership. What for one singer provided a ‘sense of novelty, of having taken part in/experienced something quite new’ (ETC31), for another offered less a ‘sense of achievement’ than singing ‘what’s on the page’ (ETC32), presumably referring to more traditional scoring. Unsurprisingly, many felt more comfortable with the comparatively conservative Andrew score. This divergence between perceiving music-making as a creative experience or as a structured challenge was common in responses, and recalls the theme of creative deviation discussed in CS1 (Chapter 5). One singer wrote that it was ‘[g]ood to have some “structured” improvising as opposed to having to make up a tune completely, that made it much more comfortable for me’ (ETC28), neatly summarising the usefulness of an interaction between structure and creativity.

Matching this spectrum of comfort was an array of perceptions of group and self. One singer reflected that the workshop ‘was a bit weird, but great fun, and I felt for some of us that it was a great way to celebrate community. I was aware, though, that for some it was some way out of their comfort zone’ (QCC2). This comment touches on several striking trends: enjoying novelty (as discussed in CS1), celebrating community, and empathetic awareness of others’ reactions. A positive sense of community took several forms, whether through a new mode of interaction, or a general sensibility, which some singers compared to mindfulness (ETC24, EUC1). Many experienced greater aural awareness of other individuals in the space, and this heightened level of listening resulted, in one singer’s words, in ‘conformity through interaction with others, rather than by following formal rules’ (ETC3). That conformity inevitably led to a sense of coalescence at certain points, and one singer observed that leaders needed to emerge to enable the performance

(QCC4). Proximity was an enabling factor in these moments of alignment; singers recalled responding (especially in the Cardew) not only to geographically proximate voices, but also to those on nearby timbres, words, pitches, or ranges.

Conformist tendencies were counterbalanced in several ways. Individuals expressed awareness of themselves – of their bodies, their decisions, and their levels of exposure in the texture. The ‘self’ was not regarded in these responses as strictly a body or a mind, in contrast to a Cartesian dualist view. Running alongside this awareness was a penchant for disrupting patterns and norms: ‘You feel like you need to be different, not matching up with people, whereas randomness will inherently bring people together’, posited one (ETC38). Another summarised the balance between individual and group decisions that several others had reflected on, writing that they felt ‘more aware both of the decisions I take whilst singing and more aware of those singing around me’ (ETC29). Aural and proximal awareness, whether leading a singer to follow or motivating disruption, was framed on more empathetic terms than in CS1. One singer wrote:

It was really interesting watching people react to the task and the reluctance in many to sing loudly or make eye contact. I think it made people feel uncomfortable but I think that can be a really good thing. I think it also showed that people like clear rules and boundaries and like to be able to follow in a group (QCC4).

Several singers echoed this empathy for colleagues’ comfort levels.

Related to this empathetic awareness of comfort, many singers couched discussions of feelings and decisions in terms of personal preference. Preferences had influenced much of the Via Nova singers’ experimentations and creativity, but they were seldom drawn along the stark binary

seen here: singers tended either to like (or enjoy) something or to dislike it. ‘I enjoyed the Cardew piece, the sense of all sharing a common purpose while largely dictating our own contribution’ (ETC37), observed one singer. Similar expressions of approval or distaste for aleatorism served to conceptualise it. For instance, the Cardew felt for many more like an exercise than a performance piece; one singer pragmatically observed that it helped in ‘improving listening maybe or perhaps simply improving awareness of the need to listen’ (EUC11).

Decision-making (Question 3)

Singers cited several factors that influenced their decision-making, which can be organised into the following broad categories: i. Leaders, ii. The Ensemble, iii. Oneself, and iv. Disruption. These factors can be seen as interacting in a Complex way as described in CS1 (Chapter 5.4.2); they also begin to shift the focus more strongly to how creative disruption played a part in singers’ decision-making.

i. Leaders

Singers perceived, and responded to, leaders that were both established – specifically, a conductor or workshop leader (me) – or emergent. One singer attributed their participation to a desire to support both the conductor of Quinton Community Choir and me (QCC2). Others commented on participating to support the process, sometimes in the face of negativity among colleagues (e.g. ETC6 & 9). Several cited my verbal instructions as specifically driving a decision. Slightly more frequent was a perception that another singer in the room gained and asserted control, largely through the strength of their voice. Several worked actively to resist these influences in deciding on their next pitch in the Cardew: one (a soprano) recalled resisting a loud section-mate in the

Andrew to avoid creating a ‘bloc’ (ETC29), a view echoed in other responses. The association here of voice and leadership, and of sound and power ‘bloc’, suggest that sound may be perceived by singers as a manifestation of an ensemble’s structures.

ii. The ensemble

The ensemble was seen as impacting upon decision-making through the perception of others’ sounds; the personal perceptions of other individuals; and through respondents’ internalisation of group dynamics within their own person. Unsurprisingly, many singers discussed their process of finding notes (in the Cardew) from other singers. Two singers noticed soprano pitches as the most aurally obvious and responded to them accordingly (ETC28 and EUC13). Other singers listened more broadly, and this generalised sense of the music’s progress gave many a sense that they were falling out of pace with the ensemble. In contrast to these depersonalised experiences of their colleagues’ sound, several singers based their decisions on a sense of personal comfort with others. For instance, one singer (QCC2) observed that her pitching decisions were

dependent on the body language of the person near me. If they appeared happy to be involved, or relatively confident in what they were doing, it was easier to approach them and listen for their note. There was also the factor of approaching those with whom I had a better relationship [...] (QCC2).

In a situation where proximity is a matter of personal choice, non-musical factors in decision-making become particularly important. The ensemble occasionally encouraged exploration of a

singer's own self, especially individuals' decisions to explore new ranges – either by matching, or by creating variety against, other pitches. Additionally, concerns over one's timing of events against that of the group were ameliorated through an individual exploration: 'I felt conscious of others being further along in the piece than me, and noticed I started to expend my breath quicker to catch up – and then consciously relaxed this' (EUC13).

iii. Oneself

These decisions, in which the group impacted upon the individual, were noticeably paralleled by decisions which singers framed as having originated entirely from their own personal choice. Similarly to other singers' accommodations to match the group's (perceived) progress, some made arbitrary decisions when dissatisfied with their own timing, or having lost count. Many based decisions on their own previous actions, rather than the actions they saw more immanently around them. Additionally, just as colleagues had spurred on singers' vocal explorations, other singers undertook to test their own ranges. One singer wrote of their experience in the Cardew: 'I was conscious of taking risks, of pushing my vocal range beyond my comfort zone' (ETC37). Reaffirming the importance of group pressure, some singers described how they altered their processes to avoid being exposed. (This issue is included under this heading because it was based on such an acute, often uncomfortable, awareness of self, even in response to a group.) Finally, several singers noted that physical ability or constraints motivated decisions. Inevitably, breath-lengths (see instructions, Figure 2.23b) dictated decisions in the Cardew; one singer viewed this from an improvisatory angle, writing that they 'created [their] own rhythm based on length of breath' (ETC16). This group of responses suggests that the individual constructions occurring as

a result of complex inputs can be acts of discovery in themselves: singers encountered a piece by way of exploring it vocally.

iv. Disruption

The influences on decision-making discussed above generally suggest an overall will among singers to conform. This tendency could be seen as a result of the musically conservative backgrounds typical of these amateur singers. Yet such a notion, already belied by the vein of exploratory decision-making in evidence, is further unseated by the considerable frequency of questionnaire responses which revealed a penchant for disruption. Indeed, these amateurs sought greater disruptive freedom – or, at least, justified their disruptions on more subjective, creative grounds – than the singers of *Via Nova*. A few singers took the music's comparative license to alter freely processes or even ignore the score's instructions altogether. Most, however, embraced their creative agency in the context of that freedom: they eschewed rhythmic homogeneity, actively sought dissonance, and broke patterns of movement around the room (in both the warm-up and the Cardew). This creative, disruptive agency is vital to an understanding of singers' co-creativity in performing choral aleatorism.

A desire to avoid matching others' rhythms and timing was as common as the above-discussed desire to avoid falling out of pace with colleagues. Timings were frequently adapted or altered to this end. One singer, for instance, deliberately did the opposite of others around them in terms of speeding up or slowing down (QCC5). Others commented specifically on avoiding a rhythmic match with those near them. Another, who indicated that she was a soprano, echoed the comments on balance found in several responses (and in CS1), recalling that she had to decide '[w]hen to start the Kerry Andrew, and how to stay aware of others yet independent' (EUC9).

Avoiding tonal compliance (recalling the comment about the ‘bloc’ of sopranos, above) was another common factor in deciding on pitches. Strategies for achieving or emphasising dissonance included deliberately moving towards discords by semitone (ETC27), accentuating dissonances by making them coincide with the *forte* lines in the Cardew (QCC5), and walking in a different direction while picking a dissonant note (ETC2). The spatial dimension of this last decision points towards the importance of proximity in many disruptive actions. One singer wrote that they ‘sometimes wanted to get away from the core tonality, sometimes felt like confirming – I think it was dependent on whether I was being drowned out by others’ (ETC4). This singer’s balance of freedom and conformity is subtly related to the physical immanence of sound; others spoke more plainly of their use of physical space to find new notes, or to remove themselves from emergent systems.

Physicality and movement factored into other disruptive decisions. Several singers sought to break walking patterns established by the group, or moved towards less familiar voices. Both responses appeared after the QCC event: one singer deliberately stood next to strangers (QCC2), while another broke the walking pattern the group was falling into (QCC4). These two singers from the same choir offer an example of how, for this group, part of engaging with new, and weaker, constraints on decision-making entailed exploring disruption as its own meaningful performance imperative. This conclusion applies, in some respect, to all of the forms of disruption discussed above, in which a lack of prescribed parameters, while creating insecurity for some, may for others leave room for creativity to emerge as a new, emergent parameter.

Physical experience (Question 4)

Singers reflected on their physical experiences in widely varying ways. In an effort to reduce unnecessary jargon, this question used forms of the word ‘feel’ three times, and ‘physical’ only once; this may have been what led a number of respondents to reflect on their feelings of their experience beyond the physical. Nevertheless, since affective and physical responses are not rigidly divorced, this array of reflections can offer rich insight. Responses fell into five broad categories, the first two identifying a tendency towards the polar ends of the spectrum between discomfort (i.) and comfort (ii.), the experience of sounds (iii.), and, once again, their awareness and conceptualisation of the group (iv.) and the self (v.).

i. Discomfort

Singers frequently related their nervousness and unsureness about the experience. The process caused some trepidation, one singer writing that they felt ‘[n]ervous’ due to feeling unsure what was ‘expected of me’ (QCC1). By contrast, another singer felt more sure of the process and its ‘expectations’, asserting a firm dislike for its ethos of “do whatever you want” (EUC15). Vocal discomfort also occurred among several respondents. Several went so far as to cite potential causes for this, including a feeling of competition among singers (ETC17) and the additional focus of counting repetitions of a line of text (in the Cardew) (ETC7).

ii. Comfort

A feature so common as to be defining of commentary about comfort and discomfort was the vital role of time and, to borrow one singer’s term, acclimatisation (QCC1) over time. As such, comfort was commented on (throughout all three questions) with greater frequency than discomfort. This

fact may be partially explained by my process-shift towards engaging singers physically in the warm-up and active use of the rehearsal space. The gradual movement towards greater comfort with the process, for some singers, points towards group dynamic and empathy, discussed previously: ‘[I was q]uite aware of some [singers] feeling silly and had a bit of a chuckle early on before I relaxed’ (EUC11). Many singers commented on the process as being enjoyable, one singer experiencing a particularly novel enjoyment: ‘It was relaxing, trance-like to sing the works. Like being in a warm bath’ (EUC1). The unknown outcome gave another singer a sense of excitement’ as to how ‘it was all going to turn out’ (ETC31). Interestingly, the same ambiguity that caused discomfort for some was a source of physical and expressive freedom for many others. As noteworthy, however, were the respondents who took greater comfort in more structured elements (for example, as found in the Andrew) (ETC9 and ETC39, for instance) or, even while enjoying the Cardew, ‘missed [the] harmony and collective sound of the choir’ (ETC28). A complex relationship appears to exist between comfort and discomfort, and freedom and structure (in both the music and the ensemble), in which these feelings do not always correspond in consistent or predictable ways.

iii. The experience of sounds

A singer from QCC observed that ‘it was strange to “feel” the notes more than hear them. I could, of course, hear my pitch and compare it to others’, but the sheer physical presence of the notes was quite different to normal singing’ (QCC3; this completed questionnaire is presented in full in Volume II, Appendix B8, p. 65). It was not unexpected that some singers should have been aware of the sound as a physical entity or force: I had asked them to turn their awareness to that possibility. It was, however, notable how strong that impression was among several of them. Two

ETC singers discussed a greater awareness of the acoustic space in which they sang (the atrium at Nobel House, where the rehearsal took place, is particularly large and reverberant), which for one of them was ‘exhilarating’ (ETC33). Two EUC singers internalised their acoustic experiences in interesting ways. One ‘[e]njoyed the vibrations in the room, [and] felt this through my [...] chest particularly’ (EUC9), while another was physically impacted by a broader, more ineffable sense of the experience: ‘By end of Cardew, I felt that my body was vibrating, but not just from the sounds I was creating’ (EUC2). The physicality of sound was not always positive, however: with such a range of individual variety in sound-production, some singers found certain timbres offensive and moved away. This dislike of strong individual voices was counterbalanced by some singers’ interest in this music’s distinctive capacity to reveal colleagues’ unique voices.

A keener sense of the sounds being made (and to which participants were contributing), led some singers to comment on it in a broader or more conceptual manner. One singer recalled that, ‘[a]lthough some notes seemed to clash with others, it didn’t sound horrible, just like a humming sound’ (QCC4). Several commented on the pleasure of massed sound in a similar way, echoing metaphorical responses across questions and respondents. A QCC singer wrote particularly strongly of their experience:

There were a few really special moments where the sound created was just immensely overwhelming. The philosophical term ‘sublime’ comes to mind, and what is so incredible is that this wasn’t composed, it happened naturally with a group of humans connecting with each other in a transitory way (QCC5).

Singers' responses, expressing comfort or discomfort, to the unfamiliar sounds they encountered in these pieces seldom treated these sounds as ordinary.

iv. The group

An awareness of group physicality factored into many responses. At the most obvious level, singers commented on moving around the room and making eye contact with others (as I had asked them to do in the warm-up), which offered some relaxation and greater interactivity and connection among the ensemble. Some, however, felt uncomfortable with the eye contact or, conversely, uncomfortable when a colleague did not make eye contact (ETC9; this completed questionnaire is presented in full in Volume II, Appendix B9, p. 67). One instance of eye contact resulted in a comment that '[s]ome people looked uncomfortable which made me uncomfortable' (ETC13), recalling the empathy discussed in previous categories. Another fairly straightforward group of comments pertained to many participants' heightened listening, and the vagaries of matching others' pitches.

A singer from EUC felt that the individual technicalities of pitching decisions in the Cardew made this work 'not so much of [a] joint effort as standard choral singing' (EUC3). This perception was an outlier against the considerable number of respondents who experienced aleatorism as creating a certain sense of unification – even homogenisation. Overwhelmingly, responses to this effect touched on the individual's place in – and often a loss of distinctiveness amongst – the group. One singer recalled 'a feeling of each individual gradually working to bring the sound together in harmony [...]' (EUC4), while another felt '[i]solated initially but then integrated as part of "chant".' This unification reached a high level of intensity for some singers. The QCC singer who had earlier commented on the 'sublime' nature of the sound also felt that 'it

was almost as if everyone's minds were momentarily working together' (QCC5); another acknowledged 'a tacit agreement between us about how to behave which made me more comfortable than I expected' (ETC18). For one EUC singer, divides of voice part and gender were negated (EUC2) (notable, given the increased interest in exploring range expressed above). And another felt 'very much part of the creative process' (ETC37). It is worth observing that often these comments do not refer to singers' bodies explicitly, but rather convey their feelings about sound. However, they all highlight that the physical experience of performing choral aleatorism involves the embodied interaction of complex external factors. That internal experience is a central feature of perceptions of the self, discussed below.

v. The self

Many responses to do with singers' selves discussed general impressions, such as listening to others, or, in one noteworthy case, a singer enjoying hearing their own note (ETC4). Others expressed a more intimate awareness of their own techniques and bodies. Several felt more relaxed and technically aware as a result of this workshop, though one became so focused on pitch that they felt they were ignoring sound production (a separation which is arguably artificial) (EUC12). An EUC singer tied their physical sensation explicitly to sound and music-making itself: 'Felt like making music – awareness of what I was singing in relation to sounds I was hearing as well' (EUC6). Other singers presented less concrete, but still bodily aware, reactions. One, for instance, felt themselves withdraw, which 'felt very warm and relaxing. My body felt quite loose and balanced' (ETC12); another recollected a 'sense of elation especially on [*sic*] the first piece' (ETC16). Another singer brought a group, with whom they empathised, into consideration alongside an acute awareness of their own identity as a singer (ETC18): 'I felt sad for the people

sitting out, as they were missing out on a mild and harmless exercise that poses more questions in my mind than it answers. What sort of singer am I?' Vocal identity here is both embodied and empathetic, expanding an awareness of the simultaneously nested and embodied nature of choral aleatory performance.

6.4 Discussion

Individuals' reflections on their embodied experiences differ from CS1. The great focus, in CS2, on physicality probably accounts for much of this shift. I would, however, also argue that the responses suggest a more intuitive, less technically mechanised awareness of corporeality among amateur singers. Furthermore, I suggest that there is a relationship between this intuitive physicality and the intuitive way in which amateur singers might undertake improvisatory music like the Cardew and Andrew.

The two strands of finding from CS1 – multiple-input decision-making and embodied constructions (Chapter 5.4.2) – are developed here and point, I argue, towards an idea of embodied complexity. Complexity Thinking has already offered a mode for considering the web of factors affecting singers' decision-making, and the emergent co-creativity of aleatory singing. By scrutinising singers' decision-making and physicality further, it is possible to view in greater depth two unexplored areas of this constructive web: the embodied nature of improvisatory constructions and the role of sound as a means of connecting singers to one another. In this section, these two physical dimensions of aleatory performance are explored through a dialogue between the above findings and the notions of embodiment outlined in Chapter 3.3. This conversation compels the realisation that, in choral aleatory performance, Complexity can be an embodied phenomenon and that embodiment is itself complex.

6.4.1 Improvisation, Sound, and Physicality

Recalling Siddall and Waterman's contention that 'musical improvisation is ineluctably embodied',³ it is clear from singers' responses that improvisatory freedom, along with the behaviour of proximal singers and a generalised feeling for the group, induces a strongly embodied experience. Their experience of producing sound in a less prescribed way than most participants were accustomed to is regarded along lines of comfort and discomfort – a response that is affective, and therefore has, I would suggest, a dimension of physicality. Their levels of comfort are bound up with their attention to their colleagues, and their frequent references to empathy point towards the relational nature of their embodied experience. As they developed this idea through successive questionnaire responses, the sense of physical interconnectedness grew. They express a consciousness of their own bodies as impacting on, and being impacted by, the sounding performing group.

This sensory, relational experience corroborates the ideas put forward (discussed previously in Chapter 2.2) by Pauline Oliveros in two key ways. Oliveros expressed her experience of improvising with others as a deeply physical one, wherein sound binds participants into a common undertaking.⁴ The two dimensions of this worth highlighting are the individual and the communal – the two strands of constructivism, in fact (see Chapter 1.4), but here realised and reconciled through corporeal, sonic experience. Singers are acutely aware of their own physical processes, but they are also attuned to the physical experience of their wider context. Even when singers comment on a loss of individuality (see the commentary of Siddall and Waterman, cited in Chapter 3.3), they imply consistently that a profoundly mutual creativity is at play while singing – an intuitive, affective physicality experienced as a group. While for some singers the self is

³ Siddall and Waterman, *Negotiated Moments*, 2.

⁴ Oliveros, 'Harmonic Anatomy', 61.

maintained as a technical, physically discrete entity, most comments to do with singers' embodied experiences of themselves reflect a more open feeling. Through multiple inputs from the group – sight lines actuating physical empathy, the sounds produced by colleagues resonating through the body – they experience intensely the music and their own role in its creative unfolding.

It is the experience of that sound that I have sought to explore most deeply in this case study. Singers were invited to consider particularly closely their experience of the sound, and they responded with great depth to this methodological focus. Singers experience the rehearsal space by way of sound, but also encounter this new (for them) kind of music via its acoustic effect. They therefore engage in a construction of 'spatiality' through sound,⁵ building a sense not only of the ensemble, but also of the greater context in which they are nested, by way of their improvisatory vocal movement within it.

So, the improvising body is open and exists within an intricate network architecture – referring back to Davis and Sumara's descriptions of the layout of points within a complex web, and the strength and types of connections within it (see Chapter 3.2). Responses to CS2 offer a deeper understanding of network architecture in choral aleatorism than those of CS1. Connections to leaders are particularly strong, but leadership was discussed more explicitly as being emergent and shifting. Moreover, the sounds made by those who emerge transiently as leaders are often actively resisted, decreasing the likelihood of positive aural feedback along those connections. More broadly splayed, weaker connections are created through a generalised sense of the group's motion through a piece, often read through body language and positioning of colleagues within the room, but also through what individual singers hear.

⁵ Caines, 'Community Sound [e]Scapes', in Gillian Siddall and Ellen Waterman (eds.), *Negotiated Moments: Improvisation, Sound, and Subjectivity* (Durham: Duke University Press), 55–74.

Singers' physical experiences of sound affirm its role as a necessary, physical connective tissue that enables proximal interactions within the complex web of choral aleatorism. Proximity impacts upon singers' decision-making, but is itself a matter of choice: singers can be somewhat selective in whom they draw near to (physically or in terms of progress through an improvisatory process), creating further positive feedback cycles of sound. Singers experience that sound as coming from others' bodies; even while they read the unfolding events around them through disembodied voices, they give those voices an agency which, I suggest, also endows them with a corporeality. Their experience of sound is closer to Cox's mimetic understanding of musical cognition (taking, as I do, cognition to encompass more than just a dualistic mind or body), cited above (Chapter 3.3), than it is to Borgo's assertion that we can 'only connect to the communication of others', not to the communicators themselves.⁶ Through receiving and understanding musical sound with their bodies, singers might infer the sounding bodies to whom they relate. Yet I would argue that the physical nature of sound allows singers' voices to bring each other into sympathy through more than mimesis. That is, singers respond to sound not only by hearing it and subsequently responding, but also through the direct impact it has on their bodies. This response adds a vital dimension to the embodied nature of emergent interpretations, placing the exchange of spontaneously created improvisatory content on multiple levels of ensemble interaction.

6.4.2 Towards Embodied Complexity

The performance of choral aleatorism is embodied and experienced as relational; the agency of the self is balanced with needs and imperatives of the group, by means of conscious decision-making, mimetic response to sound, and the body's subconscious reception of that sound. Choral aleatorism

⁶ Borgo, 'Openness from Closure', 125.

is performed within a complex network of bodies experiencing and carrying out group improvisation, co-creating an emergent, interpretative product through relational, physical noise. Returning to the individual body, questions remain as to what is happening within that body. The three crucial areas of thought, all presented in Chapter 3.3, that might fruitfully engage with the above findings are Sheets-Johnstone's idea of first-person, corporeal knowing; Proulx's invocation of phylogenesis and ontogenesis; and Downey's notion of 'the body's apprenticeship in listening'.

Sheets-Johnstone's arguments are a good starting point because they place our attention firmly on an individual's process of knowing, learning, and constructing, from which group processes then ensue. The fundamental particle of the complex system of choral aleatorism is the identity-bearing agent. Singers' performances of aleatorism result from a contingent construction of vocal identity and process; external influences are dealt with above, and how those, and internal influences, interact within the individual becomes relevant shortly. But at this point, I argue first that singers' preoccupation with the self, and with others in relation to the self, suggests strongly that their acts of musical creativity are concomitant with an act of musical discovery as an individual mind-body first.

This complex act of discovery is, as I suggested in Chapter 3.3 by drawing on Sheets-Johnstone's notion of corporeal knowing, improvisatory. She writes that, in dance improvisation,

what is essential is a non-separation of thinking and doing, and that the very ground of this non-separation is the capacity, indeed, the very experience of the dance, to be thinking in movement. To say that the dancer is thinking in movement does not mean that the dancer is thinking *by means of* movement or that her/his thoughts are *being transcribed into* movement. To think is first of all to be caught up in a flow of thought; thinking is itself, by

its very nature, kinetic. It moves forward, backward, digressively, quickly, slowly, narrowly, suddenly, hesitantly, blindly, confusedly, penetratingly. What is distinctive about thinking in movement is that not only is the flow of thought kinetic, but the thought itself is. It is motional through and through, at once spatial, temporal, dynamic.⁷

As Cox suggested above, music is also motion,⁸ as of course is the act of performing music. Singers singing are singers moving, and through that movement they are improvising – or, through that improvisation, they are moving. Such motion would have to be improvisatory: this music, and its realisation in singers' complex bodies, are seen by these performers as carrying out linear kinetic melodies that are not altogether predictable, and as being impacted upon by many variables. And, while singers' accounts of moving through their processes are verbally presented, they never quite shed the importance of physical discovery. Their descriptions of decisions are affective, kinaesthetic, corporeal, and dynamic.

This first-person discovery also entails the discovery of fellow performers. Sound affords sensory contact with both context and colleagues. Sheets-Johnstone observes that '[t]he world that I and other dancers are together exploring is inseparable from the world we are together creating',⁹ just as singers in CS1 and CS2 both discover and create pieces of aleatorism through their actions and interactions. As evident in the findings detailed above, singers' constructions involve an element of subordination of the body to the needs of the group, yet the first-person body, recalling Sheets-Johnstone, is ineluctably crucial to technical processes and accommodation of the group.

⁷ Sheets-Johnstone, *The Corporeal Turn*, 30.

⁸ Cox, *Music and Embodied Cognition*, 134–62.

⁹ Sheets-Johnstone, *The Corporeal Turn*, 31.

So, singers are both closed and open to influence and accommodation; that closedness precedes openness, corroborating Borgo's idea that

it is only through the interrelated operational closures of individual musicians' bodies and psyches, the 'staging' of the performance event, and the self-organisation of the artwork itself that improvisation is able to open itself up to and productively engage with the hypercomplexity of the world.¹⁰

Singers' embodied minds are self-determining systems, but nested in and exchanging knowledge with the 'performance event', which is in turn nested within the emergent interpretation and creation of an aleatory work, and so forth. Therefore, following Sheets-Johnstone's focus on the complexity of an individual in the creation of knowledge, Borgo allows the singers' mind-body system to be both self-determining and open.

Singers' self-determination is usefully understood through ideas of evolution, memory, tradition, and entertainment. Singers' phylogenetic biology (see Chapter 3.2) is born upon by the complexity of evolutionary influences. More pressingly here, and more germane to their descriptions of their experience, is singers' ontogeny. After case study events, singers repeatedly cited ontogenetic elements; the more experienced singers relied more on their training, the less experienced on their sense of 'normal' as against novelty, but all brought with them a cluster of constructed traditions. Onto their bodies, already phylogenetically complex, was inscribed a personal system of influences. Memory and tradition impact heavily upon singers' constructions of process. A singers' entrained mind (as both emotive and problem-solving) might be nested in a

¹⁰ Borgo, 'Openness from Closure', 115.

body conditioned by education and habit, which might be nested within the tradition of those habits or within the emergent constructive habits of an ensemble. Emergent behaviours at all levels include technical and expressive processes, interpretations, performances, and traditions. This process is ongoing and pertains directly to ongoing questions of rehearsal and disruption: ‘Habit can blind us only if we choose habit’, writes Sheets-Johnstone.¹¹

Habit, here, manifests as kinetic melodies, or the linear enactment of kinaesthetic memory.¹² The construction of a literal melody, or other improvisatory process in aleatorism, could be described in these terms. Put concretely, singers make musical decisions based on their intuitive sense of their body’s potential. Yet here, kinetic melodies are improvisatory; the balance of structure and freedom that singers frequently mention indicates how they are improvised. Indeed, Siddall and Waterman regard the body as a site of resistance to its training.¹³ The desire or sense of obligation to disrupt physical and sonic patterns creatively is a major factor in singers’ decision-making and interacts with aspects to which they conform. Via Nova took contrariness into a more creative realm in CS1, but the amateur singers of CS2 were consistently more determined and varied in their approaches to disruption.

The will to disrupt leads finally to Greg Downey’s idea of ‘the body’s apprenticeship in listening’. This idea (presented in Chapter 3.3) centres on the notion that music is kinaesthetically felt and draws the learning body into conformity with its performative norms: an apprenticeship through sound. As important to the habits and traditions formed during this process, however, is the improvisation that it enables.¹⁴ The balance of structure and freedom, central to many singers’ positive reactions to performing aleatorism, is borne out in their bodies’ acts of improvisation.

¹¹ Sheets-Johnstone, *The Corporeal Turn*, 23.

¹² Sheets-Johnstone, *The Corporeal Turn*, 258.

¹³ Siddall and Waterman, *Negotiated Moments*, 5.

¹⁴ Downey, ‘Listening to Capoeira’, 497.

Their acts of disruption creatively expand from their kinetic melodies – though I would suggest that the latter do not restrict the former, but rather supply a starting point. The factors which influenced singers through positive feedback before, now become ideas and entities to resist creatively, or at least to deviate from.

The individual at the heart of this deviatory process discovers the music they create, along with fellow singers; a singer is both self-determining and open, and the influence received from within and without creates an agency-possessed singer whose process cannot be deterministically predicted or reduced, by others or by that singer. Crucially, as that process is discovered it is disrupted, and these disruptions in singers' kinetic melodies incite further change in other singers and in the larger complex system in which they are nested.

Chapter 7 Analysing Musical Outcomes

7.1 Introduction

Analysing aleatory performance can offer insights into its performance that direct communication with singers cannot. Importantly, it can do so while still inductively mining experienced events for information. Analysis offers critical distance from singers' responses, obviating some of the pitfalls of intense immersion in an action-research situation. Singers' responses and actions can be viewed through a lens different from their own, and my own viewpoint on aleatory choral performance is altered in a dialectically useful way. Moreover, these analyses offer outcomes which might showcase the potential of choral aleatorism as a compositional technique, highlight limitations around how it is composed, and begin to suggest extended boundaries for how it might be composed in the future.

Four performances are transcribed here: Via Nova's performance of *Undismantling*, (composed by Daniel Galbreath); a solo quartet performance of Percy Pursglove's *Tender Buttons*; and two separate renditions of Cornelius Cardew's *The Great Learning: 'Paragraph 7'*, by two amateur choirs. Details of the pieces and their performances are offered before each analysis.

It is useful first to touch on some general methodological issues and limitations. Each performance has been transcribed and analysed in the order of performance. Transcriptions (see Volume II, Appendix D) presented unique concerns for each piece. In general, but especially in thick aleatory textures, it was possible to notate where pitches began (or became audible), but not where they finished. Note-heads, closed or open, indicate beginnings of notes, and, where audible and of potential analytical use, brackets indicate the length of the note. Using note-stems to indicate which voice part was singing was not feasible in analysing Cardew's *The Great Learning*, and even in Pursglove's *Tender Buttons* and *Undismantling* where it may have been possible (though

only intermittently), I concluded that this information was irrelevant to the readings of performances as I carried them out. In *The Great Learning*, it was occasionally possible to mark where one singer moved between two notes rapidly; quaver beaming indicates this. The richest and freest source of detail quickly became the prose notes that I undertook for each transcription, which clarified points of interest and details that would be difficult or unhelpfully cumbersome to indicate with musical notation.

Since each performance was either a public performance or part of a workshop, the handheld Zoom recorder used to document these performances had to be placed unobtrusively, limiting the sounds that it picked up. Due to the fairly limited number of events in *Undismantling* – the piece essentially amounts to a progression to and from a harmonised phrase – and the relatively small number of singers, transcription offered ample details of pitch and timbre to make for a useful analysis. *Tender Buttons* provided particular clarity, the performance involving only four singers, though some aural obfuscation is present in the recording from the trumpet, percussion, and electronics that were heard alongside the singers. During workshop performances of *The Great Learning*, the recorder was set out of the way, preventing it from picking up sounds from across the room, resulting in a ‘sample’ audio discussed below. Also important was the decision to transcribe only five minutes of each performance of Cardew’s piece, and only two of several performances; this limitation was entirely due to restrictions of space and time.

The pieces are presented here in a different order from that in which they were performed and analysed. *Undismantling*, which I analysed first, enabled subsequent refinement of the transcription technique and analytical methodology. Singers’ qualitative responses to *Undismantling* were the focus of interviews following VN3 (see Chapter 5) and yielded the

analytical points of interest for which *Tender Buttons* and *The Great Learning* each then offered different perspectives and critique (see Chapter 5.4.1).

In the sequence in which the analyses are presented here, there is a clearer development of ideas and variables than would be apparent in a chronological presentation. *The Great Learning* deals almost entirely with pitch, with brief mention of technical issues and observed physicality (Chapter 7.2). *Undismantling* brings variables such as text, rhythm, and physicality into greater consideration and contains a wider range of aleatory parameters (Chapter 7.3). *Tender Buttons* offers the fullest view of improvisation, and its analysis is supported by the most in-depth examination of musical and physical parameters (Chapter 7.4). In each analysis, I revisit how the points of analytical interest outlined in Chapter 5 (points A–F, Chapter 5.4.1, and re-presented below) apply in each performance, and how they offer insight into that performance. I then select musical passages that might most usefully develop ideas explored in the main case studies. Since the tools employed here do not allow – nor aim for – any kind of complete score reduction, my focus throughout is on such musical moments of interest. This approach, however, does not exploit selectively what is useful, or ignore whatever is not; rather, it corroborates more generalised outcomes of a given piece. Interpretative towers are also used to augment analyses of singers' decisions.

The points of analytical interest, arrived at in Chapter 5 from CS1, are printed here again for reference. The letters heading each point were used as labels to mark transcriptions.

- A. Points of musical focus, impetus, or injection of energy; points where the fractured texture seems to consolidate.

- B. ‘Checkpoints’, where technical or processual shifts occur and progress relating thereto may be compared among singers.
- C. Points of unity, where scored or, more interestingly, accidental (marked as ‘Ca’).
- D. Areas of textural fracture.
- E. Points (and levels, indicated with upwards or downwards arrows) of exposure of singers.
- F. Timings of events, especially as compared with singers’ impressions thereof.

7.2 Analysis 1: Cardew, *The Great Learning*: ‘Paragraph 7’

Cornelius Cardew’s canonical *The Great Learning* (1968–70, rev. 1972) is the one established work of aleatorism to be analysed here. Each movement sets a paragraph of the eponymous Confucian text using a variety of techniques of indeterminacy. The concept and performance process of ‘Paragraph 7’ are more consolidated than either *Undismantling* or *Tender Buttons*, in that performers are asked to deliver each line of text a set number of times (each repetition lasting the duration of one breath) at a soft volume, on a sustained pitch of their choosing. The rigidity of this simplicity is loosened by two additional stipulations: first, when selecting a new pitch for a new line of text, performers should match a pitch already being sung and may move around the room to find it; and second, a number of repetitions of certain lines should be *forte* (see Figure 7.1, below).

Figure 7.1, Cardew, *The Great Learning*, Paragraph 7.¹

→ sing 8	IF	
sing 5	THE ROOT	
sing 13(f3)	BE IN CONFUSION	
sing 6	NOTHING	
sing 5 (f1)	WILL	
sing 8	BE	
sing 8	WELL	
sing 7	GOVERNED	
hum 7		
→ sing 8	THE SOLID	
sing 8	CANNOT BE	
sing 9(f2)	SWEPT AWAY	
sing 8	AS	
sing 17(f1)	TRIVIAL	
sing 6	AND	
sing 8	NOR	
sing 8	CAN	
sing 17(f1)	TRASH	
sing 8	BE ESTABLISHED AS	
sing 9 (f2)	SOLID	
sing 5 (f1)	IT JUST	
sing 4	DOES NOT	
sing 6 (f1)	HAPPEN	
hum 3 (f2)		
→ speak 1	MISTAKE NOT CLIFF FOR	
	MORASS AND TREACHEROUS BRAMBLE	

NOTATION
 → The leader gives a signal and all enter concertedly at the same moment. The second of these signals is optional; those wishing to observe it should gather to the leader and choose a new note and enter just as at the beginning (see below).
 "sing 9(f2) SWEPT AWAY" means: sing the words "SWEPT AWAY" on a length-of-a-breath note (syllables freely disposed) nine times; the same note each time; of the nine notes, two (any two) should be loud, the rest soft. After each note take in breath and sing again.
 "hum 7" means: hum a length-of-a-breath note seven times; the same note each time; all soft.
 "speak 1" means: speak the given words in steady tempo all together, in a low voice, once (follow the leader).

PROCEDURE
 Each chorus member chooses his own note (silently) for the first line (if eight times). All enter together on the leader's signal. For each subsequent line choose a note that you can hear being sung by a colleague. It may be necessary to move to within earshot of certain notes; the note, once chosen, must be carefully retained. Time may be taken over the choice. If there is no note or only the note you have just been singing, or only a note or notes that you are unable to sing, choose your note for the next line freely. Do not sing the same note on two consecutive lines.
 Each singer progresses through the text at his own speed. Remain stationary for the duration of a line; move around only between lines.
 All must have completed "hum 3 (f2)" before the signal for the last line is given. At the leader's discretion this last line may be omitted.

Moments that result from these stipulations propel the creative, improvisatory trajectory of a performance and constitute much of the piece's analytical interest.

That interest is narrow but revealing. Singers' primary concern in delivering 'Paragraph 7' is with pitch, creating a rich, improvised harmonic landscape. That landscape is made narrower by the inevitable shortcomings of recording and transcribing a workshop situation, as mentioned (see Volume II, Appendix E); the transcription therefore deals with a sort of sample of clear pitches and provides verbal and graphic annotation pertaining to the 'background' cluster. Additionally, the density of sound prevented clarity of text and exact note duration, precluding analysis of rhythm. These limitations force analytical streamlining, focusing on each performance's most clearly defined pitch profile. Since pitch is undeniably a fundamental musical element and one of

¹ Cardew, *The Great Learning*. For a clear transcription of this Paragraph's instructions, please see Chapter 1, p. 70, n180.

the foremost parameters through which a composer can give performers creative prerogative, it is in fact extremely useful to home in on this as a starting point, adding elements of interest in subsequent analyses.

Two performances have been transcribed, with Quinton Community Choir and ETC Civil Service Choir (for details of the workshops in which these recordings took place, see Chapter 6). In both performances, the procedure of the piece was explained and questions were invited. Both workshops had begun with an exercise in which singers walked around the room, making eye contact and imitating each other's noises. As discussed, all three groups carried this practice into their performances of Cardew's work. Once again, this situational quirk offers interesting findings, despite being directly contrary to an indication in the score² and my verbal instructions. Most singers were, at some point, visible in the Zoom-produced video. The video of QCC showed a clear shift from inward to outward focus, revealing singers looking away from their scores and towards each other, which increased as the piece progressed. Standing in a circle and looking down, they began to move when the group's conductor took initiative. As eye contact increased, so did volume. Whilst this occurrence contravenes the score's indication that all notes except selected *forte* notes should be sung softly,³ it does suggest that a certain physical openness encourages vocal freedom. Conversely, sound impacted on physicality approximately 37 seconds into the recording, when a B ♭ pitch outside the previous range was sung, causing singers either to slow or stop walking and look up.

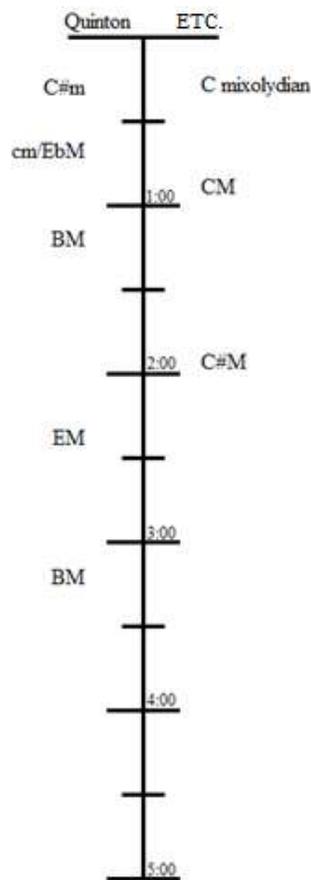
Two aural elements provide the insights that I will explore here. Below, I will detail how moments such as that B ♭ pitch exert a harmonic pull against their context. But first, it is elucidating to compare how those contexts unfold more broadly, creating an emergent tonal

² Please see Chapter 1, p. 70, n180.

³ Please see Chapter 1, p. 70, n180.

structure. Notably, in both performances, singers quickly (and most likely subconsciously) established a tonal centre, building what amounted to pandiatonic (or pan-modal) shifting clusters, with strikingly limited deviation. Divergences generally seemed to be the result of anomalies born of technical issues, such as wide vibrato or troubled pitching. No note in this piece can be ‘inaccurate’, but, in these specific contexts, the strength of the diatonic background, and my reading of the vocal delivery of these notes, compels my conclusion that they were frequently non-deliberate variations. Tonal centres shifted throughout each performance. Below (Figure 7.2) summarises the tonal progression of both performances on a timeline for comparison. (The shorthand ‘M’ indicates a major modality; ‘m’ denotes a minor modality.)

Figure 7.2, Timelines of emergent tonal centres from two performances of *The Great Learning*.



Two points are immediately striking: first, both choirs eventually reach a centre which endures longer than any previous modality, and which brings the analysed sample to a close; second, QCC traverses more of these centres than ETC. The latter of these can be seen to reflect the type of choir: QCC comprises less experienced singers and often performs easier, accompanied repertoire, both in full or partial contrast to ETC's practice. While ETC progressed upwards by a semitone, QCC's emergent tonal centre sank by a tone, excepting a remarkable point where they shifted to the subdominant (B major – E major; this moment, it should be said, is also contingent upon my hearing of the recording as actual events). Less experienced singers often struggle to sustain pitch, and a gradual flattening in pitch is not uncommon. What is remarkable, however, is that both groups attained and maintained centres, which were then inevitably inflected, non-deliberately, by their technical abilities and musical backgrounds. Deeply engrained musical habits prevail amongst the groups more than the relatively high level of pitch freedom in the piece.

This phenomenon bears upon the experience of performing this piece, where pitch decisions – and an understanding of the score's instructions – might be dictated partially by others on a local or conscious level, but where the shared construction of the piece moulds to a common aural formula. Figure 7.3 depicts this contrast, with individual pitch decisions represented in light grey and group pitching decisions in dark grey.

Figure 7.3, Interpretative tower hypothesising individual (light grey) and group (dark grey) pitching decisions during emergent tonality in *The Great Learning*.

Timing level four	Timbre	Pitch
Ensemble Behaviour level three	Technique	
Notation level two	Situation	
Concept level one	Composer	Tradition

The divergence between the group and the individual is at the point of ensemble behaviour. I interpret individual responses to this ensemble behaviour as deriving from readings of the score, which are in turn informed by a reading of the concept of the piece. Collective pitch decisions respond in part laterally to an automatic technical recourse (a physical comfort with diatonicism), but also more strongly to the situational emergence of what singers consider to be traditional.

The second element in these performances occurs where the strong diatonic aural environment is corrupted. At this juncture, the specific points of analytical interest become useful (see Chapter 5.4.1). On the one hand, moments of strong unity occur particularly where the harmonic context is reinforced: for instance, an E# appears at ca. 1:57 of the ETC recording, palpably strengthening the C# major sensibility by providing the raised third. On the other, points of high individual exposure are often those which pull the harmonic context in a new direction. Early in the QCC performance, a singer sings a short B \flat slightly higher than the main cluster; soon after, the tonality has shifted from C minor (of which the B \flat was a weak subtonic) to E \flat major (which it could more strongly compel as a dominant scale degree). More obviously, a singer then delivers a B \sharp in the same range, and the harmony shifts to B major (see Figure 7.4).

Figure 7.4, Transcript of QCC performance, *The Great Learning*, Paragraph 7.

Quite short

Eb continuing underneath

EbM second inversion emerges

Singer's *cresc.* brings about general *cresc.*

1:10 emerges

1:20

:50

:60

These moments can also be coded as moments of particular focus or musical impetus (Point A), as they would appear to drive significant harmonic shifts. They are unplanned ‘checkpoints’, rather than moments of scored processual shift.

A point of high exposure in the ETC performance bears the same characteristics, but with one important technical difference. At approximately 2:36, a lone female voice sings a high G against a C# major cluster. The amplitude of the vibrato suggests that this pitch is not entirely under the control of the singer, who may have instinctively reached for a G# and fallen short. Indeed, the vibrato is so wide as to amount to a sort of semitone trill. Evident on the recording, but not readily transcribed, is the fact that the background cluster founders slightly, once shortly after this high note, and once when repetitions of it cease. This event might provide an aural corroboration for the general pause at another higher-than-expected-note, observed in the video recording of QCC, but contrasts in its outcomes: this extremely high note did not shift the diatonic background. Moments of individual initiative may drive the harmonic progress of a group, but in this instance the group would seem to reject an insecure note – or simply hear it as the diatonic pitch they expected.

This comparison of group and individual pitching decisions between the two choirs, points towards the multi-variable, nested manner of decision-making in performing Cardew’s piece. Individual constructions of the work, taking the form of improvisatory pitch material, can be influenced by different, simultaneous factors from those that bear upon the group’s decision-making; yet an individual can enact a shift. Such corporate responses to initiative may result from the positive feedback of acoustic security, when multiple singers nearby opt for a note that

resonates more comfortably with the lone ‘new’ note, and the effect is amplified. Regardless, there is strong evidence of the concurrent isolation and interaction of levels of work construction.

7.3. Analysis 2: Galbreath, *Undismantling*

Undismantling is a short work that I composed to act as an experiment. Study of the choral aleatory canon (see Chapter 2.4) and preparation of new scores written for *Via Nova* (Chapter 5) revealed two compositional trends in this body of works: first, unified textures often give way to fracture and aleatorism, rather than the reverse; and second, decisions of pacing and progression through the piece are seldom left to the singers. These commonalities suggest implicit assumptions about singers’ abilities, including the aural skills necessary to achieve unified harmony and rhythm after fracture, and the capacity to make the composition-like choices of timing and proportion in a piece. I used *Undismantling* to gain information about how performers respond to these comparatively rare challenges and to explore potential additional avenues for aleatory choral composition. This analysis explores the interplay between performance, composition, and conducting, dwelling most heavily on the first of these; analysing a work I had produced, at some critical distance, offers insight into the second. This focus, and the comparative processual clarity of the performance, made it a useful vantage point for the analysis of choral aleatory performance.

Undismantling was performed by nine singers (including myself) positioned around two adjacent rooms, connected by a large arch, in the Ikon Gallery, Birmingham. This configuration magnified a feature present in much aleatorism: the need for acute attention to both visual and aural cues to catalyse singers’ own processes. The piece is a text score (see Volume II, Appendix D1; recording in Volume II, Appendix E), which guides singers from unpitched extended techniques to freely pitched sustained sounds, then to a unified F major chord, from which singers

begin a harmonic progression (shown in Figure 7.5) that they ultimately dismantle at their own will. A summary of each step, with indication of how responsibility was shared with singers, is provided in Table 7.1.

Table 7.1, Steps of Galbreath, *Undismantling* and performer responsibility.

	Summary of instructions	Performer responsibility
Step 1	Explore the sensation of breathing.	Collective; un-cued.
Step 2	Move mouth until breathing becomes a hiss.	Collective; un-cued (though the first singer to complete this step emerges as a leader).
Step 3	Add [k], so that the hiss becomes [ks]	Collective; un-cued (again, with emergent leadership).
Steps 4 and 5	Move mouth until [ks] becomes [u]	One singer leads; the ensemble follows after the selected singer arrives on the designated pitch.
Step 6	Collectively arrive on an FM chord; repeat breath-length FM chords until one singer moves onto step 7	Collective; singers must be aware of shared interval.
Step 7	Singers individually move through their respective part in the harmony (Figure 7.5).	Collective; singers are mutually aware but independent in how they progress.
Step 8	Singers move through the harmony together, repeating until Step 9 is initiated.	Occurs as a function of completion of Step 7; collective responsibility.
Step 9	Singers individually dismantle the harmonised phrase; <i>diminuendo</i> until the piece finishes, <i>a niente</i> .	Dismantling is entirely individual; I used a gesture to initiate the <i>dim.</i> in performance.

Figure 7.5, Galbreath, *Undismantling*, final harmonic progression, Steps 7–9.⁴

The musical score shows a voice line and a piano accompaniment. The voice line is on a treble clef staff, and the piano accompaniment is on a bass clef staff. The lyrics 'Lux ac - ter - na' are written below the voice staff. The music consists of a series of chords and single notes, with some notes beamed together and some held across measures.

During rehearsals, undertaken in May 2016, I asked one soprano to progress toward pitched material, an event for which she controlled the timing, and it was each singer’s responsibility to join eventually in a unified F major chord, thereafter moving through the piece. I also opted to cue the final *diminuendo* in this performance for timing reasons, but this step could feasibly be executed without such specific leadership.

This performance provides useful elucidation of the musical outcomes of performed aleatorism. Specifically, there is a relationship between highly involved decision-making (and the application of aural skills) and timing. A general examination of the transcription indicates clearly that the steps with more detailed instructions, such as 4 or 7, tended to take more time. An even stronger correlation is evident between duration and portions of the music with exploratory potential for pitching: Steps 5, 7, 8, and 9 each took around, or over, a minute. Steps 1 or 2, both unpitched, took approximately 20 or 45 seconds, respectively. Notably, the steps taking greater time – especially 5, 7, and 8 – were those that most required the singers to overcome the challenges that this piece was designed to explore. Outcomes of singers’ timing, pacing, and pitching

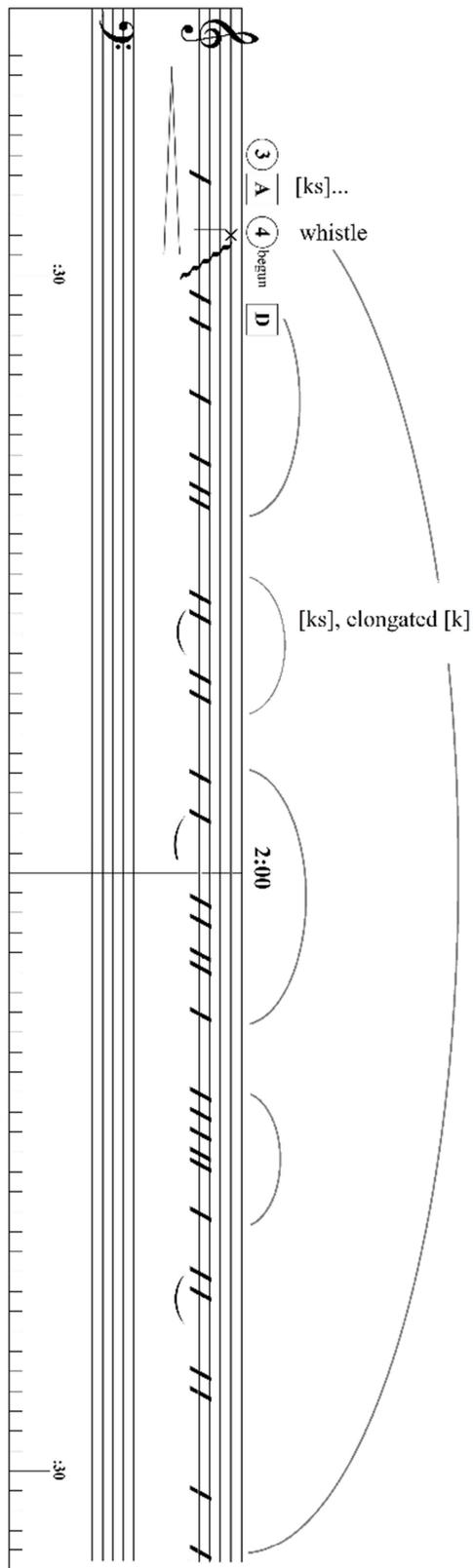
⁴ Daniel Galbreath, *Undismantling* (Birmingham: unpublished, 2016). All score extracts and instructions for this work are from the same, cited score.

decisions are demonstrated more definitively in the following analyses of extracts. Throughout, I refer to the numbered steps in the score (see Table 7.1, above) and the lettered points of singers' interest.

The first point of analytical interest occurs near the opening of the piece. Although unpitched, the [ks] sounds described in Step 3 (including those with an elongated [k], as indicated with a slur) show certain strong, collective phrasing inclinations from the choir (shown in Figure 7.6).⁵ The first [ks] sound, clearly audible in the recording, is a powerful moment of musical focus (A), and repetitions of the sound around the ensemble soon follow. The high levels of fracture (D) are counterbalanced by the strength of this impulse, such that singers' performance of the [ks] sound appear to be organised into phrases of sorts. Their frequency increases and decreases in a sort of large arc, and within that arc smaller groupings are evident (Figure 7.6).

⁵ Characters in square brackets are standard symbols from the International Phonetic Alphabet.

Figure 7.6, *Undismantling*, performance transcription, implied phrase-clusters of [ks] sounds.



Elongated [k] sounds are infrequent. This lack may be attributable to the possible physical discomfort of that sound, or to its perceived strangeness. (The singers seemed to be reluctant to explore certain distorted noises even when they embraced atypical uses of ‘normal’ sounds.) A strong orientation towards clustering is evident, both around a sense of aural normalcy, or around (or in hasty response to) other sounds. Even in a passage seemingly devoid of traditional musical elements, a sense of normalcy is constructed through both timbre and the *de facto* organisation of phrases.

Soon after the [ks] step gives way to the piece’s first pitched moment, the singers arrive collectively at the [u] sounds of Step 5. The choir’s progression to Step 5 is so rapid – only about 15 seconds after the pre-selected soprano arrived on her allocated pitch – as to suggest a general foreshortening of Step 4: an unpitched, unusual process is apparently abbreviated to arrive at the comparative normalcy of pitch-based improvisation. That normalcy is reinforced in several ways. Figure 7.7 presents the pitch explorations on the sustained [u] sound of the singers in reduced form, an artificial but necessary collapsing of time to highlight their pitching decisions.

Figure 7.7, *Undismantling*, performance transcription, reduction of improvised pitches.

The musical score consists of two staves. The upper staff is in treble clef and contains a sustained vowel sound [u]. Three specific improvisations are highlighted with boxes and numbered 'i.', 'ii.', and 'iii.'. The lower staff is in bass clef and begins with a glissando (gliss.) leading to a sustained chord. Above the upper staff, chord symbols 'D' and 'Cs' are indicated. At the end of the lower staff, there is a 'Chord sustained' symbol.

As mentioned above, note durations are not notated except where particularly noticeable. Some notes were insufficiently audible to transcribe. The most ‘deviant’ pitches, those which suggested the strongest disruptive sensibility, were more audible in the recording.

The singers’ exploration of pitch adheres surprisingly closely to an orthodox contrapuntal sensibility. As Figure 7.7 shows, improvisation seldom deviates very far from the range and voicing of the root position F major triad that the music eventually arrives at (the first chord of the extract in Figure 7.5). Moreover, few pitches violate that F major tonality. Specific instances of improvised voice-leading also appear. The box marked (i.) in Figure 7.7 contains a strong semitonal neighbour-note motion; box (ii.) depicts a neighbour-note motion across a full tone. Box (iii.) presents a double neighbour-note construction. Slurs in these extracts indicate that the progression between notes was clearly carried out by a single singer; what is perhaps more telling is that these (and other) contrapuntal details also emerge out of shared effort between the singers. A contrapuntal texture can be as much the result of the ‘pull’ of a group as of a single composing mind. Offsetting this shared adherence, there is a brief episode of shared deviation in the F[#] and B[♯] near the end. Notably, both of these pitches are quickly answered by their ‘correct’ alternative, uninflected with accidentals.

Another strong act of deviation is made by a bass singer, who, rather than exploring specific pitches, carries out *glissandi*. This particular singer spoke of approaching this passage through an exploration of the physical sensation of dissonances (VN3.11i), but it is striking that the bass singer’s particular mode of exploration is limited, with only two *glissandi* occurring. This is a valuable instance of critical distance, but it does not somehow ‘refute’ the singer’s impression. What matters, in one sense, is that he *feels* he is exploring. Yet, in another sense (and one that is possibly more relevant to a composer, conductor, or more experienced singer), the musical

outcomes of this experience exemplify the strength of assumptions, entrainment – even a sort of musical acculturation – that may not have been foreseen. The piece was built by singers in performance along the lines of tradition and the physical apprenticeship discussed before (see Chapter 3.3).

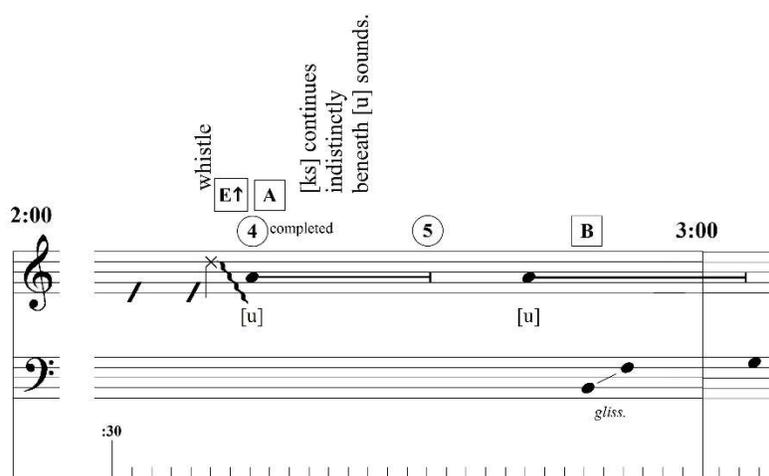
Another notable comparison with singers' responses is offered by analysis of a spontaneous dynamic shape, occurring shortly before 6:00 in the recording (Figure 7.8).

Figure 7.8, *Undismantling*, performance transcription, emergent expressive shapes.

As indicated by the marking ‘Ca’, this is a moment of accidental unity, this time expressive unity rather than textural. One chord grew and diminished in volume; its successor only grew and was considerably longer. This change may have occurred because of an action on my part: having sensed one singer leading a *crescendo*, I can recall experimenting with leading into the next chord (as an ensemble singer, not a conductor) with the preparation of a particularly long, deep breath. This event evidences a physical empathy – the longer chord, the stronger dynamic direction – among the entire group and suggests that shared, improvised expression does not require conscious communication. Physical empathy is not only a source of palpable musical and expressive shifts, it can also impact upon those shifts in a way that exists on a level below any of those conscious strata of decision-making.

The final two moments of analytical interest discussed here offer a comparison between conscious decision-making and one that is either subconscious, or presumed. This comparison is best achieved through adaptations of Hellaby's interpretative tower, applied first to the moment when the pre-selected soprano initiates the first pitched material of the piece soon after 2:30 (Figure 7.9).

Figure 7.9, *Undismantling*, performance transcription, pre-selected soprano's first pitched [u].



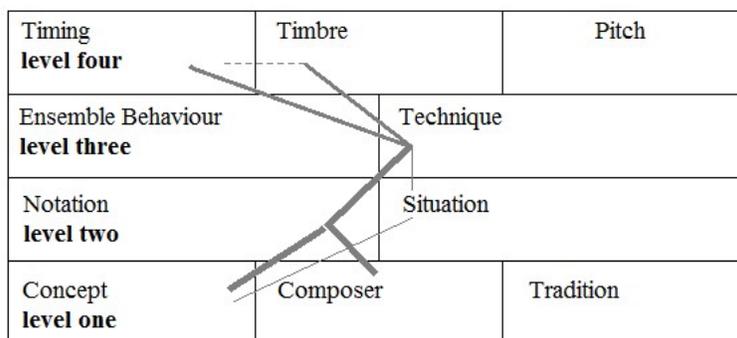
This point marks the completion of the soprano's progression through Step 4. It is a strong point of both musical focus (A), as evidenced by the relatively hasty addition of other pitches (discussed above), and of high exposure for the soprano (E). Despite the level of exposure, the soprano's 'breath-length' note is considerably longer than others found in performance of the piece (c.f. Figure 7.10), which tend to be at least three seconds shorter.

Figure 7.10, *Undismantling*, performance transcription, breath-length notes for comparison.

In terms of both pacing and duration, this event constitutes a decision of timing. Timing offers a starting point for interpretation of the soprano's decision-making, as represented in Figure 7.11.

Figure 7.11, Interpretative tower hypothesising the solo soprano's decision-making in

Undismantling.



The soprano's timing decision was related to a timbral shift, which was quite strongly the product of her interpretation of the technical process of Step 4. The duration of the note is tied even more directly to technical ability. The technical processes undertaken by the singer were a product of her interpretation of the actual score; that score acted as a conduit for constructing or imagining both the composer and the evolutionary thrust – the concept – of the work. More weakly, this technical process was dictated by the situation and a sense of need for the moment to progress,

which again relates to the piece's evolution. These conclusions are drawn from the singer's account of the moment in interview (VN3.3i), but they relate to the hard facts presented in the performance transcription in an important way. The soprano's impression was, in essence, that a technically timed interpretation of the notation was contingent upon a certain reading or construction of the composer's concept and intentions. Yet other musical interpretations – other durations of 'breath-length' note, for instance – which may come from the same source are products of different physical approaches to the same technical process. Moreover, the pitched material that follows, as discussed above (and shown in Figure 7.7), seems to derive more from a sense of tradition than from any conceptual impulse that the piece itself may be seen to imply. The same decision may prove to be widely covariate across an ensemble, down even to more fundamental levels which at first seem fixed. Certainly in this instance, the piece was a construction at every one of its multiple levels.

Another musical event that warrants use of the interpretative tower is one that was not touched upon in interviews (thus confirming the value of a two-pronged approach). At Step 8, a bass begins to sing the completed phrase as prompted, after completing the cluster chords of Step 7. The full instructions for this step are as follows:

Whoever is the first to complete 7c should begin singing through the phrase of the extract as written, with the written text, on their own voice part, at a tempo that seems appropriate. Once this occurs, others should, one by one, join them singing their own part in tempo with the originator of this section.

Possibly, the bass who happened to reach this step first interpreted ‘a tempo that seems appropriate’ as a prompt to match individual phrase length to the breath-length cluster surrounding it (seen in Figure 7.12); or, the singers felt drawn towards matching the more obvious phrase that they now heard.

Figure 7.12, *Undismantling*, performance transcription, initiation of harmonised line.

The figure shows a musical score for the piece *Undismantling*. It consists of two staves: a vocal staff (treble clef) and a bass staff (bass clef). The time signature is 7:00. Above the vocal staff, there are annotations: 'E↑' in a box, 'B' in a box, and '8' in a circle. To the right of these boxes, the text 'bass line from harmonised chant maintained by one singer.' is written vertically. The vocal staff has a 'cluster' of notes marked with a bracket. The bass staff has an 'FM chord' marked with a bracket and a 'cluster' of notes marked with a bracket. The score includes a key signature of one flat and a tempo marking of :30. The vocal line is marked with 'S' and 'A', and the bass line is marked with 'T' and 'B'.

While it seems not unlikely that the dominant ‘phrase’ length impacted upon the choice of the bass singer, Figure 7.12 provides evidence that the latter possibility – that the singers adhered to a more obvious phrase – is at play as well. Other voices begin their full lines soon after the bass, suggesting a further desire to adhere to a concrete ‘checkpoint’ (B.).

Perhaps more tellingly, this adherence remains strong, yet apparently without premeditation, when the choir undertakes the breaking-down of the music detailed in Step 9.

Figure 7.13, *Undismantling*, performance transcription, continued bass line and grouped phrasing.

lines begin breaking down

B line still dictates phrase 'shape'

intonation further weakens

9

9:00 Ca

E↑ D

T b

B

:30

To attempt to notate the aggregated dissolution of the harmonised line would be to lose the forest for the trees. Instead, collective *diminuendi* are marked, signifying points where, even in an extremely free texture, the group collectively created a sense of phrase-ending. The bass had chosen to continue singing the bass line from the harmonised phrase (VN3.11i) and, remarkably, the unplanned phrasing (Ca) matched that line. The ensemble's shared decision-making is interpreted in Figure 7.14.

Figure 7.14, Interpretative tower hypothesising the ensemble's decision-making during collective *dim* in *Undismantling*.

Timing level four	Timbre	Pitch
Ensemble Behaviour level three		Technique
Notation level two		Situation
Concept level one	Composer	Tradition

Although pitch choice is at play, phrase timing is also of interest here. That timing was evidently built upon the decision of a member of the ensemble, which was itself strongly informed by technique, given the dominance of breath-length musical units. To a lesser extent, the individual and grouped ensemble behaviour derived from the performance situation at hand, suggested by the fact that this event did not occur in rehearsal. The strongest source of grouped phrase-time decision-making was the notation; but rather than being an interpretation of the notation, the re-deployment of a rigidly notated element grounded a freer passage. More conjecturally, it seems likely that the bass's phrase, and the tonal pull it exerted, offered the strong draw of more traditional music. Analysis of this event suggests that a delineation might exist, or emerge in a given situation, between instructions or musical events that permit freedom and those which do not – those instances where freedom may have to be instructed and explored, and those where it can be naturally allowed to subside.

The two moments analysed using interpretative towers (see again Figures 7.11 and 7.14) contrast sharply: the latter is a conjectural analysis of ensemble behaviour, whereas the former represents an individual's choices as discussed in interview. But they both demonstrate equal

strength of logic from different perspectives. For the soprano in question, the concept and composer informed an improvisatory timing decision; later on, for the ensemble, their own timing decision was likely informed by a sense of tradition. Technical considerations and processes linked timing and elements at the tower's bottom level in both instances. The piece is itself a technical exploration, but the strong presence of a technical factor in two quite different cases encourages the notion that aleatory performance includes an element of technical improvisation. The importance of technical process and creativity is prominent throughout the findings of this performance analysis of *Undismantling*, as a factor that vies with, and may even supersede (especially when subconscious), external factors in constructing the music performatively.

My role as this piece's composer positions me to comment, briefly and in a limited way, on what this analysis suggests about the tension between compositional intent and performed outcomes. As mentioned, the most noticeable divergence between my intent and singers' decisions was when my brief list of possibilities for the piece's final stage were read as proscriptive of other possibilities. Additionally, it had been my assumption that singers would take more time over the technically exploratory passages. This question of timing points towards what I suggest is the most important difference between my expectations as composer and their constructions as performers: most of the creative, improvisatory decisions through which the ensemble constructed this piece expose variables that I had not considered in writing it. This disparity may result in part from my limited compositional practice, but it remains of interest that questions of timing, of the sounds singers might improvise, and of various other aspects of their technical processes, had not occurred to me. This conclusion further underscores the important role of singers in co-creating works.

7.4 Analysis 3: Pursglove, *Tender Buttons*

Tender Buttons was composed in 2016 by Percy Pursglove, a jazz tutor and PhD (composition) candidate at Royal Birmingham Conservatoire. Several movements had been ‘piloted’ before, at CoMA (see Chapter 5.2) and VN1 (Chapter 5.2). The full work, lasting approximately 40 minutes, was rehearsed intensively and premiered at the Huddersfield Contemporary Music Festival on 25 and 26 November 2016. An audio recording was made of the performance and transcribed for this analysis; a video recording of the dress rehearsal yielded compelling glimpses into how the ensemble embodied the music. Although ideally both would have been taken from the same event (this was impossible at the time), there is considerable advantage not only in having audio from a comparatively ‘definitive’ performance, but also from comparing that with a rehearsal situation in which the sense of ensemble had its first and last opportunity to truly ‘settle’. This event doubled as a pilot study for questionnaire/interviewing tactics for CS2; both the soprano and alto soloists provided interview data that are useful here. (The transcription may be found in Volume II, Appendix B11, p. 71).

A setting of Gertrude Stein texts scored for vocal quartet (SATB) and instrumental improvisers (drums/electronics and trumpet, in this performance), *Tender Buttons* presents opportunities and difficulties different from those encountered in analysing the performance of *Undismantling*. Interspersed between traditionally scored material is an extremely wide variety of aleatory techniques, ranging from freely timed, but otherwise fully notated, duets, to uncontrolled verbal exclamations, graphic scoring, and fully improvised solos. As such, the points of analytical interest do not apply exactly as they would in the analysis of *Undismantling*. Those points emerged in large part from interrogating singers’ experiences of that work; applying them to a new work tests their utility. There were fewer discernible ‘checkpoints’ (point B), for instance, in sections

with dense and continuous spoken improvisation, or a more homogeneous structure. Levels of exposure and fracture (D and F) inevitably take on different levels of meaning when the ensemble comprises only soloists. There are several notable new elements of interest in this analytical situation: I was in the more observational position of conductor; there are instruments playing with – and against – the singers; and greater improvisatory freedom is permitted than in the other pieces analysed here. One potential shortcoming is that there are fewer people singing, preventing any kind of immersive ensemble experience; analytically, however, fewer performers allows for homing in on improvisatory decisions more clearly. Two movements of the work will be analysed here: ‘Eggs’ and ‘Rhubarb’ (scores for which can be viewed in Volume II, Appendix D2, p. 88; and Appendix D3, p. 89, respectively). They were selected because they balanced freedom with audible, pitched clarity. Aleatorism in other movements occurred largely through rapid speaking and shouting, presenting difficulties in creating a usable transcription and analysing musical decisions.

‘Eggs’ occurs relatively early in the piece, and is dictated by two basic, contrasting musical ideas in the vocal writing. First (Figure 7.15), singers sustain sounds – usually a fricative or hum initiated by a plosive consonant – on any of a given set of pitches. Second, 17 spoken events are initiated in order by the bass: he says the short phrase, and each singer repeats it after him in reverse score order. As the ensemble moved from phrase 1 to 17, they were directed in rehearsal by Pursglove to become faster.

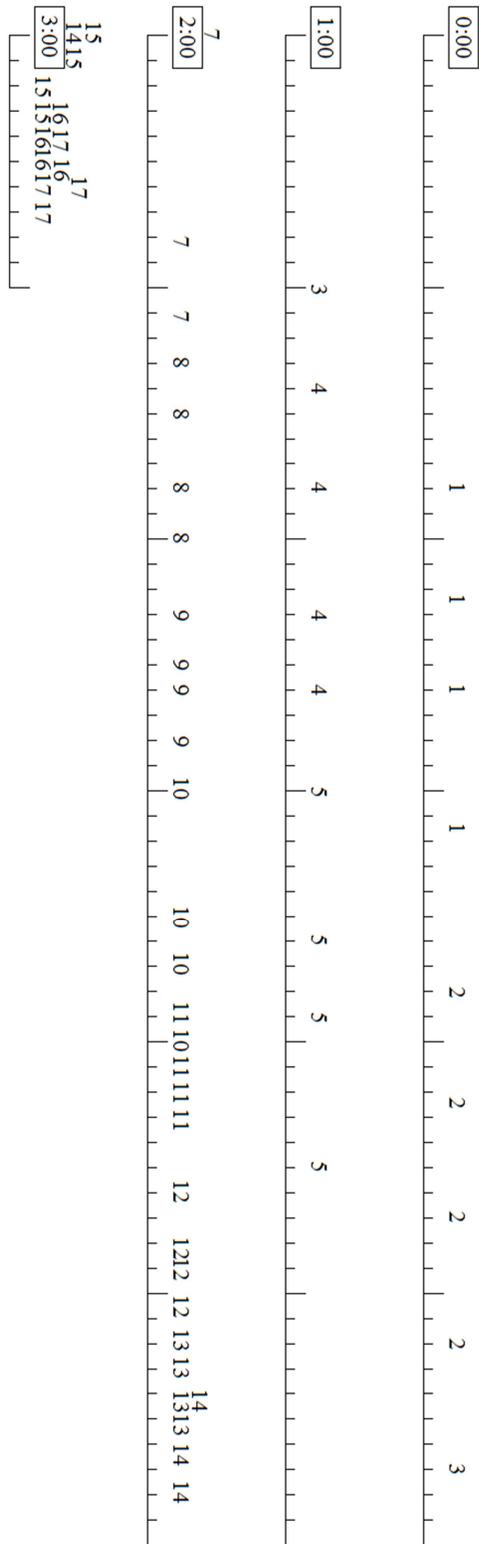
Figure 7.15, Pursglove, *Tender Buttons*, 'Eggs', extract showing pitch and sound material.⁶

Certain outcomes are evident in viewing the transcription of 'Eggs' as a whole. Firstly, there was a tension between indicated pitches and audible pitches: the trumpet played a series of $A\flat$ at the beginning, while the singers were meant to adhere to a consistent mode containing the pitch $A\flat$; the singers adhered to the pitches 'provided' by the trumpet rather than the score (even the tenor and bass, both of whom had perfect pitch). Similarly, when the bass skipped from spoken line 5 to 7, none of his colleagues attempted to speak line 6. Neither of these points are particularly surprising, but it is important nevertheless to highlight, in the contingent context of aleatorism, that adaptation or spontaneous construction of process (even when not deliberate) depends more on the actions of collaborators than on the dictates of the score – and, indeed, the concept at hand in the score (in this case, following the bass singer) may give preference to such constructions.

The pacing of spoken events reveals certain interesting trends. Figure 7.16 is a timeline with a number appearing at the point at which that numbered event occurred (referring to spoken events 1–17 in the score).

⁶ Percy Pursglove, *Tender Buttons* (Birmingham: unpublished, 2016).

Figure 7.16, Timeline of occurrence of spoken events, 'Eggs'.



Event 6 did not occur at all, as mentioned, and the tenor and alto contributions of point 7 were inaudible in the recording. At point 17, the middle voices seem to speak their line at the same time, but this cannot be fully confirmed from the recording. This first observable trend in the performance of this movement is that, whilst lines are initially spoken at remarkable regular intervals (between 4 and 5 seconds) up to line 4, the progressive hastening of delivery is not consistent across all four singers. By line 9, the alto's response is much quicker than that of her two colleagues. Indeed, around this point (line 8), the time it takes the whole quartet to complete each line begins to decrease more steadily; two exceptions, points 10 and 14, are due primarily to single gaps between singers' entries.

This trend in one singer's response time is, I believe, due to her getting 'caught up' in the acceleration of events – becoming involved in a central concept of the music's delivery at a point when the speed surpasses what conscious decision-making might easily grapple with. The dress rehearsal video suggests that a physical 'flow' takes over: a 'gradual release of cognitive control' that is 'first accessed by the nonverbal body and later understood by the verbal brain'.⁷ At the line 'In white', a slightly theatrical hand gesture in the bass is imitated in all four parts, yet no-one looks directly at their predecessor. Their peripheral knowledge-sharing hints that they may not be consciously imitating each other's physicality. More telling are how subtler physical phenomena begin to unify across the quartet as the pace increases. Vocal inflection, volume of speech, and rhythm of text homogenise only after the time to think between events is drastically shortened; surprisingly, even spoken accents (all four singers were from different regions of the United Kingdom and possessed varying accents) become consistent, the soprano modifying her typical

⁷ Oliveros, 'Improvising Composition', 75.

vowels (evidenced in rehearsal and interview) to match the bass. The singers' bodies visibly enter into the sense of flow. At the beginning of the section, each singer stands in a different posture, holding their hands in different places, their torsos in varying postures. As the movement progresses, they begin to lean in at roughly the same angle. Moreover, whereas at the beginning, each singer completed their sustained sound before repeating the text, as the pace quickened, each pre-speech breath was dovetailed with their predecessor's completion of the line, creating a palpable transfer of energy and effort along the line from bass to soprano. This performance recalls, with surprisingly strong analogy, Sheets-Johnstone's description of improvised dance. Her stance is that

[t]o say that the [singer] is thinking in movement does not mean that the [singer] is thinking *by means of* movement or that her/his thoughts are *being transcribed into* movement. To think is first of all to be caught up in a flow of thought; thinking is itself, by its very nature, kinetic.⁸

The singers are not forfeiting thought as the piece catches them up in its flow; instead, they are thinking through the improvisation of their bodies.

Given this information, it is worth interpreting the alto's decision-making more clearly. Her interview makes clear that she feels this music in a strongly physical way and that physicality contributes to her engrossing sense of play. Figure 7.17 outlines the sources of her timing decision.

⁸ Sheets-Johnstone, *The Corporeal Turn*, 30.

Figure 7.17, Interpretative tower hypothesising the improvised alto solo, ‘Eggs’.

Timing level four	Timbre	Pitch
Ensemble Behaviour level three	Technique	
Notation level two	Situation	
Concept level one	Composer	Tradition

There is, I argue, a strong connection between her timing decision and the ensemble-wide technique. That grouped technique, and her interpretation of it, derives most strongly from the contingent vagaries of the performance, rather than from the score – as discussed above. That situation is borne of the composer’s instructions in rehearsal, but is, I would argue, impacted upon more strongly by the singers’ spontaneous, largely subconscious creation of the trajectory of the piece’s timing – a sort of conceptual construction in itself.

The second movement, ‘Rhubarb’, reveals similar acts of physical unification. It is dominated by two ideas. The first is a repeated bar of improvised counterpoint, notated in terms of rhythm and pitch contour but leaving exact pitches to the singers’ discretion (Figure 7.18).

Figure 7.18, Pursglove, *Tender Buttons*, 'Rhubarb', extract showing freely-pitched scoring of contrapuntal passage.

The image shows a handwritten musical score for a contrapuntal passage. It consists of five staves. The top staff is labeled "FREE PITCHED - ANY SOUND". The music is written in a 6/8 time signature. The notation includes various note values, rests, and dynamic markings. A large, hand-drawn diamond shape encloses the central part of the score. The bottom staff is labeled "(OPEN REPEAT)". There are also handwritten notes like "same each time" and a large "A" on the left side.

At the first iteration of the contrapuntal passage, the singers visibly bob and duck, reinforcing a beat that they may not yet feel sure of; as it is repeated, their oral production of vowels is modified to achieve greater blend, and their phrases taper – their breaths are completed – in a unified way. This suggests a progression from group-construction created through external gesture to that which is achieved by internal accommodation and mutual sonic creation. The second musical idea that comprises the movement is improvised solos. Figure 7.19, below, contains the tenor's solo; video footage of this solo (Volume II, Appendix E) shows a singer in a different physical space to his colleagues, standing more erect with more outward awareness.

This physical unification corroborates the ideas gleaned from analysing ‘Eggs’, but more information regarding singer interaction is evident in comparing transcriptions of the contrapuntal bars themselves. The first section of analytical interest occurs at the movement’s opening. Figure 7.19 shows the transcription of this event in the final performance.

Figure 7.19, Performance transcription, unpitched counterpoint in ‘Rhubarb’ (first three iterations of passage).

The figure displays a musical score for the first three iterations of a passage in 'Rhubarb'. It consists of four staves:

- Tr. (Trumpet):** An empty staff.
- Solo voice:** An empty staff.
- Quartet:** A staff with a circled '1' and a box containing 'Cs B E!'. Below this staff is a timeline with markers at :10 and :20.
- First staff (Soprano):** Starts with a circled '1' and a *p* dynamic. The note 'Ah' is written below the first measure. Dynamics change to *mp* in the second measure.
- Second staff (Alto):** Starts with a circled '1' and a *p* dynamic. The annotation 'p offsets rhythm by quaver' is above the first measure. The note 'i' is below the first measure. Dynamics change to *mp* in the second measure. The annotation 'more vib.' is below the third measure.
- Third staff (Tenor):** Starts with a circled '1' and a *p* dynamic. The annotation 'note u inaudible' is below the first measure. Dynamics change to *mp* in the second measure.
- Fourth staff (Bass):** Starts with a circled '1' and a *pp* dynamic. The annotation '?' is above the first measure. Dynamics change to *mp* in the second measure. The annotation '?' is above the third measure.

By the third iteration of this figure, the singers had coalesced within an improvised figuration that they would keep until the passage in question ended and a new aleatory procedure took over. Certain elements are immediately apparent as having settled over the course of these three

repetitions: a rhythmic error in the alto line was corrected; singers settled on pitches within the same 12-tone tuning system; and the tenor's entry was cleaner. Also in evidence is a greater unification of phrasing, the transcription's *crescendo* and *diminuendo* markings matching across the ensemble by the third iteration. Less obvious are two ways in which the singers have created a de facto contrapuntal scheme for this situation. A quaver-by-quaver reduction of the third iteration into one octave (Figure 7.20) reveals the first of these.

Figure 7.20, Reduction of contrapuntal passage pitches, third iteration of Figure 7.19.



Reducing the emergent harmonies to one octave makes plain certain tendencies. The first two voices (alto and tenor) quickly achieve a perfect interval. In the penultimate beat, when three of the four parts reach a 'cadential' long note, the pitches cleave to a D \sharp minor modality that is strongly reinforced by the D-A dyad sustained in the soprano and alto. Between these points, the singers did not balk at what, in terms of their training, is clearly dissonance. But they also seemed to create momentary safety in octaves and unisons (shown with dotted lines) instinctively, as well as pitch repetitions (grey lines), as seen in Figure 7.21.

Figure 7.21, octaves and unisons in freely pitched contrapuntal passage, third iteration of Figure

7.19.

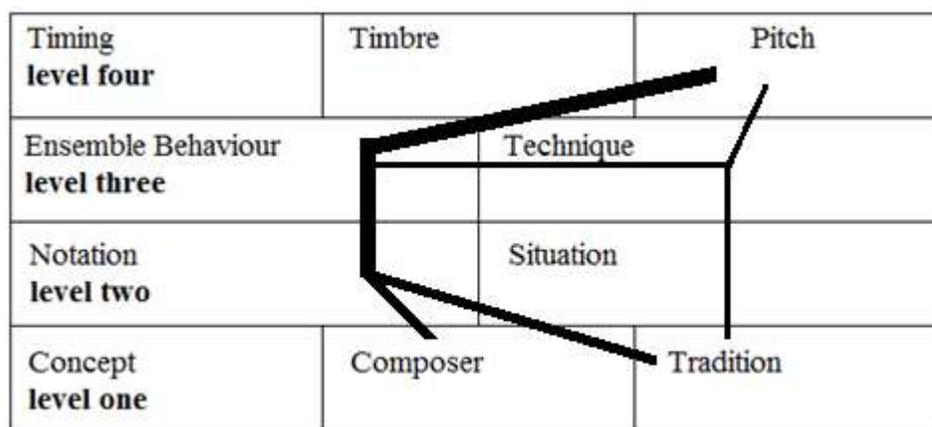


The grey connecting lines in Figure 7.21 indicate that, during the more dissonant moments, the lower voices seem to ‘borrow’ pitches from upper voices, as though subconsciously attempting to reinforce an improvisatory sound world. This is complicated, of course, in examining earlier iterations, in which the ‘borrowed’ pitches are, or may have been (where inaudible in the recording) sung by the lower voices first. Nevertheless, over time certain pitches become emphasised. In the first iteration, the alto borrows the soprano’s E \sharp ; this borrowing becomes a unison when the alto corrects her rhythm. The tenor and bass arrive on their octave more immediately.

Like the faster repetitions of lines in ‘Eggs’, these moments of contrapuntal interest probably passed too quickly to have been consciously considered. It is nevertheless a fair

assumption that these noticeably pattern-forming collective pitching decisions were based more upon perceived behaviour of the ensemble than on individual technique, or the ‘feel’ of the line (Figure 7.22).

Figure 7.22. Interpretative tower hypothesising pitching decision in freely pitched contrapuntal passages.



Indeed, that ‘feel’ was heavily influenced by the ‘harmonic’ pull of the ensemble to create cadences and match pitches, just as they had matched phrasing via breath. The individual’s sensation of the phrase was likely dictated by ‘internal’ tradition – what they are accustomed to singing – whereas the ensemble’s collective behaviour could result only from the tradition they shared, born of the notation at hand. How they read that notation may have resulted from a recently emergent tradition (a very different tradition from that drawn on by individual singers), but seems more likely to have resulted from their notions of the wishes of Pursglove, who was a physically-present contributor to readings of his score.

It is worth touching briefly on another point of analytical interest: that of the tenor’s improvised solo (seen in transcription in Figure 7.23).

Figure 7.23, Performance transcription, trumpet (top staff), improvised solos (bottom staff), and repetitions of chorale (single line with slashes), 'Rhubarb'.

The score is divided into three systems, each with a time axis at the bottom.

System 1 (1:50 - 2:00): Features a trumpet staff with a box labeled 'Ca' above it, and a tenor staff with lyrics 'Rhubarb is su-san not seat' below it. A single line with slashes is positioned below the tenor staff.

System 2 (2:10 - 2:20): Features two staves with lyrics 'in bunch toys not wild and not laugh a ble not in lit tle plac es not in ne glect and vege' below them. A single line with slashes is positioned below the lyrics. A note above the second staff reads 'begins stacc. tongue slaps'.

System 3 (2:30): Features two staves with lyrics 'ta ble not in foldcoal age not please.' below them. A box labeled 'B, F' is above the second staff. A note above the first staff reads 'swung rhythms; notation slightly elongated; figuration leading to Cb takes place in approx. 2 seconds.' A single line with slashes is positioned below the lyrics.

This is the only moment in *Tender Buttons* in which singers are entirely at their liberty to improvise rhythmic and melodic material. The parallels in contour between the trumpet and vocal line are immediately apparent, but they generally indicate the trumpeter's responsiveness rather than that of the singers. More noticeable is how the text dictates both pitch and rhythm. The end of the first line, 'Rhubarb is susan', is followed with a gap before the next note. Each 'not...' phrase is treated differently (most noticeably on 'laughable', with a laugh-like open [æ] vowel on a high F, or 'not in neglect', the surprising emotional content of which is given another small climax); the similar vowel sounds of 'not in fold coal' are given a consistent pitch.

This improvised solo makes apparent that singers' improvisations – their constructions of new music – need not be based upon the same formulae and training as those of a jazz musician, for instance. Instead, this solo, the ensemble passages from earlier in this movement, and the unifying tendencies of 'Eggs', evince a tendency to draw on multiple influences to make improvisatory decisions. Analysis of *Undismantling* suggests that technical processes – often at a subconscious level of instinctive embodiment – are important to decision-making. The present analysis suggests how those instincts may in fact be the product of the sublimation of textual, conceptual, harmonic, and temporal intellectual ideas into rapid, largely subconscious, reactions.

7.5 Analytical Conclusions

The feminist scholar Judith Butler holds that agency is a performative act of improvisation against laws, a notion that Tracy McMullen ties to the process of musical improvisation.⁹ These analyses indicate not only the performance of norms, but also their disruption from within. Those

⁹ Tracy McMullen, 'Improvisation within a Scene of Constraint: An Interview with Judith Butler' in Gillian Siddall and Ellen Waterman (ed.), *Negotiated Moments: Improvisation, Sound, and Subjectivity* (Durham: Duke University Press, 2016), 22–3.

disruptions are part of a co-creative process. Butler comments that ‘we’re not just active, we’re also acted on, and it’s that doubleness that constitutes the scene of our acting’.¹⁰ The performers discussed above ‘act on’ each other: each singer’s colleagues become embodiments of musical norms, which act upon that singer. Likewise, singers also ‘act on’ each other’s constructions of norms (those elements on the lowest tier of the interpretative tower).

Two performances of *The Great Learning*: ‘Paragraph 7’ evidence that decisions made at different levels may be due to different factors, which emerge and exchange information and energy in a complex mutuality. Analysing *Undismantling* suggests that those factors are acted upon as constructions, often within a technical or physical improvisation. *Tender Buttons* indicates how that technicality replaces conscious or intellectualised decision-making in certain circumstances, in such a way as sublimates engrained musical entrainment, via embodiment, into specific musical outcomes. The exchange of constructions occurs via a blending of the physical and intellectual.

This analytical conclusion supports – and these reflections inevitably coloured – my analyses; in turn, these analyses also clarify at some critical distance what these shared constructions produce, musically. Since they are often heavily tradition-reliant, traditional sounds typically appear, whether in the form of familiar rhythms, diatonicism (even strict tonality), or phrase shapes. This is not to say that singers are more reliant on rigid limitations; rather, I argue, these aspects of their musicianship are points from which emergent creativity evidently grows, subject to the non-determinable growth and development that marks Complexity Thinking. These structures and disruptions interact in such a way as maintains that paradigm as an attractive one for considering the execution of choral aleatorism. Moreover, such a conclusion goes a great deal

¹⁰ McMullen, ‘Improvisation’, 25.

towards supporting the idea that the performance of aleatorism has a truly improvisatory nature, according to George E. Lewis's Afrocentric perspective on improvisation as discussed above. Memories are performed via the body, disrupting the project of depersonalisation that inspired the indeterminacy movement.

This conceptualisation of improvisatory aleatorism contrasts with singers' feelings of being 'unmoored', suggesting that their mooring simply shifts away from the composition, which traditionally might be seen as an ontologically discrete entity in which singers participate in an exclusively esthetic way. They are not 'wrong' to feel insecure when less bound, but a more profitable perspective might be instilled whereby they see aleatorism as enjoyable freedom. Additionally, it would also be useful to reinforce and challenge the devices they use to ground themselves, intellectually and physically. Participants in choral aleatorism have the capacity not only to construct complex structures of musical process and influence, but also to develop, reformulate, and violate norms and rules in creative ways. This notion of creativity leads back to the question, to be addressed below: what do interrogations of performers' experiences, from within and without, reveal about how choral aleatorism might be approached in the future?

PART III:
Conclusions

Chapter 8 Conclusions for Creative Practice

8.0 Introduction

This thesis set out to investigate how exactly performers undertake and experience choral aleatorism – that ‘choral play’, with the aim of suggesting a practice that can inform the future efforts of other practitioners, including singers, conductors, and composers. This concluding chapter answers that central research question, based upon the enabling objectives of this project: its multi-methodological approach to understanding singers’ processes and the outcomes of that approach, all detailed in previous chapters. To answer the first part of the question, I shall summarise how the provisional tenets of this experience – the multiple-input decision-making and embodied constructions – were revealed in CS1 (Chapter 5), developed in CS2 (Chapter 6), and inflected by the perspective supplied by the analyses in Chapter 7. The efficacy of these methodologies will also be briefly evaluated. To answer the second part, I shall outline how this emergent practice might be of use to other performers (both singers and conductors) and composers, before closing by looking towards further potential research avenues.

8.1 Reflections on Methodology

As a preliminary, it is important to evaluate the methodology employed in both case studies and the analysis of outcomes, in terms of how well it addressed the enabling objectives of this study so as to provide insights that could answer the central question. My foundational argument was that choral aleatorism entails the performance of postmodern meaning, as a form of extreme textural fracture. The corollary importance of individual subjectivity drove this methodology. The history and practice of choral aleatorism, situated in a context of Cagean indeterminacy, European aleatorism, and writings on improvisation – including the scant writings on vocal improvisation –

has revealed a body of works in which the performer is central, which the musicological field of performance studies has helped to address through its focus upon performer activity, agency, and experience. However, performance studies to date fell short of a full examination either of vocal performance, or the performance of aleatorism. This thesis is part of the relatively recent movement, exemplified by the work of researchers such as Doğantan-Dack, Bayley, and Rink, which examines the creative act of performance.

To redress this gap and enable a contribution, GTM provided a useful starting point, both paradigmatically and practically. It permitted the inductive investigation into singers' experiences based on their own reflections. As such, it maintained the performer-centricity that underpins my conceptualisation of choral aleatorism as a compositional practice and as a performed tradition. As CS1 and CS2 progressed, however, GTM needed to be adapted in ways that best fitted each phase of research. For instance, I adhered less strictly to the practice of formulating all codes around active, present-progressive verbs. In one code, 'feeling a sense of novelty', which applied to a line of data, verbs like 'feeling' were able to be taken as a given. As data was processed and findings arrived at, revised, and edited, it also became clear that coding was a means to an end and that the research process could be made present in these findings through less superficial means than referring back to specific codes. Broader concepts and summaries were therefore provided instead of lists and consolidations of codes. Finely parsed coding of data was unarguably vital in processing the singers' responses to questions in that it rendered the intricacies, details, and contradictions of those responses into notions that could be compared across workshops and case studies. Additionally, it provided a useful tool allowing me, as a conductor, some critical removal from the events that the singers described. I concluded, however, that mentioning these codes explicitly in the thesis text as CS2 progressed caused a distraction from the findings towards which

they led. Other strictures of coding were also dispensed with, including the rigid tabling of codes, the line-by-line coding, and keeping of code names short and neutral. Coding, rather than distilling the data, became a way of abstracting that data, so that it could more freely interact with other findings and information. This abstraction enabled me to arrive efficiently at useful categories, which yielded conclusions that, as discussed below, have practical ramifications.

Active interviewing remained a useful approach for collecting data. Although interviews proved the best way of gathering rich data, the complications of arranging choral workshops and subsequent interviews or discussions proved an obstacle. The restructuring of events to include time for individual and group reflection would therefore be a vital addition to workshop practice for similar, future research. Unexpectedly, however, questionnaires took on properties of active interviews. Central tenets of the active interview – the ongoing adaptiveness and the pursuit of emergent ‘horizons of meaning’ – were applied productively to successive versions of the questionnaires that singers received, especially in CS1 where many of the singers were involved repeatedly.

In a limited way, this approach also informed how I pursued certain ideas in rehearsals and workshops. Workshop procedures and instructions were refined, especially in CS2 where the workshop model remained largely consistent. In CS1 and CS2, a fundamental tension persisted between my need to provide an engaging rehearsal or workshop experience that led to successful performances and my need to gather data. As discussed earlier, gathering data and making high-quality recordings were of secondary concern to meeting these obligations to the singers. The abductive qualities of GTM coding helped to redress these limitations of data gathering. The quality of recordings remained a considerable shortcoming (Volume II, Appendix E is included in this spirit of unobtrusive working recordings), which could be addressed in further studies where

aleatory analysis is an isolated objective, supported by appropriate technology. In an ideal situation, each singer in an ensemble might be recorded with an individual microphone, providing material for a highly detailed transcription. Much could also be gained through a deeper interrogation of their experiences of certain moments that showed up as significant in the analysis of recordings. Additionally, singers might thereafter be re-integrated into the analysis by inviting them to listen to, and reflect upon, the recording. All of these practices could further enrich the comparison of singers' experiences and performed outcomes.

Hellaby's interpretative tower model was originally used to explain a musical event according to how it was influenced by musical factors of different levels of rigidity. Here, by contrast, it became a model for hypothesising singers' decision-making, according to constructed elements of aleatorism to which they might adhere more or less strictly. It proved a useful device for presenting my analytical inferences and exposing how I construed singers' decision-making. As such, it offered useful conjectural inroads into understanding singers' own constructive processes. It also allowed for a graphic representation of what singers had recalled about their decision-making processes. As such, it provides an important connection between performance analysis and Grounded Theory Method (and similar) studies, in this case offering a means of 'grounding' analysis in performers' motives, whether hypothesised about or directly expressed. This potential could be of use to performance analysts, offering a further shift towards basing analyses in the act of performance and not just in its sonic outcomes. Once again, requesting that singers use the same template to model some of their own decisions would provide further useful comparisons.

In spite of these ongoing adaptations and modifications to data-collecting, data-processing, and analysing methodologies, what they all pointed towards remained intact: the co-construction

of meaning was evident in every stage. Through the above suggestions to involve singers more directly in analyses and reflection, this constructive dimension could be enhanced, and findings refined through constant comparison. Crucially, however, any such developments would need to remain flexible in order to respond best to the indeterminate behaviour of performing human beings. It is fitting and aptly performative that a study on co-created music should itself be a collaborative improvisation of sorts.

8.2 Performer Experience of Choral Aleatorism

The notion that singers' decision-making in choral aleatorism is based upon the interaction of multiple inputs relies on the idea that those inputs – score, composer, other performers, tradition, and the self – are constructions, and on an appreciation of their complex interactions. Moving beyond the simple perception of these influences, it became clear that they are epistemically grasped or formulated through acts of construction and that these constructions often take place in an embodied way. The individual and social planes of embodied construction interact dynamically as nested complex systems. Positive and negative feedback are essential to how these decisions gain traction and become part of an emergent pattern of group decision-making and, potentially, the creation of new traditions. While Complexity Thinking provides a useful framework and terminology for describing these phenomena, it does not fully confront the embodied nature of this experience. It became clear during CS1 and CS2 that the minds and bodies of performers were not discrete, according to a Cartesian dualism, but instead contributed holistically to the coterminous discovery and creation of improvisatory textures. The body, as a complex and non-mechanistic entity, was discovered through improvisatory acts; put differently, these acts of choral aleatorism have been shown to be an emergent physical improvisation. Each singing body is a complex

system, and performers' bodies interact in various ways. Both individual bodies and the shared, empathetic embodiment of the ensemble are sites where the behaviour of the complex system emerges into existence.

The outcomes of this process are the result of deviations and disruptions. The self-definition of aleatory performance is defined by disorder and disruption, recalling Alhadeff-Jones's explanation of Complexity referred to in Chapter 5.4.2.¹ In choral aleatorism, I have argued, traditional textural unanimity is ruptured. Just as aleatorism realises performatively this rupture at the level of extramusical meaning, singers enact constant ruptures at the level of the work's imminent unfolding. Constructions are not only altered, but acted against; entrainment and tradition, both inscribed profoundly on the body, are variously manipulated, violated, reinterpreted, made subservient to the needs of the ensemble, and used to propel individual decision-making. In choral aleatorism, whether relatively conservative works like those by Kerry Andrew, referred to previously, or the works collaboratively devised on site for VN1, this deviation is key to the embodiment of complexity. Disruptions are catalysts of creativity: the 'mutations' of process that drive the interpretation's evolution. They are acts that contest a fixed notion of phylogeny, rewarding the embodied first-person for coming to know its body and surroundings. The embodied nature of music-making therefore returns to the embodied nature of improvisation: if music is felt as well as thought – received corporeally through sound – then aleatorism is the act of creatively disrupting one's feeling body. It is that openness that drives the proposals outlined below, in Chapter 8.3.

Analysing these performances has revealed the strength and ubiquity of constructed structures, even where they seem to have come about subconsciously. Analyses also elucidated

¹ Alhadeff-Jones, 'Complexity, Methodology and Method', 29.

much about how these disruptions occurred. Musical outcomes may reinforce habits, and the construction of a piece cultivates parameters as frequently as singers may feel they have deviated from them. The analyses of Chapter 7 show the interplay of what could be interpreted as singers' musical memories, in the form of more traditional elements, with improvisatory freedom. Performances of *The Great Learning*: 'Paragraph 7' indicated that singers' disruptions of patterns often occur at an individual level, and, when met with positive feedback, can effect large-scale shifts in the work's emergent interpretation. The analysis of *Undismantling* demonstrated how those disruptions frequently occur on a physical level and suggested that the outcomes of these decisions and impulses often lay beyond the forethought of the composer. Analysis of *Tender Buttons* suggested that these decisions, and the instincts that drive them, are the outcome of multiple inputs absorbed by singers. In these works, singers were seen not only to create and navigate structures, but also to endow points in the process with particular importance. They grounded their individual processes in the group's emergent interpretation as much as in constructions of elements of the work itself. This conclusion is of vital importance to understanding how openness, already pointed towards, can be facilitated and made achievable by a diverse range of singers.

8.3 Recommendations

8.3.1 Usefulness for Performers' Practice (Singers and Conductors)

The fields of Complexity Thinking, constructivism, and embodiment leave a great deal of interpretative leeway as to how they might both describe emergent practice and suggest future practice. So far, this accommodation has been an asset that allows the particular findings of this study to maintain their primacy amid much theory; singers' experiences remain in the foreground,

viewed through the useful prism of extant paradigms. Yet these findings run the risk of provoking facile conclusions. Likewise, their misuse might result in rigid prescriptions that contravene the polylogical dynamism that is so crucial to these paradigms.² David Byrne warns that ‘[w]e must be very careful not to fall into hippy dippy new ageist imprecision when we develop a pedagogy of complexity[,] but we have to recognise a fundamental break in modes of understanding’³ from more rigid models. A useful perspective on the performance of choral aleatorism would argue for a compromise between a framework and liberality, so creating *conditions* to promote emergence, including motivation, enjoyment, passion, and cooperation. Singers’ responses made abundantly clear the need for a balance between freedom and structure – between improvisation and prescription. This balance might be said to recapitulate some of the ideas behind the indeterminate movement in experimental composition, but it is vital to understand that they apply to every level of the co-creation of aleatory performances. It is not simply composers balancing the determinate and indeterminate; singers do likewise, and works as ontologically nebulous as aleatory scores draw all participants into their precarious worlds. These qualities suggest the need for a creative openness in rehearsals, combined with a well-conceived structure, and for the creative disruption of that structure.

The interviews in CS1, in particular, pointed towards how creative freedom might best be engendered in rehearsals. Ideas can be rehearsed in an exploratory way, prompting singers to construct technical processes that allow for safe and successful performance, all the while resisting the inherent tendency for ideas to become fixed over time. This balance may prove difficult to strike, but an important corollary of this imperative is that, as throughout the process of co-creating

² David Byrne, ‘Thoughts on a Pedagogy of Complexity’, *Complicity: An International Journal of Complexity and Education*, 11.2 (2014), 40–50, <<https://ejournals.library.ualberta.ca/index.php/complicity/article/viewFile/22963/17094>> [accessed 28 Jan 2016], 46.

³ Byrne, ‘Thoughts on a Pedagogy of Complexity’, 46.

aleatory works, all performers must be complicit in both building and resisting a structure of entrenched ideas. CS2 showed singers' abundant willingness to resist emergent structures, pointing to some ways in which they could impact directly upon their own situation to make that disruption possible and comfortable. A logical next step would be to make both the building and dismantling of structural elements into activities in which every singer consciously engages, through exploration and critical reflection. Rehearsal transcripts and ideas tested in workshops suggest that exercises which encourage group exploration can prove a fertile ground for producing new ideas, or expanding upon old ones. These exercises also increase the (complex) connectivity of ideas within a singer and within a group. Even as they encourage individual creativity, they can build trust and cohesion among the ensemble, embracing the paradox found in singers' responses, in which freedom felt best when it also felt safe.

The unforeseen presence of traditional-sounding musical patterns, such as rhythmic groupings in *Tender Buttons* and common-practice harmonies in open scores like *The Great Learning*: 'Paragraph 7', suggest that structures emerge seemingly of their own accord. This inevitability suggests the need for a critical evaluation of traditions and training. As was discussed abundantly in the questionnaire responses and interviews, the nature of singers' interactions with structures suggests a strong reliance upon their own memories. In this way, the performance of aleatorism offers a reflexive examination of the ideas and habits that singers bring to any musical situation. It is largely through an examination of these ideas and habits that they might be disrupted: most creative decisions singers wrote or spoke about were acts of rebellion against leadership or confinement. These habits are inscribed upon singers' bodies, so physicality remains a key consideration. Physical empathy was a strong agent of adherence among singers, but disruption was also a physical act.

So, performers might be encouraged to embrace, explore, and disrupt their assumptions, structural proclivities, physical ‘kinetic melodies’, other habits, and (choral) traditions. Likewise, they could be empowered to discern and rebel against structures emerging from the group. Crucially, these processes occur through singers’ bodies and through the unified body of the ensemble. A performing corpus will create its own knowledge, and come to know itself, through the physical experience of singing and receiving that sound mutually, as a group. A facilitator of choral aleatorism – conductor, composer, or other leader – cannot rely on a ‘cause-effect logic’ of learning,⁴ to borrow again from Davis and Sumara. Learning is ‘triggered’ and entails ‘transformations in the learner that are simultaneously physical and behavioural’.⁵ Learning and authority are decentralised,⁶ in this case through the agentive bodies of singers. Although leadership generally must direct rehearsals in some way, it is worth considering how active decentralisation can prop open the door for participation in aleatorism – or, to invert that trajectory, how aleatorism can enable more shared activity within the broader practice of choral performance.

These findings offer important and specific outcomes for singers. As performers ‘within’ the ensemble, singers can be increasingly freed up to explore how they use their bodies in creative improvisatory ways, arguably presenting a shift from much traditional choral and vocal practice. They can also be impelled to interact with each other more creatively, expanding their awareness of the actions of the ensemble of which they are a part. By understanding that a musical work emerges from their own shared creation of it, singers may also gain a stronger sense of ownership or authorship, and embrace their own learning process as being impacted upon by constructions and disruptions on multiple levels. They can also become increasingly empowered to navigate

⁴ Davis and Sumara, *Complexity and Education*, 12.

⁵ Davis and Sumara, *Complexity and Education*, 13.

⁶ Davis and Sumara, *Complexity and Education*, 89.

within, or deviate creatively from, these constructions and the traditions or boundaries that they are seen to create. While these are all benefits that will increase how singers can undertake aleatory performance, I deliberately phrase them in such a way as also to suggest that they might offer broader advantages. The usefulness of improvisatory music-making is also one of the benefits that this research offers to conductors and other musical leaders. Singers' engagement with choral singing could be powerfully altered as a result of the developments described above, allowing conductors to distribute leadership among all performers. And, of course, a deeper understanding of how singers navigate the unfamiliar terrain of aleatory scores can permit conductors to better rehearse this repertoire. If aleatory choral music is approached in such a way, a whole new body of repertoire might become open to ensembles who have previously avoided it.

8.3.2 Usefulness for Composers

A composer's creative practice is extremely difficult to pin down and it is not my objective here to make specific compositional prescriptions. This research does, however, expose ideas and issues that composers might benefit from addressing, or at least considering, in approaching the creation of new examples of choral aleatorism. First, it is important to understand that the composer is just one factor in a process which is indeterminate on many levels. Singers' acts of construction are dictated by more than any one element. (This conclusion is equally instructive for conductors.) Even aleatory textures written to produce a relatively predictable sonic outcome are performed through a process of physical improvisatory acts of construction. A strong conceptual drive behind the work can help facilitate a performance, but even that concept will become a construction, refracted and modified through singers' successive interpretative layers and the exigencies of live performance. As Benson writes, while 'the intentions of composers can be known (at least to some

extent) and should be respected, composers are not the only participants in the musical dialogue who have intentions, nor do their intentions necessarily trump the intentions of all other participants'.⁷ It is a tautological truism worth bearing in mind that the constructors in performance are the performers. Singers become co-authors, whether or not a composer hopes for that outcome.

Communication was vital to successful aleatory performances in CS1 and CS2: a clarity of instructions was helpful, but so was a clarity of freedoms. In communicating with singers, both through conversation and the notated score, I contend that composers will always benefit from understanding, where possible, singers' habits, training, and vocal techniques. This suggestion is not proposed to ensure that scores are 'singable'; this stricture is too often mishandled, resulting merely in the reification of prejudices at the expense of creative disruptions and growth of techniques and capabilities. Instead, I would suggest that awareness of the points of departure from which singers improvise can lead to more effective expansion of the potential of aleatorism. Indeed, it proved especially advantageous for composers to collaborate with singers in some way, to open up dialogue about these limits alongside explorations of how they might be widened. Even if interaction and collaboration are not possible before or during composition, it may be useful for composers to ask themselves how the work, as they have formulated it, interacts with the performers.

Above all, I argue that it is vital to understand that the improvisatory acts of singers are no less creative – *singers* are no less creative – in aleatory contexts than in other improvisatory genres, including instrumental ones. With its important resemblances to dance, choral aleatorism makes a legitimate and distinctive contribution to improvisatory creativity. Since these acts of creation are a key part of aleatory performance, to regard singers as non-creative executors of a composer's

⁷ Benson, *The Improvisation of Musical Dialogue*, XII.

wishes would not only denigrate the embodied minds that realise a given work, but also deny an inevitability. By contrast, grasping and acting on a well-founded concept of singers' creative, improvisatory potential may pave the way to further, unforeseeable but exciting creative endeavours. As with the benefits this research offers to singers and conductors, composers may find useful a stronger understanding of how to encourage or enable improvisation. Improvisatory techniques that some composers may already use in other contexts can be applied to their choral writing, even making choral composition a more attractive option for some who had avoided it due to its perceived limitations. Composers who already write for choral ensembles regularly might find new avenues to express their musical ideas. Finally, composers of all styles may find new ways of collaborating with performers to create repertoire, permitting creative outputs that are achievable for singers and relevant to the contemporary world.

8.4 Potential for Further Research

This research project sought to fill a gap in current musicological research. It is important to understand the experience of singers participating in choral aleatorism because, while aleatorism is not uncommon in later twentieth-century choral music by Cardew, Andrew, and others, it runs the risk of being performed only by those who feel capable of overcoming its perceived difficulties. It is hoped that this research has contributed to elucidating those perceptions, assessing how valid they were, and revealing the processes by which a wide variety of singers overcame the difficulties that this music still posed. Such an understanding has yielded some practical notions and, more importantly, points towards further practical outcomes and creative – even disruptive – exploration.

The abundance of aleatory choral works in the late twentieth century, as compared with the early twenty-first, suggests that this kind of composition has stagnated, so it remains important to challenge current, more conservative compositional practice, evaluating both the potential of singers to participate in new and innovative aleatory music, as well as the place that choral aleatorism has in current creative climates. It is therefore with composers, both professional and student, that perhaps the most important future research avenues originate. I have discussed how aleatorism is bound by certain limitations: in particular, how its improvisatory potential for singers has not yet been fully exploited. Composers are traditionally the proponents of new ideas – ideally here, in collaboration with singers. With composition fully respected as a practice-research activity, composers might fruitfully shed certain notions of control, and realise their potential as co-authors, along with performers, of an expanding tradition.

I have posited that the underlying assumption behind current limitations in aleatory choral writing is that singers lack the skill to undertake many improvisatory tasks (Chapter 1.3), and this limitation points to another area in need of further research: how might singers be trained to improvise within different idioms? Answering this question might require a considerable revision – or even unseating – of approaches to aural skills training, theory, and physical practice found in current music education and institutional programmes. This intervention might take place across schools, conservatoires, universities, churches, and other institutions. Naturally, fully grasping these approaches and their outcomes, and proposing changes, would be a substantial research undertaking. Such changes might also apply to instrumental teaching, but I believe that there are particular obstacles and opportunities facing the training of singers in this regard, given their perceived limitations and the nature of their embodied creativity, discussed previously.

Perhaps the most important outcome of this research, however, is a deeper understanding of the subjective, agentive, and embodied nature of how singers perform music of any genre. The heightened creativity of aleatorism and its inherent rupture of certain strictures made it an ideal style of choral performance for probing such complexities. Thus the further research avenues opened up by this broader perspective are perhaps the most ineffable. The embodied activity of singing has recently drawn the interest of researchers (such as Davidson, Thomaidis, and Ben Spatz⁸), just as the philosophical meaning and significance of the voice had previously. Understanding how singers' minds, bodies, and voices interact in a holistically considered, embodied, and relational experience might catalyse a further re-evaluation of what it is to sing, to train and conduct singers, and to act creatively with the voice as a performer or composer, alone and among other artists and listeners.

⁸ Ben Spatz, 'To Open a Person: Song and Encounter at Gardzienice and the Workcenter', *Theatre Topics*, 18.2 (September 2008), 205–22.

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**Conceptualising Choral Play:
The Creative Experience of Aleatory Choral Music**

PhD thesis (Appendices)

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Submitted in part-fulfilment of the degree of Doctor of Philosophy

Royal Birmingham Conservatoire

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Appendix A Representative Data Collection Instruments

This Appendix presents the data collection instruments for VN1, VN2, VN3, and CS2. The contents include information sheets, consent forms, questionnaires, and the VN3 interview guide that was devised and used within the research. The consent form that was issued following the Huddersfield Contemporary Music Festival performance of *Tender Buttons* is also included, since recordings and follow-up interviews were employed in Chapter 6. As discussed in the main text, the VN questionnaire was further refined or re-focused before each event, however, to aid with comparison of data, all three CS2 events used the same questionnaire. For reasons of space, all questionnaires are presented here without logo-bearing headers. Similarly, the empty space for answering questions, which was always at least a half-page, has generally been reduced here.

A1: VN1 Data Collection Instrument

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Via Nova Case Study Information sheet for participants

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. If anything is unclear to you, please ask any questions either in person or via email.

The aims and process of this project:

I am conducting research into singers' and composers' experiences during the creation, rehearsal and/or performance of aleatorism. 'Aleatorism' refers here to any instance where singers have the opportunity to sing more freely or independently than they would in a 'traditional' score. This stage of the research is to develop a theory of singer experience and perceptions during aleatorism. Information will be gathered during and/or immediately after Via Nova's workshops with composers during 2016, through questionnaires, then through follow-up interviews.

Two questionnaires will be administered: the first will comprise a general series of questions that we will discuss and elaborate upon in the interviews; the second will offer an opportunity to reflect on your experience of and interaction with me, the conductor. The second of these will not include any information about you, the respondent, including your name or the code assigned you (see **Confidentiality and voluntary involvement**, below).

The final result of this project will be a document (a PhD thesis) that expands the understanding of the practice and composition of choral aleatorism. Portions, or all, of that document may be submitted for publication; it will also be made available at BCU libraries and potentially on online thesis databases. Photographs and audio recordings may be used for research purposes or by Via Nova for promotion.

Confidentiality and voluntary involvement:

During interviews, I will make an audio recording, which will then be transcribed into a written text. In all cases (including your questionnaire responses), your responses will be anonymised: you will be assigned a code, under which your responses will be represented rather than your name. Names will only be recorded to ensure consistency of data collation, but will not be associated with your responses. Findings will only be used for this project and the final document that results; data, which will be stored securely and confidentially, will not be used elsewhere or for any other purposes.

please turn over...

If you choose to participate in this study, you are giving your consent for your responses to be recorded and used in the final document. You may, however, withdraw from the study at any time without negative consequences and without giving a reason; you may still participate in the workshop after withdrawing. You may also ask for your responses to be deleted from the record.

You will also be photographed or audio recorded. If you are a composer, your score may be retained and possibly extracted for future documents. You will be fully credited if your score is used. If you would prefer to opt out of photography or audio recording, you may do so at any time and your image in any photographs will be blurred, or the recording will not be used and will be disposed of (regardless of whether you are a performer or composer). (Please see **Benefits and risks**, below.)

Benefits and risks:

Early stages such as this will have a direct influence on rehearsals to follow. You may be present in subsequent rehearsals, in which ideas that result from our conversation are tested. You will also have the opportunity to reflect on a style of choral singing that may be new to you. You will be playing an active role in a study on a field that is relatively new, and will have the opportunity to develop your own practice in that field.

There are no significant risks to taking part in this study. Your responses will remain anonymous. I may have a relationship with you as a conductor or BCU lecturer, but I have an ethical obligation to ensure that your responses have no negative bearing on my interaction with you in those situations. You have been paid for your involvement as signers in this project, but your payment is not contingent on your participation in the study.

Thank you for your time!

Consent form

By signing below, you confirm the following:

1. You have read the attached information sheet and understand it completely; you have been given the opportunity to ask any questions about the project and this phase in it.
2. You understand that your participation is voluntary, and you are free to withdraw at any time.
3. You understand that your responses will be recorded and anonymised, as described in the attached information sheet.
4. You give consent to be photographed or filmed during the workshops, and understand that you may opt out at any time and your image will be blurred, or the recording in question will not be used and will be destroyed (please opt out by informing Daniel Galbreath by email or in person).
5. If you are a composer, you consent to your score being retained and possibly extracted for future documents, and understand that you may opt out of this at any time and your score will be neither retained nor used. You understand that you will be credited if it is used.
6. You understand that your responses will be kept secure and confidential.
7. You agree to take part in the study as outlined to you.

Name of participant

Date

Signature of participant

Name of researcher

Date

Signature of researcher

You will be given one copy of this form. Another will be kept securely by the researcher.

Stage 1: Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

Please answer each question, or respond to each prompt, in the space provided. If you require extra space, feel free to use the reverse of this sheet or additional paper which can be provided. If there are any aspects of this encounter with aleatorism you would like to comment on, but which is not covered by the questions below, please request additional paper to do so.

These questions are deliberately open-ended: you should feel free to discuss whichever aspects of your perception or experience seem most relevant or interesting to you, or that you responded to strongly. ‘Aleatorism’ refers here to any instance where you had the opportunity to sing more freely or independently than you would in a ‘traditional’ score.

Please write as legibly as possible

Section 1. Basic Information
Name <i>(this will be replaced by a code if you are quoted)</i>
Course, year, and specialism (eg MMus, 1, voice) <i>(if you are a student)</i>
Please briefly describe your singing background and experience.
Please discuss any contemporary vocal experience you have, especially any that included some form of aleatorism.

Section 2. Reflection

1. Please discuss your feelings towards the pieces we rehearsed and performed for this workshop.

Your comments might include descriptions of the music, reflections on how we rehearsed and performed it, or anything else about your relationship with, experience of, or thoughts and feelings toward the aleatorism in all pieces. If a comment pertains to a particular piece, please mention it.

2. Please reflect on the composers we collaborated with during the workshop.

What was your perception and experience of them as present, involved composers? How would you describe your encounter with them via their music? You may mention them by name; I will replace their names with a code if you are quoted.

3. Please describe how you interacted with other parties in the room during aleatorism, and your feelings towards them?

'Other parties' may include other singers, the audience, composers, composition mentors, passers-by, etc. (excluding the conductor, who you will be asked about later). Your interaction may have been only brief or one-sided; it may have been only an awareness.

4. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.

This may include any technical or expressive aspects, what you heard, how you felt in a more general sense, etc.

A2: VN2 Data Collection Instrument

Daniel Galbreath
 Birmingham Conservatoire
 Birmingham City University
 daniel.galbreath@mail.bcu.ac.uk
 07507 088876

Via Nova Case Study Information sheet for participants

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. If anything is unclear to you, please ask any questions either in person or via email.

The aims and process of this project:

I am conducting research into singers' and composers' experiences during the creation, rehearsal and/or performance of aleatorism. 'Aleatorism' refers here to any instance where singers have the opportunity to sing more freely or independently than they would in a 'traditional' score. This stage of the research is to develop a theory of singer experience and perceptions during aleatorism. Information will be gathered during and/or immediately after Via Nova's workshops with composers during 2016, through questionnaires, then through follow-up interviews.

Two questionnaires will be administered: the first will comprise a general series of questions that we will discuss and elaborate upon in the interviews; the second will offer an opportunity to reflect on your experience of and interaction with me, the conductor. The second of these will not include any information about you, the respondent, including your name or the code assigned you (see **Confidentiality and voluntary involvement**, below).

The final result of this project will be a document (a PhD thesis) that expands the understanding of the practice and composition of choral aleatorism. Portions, or all, of that document may be submitted for publication; it will also be made available at BCU libraries and potentially on online thesis databases. Photographs and audio recordings may be used for research purposes or by Via Nova for promotion.

Confidentiality and voluntary involvement:

During interviews, I will make an audio recording, which will then be transcribed into a written text. In all cases (including your questionnaire responses), your responses will be anonymised: you will be assigned a code, under which your responses will be represented rather than your name. Names will only be recorded to ensure consistency of data collation, but will not be associated with your responses. Findings will only be used for this project and the final document that results; data, which will be stored securely and confidentially, will not be used elsewhere or for any other purposes.

please turn over...

If you choose to participate in this study, you are giving your consent for your responses to be recorded and used in the final document. You may, however, withdraw from the study at any time without negative consequences and without giving a reason; you may still participate in the workshop after withdrawing. You may also ask for your responses to be deleted from the record.

You will also be photographed or audio recorded. If you are a composer, your score may be retained and possibly extracted for future documents. You will be fully credited if your score is used. If you would prefer to opt out of photography or audio recording, you may do so at any time and your image in any photographs will be blurred, or the recording will not be used and will be disposed of (regardless of whether you are a performer or composer). (Please see **Benefits and risks**, below.)

Benefits and risks:

Early stages such as this will have a direct influence on rehearsals to follow. You may be present in subsequent rehearsals, in which ideas that result from our conversation are tested. You will also have the opportunity to reflect on a style of choral singing that may be new to you. You will be playing an active role in a study on a field that is relatively new, and will have the opportunity to develop your own practice in that field.

There are no significant risks to taking part in this study. Your responses will remain anonymous. I may have a relationship with you as a conductor or BCU lecturer, but I have an ethical obligation to ensure that your responses have no negative bearing on my interaction with you in those situations. You have been paid for your involvement as signers in this project, but your payment is not contingent on your participation in the study.

Thank you for your time!

Consent form

By signing below, you confirm the following:

1. You have read the attached information sheet and understand it completely; you have been given the opportunity to ask any questions about the project and this phase in it.
2. You understand that your participation is voluntary, and you are free to withdraw at any time.
3. You understand that your responses will be recorded and anonymised, as described in the attached information sheet.
4. You give consent to be photographed or filmed during the workshops, and understand that you may opt out at any time and your image will be blurred, or the recording in question will not be used and will be destroyed (please opt out by informing Daniel Galbreath by email or in person).
5. If you are a composer, you consent to your score being retained and possibly extracted for future documents, and understand that you may opt out of this at any time and your score will be neither retained nor used. You understand that you will be credited if it is used.
6. You understand that your responses will be kept secure and confidential.
7. You agree to take part in the study as outlined to you.

Name of participant

Date

Signature of participant

Name of researcher

Date

Signature of researcher

You should keep one copy of this form. Another will be kept securely by the researcher.

Stage 2: Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

These questions are a follow-up to the previous questionnaire. This does not mean you need to have filled that questionnaire out, however. Each answer is deliberately open-ended; please write as much or as little as you would like.

Section 1. Basic Information
Name <i>(this will be replaced by a code if you are quoted)</i>
Section 2. Reflection
1a. Please discuss any general feelings towards the pieces we rehearsed and performed for this workshop.
1b. How well do you think you adhered to the composers' intentions? How did you come to understand those intentions?
2a. Please reflect generally on the composers we collaborated with during the workshop.
2b. How was working with these composers different to your experience during the Frontiers event (if you were involved)?
3a. Please describe how you interacted with the conductor.
3b. ...how you interacted with other singers.
3c. ... how you interacted with instrumentalists.

4a. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.

4b. What challenges did you face vocally and musically? What solutions (if any) did you use to overcome them?

A3: VN3 Data Collection Instrument

Daniel Galbreath
 Birmingham Conservatoire
 Birmingham City University
 daniel.galbreath@mail.bcu.ac.uk
 07507 088876

Via Nova Case Study Information sheet for participants

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. If anything is unclear to you, please ask any questions either in person or via email.

The aims and process of this project:

I am conducting research into singers' and composers' experiences during the creation, rehearsal and/or performance of aleatorism. 'Aleatorism' refers here to any instance where singers have the opportunity to sing more freely or independently than they would in a 'traditional' score. This stage of the research is to develop a theory of singer experience and perceptions during aleatorism. Information will be gathered during and/or immediately after Via Nova's workshops with composers during 2016, through questionnaires, then through follow-up interviews.

Two questionnaires will be administered: the first will comprise a general series of questions that we will discuss and elaborate upon in the interviews; the second will offer an opportunity to reflect on your experience of and interaction with me, the conductor. The second of these will not include any information about you, the respondent, including your name or the code assigned you (see **Confidentiality and voluntary involvement**, below).

The final result of this project will be a document (a PhD thesis) that expands the understanding of the practice and composition of choral aleatorism. Portions, or all, of that document may be submitted for publication; it will also be made available at BCU libraries and potentially on online thesis databases. Photographs and audio recordings may be used for research purposes or by Via Nova for promotion.

Confidentiality and voluntary involvement:

During interviews, I will make an audio recording, which will then be transcribed into a written text. In all cases (including your questionnaire responses), your responses will be anonymised: you will be assigned a code, under which your responses will be represented rather than your name. Names will only be recorded to ensure consistency of data collation, but will not be associated with your responses. Findings will only be used for this project and the final document that results; data, which will be stored securely and confidentially, will not be used elsewhere or for any other purposes.

please turn over...

If you choose to participate in this study, you are giving your consent for your responses to be recorded and used in the final document. You may, however, withdraw from the study at any time without negative consequences and without giving a reason; you may still participate in the workshop after withdrawing. You may also ask for your responses to be deleted from the record.

You will also be photographed or audio recorded. If you are a composer, your score may be retained and possibly extracted for future documents. You will be fully credited if your score is used. If you would prefer to opt out of photography or audio recording, you may do so at any time and your image in any photographs will be blurred, or the recording will not be used and will be disposed of (regardless of whether you are a performer or composer). (Please see **Benefits and risks**, below.)

Benefits and risks:

Early stages such as this will have a direct influence on rehearsals to follow. You may be present in subsequent rehearsals, in which ideas that result from our conversation are tested. You will also have the opportunity to reflect on a style of choral singing that may be new to you. You will be playing an active role in a study on a field that is relatively new, and will have the opportunity to develop your own practice in that field.

There are no significant risks to taking part in this study. Your responses will remain anonymous. I may have a relationship with you as a conductor or BCU lecturer, but I have an ethical obligation to ensure that your responses have no negative bearing on my interaction with you in those situations. You have been paid for your involvement as signers in this project, but your payment is not contingent on your participation in the study.

Thank you for your time!

Consent form

By signing below, you confirm the following:

1. You have read the attached information sheet and understand it completely; you have been given the opportunity to ask any questions about the project and this phase in it.
2. You understand that your participation is voluntary, and you are free to withdraw at any time.
3. You understand that your responses will be recorded and anonymised, as described in the attached information sheet.
4. You give consent to be photographed or filmed during the workshops, and understand that you may opt out at any time and your image will be blurred, or the recording in question will not be used and will be destroyed (please opt out by informing Daniel Galbreath by email or in person).
5. If you are a composer, you consent to your score being retained and possibly extracted for future documents, and understand that you may opt out of this at any time and your score will be neither retained nor used. You understand that you will be credited if it is used.
6. You understand that your responses will be kept secure and confidential.
7. You agree to take part in the study as outlined to you.

Name of participant

Date

Signature of participant

Name of researcher

Date

Signature of researcher

You should keep one copy of this form. Another will be kept securely by the researcher.

Stage 3: Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

These questions are a follow-up to the previous questionnaire. This does not mean you need to have filled that questionnaire out, however. Each answer is deliberately open-ended; please write as much or as little as you would like.

Section 1. Basic Information

Name *(this will be replaced by a code if you are quoted)*

Section 2. Reflection

1. Tell me about the physicality of these performances, and how it impacted you *and* the group (or how you felt within the group).

2. What difficulties did you run up against, and what did you use to overcome them?

A4: Interview Guide, following VN3 (Ikon Project)

Interviews occurred during week commencing 30/05/16

- Thanks, consent and anonymity, going to record – I promise you get used to it – etc.
 - Talking about my piece – but if you hated it, that's fine! this was an experiment, not a composition.
1. Will you walk me through this score (my piece), and what you did in the performance?
You can offer any details you like.
 2. Can you talk about learning this score?
 - a. How did you read the score?
 - b. How would *you* explain this piece so that others could perform it?
 3. Tell me about how much freedom you felt during any of the scores.
 - a. How did you decide just how free to be?
 - b. How did you balance freedom and what you read in the score?
 - c. ...and what composers said?
 - d. ...what others did? Did the choir make you feel more or less free?
 - i. What other effects did other signers have on you?
 - e. ...and rehearsal – did rehearsing make you feel more or less free?
 - f. Did these *open up* freedom?
 - g. How creative did you feel?
 4. How did the pieces *feel*, as a singer?
 - a. How did you, vocally, as a singer, get a feel for the pieces?
 5. Any other thoughts you had on working with the composers?
 6. ...on the ensemble?
 7. ...on working with me as a conductor?
 8. ...on movement, and how it impacted you?
 9. Anything else that stuck out, or that you'd like to ask?

A5: CS2 Data Collection Instrument

Daniel Galbreath
 Birmingham Conservatoire
 Birmingham City University
 daniel.galbreath@mail.bcu.ac.uk
 07460 881714

Workshops: THE IMPROVISING CHOIR Information sheet for participants

You are being asked to take part in a workshop and research study. Before you agree to take part, it is important for you to understand why the research is being done and what it will involve. If anything is unclear, please ask any questions either in person or via email.

I am conducting research into singers' and composers' experiences during the creation, rehearsal and/or performance of aleatorism. 'Aleatorism' refers here to any instance where singers have the opportunity to sing more freely or independently than they would in a 'traditional' score. The final result of this project will be a document (a PhD thesis) that expands the understanding of the practice and composition of choral aleatorism, and potential published articles and conference presentations.

Confidentiality and voluntary involvement:

- **Audio and video of workshops:** There is an 'opt out' policy, which means that by participating in this workshop you give consent for this documentation to be used for research purposes. If you would prefer not to be recorded, please inform me, and I will arrange for you to sit out when portions are being recorded.
- **Interviews and questionnaires:** I will record interviews. Interview transcripts, along with questionnaire responses, will be used in a final thesis and potential additional papers for publication or presentation.
- *ALL responses will be anonymised;* names will only be recorded to ensure consistency of data collation; responses will be kept secure and confidential.

If you agree to participate in this study, you are giving your consent for your responses to be recorded and used in the final documents. You may, however, withdraw from the workshop at any time without negative consequences and without giving a reason. Where possible, your contributions to recordings will be deleted. You may also ask for your questionnaire or interview responses be deleted from the record, also negative consequences or giving a reason. (Please see **Benefits and risks.**)

Benefits and risks:

This workshop may introduce you to a style of choral singing that may be new to you. It may also help you re-examine 'traditional' choral singing. You will be playing an active role in a study on a field that is relatively new, and will have the opportunity to develop your own practice in that field.

There are no significant risks to taking part in this study. Your responses will remain anonymous. I may have a relationship with you as a conductor or BCU lecturer; I have an ethical obligation to ensure that your responses have no negative bearing on my interaction with you in those situations.

Thank you for your time!

The Improvising Choir: Consent form
for interviewees and questionnaire respondents

RESEARCH CONSENT FORM

Please read and complete this form carefully. If you are willing to participate in this study, ring the appropriate responses and sign and date the declaration at the end. If you do not understand anything and would like more information, please ask.

- I have had the research satisfactorily explained to me in verbal and / or written form by the researcher. **YES / NO**
- I understand that the research will involve: workshops on contemporary choral music; video and audio recordings of rehearsals; audio recordings of interviews, which will be transcribed into written form; questionnaires. **YES / NO**
- I understand that I may withdraw from this study at any time without having to give an explanation. **YES / NO**
- I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. **YES / NO**
- I understand that any audiotape or video material of me will be used solely for research purposes and will be destroyed on completion of your research. **YES / NO**
- I understand that Daniel Galbreath will be discussing the progress of his research with others. **YES / NO**

I freely give my consent to participate in this research study and have been given a copy of this form for my own information.

Signature:

.....

Date:

.....

Workshops: THE IMPROVISING CHOIR
Questionnaire
[NAME OF CHOIR]

Please answer the following in as much detail as you would like.

1. General information (*please feel free to leave any spaces blank; your name is requested only for record keeping purposes, and your responses will be anonymized in any publications or presentations.*)

Name:

Age:

Gender:

Music experience:

2. What are some general impressions you have after the Improvising Choir workshops?

3. Please pick 3 or 4 moments where you were aware of making a decision (of any kind) during these pieces; who or what influenced your decision?

4. Please tell me about how you felt physically during these performances. How did it feel to sing the works? How did it feel in relation to others in the room? To the sounds you experienced?

A6: Huddersfield Contemporary Music Festival Participation

Daniel Galbreath
 Birmingham Conservatoire
 Birmingham City University
daniel.galbreath@mail.bcu.ac.uk
 07460 881714

HCMF, 25–26 November 2016 Information sheet for participants

You are being asked to take part in a research study. Before you agree to take part, it is important for you to understand why the research is being done and what it will involve. If anything is unclear, please ask any questions either in person or via email.

The aims and process of this project:

I am conducting research into singers' and composers' experiences during the creation, rehearsal and/or performance of aleatorism. 'Aleatorism' refers here to any instance where singers have the opportunity to sing more freely or independently than they would in a 'traditional' score. The final result of this project will be a document (a PhD thesis) that expands the understanding of the practice and composition of choral aleatorism, and potential published articles and conference presentations.

Confidentiality and voluntary involvement:

I will make audio and video recordings during rehearsal and performance at HCMF, and subsequent interviews, which will then be transcribed into a written text and analysis. In all cases, your responses will be anonymized; names will only be recorded to ensure consistency of data collation. Findings will only be used for this project and the final document that results; data, which will be stored securely and confidentially, will not be used elsewhere or for any other purposes.

If you agree to participate in this study, you are giving your consent for your responses to be recorded and used in the final document. You may, however, withdraw from the study at any time without negative consequences and without giving a reason. You may also ask for your responses to be deleted from the record. Recording will then not be used, and will be disposed of. (Please see **Benefits and risks.**)

Benefits and risks:

This work will have a direct influence on rehearsals to follow. You may be present in subsequent rehearsals, in which ideas that result from our conversation are tested. You will also have the opportunity to reflect on a style of choral singing that may be new to you. You will be playing an active role in a study on a field that is relatively new, and will have the opportunity to develop your own practice in that field.

There are no significant risks to taking part in this study. Your responses will remain anonymous. I may have a relationship with you as a conductor or BCU lecturer; I have an ethical obligation to ensure that your responses have no negative bearing on my interaction with you in those situations.

Thank you for your time!

Consent form

By signing below, you confirm the following:

1. You have read the attached information sheet and understand it completely; you have been given the opportunity to ask any questions about the project and this phase in it.
2. You understand that your participation is voluntary, and you are free to withdraw at any time.
3. You understand that your responses and performances will be recorded and anonymised, as described in the attached information sheet.
4. You give consent to be recorded during rehearsal, performance, and interviews, and understand that you may opt out at any time and the recording in question will not be used and will be destroyed (please opt out by informing Daniel Galbreath by email or in person).
5. You understand that your responses will be kept secure and confidential.
6. You agree to take part in the study as outlined to you.

Name of participant

Date

Signature of participant

Name of researcher

Date

Signature of researcher

You should keep one copy of this form. Another will be kept securely by the researcher.

Appendix B: Representative Examples of Raw Data

This Appendix presents two filled-out questionnaires from VN1 and VN2, sample interview transcripts from VN3, and one questionnaire response from each CS2 event. It also includes transcriptions of discussions that occurred during VN3 rehearsals, interview notes from interviews with two singers following the Huddersfield Contemporary Music Festival performance of *Tender Buttons*, and two sample memos. Two responses are included from the same singer – VN1.5 and VN2.5 – even though the latter was not completely answered; both responses were determined as worthy of inclusion because of the singer’s background and perspectives. These are also the two responses through which the process of coding is demonstrated (see Appendix C).

For reasons of spacing and to make formatting slightly more uniform, all responses have been typeset, or re-typeset. Texts have, however, only been lightly edited for clarity. Excess material has been deleted, including headers, and some instructions already provided fully in Appendix A. The full text of each question prompt has, however, been left intact to act as a reminder.

B1: VN1 Sample Questionnaire Response 1: VN1.2

Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

Section 1. Basic Information

Name *(this will be replaced by a code if you are quoted)*

██████████

Course, year, and specialism (eg MMus, 1, voice) *(if you are a student)*

BMus(hons), 3, voice

Please briefly describe your singing background and experience.

Studies singing since I was 9, taken part in county choirs and national. Been at the Conservatoire for three years taking part in choral and operatic performance

Please discuss any contemporary vocal experience you have, especially any that included some form of aleatorism.

I have been singing with Via Nova for 2 and a bit years. Working on pieces with via nova and recently CoMA, some composed on the day via workshops and some previously composed which have included aleatorism.

Section 2. Reflection

1. Please discuss your feelings towards the pieces we rehearsed and performed for this workshop.

Your comments might include descriptions of the music, reflections on how we rehearsed and performed it, or anything else about your relationship with, experience of, or thoughts and feelings toward the aleatorism in all pieces. If a comment pertains to a particular piece, please mention it.

The performance of the piece always feels like the first time we have properly given the piece a go, as it is when we really push the length of the aleatorism. But the longer it is left the more perceptive it can become. And the sound begins to go through stages which are completely unplanned but can then effect the next section of the piece. So even if the aleatoric section are only briefly practised in rehearsals you still hear the effects and emotions of the music however when left for longer periods of freedom it allows the music to really build itself which is a really interesting thing to be part of as a performer!

2. Please reflect on the composers we collaborated with during the workshop.

What was your perception and experience of them as present, involved composers? How would you describe your encounter with them via their music? You may mention them by name; I will replace their names with a code if you are quoted.

Both composers I worked with in a smaller group responded well to our feedback, however the pieces were very stylistically different, with one looking at an echo effects that may normally be considered when doing electronic and the other composer using chordal movement and traditional poems. Both ideas reflected the text which helps the performer engage with the music they are creating. It was a very brief encounter but workshopping an idea for composition with them really reveals a lot about their personality with one begin very laid back and other being reasonably serious (about her music at least).

3. Please describe how you interacted with other parties in the room during aleatorism, and your feelings towards them?

'Other parties' may include other singers, the audience, composers, composition mentors, passers-by, etc. (excluding the conductor, who you will be asked about later). Your interaction may have been only brief or one-sided; it may have been only an awareness.

The aleatorism in the music really makes you connect with the other performers. There were a few pieces where we spread around the room in groups and during these you almost became one cell of sound and didn't really acknowledge the other sounds. However, I found when stood by myself not in choir formation I was very aware of where and what the other performers were doing, possibly as aleatorism is still a relatively new thing to me and I wasn't convinced by what I was doing.

When singing in normal formation I found myself generally connecting a lot easier with the other performers as you begin to bounce off one another with energy or new momentum. You hear a version that hasn't been sung before and that sparks an idea in your own mind, especially after the section has been going for a while and you were starting to feel a bit stuck on your previous idea.

I find generally with contemporary music the composer is easier to connect to, because it sometimes needs the thought 'What is he/she trying to say here' in order to properly get your head around a piece and what may be many by an extended technique or some other factor of the music. And I think this is the same with aleatoric music, it can sometimes sound so different as a performer and audience member that you have to think 'what is the composer trying to state with this'

I also became more aware of the audiences' reaction. This could be because we are in a much less formal situation so it is easier to see their faces. But mainly I think for me it is because I am still a bit unsure about what I am going to do next and therefore their reaction is also playing on my mind. However, it is also brilliant when you see an audience's properly engaging when performing aleatoric music as it shows that the way you interoperate the instructions is relatable to them as well.

4. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.

This may include any technical or expressive aspects, what you heard, how you felt in a more general sense, etc.

I found it very mentally draining. In the workshopping of one particular piece we had to listen and sing at the same time, which after a while became a lot harder than it first seemed. Also, most of the music we sang wasn't tonal and until the point where I my phone and earphones for a pitch guide the mental work behind pitching off individual voices and depending on that one other person was quite difficult. In a key it is the music easier to presume a note, however it could be said that for some of the workshopped music that is the wrong note had been sung then it wouldn't have been noticeable, but it could have ruined the desired affect when we have purposefully been restrained to certain chords. It also felt more obvious to me as to when I was using my full body and properly connecting to my voice, as the music could be quite demanding, however that was only on some pieces.

B2: VN1 Sample Questionnaire Response 2: VN1.5

Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

Section 1. Basic Information
<p>Name <i>(this will be replaced by a code if you are quoted)</i></p> <p>██████████</p>
<p>Course, year, and specialism (eg MMus, 1, voice) <i>(if you are a student)</i></p> <p>MMus, 2, Voice</p>
<p>Please briefly describe your singing background and experience.</p> <p>I began singing at 17, I had previous been a first study brass player. My main involvement with singing was, at first, in choirs and ensembles, and my experience grew gradually over time to include singing in examinations at both Sixth form and university for my undergraduate degree (Music, Uni. of Nottingham). I am now studying Vocal Performance at Birmingham conservatoire with an aim to establish myself as a full-time professional singer. My goal is to be proficient in all genres of classical music; choral, recital (art song or otherwise), oratorio, and opera. In the latter two I have gained much experience over the last two years in Birmingham, nearly all of which has been extracurricular (and professional). I am also a Lay Clerk at St Philip's Cathedral, this is my chief and most reliable musical income, I sing four services a week, and many more during busy periods (Easter, Christmas, etc.).</p>
<p>Please discuss any contemporary vocal experience you have, especially any that included some form of aleatorism.</p> <p>Without the contemporary choir Via Nova I would not have had much contemporary choral experience. Rarely have I had an opportunity to sing work by living composers, never mind those that are interested in extended vocal techniques and the expansion of what we can define as 'singing.' With respect to aleatorism, I am a consummate amateur. Other than in some devised theatre pieces (Nottingham), I have never had the opportunity to produce something entirely improvisatory.</p>
Section 2. Reflection
<p>1. Please discuss your feelings towards the pieces we rehearsed and performed for this workshop.</p> <p><i>Your comments might include descriptions of the music, reflections on how we rehearsed and performed it, or anything else about your relationship with, experience of, or thoughts and feelings toward the aleatorism in all pieces. If a comment pertains to a particular piece, please mention it.</i></p>

It was a completely new experience for me, and one I enjoyed very much. Perhaps the most fulfilling part of the day was the composers' willingness to be involved in the singers' experience of the works. This meant that the pieces, whilst quite overtly conceptual, were very realistic and completely performable, almost without fail. The main interest for me was the constraints put of the aleatory elements of the works. This could be in given reciting pitches, or in small themes that were outlined in the score; meaning that the work as a whole was completely reliant on the ideas of the musicians performing it, but still had idiosyncratic compositional features that were (often deceptively clearly) linked to the composer(s). Thus, everybody had the opportunity to create something within a work, but the composers' intention could still, in theory, be realised.

There was also a much more traditionally notated and structured work, Basho's Journey, that (for me in any case) was the most relatable. The textures used in the vocal writing was not hugely experimental, but the writing was done in such a way that the result was very successful. In terms of extended techniques, this piece was almost completely lacking (save a few glissandi towards the end of the final movement). However, the textures of the voice were very well exploited harmonically, and the way in which the vocal parts interacted made the piece not only very interested to perform but (I would imagine) very pleasing to hear.

My favourite piece of the evening was [REDACTED]'s *Delays*. This was exactly the kind of work that this workshop was designed to create; something entirely conceptual, and always changing (especially thanks to the idea of altering the text to keep the information up to date). The facility to produce the reverb effect [REDACTED] desired was not simple, there were often times where one would have to be singing the beginning of a theme whilst listening to its ending, and still manage to repeat it entirely. This wasn't completely successful in performance, but with more work I believe it certainly could be.

2. Please reflect on the composers we collaborated with during the workshop.

What was your perception and experience of them as present, involved composers? How would you describe your encounter with them via their music? You may mention them by name; I will replace their names with a code if you are quoted.

The composers were fantastic throughout the process, most impressive in their willingness to listen to singers, and in understanding what is (and isn't) practical and possible. This is especially impressive considering singers' notorious reputation within the musical community...

As stated above, I thoroughly enjoyed being able to create during a performance, and to do so still with a very clear idea of the composer's original intention or concept. I believe it was a healthy relationship between both parties, the composers were malleable, when needs be, but held their ground on certain, less flexible areas of the compositional process. For the most part, the composers were also very fair, they appreciated the minimal amount

of rehearsal time (whether that is a strict need for aleatory music or not is another matter entirely...) and came up with simple, and highly refined concepts that the singers could grasp immediately. This meant that there was little need for worrying too much about notes, or rhythms, and the whole event progressed much more quickly.

There were two pieces though, that didn't quite tap into the ethos of this however. One was a large scale (which in itself is difficult with a choir of twelve singers) polytonal piece that need a lot more rehearsal to become successful, not to mention a substantial programme note. And the other, which was probably my second favourite piece, was based on the building of a whole tone scale—this piece had the potential to work fantastically well, it didn't really include many aleatory features, it didn't explore extended vocal techniques (other than the slightly superimposed microtonal singing of a D), but yet the textural and harmonic language was thoroughly interesting, and should definitely be revisited. It was a true challenge for the choir, but then, wasn't that the point of the day?

3. Please describe how you interacted with other parties in the room during aleatorism, and your feelings towards them?

'Other parties' may include other singers, the audience, composers, composition mentors, passers-by, etc. (excluding the conductor, who you will be asked about later). Your interaction may have been only brief or one-sided; it may have been only an awareness.

There were some works in which strict interaction was wholly necessary, like Delays, or Basho's Journey, both in completely different ways. However, it was in Percy Pursglove's piece, [title], that I really felt that I was engaging with the other performers in interesting and unprescribed ways.

The cells that he had created (based on a clock-face-like graphic score) were repeated twice, and interrupted occasionally by a tutti signalled by the conductor. Whilst performing, I was acutely aware of what nearly every other performer was doing, especially those improvising. It was a thoroughly engaging experience, and one that I'm sure most of us must have been aware of. This may have just been a nervous worry that I may be left alone to sing the last half dozen cells on my own (if strictly following instructions!), thus I was making sure I was always ahead of *someone*. But, I hope that I have more gall than that, and that I was in fact just enjoying everyone else interpretation of the individual cells, and perhaps adjusting my interpretation to align with (or oppose) theirs.

4. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.

This may include any technical or expressive aspects, what you heard, how you felt in a more general sense, etc.

The rehearsal process was incredibly mellow. Having been a choral singer for all of my adult life, I have had constant worries about pitches, rhythms, text, and blend during both rehearsal and performance—either individually or all at once. However, in this environment (for the most part, with the exception of *Basho*) none of these typical issues were raised much at all. Essentially, it was the goal of a group of singers and composers to work together to produce something new, and that was not only very fulfilling, but also quite exciting.

Technically there was nothing outlandish (excepting [REDACTED]'s high Cs and moans in *Delays*), and given more time I would have liked to explore even further extended techniques—playing with overtones/subharmonics, using our mouths, lips, and nasal resonance in different ways, or exploring how the false folds could be used to cover the sound (in a health way), or really any form of throat singing.

I don't think any of these techniques should have been shoehorned into any of the pieces we performed, as none of them really demanded it. But, regardless and exploration of all the new and exciting things voices can do would be fantastic, especially in such an open and supportive performance environment.

B3: VN2 Sample Questionnaire Response 1: VN2.5

Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

These questions are a follow-up to the previous questionnaire. This does not mean you need to have filled that questionnaire out, however. Each answer is deliberately open-ended; please write as much or as little as you would like.

Section 1. Basic Information

Name *(this will be replaced by a code if you are quoted)*

██████████

Section 2. Reflection

1a. Please discuss any general feelings towards the pieces we rehearsed and performed for this workshop.

More than anything, I was really impressed with the variety of compositional method used in this project. The composers had really thought about their desired intentions, and that preparation and commitment shined in the final result.

1b. How well do you think you adhered to the composers' intentions? How did you come to understand those intentions?

For the most part (barring the odd error) I felt that both I as an individual and the choir as a whole managed to recreate most of what the composer was looking for in each instance. This was thanks to their ability to write wholly performable music, and their hands-on involvement in the worshipping/rehearsal process. In fact, I believe the choir, given slightly preparation time, could have only improved on the interpretation of the works, especially in the more improvisatory sections. It was a new world for most of the signers (myself included), in terms of exploring jazz, and it made for exciting music-making.

2a. Please reflect generally on the composers we collaborated with during the workshop.

As before, for the most part the composers really gave themselves to the project, and delivered fantastic pieces of music. This is both from a choral and instrumental perspective in my opinion.

There were times when I felt that some could have been more committed to working with the singers, and understanding that writing for the voice is a completely different skill to writing

for a horn. There was some distinctly instrumental writing, that felt a touch superimposed on to the voice parts. It worked, however, so my reservations are somewhat auxiliary.

2b. How was working with these composers different to your experience during the Frontiers event (if you were involved)?

Very different, mainly because jazz musicians are just built to work differently. There was an almost polar opposite approach in fact. The 'classical' composers seemed very concept lead, and the ideas and intentions for the works were distilled from the very beginning of the process. This sometimes meant that the execution of the work suffered, as more time was spent on developing the concept than the substance. The 'jazzers' however, seemed to approach from more active a perspective. Get involved, try things out, experiment, and then develop. This meant that (in general) the execution was to a high standard, but sometimes the concepts felt a little less firmly grounded.

3a. Please describe how you interacted with the conductor.

In a different way to the previous project. This felt very 'band' led. That's not necessarily a good or a bad thing. It felt like the composers often wished to take more control of their piece, rather than delegate to the conductor (another polar comparison with the classical composers).

3b. ...how you interacted with other singers.

As always; it didn't seem to make an enormous difference to the relationships within the choir. Certainly there were fewer singers, and that meant that every part was quite exposed, but in a small chamber choir we expect that anyway, so it's nothing unusual. Even in the improvisatory sections, it seemed to still feel relatively constrained.

We definitely weren't losing our free jazz virginity.

3c. ... how you interacted with instrumentalists.

Working within a rhythm section is great. It really adds to the stability of a choir, just like the use of chamber organ in more regularly performed renaissance repertoire.

Working with the soloists is a little different because, especially during improvisation, the singers were definitely trying to take their cues from the lead soloist, if there was one. I'm not entirely sure this was successful in performance, but it was interesting nonetheless.

4a. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.

[unanswered]

4b. What challenges did you face vocally and musically? What solutions (if any) did you use to overcome them?

[unanswered]

B4: VN2 Sample Questionnaire Response 2: VN2.9

Via Nova Case Study
QUESTIONNAIRE no. 1, SINGERS

These questions are a follow-up to the previous questionnaire. This does not mean you need to have filled that questionnaire out, however. Each answer is deliberately open-ended; please write as much or as little as you would like.

Section 1. Basic Information

Name *(this will be replaced by a code if you are quoted)*

██████████

Section 2. Reflection

1a. Please discuss any general feelings towards the pieces we rehearsed and performed for this workshop.

It was really interesting how different all the pieces were. Despite all being in a very similar tempo, there was a huge range of emotion in the pieces, going through sacred, Jazz and even barbershop styles.

Personally, I really enjoyed performing 'The Trees'. It had a wonderfully choral/barbershop feel to the opening, with a huge improvisatory section in the middle, growing into a hugely rhythmical and exciting end section. I felt we got to use our voices in more varied ways in this piece.

It was great to work on the Pursglove again. This time round, I found a lot more depth to the words and music and certainly felt a little more comfortable performing it.

1b. How well do you think you adhered to the composers' intentions? How did you come to understand those intentions?

All the scores had clear directions, and when speaking to the composers through rehearsals, most explained their reasonings for such markings or directions.

2a. Please reflect generally on the composers we collaborated with during the workshop.

Generally, the composers were very easy to work with. They were keen to learn about the vocal aspects of the pieces and always very open to discussion for changes, should they be needed.

2b. How was working with these composers different to your experience during the Frontiers event (if you were involved)?

The choir was a lot less involved in the making of the pieces for the festival of improvisation. At the Frontiers event we worked in groups with the composers to give inspiration or guidance, whereas for this project we were given the music beforehand.

3a. Please describe how you interacted with the conductor.

Although Aleatorism gives a certain amount of freedom to the performer, we were still dependant on the conductor to guide us through sections of the pieces, ensuring we all entered into ensemble/unison parts together.

3b. ...how you interacted with other singers.

I think *The Trees and The Stream* required a lot more awareness about the other noises around us as they moved in very clear sections. We regularly had to go from aleatoric passages into [discontinued].

In the Pursglove, I had to pay particular attention when singing a duet above the improvised noises, as we were generally left to sing that section in our own time.

3c. ... how you interacted with instrumentalists.

Sometimes it was extremely hard to hear the sections within the instrumental parts, but this was perhaps due to not many of us being used to performing with Jazz instruments of such volume. In the Pursglove, *Kyrie* and *The Trees*, it was rather important that the instrumentalists ended on the given notes/keys, in order to help the vocalists regain pitch after the sound clusters.

4a. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.

I've really enjoyed working in aleatoric music. The added freedom the improvisatory sections give, make me a lot more aware of my technique and performance styles, as well as honing my ensemble skills.

It's a little more nerve-wracking performing the pieces however, as it is hard to be 100% within a 12-strong ensemble as to what happens in sections. It is sometimes easier to lose focus during the sound clusters, and one lapse of concentration can destroy an entire section of a piece.

People sitting in the audience laughing doesn't really help.

4b. What challenges did you face vocally and musically? What solutions (if any) did you use to overcome them?

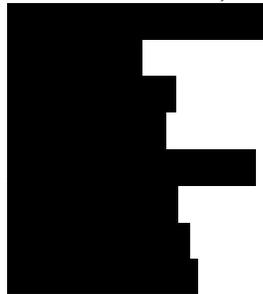
My voice was rather tired on the concert day, which meant I had to focus a lot more on solid technique in order to give a good performance. I found the music relatively simple to learn, there were very little tricky time signatures, a few difficult rhythmical aspects, but the music itself was clear and precise.

The Pursglove probably gave me the hardest time, as I discovered I had learned a part slightly incorrectly, possibly due to the original printing of the score (edition 2 gave separated vocal lines). This was quickly rectified by some additional personal work.

B5: VN3 Rehearsal 2 Conversation Transcription (Ikon Project)

Via Nova @ Ikon Rehearsal 2, 23/05/16, 1800 – 2100, LR3 Conservatoire

In attendance:



[recording begins after introductions, etc., with first run of *Undismantling*: Sssses appear after ca. 20 seconds, sound more aggressive than last time, experimenting more widely (from ca. 00:30, more variety at :45); variety evens out before Kssss (1:24); Kssss gets more aggressive, extended 'k' starts moderate (1:34) and expands; Ssssses get more intense as Ks do; first [u] audible at ca. 2:17; doubles up be 2:45, [u] at 2:36; 3:00, next [u], then general waffling; last [u] at 3:30, I think; by that point, chord arrived at (minimal perception of pitch waffling, all fairly minor – not audible, the intermediary whistle-sing, nothing to get us really to u, and chord arrived at very quickly; one hanger on when 3:44 it becomes apparent that we're all together, and a few other hangers at 3:45, and a few try to sing text and progress... interrupted, 4:14:]

DG: Pause. When you're going further afield you stay on the [u] ('Oh' from someone) and you keep doing the breath-length note with [REDACTED]

[REDACTED]: Until you get...

DG: Yeah, so I'd venture, if I'm singing tenor, I'd venture out to the A, but in the same rhythm as what Soul's doing.

[REDACTED]: Is it with me, or, at that point, is it just together?

DG: Well, it's basically communal, yeah.... Go again?

[REDACTED]: Sorry, I don't think I've quite understood how...

DG: Uh, just like last time, um, you go on to the next note, but while you're still just venturing out and coming back you stay on an [u] ([REDACTED]: okay) and you're doing the same sort of rhythm as everybody else ([REDACTED]: okay) You just have to add a dissonance basically. ([REDACTED]: (joking) I'm already a step ahead...)

[I just give pitches, no prompt, and a gesture, and we go from where we left off (4:55, so all timing here are given *as they appear in Audacity*; 40 seconds should be subtracted to get actual durations); chords better in tune!; onsets not clear (one person laughs slightly at this); onsets get better by 5:24; more diss. at 5:39, and everyone wavers!; beginning here, but I recall elsewhere (later), there's an intake then a hold before the note comes in; volumes differ depending on what's happening 'harmonically', though not really audibly; different people 'lead' for a few chords at a time (usually me, [REDACTED], or [REDACTED]); all happened to be on [REDACTED] when [REDACTED] brings in tune at 7:38; people unsure when to enter on next [u], as [REDACTED]'s *not* doing what [REDACTED] had done before, which is to say, keeping the full phrase in line with the breath-phrases (so I sing more strongly); [REDACTED] enters, then me, by 8:02; we also, at this point, align on one breath; the one at 8:18 when I think we're all together is much slower, each seeming to wait for the syllable to change; after

that, consonant clearer (largely from me, to align); the one at 8:44 has us doing a little dip before very clear consonants, to further consolidate; 8:55, ■■■ (I believe) decides to hold last note and cue dissolve; dissolve happens almost immediately, and occurs first through a widespread dissolution of timing; 9:20 roughly I begin repeating Lux to edge that in; no real experimentation with pitch; after that, we begin *dim*, which lasts till 10:26 (so a perf. of about 9:45, give or take)]; not a great deal of wallowing around in the lower reaches of the voice's capacity to produce sound; mic too close to me, so I can more hear my decisions than theirs;]

[Few comments and chat, then very quickly on to:]

DG: A few notes, just in terms of pacing... ■■■, I think you can get to the... I think basically getting to the [u] can happen a little bit faster. (■■■: How - Oh! Faster!) Because [...] like we were talking about when we talked through the piece [previously, just to get her thoughts on it; see note in memo about our conversation] in a way that's just sort of a build-up, it's not *that* interesting, it's just a way for us to build up to it [unwise self-deprecation!] Um, maybe not a lot faster, but just a little bit to feel that pacing. Ummm... That went well... When we get to just holding the [u] together [...] don't be afraid to sing it, you know, well, it doesn't have to be too timid and reserved; Um, we stopped and talked about how you progress onto the next note – is everybody happy with that, kind of make sense now? [sounds of assent while I plough on]. Don't be afraid to bring out notes (more positively) – you know, if you have a dissonance, you know, if you want to bring out that E against the F Major (to ■■■, no doubt) or something... [assent, some mild murmuring incl. from me to tenors] if you want to bring out any note, it can be in the home triad or, or anything else do that [...] let stuff come out of that. [Apologise for a typo.] Other than that, I think the sung stuff can last a little bit longer, so don't be afraid to sing (sings tune of *lux*) like, 13 times in a row if you want; don't feel like you have to start venturing out too soon – really just, just feel the process, I think, and *feel* when things are paced – it was about the right length, it can be a skosh longer, especially if ■■■ shortens that first bit. Um, everybody happy with that? [general assent]

■■■: Just wanted to (me: yeah) when we're on our A's, how do we get to our next note, do we step or do we slide [referring to when ■■■ holds their A]

DG: How do you get there (in casual, pretty understated tone)?

■■■: How'd I get there? (DG: yeah) I'd sung a B, then a C

DG: [nonsense... then] Okay, how'd everybody else do it, how'd you eventually find your way? 'Cause you were doing sort of non-pitched stuff then doing pitched stuff, how do you find your way there?

■■■: I sort of gradually [...] slid down, using the dissonances while I was going down as well.

DG: So you do like a systematic working down

■■■: Yeah, ish, but not necessarily in actual notes if that makes sense.

DG: Yeah

■■■: Just sort of, going through quarter tones et cetera.

DG: Yeah. What'd you do, ■■■?

■■■: Sang a third.

[lots of laughter, ■■■: I'm not gonna lie, I just sang a third!]

DG: Did you just go right in for the pitch (■■■: Yeah) You didn't waffle around? Who waffled around? (■■■: I waffled around then...)

■■■: I waffled then just went for the first note... (■■■: assents)

DG: 'Cause that's where the voice stuff starts, you can do a bit more waffling, what'd you do...

█: I sort of attempted to, um, go up [...] do the reverse of what Tim did. (DG: uh huh) Didn't really go very well because I couldn't voice it properly, and then jumped to the [?] [laughs]

DG: Okay, so you sang an F first, then to the C.

█: That's all right!

DG: Yeah it's in the triad.

█: If you get the F then just go up.

DG: What were you doing while you were waffling? Were you listening to the A and pitching it in your head, or were you... did you just kind of waffle around until you found it what'd you do there?

█: I was just listening around for the dissonances, sort of trying to create as much pain in my ears as I could [laughs] till I was in the [or 'found the'] right place.

DG: But how did you [...] you just pain pain pain pain and then...

█ I started on the A [me confirming an impression of octave I'd heard] [...] I slid underneath ever so slightly and sort of kept going when I could hear

DG: [compliment █ for keeping the A in spite of that slide] Cool, any other [questions comments etc.] (█ likes piece)

█ says she 'physically can't whistle', worried she'd skipped a step, so I clarify that it can be just a breathy whistle-esque sound; █ makes technical clarification: 'notion of the air going through' 'it's not the actual whistle'; we all try things]

Ends at just after 15:00

From 2nd file (after/during break, when I'd warned them I'd have a few questions, and any who wanted could stick around and chat):

DG: So, just a few questions [then have to find them...] Okay, so, [...] all these scores use different types of notation, and rely on notation in different ways. Can you guys just talk about – how are you *reading* your scores? What are you doing to actually read your scores, and use the notation?

[thinking pause]

█: I think you've got to me more aware (sound of assent) of what – especially in these pieces – 'cause not only are we moving [in number?], you've got to be a lot more perceptive to what you've just sung, and what you're about to sing.

DG: Is that just in █'s piece [which calls for that sort of thing, the back-and-forth]?

█: No I think it's in all of them (me: mm hmm) because, like, with James's piece where you have [chatter as she arrives at 'silence', where there's a 'physical silence', i.e. the T sound] but throughout that time you've still got to be thinking about that note you should be trying, that we *would* be prepared should we [?]

█: And the same with the noises, just to make sure that they're all kind of in the same melodic line

DG: yeah, you're just sort of thinking *out* from where you are.

█: Yeah not like doing [...] quite a lot of the noises can be pitched, kind of pitched, but not, like, not actually pitched, but [...] making sure it's not something really obscure, like within the (me: interesting)

■: I'm finding with the scores I'm having to strategise a lot more of where to look forward in a different way to I would do a normal choral score (agreement) having to select different bits that I need to go back to and...

■: It's not straightforward reading is it, sometimes you're missing out whole bars

DG: I mean, a lot of the instructions for these pieces just because of how we put them together, have been verbal...[...] it's a nebulous question, but I'm just curious, like, how are you guys, as singers, approaching having this notation in front of you, with verbal instructions. *Or* when it's all [...] literally just verbal instructions in my piece, it's all just written out ... do you have any thoughts on that?

■: I think having it written out, for your piece, actually, makes your piece less longer, because whilst we're doing it, we're reading [jollity and commiserative laughter] what the hell is coming up next! [...]

DG: Okay, so ■'s piece, where he just took the notes, and made a piece [...] not completely unrelated, but a completely different piece to what's written, out of that...

■[?]: It's a nightmare to read, like, it's...

DG: Is that because you're thinking other stuff...

■: It's because I'm thinking 'am I going forwards am I going backwards' am I going short long short long [etc., also (■: Is Daniel [...]) and it's just like, I don't know.

■: It's a mind fuck.

[laughter and ■: yeah]

DG: Do you think if you had something [hesitates] memorised, and I was doing the same forward forklift, backlift,

■: I think you'd have to know the piece very well (■: yeah) and you'd have to be able to sing it through forwards and backwards, I think you'd have to learn almost two pieces

■: Even then it's...

■: [over ■] it's another layer of [?] (assent)

TE: It would be next to impossible to do [...] it from memory [...]

DG: So [...] despite the fact that you have this visual thing in front of you and these verbal instructions [meaning like those from ■, etc.] and *me*, like how are you balancing those? 'Cause you've got visual instructions from me, visual instructions from the score, verbal instructions going in your head from ■ or whoever,

■: I think, the way you sort of strategise it in your head [...] figure out first of all what you're gonna do next, then look where you are in the score, and then think 'right, so you're going on to the next one', then you figure out your pitch, then you back up, cause once you have one note memorised [DG yeah] you just memorise a note, back up waiting for the cue and then

DG: Did you guys all have a similar sort of [...]

■: Yeah, 'cause at the end of the day, it doesn't *overly* matter if you get the wrong length of – like, it *does*, but it's not –

■: The whole piece isn't going to fall into chaos [laughter]

■: Like, it's gonna happen anyway, so, it's [...]

DG: Did you [...] was there a point at which you thought, 'okay, I see how this works, gonna do this, then this, then this,' did you become conscious, or are you... are you becoming conscious of it

■: I was very aware [...] 'cause I started as the B in ■'s piece [...] I was very aware that no one had started yet [...] it wasn't like a random, it wasn't a straight-on decision, I was making

sure that each time I was thinking about doing it, nobody else was actually starting it, because obviously when someone else has started it it moves onto a different section of the piece

DG: So depending on who had entered, you had a different role

[agreement from ■■■] And [... these can be critical I said, because it will make us 'all do this better in the future'], just any thoughts on this rehearsal process.

■■■: I quite liked this rehearsal process.

DG: Why?

■■■: Dunno...cause...there's the interaction, I think, between the composers and us, and then you, and then, I don't know

DG: [some aimless talking, then] We've done piece where the piece was devised for us, *with* us sort of on site, we've done pieces where it often had aleatorism but it was *set*, like, it was a set score, sometimes an old – oldish – piece. [■■■ mentions jazz] Or the jazz composers which – they were there, the piece was pretty well set in stone, there wasn't a lot of flexibility. This has been kind of an intermediary, to [meaning 'in'] my interpretation, [...] they've been here, teaching us the pieces, there's been some back and forth – but the pieces I did ask them to write their pieces ahead of time. I mean, especially those of you who've done previous things, how's that felt? Or [...] even if you haven't done previous things, just how has it felt interacting with the composers?

■■■: Well, it still felt like they knew who we were as a group enough to write something we could do, so it didn't feel like were just handed something that had nothing to do with us.

■■■: Whereas the one at the first art gallery [...] it would appear that very few of the composers actually knew how to write for...maybe singers full stop, but especially

■■■: [chimes in agreement]

■■■: but especially an ensemble like us (■■■: yeah), and so it's kind of gone from [...] all of us enjoyed the art gallery but

■■■: Yeah it was really good but

■■■: The jazz one possibly not as... personally I didn't enjoy the jazz one as much because it was so much more set in stone [...] and [...] this is a really nice intermediate.

[... nearly run over ■■■...]

■■■: I suppose it's quite nice in that these, um, ['moved around' and 'flexible'] it's almost like they've been tailored for our concert which was quite nice [...] because normally, when you change things you feel like somehow it's gonna, well you have problems that you need to fix, whereas it's been more of a...

DG: sort of building positively rather than...

■■■: Yeah yeah yeah, exactly [...] Like how can we make this better, to do this [? biscuit rappers rattling]

DG: Yeah, cool. Um, ■■■ – [jokes as my attention turns to them, ■■■ 'how are *you* feeling about this?' etc.]

■■■: I, I don't really know what to say, it all seems fairly accessible and quite, it's, from what I've experienced, and that's quite a limited, sort of experience, but um, it's all been fairly straightforward, we've been told what to do to a certain extent, so it all seems reasonably structured [...] and yet, free [...] but I don't feel particularly exposed in any of it...

DG: How are you guys feeling about being exposed? That's something that comes up a lot in this stuff.

■■■: In James's piece, um, with the bit with just me and James [JG], that felt a bit exposed ... [Jokes about ■■■, who I'd selected to be the one-to-one person in ■■■' score]

DG: [...] Any other thoughts on the rehearsal process? It can be good, bad...

█: I found the way we started rehearsals today didn't help me at all, with Gavin's piece, [...] like, trying to get us to learn that new piece of music [the chant] by memory [agreement]

GT: What's interesting is that your movement was much more secure as you went [...] the music was shot, but [...] physically, and █, considering you hadn't even learnt it with us, you were surprisingly...*with it*

█: I think we were grasping onto something [...] that we could

█: Eventually I just [...] didn't sing a lot of it, because learning by rote isn't what [I do confidently?]

DG: [explain that that wasn't the point, it was to find bits you're comfortable or uncomfortable with; then ask about anything else on the rehearsal process:]

█: I'm not sure if it's the rehearsal process, but in █'s piece, with the kind of doing a sound that doesn't actually come out, I was pretty struggling with that, because I was trying to take it really seriously, [...] every time I did that it got the point where I felt so uncomfortable that I started to laugh so – it wasn't me taking the piss, it was just –

DG: [interrupting] Can I follow that up? [...] Because I've talked about this before, what do you think about the idea of taking this stuff seriously? [...] Do you take it seriously?

[assent]

█: [annoyed during jazz concert when some girls were laughing in the audience]

DG: Luke –

█: [a bit of chatter] If we go tomorrow and people find it really funny [...] that won't really bother me – I think one of the cool things about this is that it *is* accessible to everyone, and if some people react to it differently, that's sort of quite cool, and actually [...] if something we're doing does make you laugh, that's not necessarily an issue either, [...] you just [...] go back to what you were doing [...]. I think, sort of, getting rid of that stigma, of like, everything we're doing is really serious, and really expressive, and, you know, this is what we're doing, but actually [general 'yeah's from a few of us including me]

█: Also it can be that people find stuff, something funny at the beginning, especially if it's, you know, making sounds and things, something they're not used to hearing every day, but then as it goes on [assent ...] they'll understand the piece more. I mean, [...] in my piece people might find it, especially with[?] the [funny, texted, march-ish] transition...

DG: With your piece, to be honest, I find it funnier the more I do it [... agreement, laughs] It's quite a funny piece...

█: It's[?] the transition that openly funny, as well, like [...] it's a ridiculous text, and um, and the music's pretty daft as well, you're all marching around [getting into?...] these formations. [...] It's quite funny [...] people won't necessarily laugh, also if they do laugh, it won't be unexpected. [...] But then, also, with some of the [...] actual grid sections, um, it might be that people do laugh at some of those things, like you know the first time you like struggle to get a sound out or if you [...] you never know who [in?] the audience might giggle at you going [ç...] or something. Um, but then as it goes on, it almost kind of becomes more of a struggle as it goes on, and [...] there's no way that whatever they find funny at the start they could find funny at the end. [...] Those'll be isolated sounds [...] but then it'll be part of the overall structure and the endurance of the piece that [...] they take into account, might even feel bad about finding it funny. [assent...]

█: It's like the piece we did for Percy at the other art gallery, and like, its sounds are just, so [interruption as I sort out what she referred to] [...] it's those sounds again, and it's like, actually, I don't know...

[REDACTED]: Once you get used to them they sound really –

[REDACTED]: Once you get used to it

[REDACTED]: Normal

[REDACTED]: Yeah, but initially when you first hear them, they weren't –

[REDACTED]: We were all howling, weren't we?

[close up rehearsal for timing reasons...]

B6: Sample Interview Transcript 1: VN3.2i (Ikon Project)

Via Nova @ Ikon INTERVIEWS, 01/06/16, 15:00 – 16:00, 2nd Cup on New Street

In attendance: [REDACTED] [initials used below]

(Parentheses indicate interjections by the other party; most of my ‘Mmm’s and ‘Yeah’s are omitted. [...] used for unsureness to starts of sentences or ideas; little stammers generally not notated at all, nor were most ‘erms’)

[usual preamble and pleasantries]

DG: The first thing that’s really useful to do is, will you just walk me through the piece as it happened in the performance – you know, your experience, what you heard, or how you felt – literally anything.

CS: Okay, so, started by breathing – breathing, what’s the word, not observantly, just so people could notice. [...]

DG: Did you want people to notice?

CS: Yeah, yeah I think so. And then we did like shaping the mouths – that bit went really quickly for me. Because I think in the rehearsal I took more time into that, then in the performance it was a bit kind of like, ‘oh we’re not making any noise yet’, so we kind of split it up – or that’s what was going on in *my* mind. It was all the different shapes and stuff like that, and then [doing?] the tongue around the mouth. [...] Then we started putting the air onto[under?] the sound, didn’t we. I’ve just noticed it says whistling; I don’t remember actually doing much whistling during the performance. In the rehearsal I did; I remember her doing those funny sounds that we did with the, Percy’s piece, we did that in rehearsal but I don’t think I did in the performance. [...] I remember going through it – Soul led it didn’t she, Soul led the movement through to the sung pitch.

DG: So the hiss and the tongue shapes and stuff, that didn’t really register with you much, [...]?

CS: No, I was doing that, but I was kind of just doing it and trying to make a different sound to the one I’d just done, but at the same time I was thinking ‘what stage is Soul at’, can I move on yet. Then Soul started singing the A, then I made it more kind of, I tried to find space in between; I found that the difference from unvoiced to voiced, when you can’t go back on yourself, there isn’t actually much there to play with, because obviously I skipped the whistling stage. [...]

DG: While all this is happening, how are you deciding what to do next?

CS: I could hear what you were doing, I could hear what Lucy was doing. [recalled who was in the room... remembers it being] all four voices types, ‘cause when we made the chord, it was like ‘ooo!’ [more confirmation]. So I could hear from the acoustics [...] what everyone else in the room was doing. I wouldn’t say that I immediately kind of copied what other people were doing, but I make like a mental note ‘oh they made that noise that’s quite a cool noise’, and then I would like try to find a way if I found something else on the way I would do that instead. [jokes and conversation] [...] ‘Cause once you’ve found that mouth shape, then the mouth shapes start moving anyway when you move the tongue around, so I was trying to kind of keep the mouth shape but move [inaudible] at the same time, [...] you just kind of naturally explore, without really meaning to. [...] It was cool doing different things. [...] And then we started singing.

DG: The singing took a while to get there.

CS: See I didn't think it did take that long! I thought we'd made it take longer before. But then when we came off and you said we'd been in there for 15 minutes, I was really surprised, so, maybe it was just the fact that people stood there watching me breathing, and I was a bit like, let's get this over and done with!

DG: Where were you looking during that?

CS: At [REDACTED]. [...] Me and [REDACTED] looked at each other for quite a lot of it, 'cause I remember [with notes?] we kind of looked at each other and went [makes face of shared recognition of event with imagined Lucy]. I looked at you sometimes, I looked at Soul, 'cause she's quite move-y, [searches for word, I offer 'demonstrative'], so I kind of, I didn't really look at the audience members; there was a couple stood just like kind of in front but to the left of [REDACTED] and they were watching me for quite a lot of it, so I was kind of being like 'don't make eye contact with them', 'cause that would just make me crack up or something – I wouldn't want to lose focus. So I tended to look at choir members. I didn't look down very much [...] apart from just to check the notes for the actual movement at the end.

DG: Sure. Was that the extend of your perception of, or interaction with, the audience? Did you feel the audience just through 'oh I shouldn't make eye contact with these guys who are staring –

CS: Well it wasn't that I didn't want to make eye contact with them, just, I think they were still trying to figure out what the piece, being the first one and it starting so quietly, I think they were, you know, being a bit inquisitive. [...]

DG: Did you get a feel from the audience elsewhere in the evening?

CS: Yeah. [clarification requested and given.] Of what kind of feel though? Oh, okay. During Gavin's piece I obviously was part of the audience [...] and that was funny, because I told everyone – like, I was stood with [REDACTED], and you all walked through very professionally and went to the other room, and everyone, once you'd gone through everyone kind of looked around like 'should we follow, or should we not?' So I was like 'come on, come on!' and took Christina through, and then that kind of group came through and then the other group [muddled – made their way around as well, essentially].

DG: It's a good job we had you there.

CS: Yeah. But then they all kind of gathered right near the edges, and I was a bit tempted to start walking around, but because they'd all seen me *as* a performer, I thought they might just not kind of follow it, so then when you guys started walking through to the other room, a few people started moving, and then Christina gave me a really funny look, and I was like 'no' and did that with my arm [gesture imitating walking with fingers] to be like 'go through, it's cool, it's cool!' [...]. In that one they didn't really know how to react to the movement, 'cause it was kind of new. I think we all just...during [...] James Oldham's piece, when we were walking around, I think they found that quite funny, at times, and you were in your own little world, picking out posters.

DG: Did that effect how you performed?

CS: Erm... I found more interesting routes to go around them. 'Cause they'd like sat in funny ways, hadn't they, so I tried to kind of go purposefully into them. [...] Possibly it just made me a little more confident to play around with the music, with it being so contrasting one section to the next. ([...] The humour they found in it made you more comfortable?) Yeah, yeah, exactly.

DG: Did you perceive them at all during Paul's piece?

CS: [Thoughtful pause] No. During Paul's piece I was just there like [imitation, jokes, etc.]. I was so busy just concentrating on what hand you were doing.

DG: Going back to this piece [...], we kind of skipped over the ksss [...] What went on with you during that?

CS: I liked it. I liked the Ksss bit 'cause it was so, it was like the first thing that got heard properly and that made the audience kind of go 'oo!' [...] Everyone's head turned. Who did the first one? [...] Was it Luke English who did the first one?

DG: Everyone things it was a different person – I *should* know, I listened to the recording (pretty sure it was Luke). In a way it's more interesting that nobody really knows.

CS: Yeah. I remember hearing it and – 'cause it's always kind of a brave thing to take it on to the next section, 'cause in my mind that makes everyone kind of think 'oo! they've finished that bit, I'm still only halfway' and it might make you [...] it might make other people respond.

DG: So you think about how you're impacting other people when you do that?

CS: Yes. Yeah, if I move onto the next section, I'm a bit like, 'how come I've already reached the end, no one else has' – am I like not doing this – I overthink everything, it's – [jokes]. [...] It was cool [...] the first few I think were quite bold, and just really loud, and after that it started to break down again. [...] I did actually, I noticed the audience at that point, I remember seeing them all kind of being like 'oo! that's a new noise!' [...] That was cool, 'cause it's just [...] I don't know... Yeah, that section was cool actually! 'Cause the sounds blended, but they were different at the same time. You could – I could tell who it was, as in like, you could tell that they were doing that and not something else. ([there's more individuality, I say, to her agreement]).

DG: Then we got into the [u]s.

CS: Yes. And that was with the tongue moving wasn't it. [clarify together that it was actually earlier; I remind her of Soul starting this figure: 'we had to find our way into that...'] I kind of played around with my mouth shape a little. It didn't take me long at all to get into the [u]. I think [...] it didn't [...] like, that section to me was definitely shortest; I just kind of joined Soul on the pitch.

DG: Did you play with pitches at all, or did you just change mouth shape and land on the pitch?

CS: I changed mouth shape, yeah, didn't really play with pitches. I just did the mouth shape –

DG: How come, what do you think that was, in the moment?

CS: I think I was a little bit, kind of – I didn't kind of want to go out there, with the piece being so, kind of, slow going at this point. And also I wasn't looking down so I kind of [jokes]. [...] But no, I think if I'd heard someone else do it, kind of would have triggered, and I'd [have] been like 'oh I might play around with that', but I think everyone was being quite restrained at that point, 'cause we were all still like slow breathing, or like that was the mentality that we'd kind of got into. [...] So, I kind of went quite quickly to that note – I think I changed and went onto a different pitch in the chord, and then went back onto the soprano note before everyone else gathered, like I moved around the chord, but I didn't actually – I didn't do this bit [points], I just kind of changed pitches but didn't play around with them. [...] But I didn't put in any clashes or anything. I just kind of, I could hear Lucy was singing that note, so I kind of went to her note for a little bit, then went back to Soul's.

DG: So, I mean, when you're making – 'cause that is, to some extent, a decision about how you're pacing you're decisions and stuff, do you have any feel for what's causing you to make those pacing decisions? Are you thinking about other people in the room, are you thinking about the piece, are you thinking about creatively improvising, are you thinking about what the composer wanted?

CS: Possibly – less what the composer wanted and more ‘I’m scared to not do’ – like, I’m scared to do something the composer didn’t want – so I don’t want to kind of go too out there just in case they’re a bit like ‘why did they do that, I definitely didn’t write that’. So it’s safer to stay on one side, but then it’s contemporary, so...

DG: Well, I mean, a piece like this [gesture to my score], where I just wrote a few instructions basically, [talk about my attempt to limit instructions, to] see what else happened. So how did you decide where that boundary of what you shouldn’t do was?

CS: Listened to other people. If someone else did something, and I thought it kind of just worked, I would be a bit kind of like ‘oh, not going to do it next time, but might do it the time after ‘cause that’s kind of cool’.

DG: If somebody had gone in and made a dinosaur noise or something, apart from us all just laughing, how would you have reacted to that? (Depends who it was) Let’s say it was Luke, cool-hand [jokes...], easy going you-just-kind-of-buy-things-he-says Luke.

CS: I think I probably would have looked at you to see if you reacted to it, because you were stood like basically opposite to me. I might have actually looked at you, to see if you reacted, and then kind of been like ‘oh I might do that’ [...]

DG: What if it were something like Grey Matter for instance, where there was no real composer, we were just screwing around with things...

CS: Yeah, in that case, like (and somebody had made a dinosaur noise) I’d probably go with it. I’d probably try and one-up it. [recalls, in GM, when someone did something as revolutionary] I wouldn’t... it opens up kind of ideas, definitely,

DG: Would the context of the piece – I mean, would you have thought during this that this piece doesn’t need [...] dinosaur noises.

CS: Yes, I wouldn’t have said that it would’ve been the right, like, setting for it, because of how, because of the fact that we weren’t moving, we were very like stationary with what we were doing, and how it started and how it ends, like, it wasn’t a particularly dynamic piece. It was, like, very... It was almost like – you know when two things just kind of merge, like really slowly, I’m trying to think of the word [...] I think it was a quite kind of oozy piece, just kind of oozed from one section to the next, and I think if some just randomly kind of went [makes dinosaur noise, jokes about how odd it would be, etc.]

DG: Okay, so we’ve got to the [u]s, and then it begins to coalesce. Talk me through that.

CS: What, as in when we started to kind of like go in but not go in...

DG: [clarify where I mean]

CS: That bit was quite meditative, almost – I quite enjoyed that, cause [...] to me it kind of had the most structure, and being like, not crazy about contemporary music – like, obviously I like it, but I sometimes kind of like [indecipherable, about being in ‘the next section’]. And I think just being able to breath together, it really – I like it as well because you get a really unison choral sound, and in that acoustic it was really nice. At that point I did look at Soul actually, I did move my head just so I could see when she was breathing. Because we were kind of in our own little room, and I think we could hear more of each other than everyone else, so I *was* looking at her at that point.

DG: What about that sudden lining up on that chord, what do you like about it? [...] Is it just the sound, is it...

CS: I mean it’s the way we all kind of merged and all of a sudden – I was looking as soul because she was the one that was choosing when to breathing, but you feel more like you’re shaping, working together as a choir, even though it is just one chord, and there’s not really that

much happening, you all of a sudden feel like kind of you're kind of working with the other people rather than feeding off them.

DG: Could you – [mention that she did a lean-forward thing during her last comment] did you feel us breathing together or preparing together?

CS: Yeah definitely. I quite like – especially when it was just a simple chord. Yeah then it started to move on didn't it. I don't even know [...] that's the thing, I don't know who was the first one to move. I just remember acknowledging that all of a sudden we had like a little crunch in there, but I stayed on it for a few more, cause I was like 'oo I like the sound of that, I wonder if they'll keep playing with that!' And then we went through, didn't we, just at our own pace. I kind of went through – I got to there, and then realised that actually I've only got three notes, so if I really want to play around with I've basically already got to the end, so I went backwards, stuck on the first note for a little bit.

DG: So that was because you wanted to hear more different things?

CS: Yeah, I liked it when we did like have a crunch like when, especially in our little room, if like Lucy was singing the E and I happened to be on the F, or the F and the G – like, there was one time when we sang it, and we didn't look at each other, and then we both sang it again, and we both just looked at each other and kind of went [...] 'yes! we're on the same lines here!'

DG: Did you have that – how were you interacting with other people? Were you? I mean, were you hearing them, were you singing in a way to communicate.

CS: Yeah, [...] obviously I could hear Tim, I could hear Luke, and I could like get the intervals there [inaudible], so yeah, in that way, I think it's just 'cause of obviously the voice types, like, mine and Lucy's, if it does clash, it's literally like a semitone or a tone, which you can really, like, buzz off – I like that.

DG: Why do you like that buzz?

CS: 'Cause it wants to go somewhere, and you can stop it [jokes] 'cause I'm bossy [laughs]. I remember stopping on that A for ages, being like I don't really want to be the first person, 'cause again [...] like I said before where I didn't want to be the first person to move on. I think Tim moved on first, didn't he, 'cause it was bass. It was either Tim or Luke. One of those two moved onto the *Lux aeterna*, then I joined them, I joined on the 2nd go, and it sounded like [...] I think it was time' cause it went down. And they don't exactly sound the most lyrical together, [...] especially with the other chords kind of just sounding in the middle, it was really kind of – not plainchanty, but it fitted even though you could tell it didn't'.

DG: [effect of diatonicism even if not the real thing.] So we got to the end. [...] I can't remember already, you said you joined fairly early on.

CS: Yeah I was [...] I joined on the 2nd time it was sung.

DG: Why? Why'd you decide to join then?

CS: Because I'd already got to the end, and I knew that I was stopping myself from moving on, so I was a bit kind of like, someone else has done it now, I'll join them. And maybe he sung it twice and I joined on the third go – but I did very quickly after, because I had kind of got to the end and I'd been stopping myself and I was about to change anyway [...] And then Tim did it, so I was a bit like 'oh I can join him now'. But I was kind of getting to the point anyway with, like, the stage that I was at, when I could only go backwards and forwards so many times, because I knew mentally that I'd reached the end of the phrase.

DG: And then of course we started pulling it apart.

CS: [re-checks score] Oh yeah! I liked the consonants. I liked playing with the 'ksss' and the 't' – not necessarily holding them but just like repeating T T T T, that kind of thing.

DG: Did you – when you had Kssss, did you clock that that’s what the beginning of the piece came from?

CS: No ‘cause I always held it with the vowel. I didn’t ever just hold the consonant, I would be like ‘luuuux, luuuux’.

DG: [follow up – when we were learning, did you notice? she didn’t. I failed to mention it, and forgot I’d meant to do that in composing; then re-prompt]

CS: Rather than just the consonants, like, the actual notes, I think maybe because it was more whole, I think I might have once been like ‘t t t’ kind of thing, but I never did anything that was really fast because we’d set that [demonstrates] we’d kind of set that pulse now.

DG: Did you play with pitch at all?

CS: No. No, I didn’t. ‘Cause I remember speaking to someone afterwards, before the next piece – it was Andy Armstrong [not Luke in the room] – ‘cause he came up to me and Tim and he was like ‘did you like that C sharp I put in’, but that was before the performance, ‘cause we were all like ‘oh can you actually switch around with the pitch?’ And we looked through it and we were like [refers to instructions], does that mean we can change them? So we had a little conversation beforehand, being like [...] But he still put in C-sharps in the performance, I remember. [I mention that I did too, plus others.] I noticed that as well actually, because Andy had said to me, in my head I was thinking ‘I wonder if we can’, and then remember noticing that you’d gone off your note.

DG: And I wondered if that would catalyse other people to try that; I don’t think it really did.

CS: No, I stuck quite to it.

DG: So, when you see instructions [like those], you use that as a restrictive list, not as a ‘here are some ideas, take –’

CS: Yeah. [...] Because you’re so used to working within the brackets, that sometimes you forget the brackets aren’t actually there, like, there’s just kind of music. [...] Yeah we had that conversation, it was whilst we were at the space. [...] I remember him and Tim, looking around and being like ‘ooo’ with the C-sharp or something, I can’t remember what they were doing with that.

DG: Did you pull it part gradually, or did you just pick a few things and...

CS: I sung it through a few times, until I could kind of hear that most people, that it was a more unanimous sound. I think I slowed it down first, and then I started breaking it apart. But I would always break it, so if I repeated like the T section, I’d repeat that a few times, until I was out of sync, and then I would carry on, [...] and then I would sing it once, and then I’d find something else to break down; I didn’t kind of in one go break it all down.

DG: Did you hear what other people were doing?

CS: Not at that point, no, apart from the pitches, ‘cause I’d clocked that you were playing around with that. But not really, all kind of, especially in that acoustic, just kind of blurred into one sound, which was fun to [...] keep going rather than...

DG: Did you feel that you were playing within that sound, or just within your own process?

CS: Within the sound, yeah. Yeah it was [...] that sometimes if someone else does some thing that I was about to do, I will hesitate from doing it if it’s already in the sound [...] I will kind of put it on a back burner, but then if someone does something cool, I’ll put it on a back burner for me to do, because I liked it.

DG: [...] When we were holding the chords, [...] it sounds like a lot of the time you were being more responsive than leading [...]

CS: Yeah. Especially 'cause I missed that Thursday rehearsal, so I was kind of being a bit like 'O I don't really know what was said last night', I will just kind of respond instead.

DG: When we were holding the chords, how did you feel about the sound then, or what you were doing to it? [...]

CS: I thought it was nice, I was just kind of shaping it like I would, like, kind of filling it out just like normal singing.

DG: [...] Do you remember there was a point where there were a few [u]s in a row that were quite strong – did you feel like you led those?

CS: ... Yes. [laughs]

DG: I'm asking because [...] at some point everybody talks about when they sort of made a decision to do *something*.

CS: I'd forgotten I'd done that to be honest. [...] I kind of, [...] after singing quietly for quite a while, I kind of just wanted to open out a little bit.

DG: You physically?

CS: Yeah, just kind of wanted to [gestures opening out]. [...] I just wanted to broaden the note a little bit, the sound. But I didn't think of it that other people would respond to me, I was just personally being a little bit 'ooo, I can open up a little bit now'.

DG: But then we all went with that. [Describe where I then experimented with giving more obvious breath to see what would happen – she thinks she remembers hearing – I say I was trying to make the note longer]

CS: In the rehearsal someone was struggling with the long notes though weren't they. [...]

DG: It's interesting what we settled into. [CS has to answer phone at this point, and talks for a few minutes] And then we got to that – it got to that dying-down bit at the end.

CS: Yes, and we got really quiet, and I don't like that. That makes me feel really uncomfortable. I don't like the fact that I can't sustain quietly. 'Cause I'm quite a loud singer and I know that, and it really annoys me like in Chamber Choir or something when he's like 'sing it quieter' – eventually I just stop singing and just kind of go [holds mouth open] cause [...] my voice kind of kicks in but [...] can't fully sound, and it's not that I'm not on the breath or anything, it's just [...]

DG: Even though that was what I said was the goal of that part.

CS: Yes. And I did it and that couple [...] looked around when my voice juttered, and I remember seeing them and immediately my instinct kicked in being like 'oh I shouldn't have done that' because it's not the normal thing for a singer to want to do. So I kind of, I think I didn't really make it unvoiced, but I think I kind of ended up kind of humming a little bit, but still trying to turn that hum into a more open sound. But [...] that was the one bit that I was really like anxious about [...] I can't do this bit...

DG: But during that, you had what was in the score and what you were comfortable with. You also had my – we had discussed it – our discussion and my instructions. In general, actually, how did you balance those things – because for [...] almost all the pieces except for Gavin's you had a score in front of you, you had instructions from the composer [...] [mention Grey Matter], you had what you were hearing from other people. with those going on, can you just [...] talk at all about your decision-making process, how you balanced those.

CS: ... I always want to make sure that the composer's kind of briefly talked about it. And I think there was a time when I went up to James on the Wednesday evening and just kind of double checked something with him kind of like 'is this okay'. But when we work on the music like that with the composer, it doesn't really feel as though it's their music anyway [...]. Because

you're collaboratively – they come up with the ideas, fair enough – but after that, it is kind of you that's doing the exploring, and unless something written down, like with us doing that little tick of the list cause it's not there, it does feel like you're okay to explore. Like especially in the rehearsals, less so in the performance 'cause you feel a little bit more 'I don't want to mess up, I don't want to do something that they really didn't like'. But in rehearsals, I do feel a lot more free and able to just kind of see where it goes, see what we can do.

DG: How did you necessarily know what they wouldn't like?

CS: Characteristics. 'Cause I kind of know the people. 'Cause like, James is just...James. As in he likes to kind of play around and stuff, so he wouldn't really – but then at the same time he was quite kind of 'I don't want the footsteps like that, I want them like this'.

DG: What about with my piece, where you know me mostly as [...] Conductor Daniel and slightly – I don't know if you use me as authoritarian [...] but as a conductor that's sort of my role anyway – how did you feel about being creative in this piece when it came from me, *because* you judge things based on characteristics.

CS: Yeah. [...] I could kind of [...] 'Cause there was so much instructions written down, it does make it kind of like, 'oh okay just work with the instructions' cause it seems like you've covered every point within them. But then when you're stood there, you don't really want to look down and kind of be like 'where are we in this paragraph'. So – but you're quite detailed about like areas, does that makes sense. So with [...] the mouth sounds, I knew that anything I did in that area would be okay, and once we'd got onto the pitch, working around that pitch but then it was like that next step okay – yeah I don't know. I feel more open to explore in rehearsals, that's probably the main thing.

DG: And that's actually a really interesting point. With music like this, 'cause you've done a fair bit of it now, and Grey Matter in a way is one of the best examples of aleatorism that we've done so far [...], do you feel – how do you feel about the rehearsal process for this, or any of them really, especially given that you're improvising –

CS: [relays experience of explaining to her mother that they hadn't got the music a week before, to the latter's surprise] Like, it's a lot more relaxed, because you do just explore it personally – like you're still exploring it in the performance. And with this kind of music, if you weren't exploring in the performance, something would be wrong, because you've lost that aleatoric element. Like you've got bored, so you're just going 'yeah I'm going to do this next.' Cause you just instinctively react to everyone else, don't you. So I would say the rehearsal process, it makes sense for what the music is, and although sometimes you feel a bit like [...] – I asked Luke if he enjoyed it and if he'd do it again, and he was like 'yeah I did, actually' and I was like [face], 'cause we'd literally just sat cross-legged on the floor and chatted – it wasn't, it was a really strange rehearsal. But at the same time, that's just becoming normal, that we all just not doss around 'cause we are actually doing stuff (there's always some dossing) [jokes].

DG: So do you feel like more rehearsal would be counterproductive, or do you think it would help you explore more things?

CS: Counterproductive. Obviously it would have been useful for me to be there on the Thursday, 'cause I did feel a little bit like 'ooo this is gonna be kind of I'm literally exploring the music onstage'. But I don't think, if we'd stuck in like an extra four hours [...] I just think that you'd find new elements to work with but at the same time you'd be a bit kind of like 'right we've been doing this for three minutes now, I've gone all the way around my mouth once, what do ...'

DG: [ask her to help me remember what she'd said] Oh! [...] What would – cause you talk about, you like that you're sort of creating a piece in the performance (I thought you'd picked upon that [...!]), what would have been too little rehearsal?

CS: To be given it on the day. As in [...] kind of – the one we did at [Eastside Projects, we figure out]. That one was very, with some of them, I guess kind of like with [thinks and deliberates...] like with Paul's, you do – you can't rehearse it till you feel comfortable – you just have to be, like, there. And I think if you got given that, and kind of gone, this is the instructions, quick kind of this is what I'm gonna do, like you could do that with yours in a sentence, you could go up and perform it – it wouldn't be as, you'd [...] be less reacting to other people and more kind of figuring it out – I think you do need the chance to run it threw a few times.

DG: So, is that what you get from rehearsals? *What* do you get from rehearsals, like if you have the right amount of rehearsal time, what is it that those rehearsals offer.

CS: Feel comfortable with the music – it's not about whether I can do it or not, it's about whether I Feel comfortable. Like, I cannot know a piece but still feel happy singing it.

DG: What is that you're getting comfortable with? Is it the sort of standard stuff you're going off of, or is it with the improvisational process?

CS: Standard stuff, 'cause improvis[stumbles around, indicates 'improvisational process'] [...] that's not really my forte, I'll definitely say that, and that's I think that's the bit I prefer to just do it there, to just kind of not overthink it, 'cause otherwise, I wouldn't plan it, 'cause that doesn't work, but if I had to get that bit over and done with, and then I'm kind of back on 'okay I've got my notes now' and they I just break it down. [...] That's definitely my weakest point.

DG: So do you feel quite insecure when you're doing that, even in a choir?

CS: When we were stood how we were, yes. When the audience is kind of stood right around me and they can hear exactly what I'm doing against[?] what someone else is doing, yeah.

DG: In – I can ask you about Gavin's because we can also open it up to Grey Matter – how did you feel singing during that.

CS: I enjoyed that, I thought it was weird, so weird, but I actually really enjoyed it. (Enjoyed Grey Matter?) Yeah. I think because everyone in the audience knew the meaning of the piece, you felt like you could push it that little bit more because you became the character, whereas in the choir when you're doing a piece like this, when there's not much of a back story on the piece anyway, especially like from my point of view, and like you said, you'd just kind of written down instructions on a page, there isn't much of a back story to it, I would say it's harder – not – it's harder to get really into exploring it, whereas in something like *Grey Matter* when you know what's kind of going on and why we're doing it and you are physically moving as well it's a lot easier to get vocally involved and kind of put yourself out there.

DG: So, did you feel less vocally involved when we were rehearsing Gavin's?

CS: [...] [revisits the whistling issue – realised she couldn't remember if it was because others weren't doing it, or because she forgot] But [...] in Gavin's where we had a bit more of a back story, and might not have cared as much about the fact that no one else had done it, because I'd just be like, 'oh'

DG: You would have had more motivation.

CS: Yeah exactly, exactly.

DG: That would be worth fleshing out in some way – 'cause there's such individualism to this music [agreement] but it's also (restricted) still choral.

CS: I think that's the difference between *Grey Matter* and this, is that this is still choral and there is still you in a way kind of stood all [...] with the other ones Soul was stood kind of doing the

breathiny bits and leading them [at that stage?]; there's someone kind of leading it, whereas with Grey Matter it was just literally just 'here's your material – go.'

DG: Do you think you could do something like this without any sort of emergent leadership?

CS: Yeah. Yeah, I think so, Because I think eventually it would get to the point where someone would just sing a note even if it wasn't the right one. Like you were saying you didn't really want to give the note [...] to allocate it, I think it would just [...] happen. [some jokes and chat]

DG: Is there anything else that stuck out from the whole thing?

CS: I'd say, in Paul's piece, I enjoyed it even though I Felt like on edge the whole time. I listened a lot, and I was listening a lot to the choir in case I did go wrong. Like it was in the back of my mind – 'yeah they're all still on the same word as me', and if someone else did a word slightly wrong I would be like 'is it me that's wrong or is it them.' So I think because that was one where you can't make it more comfortable, I was kind of on edge there, or more aware of what was going on around me, in the choir, not in the audience – like, I literally don't even know where the audience were during that piece.

DG: [we commiserate – she was watching my hands for the forklift] When you were more relaxed, would you say you were less engaged with the other singers?

CS: ... No, but engaged in a different way, in a more kind of responsive way rather than 'what did they just do' (accuracy check) yeah.

DG: [ask for anything else and close interview]

B7: Sample Interview Transcript 2: VN3.11i

Via Nova @ Ikon INTERVIEWS, 30/05/16, 13:30 – 15:30, 2nd Cup on New Street

In attendance: [REDACTED] [initials used below]

(Parentheses indicate interjections by the other party; most of my ‘Mmm’s and ‘Yeah’s are omitted. [...] used for unsureness to starts of sentences or ideas; little stammers generally not notated at all, nor were most ‘erms’.)

[pleasantries and friendly chat, incl. about camera placement in gig]

DG: Okay, so, first question is actually quite open ended. you can look at the score and you can just kind of recollect. If you don’t mind, will you just [...] talk me through – I’m focusing on my piece because it was sort of – it was the ‘controlled’ experiment, it was looking at a kind of specific kind of aleatorism (yeah) Um, for the record, it was an experiment, not a piece, so if you didn’t like the piece, I won’t be heartbroken

TE: I actually [...] honestly really really liked it. (that wasn’t me fishing, but thank you!) [...] I know, but I actually did really enjoy it. You know, I’ve [...] never done this type of music before, you know [...] I’ve never had a text, apart from in first year with crowd out, but [didn’t enjoy or complete]. But you know I’ve never had like a text score rather than an actual score, so very very different, you know, for me, and [...] quite interesting, ‘cause [...] at first, honestly, I thought, I’m not gonna enjoy this [laughs], you know, I’m like ‘mmmm, is it or isn’t it’, but actually, it sounds the whole thing overall sounds, it’s sounding really good, and the way we were dotted around as well, just sounded (yeah it was a cool space) really really really good, *really* good.

DG: [...] how did you go about... *reading* this score?

TE: Well, at first [...] I basically read through it all, sort of got where the changing points were, for instance, so you know where you had to change slowly from the breathing into a hiss and then, um, so I just basically read it all and then, as we were going through it, had what the end product was, and where the changes were – what *happens* to the changes – and then basically, um, you know, just listened around. It’s all about listening, and watching as well.

DG: Even how you, how you interpreted the score was based on what you were hearing?

TE: Yes, to an extent. Yeah, I mean [...] And it wasn’t just looking at you, being the [...] ‘conductor’, it was [...] listening around and watching [...] what everyone was doing.

[Because?] obviously, if you feel that you’re going to be the first person moving on to something, then your brain sort of goes ‘well do I want to do it now or do I want to wait, do I sort of want to wait a little bit – ’

DG: How did you make that decision? I never know how I make it (laughs)

TE: D’you know, it’s a spur of the moment [...] it’s a little spur of the moment job. [...] As soon as you’re doing one thing, and you’re moving from the breathing towards the hiss, [...] It’s literally a spur of the moment thing, you know, one second you’ll be going ‘okay so I’m breathing’, and then suddenly, it will just actually be like well [...] my mouth is now shaping that, so you’re just going to go on to it –

DG: How did you think that happened though?

TE: Erm...I don’t really know. Difficult to sort of explain that one, it’s [...] you saw everyone else’s mouths moving, and then, you know, as you were breathing, actually [...] as the mouth

went into that shape, it automatically did it, rather than a conscious effort, it sort of automatically started then to a low sort of [does whistle-ish noise from my piece] sound, and then suddenly you're like 'okay so I've gone to that, the next step is just to sort of [...] move it on a little bit'. And it's all about, you know, where everyone else is at, because obviously you don't want to be the only one doing it for five minutes [laughter and jokes]. [...] And I think that's sort of the same for everybody, cause if everybody's doing that, you do get a sort of harmon- harmonious [considering word choice] sort of movement not all together because everyone's watching everyone else and listening for everything else, but then it's once one person does it it's sort of [...] the cascade effect, and everyone else sort of...follows on

DG: I mean, were there any points in the concert where you were the first to do something?

TE: Yes. [...] Not necessarily in your piece (that's fine) In [we establish Paul's piece] the going from, you know, person A does the long-short-short, for that I sort of, I actually I was going to just go and do it [the B entrance], like about 30" to 45" after someone had started the long-short-short and you'd sort of made your face [when I indicated that B needed to come in sooner rather than later in the performance; some mild joking], but I actually ended up waiting a couple of [...] because [...] I wasn't sure how long it would take anyone else to do it, and obviously, that was the *thing* about Paul's piece, [...] 'cause, he only wanted one person to start off on A and one person to start off on B, it was like, if you both, if someone happens to start at the same time, that's a question of what you do. Do you just continue on with what you were doing or do you just go back. But then if both people think the same thing, then you've got a long-short

DG: It's like when two people walk into each other in the corridor and go back and forth [jokes] [...] So [...] were you trying to avoid that?

TE: I was trying to avoid that, but then after the sort of second time with my thought process going 'is anyone else going to do it', I thought, screw it, I'm just gonna do it, see what happens, and you know, nobody else started with me, so I was like [clicks fingers] all right, carry on, and then I got a sort of thumbs up from you [laughing, jokes] [discuss how I tried to cut him off, when I was supposed to allow A and B to continue, and we discuss then that there was a lot to think about and coordinate; re. my job:] From an outsider's point of view, that might've looked easy, but actually from a thought process point of view, you've got to know where *you* are [as in, me], you've got to know [...] not necessarily who's doing what but you've got to know what's going on and whereabouts you are in it, and, you know, it's quite difficult to sort of go [...] I felt there was a couple of moments actually where (I'd forgotten to decide!) You'd forgotten to decide [describes and demonstrates my stuttered, confused gestures sometimes]...

DG: Yeah. You guys responded well to that. [I talk through my thought process, all the things I'm deciding in Paul's piece at the same time; we recall places where notes went completely wrong, too...]

TE: Well [...] It's sometimes hard to get, when you're doing staccato notes like that and [...] everyone's thinking about whether it's going forward or backward or whatnot it's sometimes hard to actually stay on the same note [...] So we had variants of the same note when we were staying on the same. [...] That sometimes can get – that will happen, just, in general.

DG: Yeah, and you don't have the duration of the note to correct it do you...

TE: No, exactly

DG: You just have to go to the next one and hope [laughter], and it never gets fixed! [...] So, at any length, I'd just be interested for sort of your account of how this worked in the performance, [...] how you did it, how the choir - [...] it's deliberately really open ended, I just want to get a sense of your chronology of it, in the performance as best as you can remember.

TE: Yeah, okay [some jokes]. So obviously we all started off and, I think, we nearly started off with a harmonious breath. to be honest, in the first section – (did we?) like, we nearly all breathed together. There was maybe a couple of people that weren't, but so... so we all started breathing, and there was stuff coming from all around, you know, people a shallower breath, people were doing the really sort of [demonstrates] deep breaths, and even making a slight sound when they're breathing to make it known to the audience that they're actually doing a different type of breath. And then [...]

DG: What were you doing there?

TE: Mostly I was doing big deep breaths. And then occasionally I'd switch to a sort of splat breath. [I query term 'splat', he says 'reflex breath' then explains how youth choirs used the term, and he demonstrates it, sort of.] So then I actually waited a little bit before I started moving my mouth towards the S, because I [...] A, for some reason I got it into my head that I didn't want to be the first person to do it, don't know why, just wort of went through my head -

DG: just to probe that a little, do you think that was because you had just decided that's how the piece needed to be paced, or was it like a personal...

TE: Well I think it was half personal and half because I wasn't entirely confident on how fast it...I wasn't entirely confident at the timing and [...] how long it had been and how fast the piece wanted to be.

DG: Did you think the other singers *were*?

TE: Erm, probably not. I think the only person who had it *really* in their mind was probably you.

DG: [laughs] Jokes on you.

TE: Well, whether you did or not, you had an idea for how long it had to be in general, how each section would sort of have to be, so then when we started the hissing, I noticed that you started the kssss, with the K first [...]

DG: I don't think I did on the day – (it was either you or Lucy) I think it was Lucy

TE: And that came quicker than I actually thought that it would in honesty [...] so I sort of hung back a little bit and kept doing the tongue sounds, the moving the tongue around for the different shapes, and then I sort of joined in after four or five people had sort of – that was a conscious decision, that was a decision [that] I'm not going to be – I just wanted to [...] drag out a little bit and experiment a little bit more with the tongue, 'cause you know, there is only so much you can do with [the tongue, of course...] 'cause obviously, a lot of it creates the same sounds, but then when you move your tongue from side to side you look like a bit of a... I felt that it looked [makes funny faces and noises] [...] looked a bit – *odd* – so that was quite interesting to explore because I wouldn't know how it would come across, but it was a different sound

DG: [...] So you were thinking about sounds, not about sensation?

TE: Yes. Mostly. The sensation I thought about was how my face *looked*, [...] not my personal sensation, but the audience's sensation towards the look of my face.

DG: Were you looking at your score or looking up?

TE: 90% of the time looking up – because I knew what was coming next. (interesting!) Actually (I looked at my score the *entire* time, 'cause I was quite self-conscious [laughter]) No, erm, I think the only time I looked was to double check around sort of no. 7 to sort of see exactly what note, because you know obviously in rehearsal I got it the wrong way 'round a couple of times, [...] so I just wanted to make sure they're there, but you know 90% of the time I was looking up because I knew what was coming next – 'cause [...] even though we had a short rehearsal time, it was actually very well done, so that we all knew what was coming next, and when [...] Well, I, certainly, from my point of view, you know, I understood what was coming next most of the

time. [...] Until sort of notes were sounding and where you wanted the, where you wanted us to carry on, do the whole phrase, for instance, and then [...] when the ‘kssss’ started, I didn’t do that for as long as I was thinking, purely because I’d sort of ... [I explain I’m jotting a note about rehearsals, since he’d stopped to glance at my prompt sheet as I wrote] Basically, I’d elongated the K a little bit, but then I thought, actually, I’ve done a little bit of this, and there’s more if it to come in other pieces, so once Soul had gone to her [...] once we’d got to the open whistle and Soul had picked out the A, I actually wasn’t quite on the whistle before Soul had picked the A [...]

DG: She got to that fast, didn’t she! Did it feel that way to you?

TE: Yeah, it did, yeah, so I cycled through the whistling a little bit, but I noticed that I was maybe the, one of the last ones to actually go onto a note, but I still thought I’d gone quite quickly, if that makes sense, through the ksss and through the whistling. And then, with the note, I – I mean, I love dissonances, absolutely just love singing (joke about contemp. choirs) [tells story about humming possibly even microtonal dissonances along with vacuum cleaner, followed with:] To some people it would seem quite, like weird, and strange, but to me it was, there’s a sensation in my ear, as I’m sure there is with a lot of people with dissonances, that I just absolutely love.

DG: How’d you describe it?

TE: It’s the wave pattern in your ear. Because – it’s so interesting how you know when, as you get further away, obviously the wave sound gets bigger, and as you get closer – so it’s sort of a test to see how quick you can get the wave without actually being dead on, you know, before the wave stops, then how far you can get it away before it sounds nice, if that makes sense. And there’s a bit of a pain in my ear, sometimes, you know, with the shorter waves, there’s definitely a pain – and I like that pain, for some reason? (No I know what you mean) So yeah, I really really enjoyed sort of going just underneath and just above the A until I was sort of, I slid down sort of a fourth or a fifth, and then stopped, restarted, back at the A, to then slip again, until we were finally all sort of singing that [...] F Major chord and that again, that came in, not quickly, but once, sort of, 3 or 4 of the notes were there from various people, people then sort of got to it quicker, because they’re like, okay, so these people are at their notes, let’s sort of make it ‘nice’, and [...] let’s essentially sort of shift the sections of the piece. And then [...] I mean there was a moment in one of the rehearsals where actually we’d all got to the F major chord, and then the next section is obviously – each move whenever you want to to go on to the next chord then back again but actually there was a moment where we each held the F M chord, on the next breath we held the F M chord, and on the next breath we *all* simultaneously went to the second chord, and I just wnet, wow, I mean, you don’t get that sort of thing normally, when you’ve got 8 different singers [...] doing, with the information that we’ve been given, with the instructions that we’ve been, to do it at different times, you just don’t get it moving harmoniously at the same time, generally speaking. So that was quite a sort of revelation, and then everyone just sort of went, ‘okay so now we’re gonna do everything different’, and people went to the third chord, people went back to the first, etc., but again, there’s that, there’s all those dissonances, so many, in that section, they’re all moving to different notes of the chord at different times; so many areas where it can be dissonant, and you sort of try to pick the people that you’re being consonant with, and you sort of lock onto them. And then you try and sort of not guess where they’re going to go, you sort of try and, well I suppose, yeah, slightly guess where they’re going to go and try to make it dissonant from them so that you’re different to them and maybe you’re consonant with someone else –

DG: Were you usually right, in your guess?

TE: No. (Okay.) I wouldn't say usually. I mean I couldn't really tell you exactly how much, but I [...] would probably say about 50/50. Cause I don't think, possibly, other people were thinking of it the same as me, like, some other people would then go, would drop[?] onto the people they're dissonant with and try and shift it from there [...] and try and make it either consonant to them on the next one [...]. But maybe it was just sort of unconscious, you know, probably just a lot of unconscious 'I've made a decision on where I'm going to go already so by the time you've sung that note, you know where you're going next regardless of what you're hearing around you [...]. 'Cause sometimes my options changed, my thoughts changed. So there were time were I was consciously going, 'yep okay so I'm going to be going to this one next,' but then it changed, 'cause of where other people were. And actually, I sort of planned to be the first person to get to the end (in the perf.?) In the performance. And I was. But I even went [...] I went to potentially my last chord, and then sung it, then went back to the beginning, and then when I got to the end again, I sung my last chord again, [...] I then sung ['sang' in accent?] my last chord again, and then went on to it, and I was still the first person to actually *get there* [...] I was still the first person to start my entire phrase

DG: Did you feel like that took a long time?

TE: Yeah, that one did, yeah. I was sort of consciously [...] trying to see where other people were, [and I?] swear [...] someone or two people got to the end before but they chose to go back to the beginning anyway and just continue on with what they were doing.

DG: And then, when we started breaking up – I guess that's the final stage – what happened then?

TE: It was really good to hear, like, all the – I mean, there was people repeating – I vaguely remember, you know, the word '-terna' being repeated about 10 times, by someone in a row, you know, straight away [...]

DG: Do you know who that was?

TE: I think it was Chloe. [...] And it was quite [pause – gesture or face?] going from us all [...] once we'd all got going through that, it was actually really quite nice for it to be – it sounded like it had been assembled and then was slowly being sort of pulled apart and disassembled which I found [...] really quite nice to listen to, actually, and then the people were elongating the consonants and everything which was...

DG: How – I mean [...] why was it nice to listen to?

TE: Erm, I guess – I'm not really sure why it as nice [...]. I guess subconsciously my sort of happy brain just went oo! now it's starting to just be pulled apart... [...] Just the fact that it had been assembled – slowly – and then slowly [...] being ripped apart again sound really [...] nasty of me really! [I point out his hand gesture twisty-together-and-twisty-apart, which I say says something about physicality...]

TE: Because it wasn't straight disassembling, it wasn't sudden 'I'm going to pull it apart', it was literally, because some people were elongating the consonants, some people were [...] repeating things, it did feel like it was being twisted apart rather than just pulled apart.

DG: [...] And what did you do to twist it apart?

TE: [...] To start off with I carried on [...] I was the first to start, and I think I was the last person to [...] start pulling it apart as well. 'Cause I was just listening to – while I was, you know, going through things [...] but I think the firsts thing I did when I started that was I just elongated *everything*, other than the consonants – I elongated the phrase, for instance, and actually, I was toying with how long I could make the phrase before I died, essentially, because I mean that's

one thing that I really really playing with is my breath control and my length of breath. And then, you know, I started elongating the consonants after that. So, while I was doing these long phrases, I would elongate the X and then even the T, which is a really difficult one to elongate, [we both try it] so, it kind of grew like that, it kind of came apart like that, and then [...] as per the last one, you know, going right to the end of your – you know, with the diminuendo – and [...] just playing with how quiet it can actually be done [...] A) before you start losing tone, which happens before you get to as quiet as you can get and then sort of being like well actually, how far can you just pull it, pull it a little bit more, pull your breath a little bit more, and see how quiet you can get it, and then essentially sing it while not singing it [...] Your trying to sing it so quietly that actually nothing comes out, and you end up just going [demonstrates – no noise] – I can't physically get any more quieter, even with the little, you know, [...] obviously you get the little bubbles, when you try to sing it so quietly you get the little bubbles that a choir director in normal – 'normal' – inverted commas music would never ask you to get to because you've got the tone, [...] say in a cathedral choir, you don't want to lose the tone, because – it's just not what you do there, but in this type of music it's quite fun to sort of play with [I query bubbles, and he demonstrates and explains – 'little bumps in your breath'] as you try to keep the sound there [...] as quiet as possible, you get little bumps that, and that's when you know that that is just as quiet as you can physically get and, you know, we stopped. And, I think that was quite a [...] the audience didn't quite know that we had finished, but I think that's about, that's a good thing, you know. [...] Essentially you know you started off by breathing and doing that, so it sort of came in slowly, from nothing essentially, it came in slowly, and at the end it went back out to literally noth[ing] – as little as, you know, absolutely nothing and [...] the other people who were singing it didn't necessarily get to the end of the phrase when they got that quiet. I think the last person actually stopped halfway through the phrase, because that's where they got to when they couldn't physically produce any more sound.

DG: I was interested by the fact that you had decided, during the breaky-uppy bit, [...] you had sort of decided on your own process and then [...] it sounds like you were definitely listening to other processes other people were doing...that's interesting...

TE: Yeah and sometimes, you know, whether what you've decided then changes, you know, as opposed to – 'cause obviously you're listening as well, so what you've decided may not [...] I don't mean, like, it won't *sound* right, 'cause that's not an issue, but it may change as to the speed that you do things, or you know, 'cause obviously [...] the middle section went a bit quicker, so my process changed every so slightly because I need- not *needed* to catch up, I felt like I *should* catch up [...] So having a *sort of* action plan, [...] but letting it be subject to change.

DG: And at the end, when you had decided 'okay I'm gonna slow this down as much as possible', but from what you just described you heard other people doing different things – you actually stuck with your plan that time, didn't you.

TE: I did, yeah.

DG: How come?

TE: I don't know, to be honest! [...] It just happened...

DG: How did you – silly question, but I mean it – how did you – physically as much as psychologically – how did you *feel* doing that?

TE: how did I feel...

DG: During the last bit, when you decided to slow it down – like, can you remember the sort of the experience itself at all?

TE: [long pause] How did I feel while I was doing it.... Erm, well I didn't feel [...] pressured into – like I didn't feel pressured into anything, doing it. And I didn't feel like I *had* to change what I'd already done, 'cause [...], I don't really know why because, to be honest, it's a difficult one, that is a difficult question, yeah, [...] I don't really know [...] is the actual answer to that.

DG: [recalls feeling sensation from some bits but not others, TE agrees feeling arms hurting... remembers at one point thinking 'I wonder how long this is going to go on for',]

TE: The audience were great, actually, throughout the entire thing. You know for your piece they were all [...] standing around the sides and sitting and all that, and when we came out and did James's piece they'd all sort of, because they'd seen the cards, [...] they'd all sort of moved out to the side a bit [describes interesting duet bit with him where I put us right in the thick of them!] And then, through Paul's piece, obviously, we had place, that was the only [...] one where we had a set place where we were all going to be a horseshoe at the same...

DG: How did that feel to you? Going to a more 'normal' [...] configuration?

TE: In the grand scheme of things it felt odd. Even though it was the most 'secure' [...] position, because we were all in a 'regular choir' choral shape – or ensemble shape – it felt a bit odd in the whole context[?] of the rest of the – because obviously the other three were yours [describes positions and lack of 'uniform' position]. [Moved to talking about movement - during conscious walking, didn't look up, had 'set myself a path', and just expected people to move – which they did! 'they realised where I was going'; if they hadn't, I asked? he would have 'walked straight into them'; that was the 'one decision I'd made properly, in Gavin's piece'; says he can't stop and say 'excuse me' because 'that's a break in the piece']

DG: So how did you feel about the singing during that piece?

TE: It was more difficult during that piece. Much more difficult, I found myself, obviously, the second moment in the set we did, before we started doing [...] you know the happy movements, certainly my one was a bit more active than I should've made it [...] I'm not a small guy as well, so physical exertion is something that gets me quite... so [...] doing that while singing, it sort of [...] when we got to a more rested [bit], when we got to the conscious walking, I had to take deeper breaths, [had to take a couple of breaths, to regroup; happy mmt had made him uncomfortable before even the uncomfortable, which did 'as it was meant to'; had to make sure he could] produce a sound without damaging myself, if that makes sense. [...] And then when you lie down, [...] you feel your back expanding and everything, it was quite nice to sort of have the lie down and be resting, but actually it's also quite difficult if you, for instance, try to go to the end of your breath while you're lying down, it's really difficult to get straight back in, take that breath, and start back up properly again, you know, you end up with bumps in the sound because you've not breathed properly [...]. So it was quite odd, the way that the happy stuff made me feel slightly discomfited while I was singing it.

DG: Yeah, I mean, how did you...did you feel like you were singing expressively?

TE: No. I did for a little bit, but then once we were sort of in the third time through the movement, I found myself being less expressive, because firstly I was trying to concentrate [...] on what movement [laughs] and getting it in time with... 'cause that's really, for movements like that, it's really difficult [...] to get in time. [esp. arm swinging, because of physical differences.] So I would say to start off with, yes, I was being expressive, and then it got less and less so until I got a bit more comfortable again, [...] which probably wasn't until the conscious walking. Because obviously the next section was designed to be as uncomfortable as you could make yourself, not necessarily singing-wise, but body-wise, and that automatically makes you quite...uncomfortable

DG: Did you feel like expressive during that, though?

TE: I think maybe a little bit, but because the sounds I was trying to make were, [...] you know I was fiddling around with the vowels and making them sort of dirty vowels, I was expressive in –

DG: [query dirty vowels, where term comes from – from his training, and ones he'd been told about] But then, rather than it being dirty vowels in the way that I'd been told, it was sort of twisting the vowels, so on an [i] – I chose the 'quia pius es' – so on the [i] I would stop on the [i] and [demonstrates] to really really sort of make that a[...]n uncomfortable sound. So, slightly less expressive in that way, but [...] expressive in the fact that there [...] seemed like a conscious level of dynamic between, actually, and that definitely showed in your piece, actually. There was a moment where we were holding on the F M – we were doing the F M chord, and we just got louder, together, without any prompt, we got louder, then we got softer.

DG: How did – just going back to that moment in that piece – did you feel like there was any impetus for that?

TE: I think maybe one person started to get slightly louder and maybe came in on the chord slightly louder and everyone just sort of followed – not followed, but everyone joined in with, because it was, something that someone was doing that people had cocked onto and, as a choir, that what, you know, that's what you *do*. If you see a diminuendo in your copy, you diminuendo as a team.

DG: But we didn't have anything in the 'copy'. (no we didn't) I mean, when that happened, as best as you can remember, was that, did you say 'ah, crescendo! better get louder', or was it more instinctive than that.

TE: Well I think it was more instinctive than that, and I think it was literally hearing someone do it, and your body just naturally going with it, rather than an actual consi- - 'right that person's getting louder, so I must get louder'. [...] That *wasn't* what was in the piece. But yeah, I think it was just a natural sort of [...] reaction to the singers around you. That ties in with the listening to everyone around you, you know, and you become an ensemble, and you do things as an ensemble, you know, so it just naturally attunes to an ensemble, if that makes sense [...]. [I fuff, he reminds me I wanted to ask about rehearsals...]

DG: Basically, the question is, do you feel from more rehearsal, or less rehearsal, or...

TE: Erm, actually, normally I would probably say more rehearsal, for something that's quite out there, like this type of music, but, I think having [...] we had probably an hour and half [...] on each piece, [...] me personally I strive [thrive, presumably] on doing things with as little rehearsal as possible, not because I don't want to make it as good as possible, but because the calibre of musician that I put myself being, and that I aspire to be, you know, if you can get something that is really good in a small amount of rehearsals, why rehearse more? And actually, I mean, there was maybe [...] a couple of things that went wrong, in James's piece, and couple of movements were slightly wrong by the choir in Paul's piece... in Gavin's piece there was sort of little room for error – the thing that doesn't require much rehearsal necessarily is getting things in, getting things together, because [...] you can only *do* so much of that before it's actually, you know, the adrenaline of being in a performance will take over [...] You will either be more in tune with someone, with the rest of the group, so I think the amount of rehearsal time was actually really good. You know [...] we did really well, some people, Gavin said you've done amazingly for the hour and a half that you – and yeah, to get all those movements, and for everyone to know all those movements – yeah, fair enough, maybe we possibly could've had a little more rehearsal time – but, we didn't need it, in the end, because it came together very well. I think [...] if we'd've had an hour on each piece then it would have been a bit, sort of, more

stress, and there would've been a bit [...] there would have been more panic induced incorrectness, if that makes sense. But no, I think an hour and a half was seemed fine.

DG: What about for how the rehearsal impacted improvisation – 'cause, you were talking about rehearsal as keeping us from making errors, in the sort of more straightforward stuff. [...] As far as improvisation goes, how did the rehearsal effect that?

TE: Well, I mean, you can't reh.... with improv there's always a sort of margin of not error, but a margin of difference really, 'cause obviously, if you're talking in jazz terms, one improvisation [...] you do is not gonna be the same the next time you do it, because that's the whole nature in improv. So I think there's only so much rehearsals you can do with improv. At the end of the day if something goes slightly differently, like for instance your piece we got through the middle section slightly quicker, that was essentially [improvised]. We had to, you know, it's then about adapting; you can't rehearse for that adapting. You can only say, you can only sort of go 'this might happen', and then if it does happen, go with it.

DG: Did the rehearsal help with that, or was that just a you knowing?

TE: I think yes it did, because you had the sort of structure and the basis of it, so then, you know you've got the, the rehearsal helped with staying in the confines of that area, but, and you know, there were definitely some restrictions say in James's piece there were some restrictions that he gave that we couldn't improvise out of, but you know, the walking around for instance that was, we rehearsed that to an extent, but [...] again there's only so much you can do to rehearse walking around. [...] Like, he said, you know, when you've put the card down, yes, go over and have a look to see if you're involved in that section, and then go away if you're not. You know, the rehearsal helped with letting people know that they can do that, and how [...] it would feel, and how it would look *while* you're doing that, but in the end I only did that once, when I pretty much did it every single time in the rehearsal. [established that he used his peripherals, but] I didn't make the conscious decision *not* to do that. [He'd just walk around during the transition music] Because I didn't want to look like more of a plum bit sitting there for ten bars rather than the two bars that I actually stood there for.

DG: Interesting. You were talking about getting things wrong. [I 'let him in on my thinking' as it were, about my interest in following comp's intentions vs. being error-free, leading to:] What did you make of the composers' intentions? Like, did we get it 'right'? [...] How did you know what the intentions *were*?

TE: Well, I think during the rehearsals when, you know, we sat – it was like the before each piece, or in the middle of the pieces, the choir *asked* the composers 'so what are you looking for here', [...] I don't think in a sense, we could have got things wrong, but what they were looking for, like, James, for instance, when we asked him 'what would you like the walking to be like, sound like, etc.' and he said 'okay, so, don't do it like you're in a marching band, do it like you're just walking'. So essentially if we'd've gone 'round doing it like a marching band, that would've been not what the composer intended, so therefore essentially *wrong*. [...] But with something like notes, if we are given, the notes are a [...] bracket we are given, I mean it didn't matter if we got the notes wrong necessarily, but it may not have been what the composer – because he's given you that that structure there, these notes are the settled notes that you have to adhere by essentially, [they're?] something that can't necessarily be improvised.

DG: So, when you were doing the things that *weren't* bracketed, as you put it [liked his term], say in my piece, where it was pretty open, were you thinking about composer intention at all?

TE: Erm, yeah, I mean... yes, because, yes there[they?] weren't bracketed things, but the information we were given by the composer [...] essentially to how he would, how he wants it,

and he obviously had a specific – not necessarily a specific sound in mind for each, but [...] a sort of overall view for what it might sound like. [...] If for instance someone had done, instead of a ‘k’ in front of the S for instance, something else, like a Psss or something, that’s not what the composer intended.

DG: On less specific stuff, when you’re deciding on pacing – ‘cause it sounds to me like you made a lot of conscious decisions (throughout) that impacted structure (yes) – did you make those decisions with me in mind?

TE: I guess some of them yes. [...] Like for instance when I made the conscious decision to move onto the next section, I was thinking [...] how long do I think you would have wanted this section to go on, and like, the speed of the central section, I’m not entirely, I was possibly thinking ‘is this quite how fast he envisaged this going’, rather than... [...]

DG: Was that never *your* [say I want to challenge this one a bit] decision, were you never thinking, I think the structure should go like this.

TE: I was never thinking it quite so precise like that.

DG: But were you thinking from your own point of view, ‘I aesthetically think this should be how it is’.

TE: Erm [sounding a bit cornered], I guess, yeah, I guess I was, yeah, probably thinking ‘I think this has gone on too long’ or [...]

DG: based on the piece or based on me?

TE: Yeah, both. *And* a bit of from what everyone else is doing. Because obviously if we’re sitting on section for a long time, you’re thinking ‘okay, so, I’m pretty sure that *I* would want this to move on here’ and then you think ‘Would Dan- would the composer want to move on from here – yes he possibly, probably would if it’s been going on for ten minutes in one section – yes he doesn’t want this going on too long.’

DG: Even if I hadn’t talked about proportions –

TE: Even if you hadn’t talked about it, erm, I think, because there’s only so much you can do with one section, if that makes sense. I mean I know the last sections there’s a lot more you can do [...] because notes were involved then [...] but like, with the tongue movement for the S’s, there’s only so much you can do, so actually, it’s a decision, it’s a thought of ‘does he want the same stuff because that surely detracts from what [...] he’s written us, it detracts doing that one thing, and creating 3 or 4 sounds, for 5 minutes, because that’s not necessarily what you wanted, because that’s why you’ve written 9 sections, and not 3 sections, one of moving the tongue around, one of hissing, and the other of – something else, does that make sense?

DG: So in a piece like Paul’s [...] I mean, Paul didn’t really write anything (no), he explained something ([reminds that he gave *me* instructions, but I point out only on the second day!...]) because he wanted to clarify his own sort of constructed process...

TE: But that helped you which helped us then interpret what he wanted

DG: [thought I was the only one improv’ing, corrected myself, and TE clarified.]

TE: After a while, you know you could see you sort of going ‘who’s gonna start the long-short-short, when *is* it going to start’, and [...] he gave you an instruction of after about a minute, didn’t he, for person B to start doing theirs, and [...] for me, I would’ve thought that he would’ve wanted it slightly quicker than I actually did it. So the long-short-short came in and it was about sort of – I dunno, cause the long-short-short came in after about, I don’t know, it was probably about 4 or 5 minutes, I’m not entirely sure on the timing, but then I came in [...] it was probably about half the time, so it was probably about 2 minutes rather than a minute afterwards, and that wasn’t necessarily what the composer wanted, but that’s why my thought process then was, ‘how

long would he actually want it before the B section comes in', 'cause obviously you've just got this guy going long-short-short and the audience going 'there's just this one thing, going long-short-short' [...] I possibly shouldn't have done the extra couple of rounds, thinking about it, and just done [...] from what *he* wanted, from what Paul wanted,

DG: [mention last slew of questions....] Basically, *any* other impressions you had.

TE: I mean, I think working with the composers was great, because having them in the rehearsal space with you obviously, [...] 'cause the music is quite open to interpretation, having the composer there [to] get his, sort of [corrects gender assumption, which I brush off in this context] an overall structure on it was really helpful for us doing the improvisation in the middle, [...] because, you can talk to them, and we said [...] do you want anything specific here, or do you want us to just go with the flow for instance, and then we didn't decide on the like walking around properly or the cards until halfway through the first rehearsal [etc.] So it's handy to have [...] them there for that. Working with the ensemble is, in that time frame that we had, was quite inter – 'cause obviously, Gavin I don't care what you look like, just do something that you enjoy, and it's really good to see the ensemble just doing something [...] together. It's really, really really good to work with a group of people that will just go and do that, go and be 'strange' with each other, and it's something that I don't excel at, because I'm very self-conscious about everything, which is why I don't do lots of acting [...] and it's sort of opened me up with the ensemble, and it bonds you as well, as an ensemble – doing silly shit together bonds people, it just does, and doing things that end up being quite uniform by accident really surprises you and just makes it all the better working with that group of people. [...] [working with me as conductor] Very, very good timing-wise, you know, you had a set amount of time and you made sure that everyone got the right amount of things, and you were very open to suggestion from the ensemble, not suggestions on how to conduct, cause obviously you got where you are because you've learned how to conduct, but it was just various other – like for instance the putting down of the card, you're very open to suggestion from us to just sort of help us improvise, put the correct structure, the correct sort of overall structure to what the composer wanted as well. [jokes about my ego]

DG: How did you, like in the performance, how did you see me? [...] How did you think of me as conductor in the performance, I guess especially in Paul's and James's [Tangent in recording: those two saw me *as* cond. and interacted with me as such, so I was made a conductor]

TE: [affirming the above for mine and Gavin's] And to an extent for James's piece, yes you were, you know, conducting us when to start an when to stop, but actually you were a heavy part of the ensemble as well 'cause of what you were doing with the cards, you know, and yes you were sort of the staple man in front of the choir conducting and you were sort of the centre for each different card, but it was more , in J's piece, you were more a part of the ensemble, sort of in the middle between P's piece and yours and Gavin's. And then with Paul's piece it was very much you are the thing that you didn't have control over was the people who started and when they started [...] and then at the end it became more when you were cutting people off that you were sort of 'in charge'.

DG: [point out that where he sees me *as* conductor, I'm more in charge, and thus actually waving my arms, whereas I felt as conductorial in James's] Does it have to do with seeing me wave my arms like a conductor or my level of control or what?

TE: I think it was more to do with, you were, essentially you were joining in the movement with us, in James's piece, you were part of the movement, in Paul's you were completely guiding us, 99% guiding us, but in J's you were part of the movement, and yes you were in charge because

you were the man with the card, you decided what goes there and there, and you decided when we started and when we came off, so yes, a more conductorial sense than that, but you were still *part* of the movement, if that makes sense.

DG: [I just note that there was less improv in J's than in P's, but I was more a conductor in P's – (to me anyway, yeah)].

B8: CS2 Sample Questionnaire Response 1: QCC3

Workshops: THE IMPROVISING CHOIR
Questionnaire
QUINTON COMMUNITY CHOIR

Please answer the following in as much detail as you would like.

1. General information (*please feel free to leave any spaces blank; your name is requested only for record keeping purposes, and your responses will be anonymized in any publications or presentations.*)

Name: [REDACTED]

Age: 56

Gender: F

Music experience: played piano from ages 8-15 (not very well but could read music); sang in church choir as young girl (ages 12-17); then no musical involvement until joined covers band as backing singer (ages 45-55). Joined Quinton two months ago, singing alto

2. What are some general impressions you have after the Improvising Choir workshops?

The experience was uplifting, the chances to “find your own voice” very empowering. It was interesting to see how other singers were coping with the task, with some hating it (from their facial expressions!) and some enjoying it immensely. Moving around while finding notes was very unusual, as picking up notes from several others meant that I had to make a choice about where I pitched my note, and if it clashed with someone nearby, I had to then make a decision about whether to change or move away!

3. Please pick 3 or 4 moments where you were aware of making a decision (of any kind) during these pieces; who or what influenced your decision?

First decision – where to pitch opening note. This was influenced by the general sound in the room (i.e. listened briefly to other singers first, then decided where to start with my contribution).

Second decision – when to change to new words in the free form piece. I did lose count of the number of times I had repeated each word or phrase, so I tended to listen to those who were around me or passing me, and when they had obviously changed to a new phrase, I did the same.

Third decision – when to put the loud notes in to the free form piece. Initially, I tended to listen to others and then put in my own loud notes. As I got more used to the format, (and more confident?) I was putting in loud notes when I felt they belonged.

4. Please tell me about how you felt physically during these performances. How did it feel to sing the works? How did it feel in relation to others in the room? To the sounds you experienced?

There was certainly a visceral aspect to the exercise. Perhaps the moving around helped this, but it was strange to “feel” the notes more than hear them. I could, of course, hear my pitch and compare it to others’, but the sheer physical presence of the notes was quite different to normal choir singing. I did enjoy this aspect. I felt the overall energy of the noise in the room, which is quite different to a static experience.

B9: CS2 Sample Questionnaire Response 2: ETC9

Workshops: THE IMPROVISING CHOIR
Questionnaire
ETC CIVIL SERVICE CHOIR

Please answer the following in as much detail as you would like.

1. General information (*please feel free to leave any spaces blank; your name is requested only for record keeping purposes, and your responses will be anonymized in any publications or presentations.*)

Name: XXXXXXXXXX

Age: 51

Gender: F

Music experience: Singing in choirs/groups
 Playing music. No formal music training.

2. What are some general impressions you have after the Improvising Choir workshops?

I enjoyed the warm up and the Kerry Andrew piece.

(I liked your conducting style for the Mozart)

As someone who knows nothing about modern composers (in fact very little about most composers) so rattling off names of composers felt like you were showing off/can increase feelings of inadequacy amongst participants already out of their comfort zone. Don't assume people's cultural reference points are the same as yours.

You explained the Kerry Andrews piece well, and conducting style was coherent. Less so your explanation of the Cardew, as people got confused (This probably demotivated me somewhat.)

This may also be an aside, but I wasn't aware we were doing this. This may or may not have been deliberate. However some prior orientation may have been helpful.

3. Please pick 3 or 4 moments where you were aware of making a decision (of any kind) during these pieces; who or what influenced your decision?

To tune into other people more when I liked the sound.

When I felt some people dominated I got annoyed and avoided them

To drop out when I got bored, when I felt I wasn't "in tune" on any level with the process.

4. Please tell me about how you felt physically during these performances. How did it feel to sing the works? How did it feel in relation to others in the room? To the sounds you experienced?

Walking around to start with felt unnerving, people didn't make eye contact. That made it feel worse. Tuning into other people was interesting, more connected. I found it easier to tune into others than share my pitch. When – primarily males – were loud – this startled me, so affected my sense of security, and ability to connect with them. I then preferred to pass women.

I felt more comfortable with the Andrews piece. The juxtaposition of together and not together was quite nice, there was some structure but then some freedom.

I got bored with the 3rd piece and dropped out, at 'be in confusion'. Observing it was more interesting. I found the dissonance challenging yet there were parts of it that felt interestingly 'together'.

B10: CS2 sample questionnaire response 3: EUC10

Workshops: THE IMPROVISING CHOIR
Questionnaire
EX URBE CHOIR

Please answer the following in as much detail as you would like.

1. General information (*please feel free to leave any spaces blank; your name is requested only for record keeping purposes, and your responses will be anonymized in any publications or presentations.*)

Name: [REDACTED]

Age: 60

Gender: F

Music experience: 'Rigid' choral – any improvising outside comfort zone.

Instrumental – mostly “straight classical”, more recent swing/jazz

2. What are some general impressions you have after the Improvising Choir workshops?

Good to be made aware of the breathing dynamics and what can be achieved by being more relaxed about ‘improvising’.

Enabled to try new experiences.

That I will try to carry through some things into singing the pieces we are doing – some are clearly important/applicable even to apparently proscribed pieces.

3. Please pick 3 or 4 moments where you were aware of making a decision (of any kind) during these pieces; who or what influenced your decision?

Trying not to be led by others – to make an individual decision though within the team framework.

4. Please tell me about how you felt physically during these performances. How did it feel to sing the works? How did it feel in relation to others in the room? To the sounds you experienced?

Definite heightened listening to others.

Awareness of the physicality of sound.

**B11: Huddersfield Contemporary Music Festival:
Interview Notes, following *Tender Buttons* Performance**

**Interview Notes, and Interview Piloting Memo
post-HCMF**

Memo: These interviews functioned as pilots for later interviews, not as data collection in their own right; they helped me to sort out how to draw information out from interview about things signers may not have spoken about. The first lesson was that, yes, I need to 'prime' them before workshops – to get them thinking about processes (decision-making and physicality) that are happening, just not something they're used to being conscious of (after all, it took a lot of data to even hint at these things previously; there's no harm in really going for the jugular here). The second lesson was that guiding the interviewee towards thinking about these things did not seem to stifle their desire to fully and richly recount their experience – in fact, sometimes it barely steered them at all. Gentle steering, in general, I conclude, will be no bad thing.

I need to keep interviews to exactly 30 mins.

For the record: for these interviews, I'm just taking some notes on what was salient for future interviews, and what contributes to (ie provides interesting comparison for) the analyses. Interesting that analysis and interview will only fully intersect in the final 'event'.

Finally, new note-taking strategy: notes in italics; quotes from interviewee in non-italics.

Interview 1

██████████, 6/8 Café, 8/12/16, 18:00

Started with general impressions of whole thing. She went to rehearsal. Enjoyed improvised stuff from outset; notated stuff took till the performance (because if it went wrong, nobody could do anything about it at that point [laughs]; they can't shout at me, and then with the trumpet and the drums, it would probably be less obvious... said relaxing probably also made it better, because she wouldn't try to pre-emptively correct things; commented personally on people – but also criticised his pitching; lots of sort of like/dislike stuff before substance comes out. Felt occasionally that piece was too proscriptive for what she saw was the overall effect: eggs, scale ended up not counting, largely because Percy didn't care in the end.

Then ask her to work through impressions: Rhubarb, she decided to keep her improv similar to keep it going weird; just had a shape in my mind, which was largely dictated by what he'd written; ask if she was thinking intervallically, or shape, or what? she said it was how it felt. Very aware of other people – that was what made it challenging [?] to remember what you did the first time... would have been easier if she'd ignored them in this one; what effect were they having I ask? Was more that she was listening, and mucked up what her awareness of herself; affected her singing, she said, impacting reliability, and made her want to sing lower! to avoid standing out and impact blend; ask about her solo: she sung what I kind of felt would be

enjoyable to sing, as opposed to *trying to* make it interesting...because most of it was not particularly *well-sitting; much too high; just decided to have a nice bit of a sing; what physically felt good, kind of trying to stick to rhythms a little bit: used notation as guide, but didn't mind if it deviated; let it deviate according to how it felt, but tried not to stay on uninteresting words too long, and ignore everyone else; how aware were you of what other people had done with their solos?* not really; *she just wanted to sing*

Piece of coffee: put some character into what you were doing, because, this being more speech-ish; pretending I've got Tourette's, trying different things to 'add colours' – according to her own interp. of the different understanding of the words; mostly text-based; Percy's line patterns factored in in ways – dotted lines made for stutter, thicker lines made for more repetition, for her; decided on those responses to graphics based on what she saw in the score; ignoring others, though was encouraged by their elaborateness; she felt people down the row, esp. Suzie, but was still aware of others – Suzie was aggressive, and recalled Suzie's movements – made Christina want to not seem angry, to offer different thing to audience; wasn't sure of guys' emotions – only heard them; get any impression from hearing them? yeah, kind of...

Salad dressing: comments on stress, but ease down the octave; would have liked another day and more personal practice to ensure pitching could shut everyone else out; really aware of surroundings; would group practice, tuning, have helped? maybe not, as it got mucked up by lower voices; yoyoyoy to next thing made pitching tricky, but it was nice; I enjoyed the actual sensation of it; in perf, when let things go and just assumed it was going to be right, felt lots better, and physically felt better once she'd done that; felt other people during yoy, and tried matching other people based on hearing, which impacted how she did it physically – decision was deliberate and intellectual

A Red Stamp: really enjoyed; liked freedom; enjoyed physically making the word-sounds; couldn't hear other people, but decided to stay on each stage based on avoiding moving with other people, then decided on a number (sometimes) to repeat something to keep herself separate; wanted to get to her favourite (catalogue); liked having to watch me for chorale – challenge, found that quite exciting; how'd it feel, doing one thing and hearing other things around you? Quite exhilarating, as if you were completely free; could even be silent for a bit – she would leave it silent till she couldn't cope any more, prob. about 5 sec.

Big finish: found it hard to read, so made a lot of it up – but she supposes he wrote it the way he did he wanted it to be a little ambiguous; which was stressful in rehearsal, but concluded that quietly working out word wasn't the idea; how much did she adhere to my 1,2,3,4? Oh I did; felt other people – Suzie angry again, so she tried to do something different; aware Adrian reading really fast; I suggest she could 'hear' Adrian's physicality; when it got manic, it instilled a little bit of panic ... until we got onto the [...] end bit, transition; as soon as I heard somebody doing that, I calmed down then; but she figures the climax is why it was panicky; why panicky? loss of mooring/control? she says, because she was trying to listen and perform, but everything around her was shouting! not sure what she should be doing; felt lack of control; noticed me beginning transition, before Adrian, who actually began it; then wanted to get there, but didn't want it all to abruptly collapse into an ah-ee; why didn't want to collapse? didn't feel like it would've been

right – *if it had happened too fast, it would be like you'd missed an entire section; and anyway, the ah-ee made her panic less, so feel more okay about the drawn-out process of getting there.*

Then address the things I'm looking at: thought warm-ups helped engage physically, and make less embarrassment about eye contact and physical proximity; lent to mutual awareness even without looking, and getting used to each other's sounds; and how sounds impact yours; in freer bits, like red stamp? she was very aware, and even though they were all independent, we were still working together...it was very much a team effort; never felt that you were exposed; how present was Percy in your mind? In yoyoyoy movement, she noted his capacity to re-score, but noted it was a better scoring overall, not just a concession to her.

Decision-making: [spent a lot of time setting up what sort of decisions might have been made...too much time]; Percy was present as a critical force; a little scary!; created pressure; felt him a lot when standing next to her; she felt extra exposed after a piece's worth of shouting; felt him get more supportive towards performance; found me reassuring, because she always knew where we were except one bit, where I cued re-entry to dirt-and-dirt too quickly (this one was my fault); in improvisatory bits – always partially aware to see if I was indicating something else, but was just getting on with my own thing, really; aware that it needed to be visually entertaining for the audience, which impacted her physical movement and not looking only at her score; says she looked up and out at audience less so in scored bits, more in improvised bits.

Overall, just really enjoyed it; thinks/hopes she did it well in the end;

Interview 2

██████████, Damascena Coffee House, Moseley, 7/12/16, 18:00

Prompt thinking about her experience and perception in general; she liked starting off with structured choral singing, got those little bits sorted out, liked early structure – why? – both ensemble and personal reasons, and getting togetherness and listening for details; rehearsal process? felt positive; liked starting physical – really helped with getting out of your head and into the freedom of your body's intelligence, letting go of inhibitions; body's intelligence a big part of how she performs music like this; recently become aware of it, through both experience, thinking, and her experience with teaching small children – likes wildness and instinct; learns from children; thinks we all have this childish creativity, which for her is present in how she likes to improvise; gets into state of not second guessing; you're just flowing and stuff's happening, without judgment; playful, fun, not serious, not hardcore intellectual stuff, it's 'let's try stuff out'; she's experience when she can't do it!; her mood can impact these things; her psychology also impacts things quite dramatically; also acknowledges that her experience of bad improv doesn't mean I'm not doing anything of value – hard to value;

first movement: standard singing, she says.

A piece of coffee: refers to the other big speaky one – she says she made a mistake; but in Piece of Coffee, she wasn't totally happy with what she was doing, because she didn't find a sense of

purpose and direction in it – *for herself, not how it was composed; she really likes the way the piece works and how people end on their own – but her brain wanted her to interpret the lines in a specific way because she couldn't think of one, and because there was such freedom against something specified-but-vague; troubled by specificity of the lines; didn't feel she did it justice but not sure how she'd do it differently; so how did you decide how to interpret? decided to focus on form of words, not their meaning – just saying them – and the lines she was interpreting as either volume or length quite strictly; did you create your own set of rules because, maybe unconsciously, that's what Percy wants? the piece wants? other performers? she sensed Percy didn't mind; was conscious of greater theatricality of other singers – stubbornly resisted, stuck to her guns (didn't actually alter rules to be contrarian) – says she's rigid with rules;*

Percy as composer influenced, through actually giving instructions, her interaction with sounds they were making during big improv solo, but still felt like I needed to stay in my box, and would have liked to have broken freer – why didn't you? where did the box come from? – it was her ego, she says, telling her to stay small, not to show off; wild child of improv vs. person who saw the other singers, all of whom had their turn; child came out in many ways, but not at this (particularly free, notably) point.

Talk about awareness of other personalities in rehearsal and performance: she felt a nice bond with them; established quickly a mutual awareness, bouncing off each other, and carrying each other along with momentum – even without sightlines? Yes – not much looking, actually; grouped-ness came from listening, and from staying with me as conductor.

*A Red Stamp: loved it; thought it worked really, really well; loved randomness of pitches being sung together (chorale bit); loved randomness of going into and out of it; was more aware of others than in other movements – because it was in order, and set herself rules about when she would move to next cell, often depending on what others had done (either postponing or hastening to the next one) out of desire for it to be interesting and varied; comments on making her decisions based on them, without knowledge of what they're basing *their* decision on! Composing piece onstage? yeah, making choices. How'd you decide how to compose the piece? wasn't thinking what Percy wanted – was thinking within immediate context, listening to others, what do I want to do next? and no more complicated than that; I comment on different kinaesthetic sensations of the cells – talk about being in your physical space in this movement? thinks she moved a lot in perf.; thinks she's more creative if allowing body to move with the sound; hard to produce sound creatively if holding still; also hadn't been aware of the really high notes she'd done, because she wasn't thinking about how to produce them – wasn't worrying about being correct or matching the rest of her voice; high notes could just be how they happen; comments again on responding, sometimes taking lead, sometimes following or not-following – then when I re-enter, it was great, like a little anchor*

Physical relational stuff (I mention Gavin stuff); responding to drums and electronics was more physical, for her, especially the drums; can't remember if the other voices had an effect.

Rooms: was disappointed with what she did, because she'd got into it in rehearsal, but was worried she was taking too long; in perf., jumped ahead a lot either because of other singers or sense of timing – finished movement early!; regretted missing the opportunity to enjoy it as she

*had done in rehearsal; says she enjoyed doing that stuff because of the intense concentration – felt possessed!; affected her physicality, made her hunch over; did you notice other performers' physicality? not really; in rehearsal she did, though, esp. first time through; didn't impact her decisions because she had her own clear idea – retained my suggestion of 'opera singer on acid'; she didn't like boys' choices – respected that they had their choice, but felt that it was artificial acting – made what she did about what she was really *doing*, whereas they were acting, which makes it sort of high-brow Art, not an organic process; says everything is visual, which entails responsibilities for singers, but this still wasn't a theatre piece; not sure if physicalities impacted each other; theatricality unavoidable in something like this, but runs risk of getting overly so.*

Very last system of music: felt it was 'gorgeous'; almost let my mouth gradually disengage with the words; interpreted gradually dim. as a dim. of pronunciation! evolved from singing a word to making a sound; ending: doesn't remember that moment; (we chat about movement stuff in my conducting and Gavin Thatcher).

Anything else from the process or performance? she'd liked to have got more of a grounding in study of improv – worried she's making it up as she goes along (laugh); says there is good and bad improv; thinks of it as spiritual practice, being fully present, which is what makes it good or bad for her; but worries at lack of study, or theory she wishes she knew – whether it changed anything or not; would theory restrict you? didn't know, said maybe it would; any more physicality stuff? felt free to move around, though wish she'd had time to memorise; score and stand had to be dominant; recalled restrictions of standing behind music stand; but prefers to learn through lots of rehearsal; ties to her interest in theatre, and idea of having lots and lots of time to steep in work; getting it in your brain is quick, getting it in your body, takes longer.

B12: Personal Memo 4: Via Nova Workshop and Performance for Frontiers Festival Full-Day Event with VN and Group of Composers, Eastside Projects (17 March 2016)

(My response to this event is less detailed partly because I withheld or avoided conclusions, not entirely deliberately, because data would be collected later, and because the actual act of coordinating the day, minute-to-minute, was extremely difficult.)

It is worth noting now that I will *never* distribute a questionnaire for one of these events without scheduling time for it to be filled in; chasing people down via email is horrendous and frustrating.

On the whole, the day was a success, and produced some interesting scores. Perhaps most interesting, at least initially, were the patterns that emerged as pieces neared completion. A central concept is in moving to and from unity, whether a pitch or rhythm. In part, I suspect, because of a perceived need for security with choirs, most of the pieces presented the choir as unified, then dissolved it from there. This tended also to be paralleled in/be due to/cause a fairly 'standard' arch-shape, the dialectical implications of which were made all the more apparent in pieces that actually used fracture to pit forces against each other (the best example being ██████████'s and ██████████'s piece, which placed two choirs across from each other asking 'which is right' and 'which is wrong'. In thinking about it, my intuition with all of the pieces is that they couldn't help but use fracture as a performance of meaning, though I would be reluctant to veer toward that level of deduction without the pieces, and even composers (if the poetic is necessary – it is certainly interesting) present.

My own practice was not significantly altered from what I normally do. I did my usual pre-devising warm-up (complete with the Tallis canon, requiring participants to change anything, but only one thing, as it gets passed around the circle) with the composers. The greatest change was the group of activities Percy added: divide into halves and explore short and long noises; close your eyes and respond to short and long noises; combine those – eyes closed, in two groups and trade short and long across the 'ensemble', during exact but arbitrary period of time (e.g. 'complete this exercise in 2 minutes and 17 seconds). Obviously the times were impossible to achieve perfectly, but raised a very interesting awareness not only of time, but, for me, how time is altered as you actively inject your notions into a diachronic process while responding to it. It makes me aware that the questions of psychology of musical time I'd written off might be quite interesting.

I began to develop a gestural 'vocabulary' for aleatorism, complete with half-joking nicknames: the two-handed 'forklift' when the whole choir needed to make a shift; the 'swirly hand of aleatorism', when I finally relinquished control. Beyond that, my conductorial approach was by and large as it has ever been. Rehearsing pieces was interesting: because of the (sometimes extremely) intense schedule, I had to make decisions without permission of the composer (who may have been right next to me), only quickly turning them to almost demand their approval for what I had to determine to be intuitively obvious. Composers worked directly with singers, but still sometimes struggled to explain the process. One composer I allowed to entirely explain her own piece, and the musicians seemed most flummoxed by hers. I'll make an effort to examine my own explanatory tactics in the future.

It shouldn't be ignored that this was an extremely positive day, and not least of all because of the team-work absolutely necessary to devising. This kind of positive, quite fun collaboration and interaction provides a balm for the discomfort of much of what is asked in these situations; present composers make that sharing of responsibility and discomfort all the more collegial and (at the risk of inducing cringes for a buzz word) synergetic. From a CT point of view, the 'emergent' element from one-to-one relationships and a shared context, combined with individual objectives, were actual pieces...which is, I suppose, as it should be.

B13: Personal Memo 13: While Coding VN3

Something is emerging, confusingly – embodying multi-strand intersubjective decision-making (all disgustingly jargony)

It's all *processual* – nested processes (internal, devised, processes against group processes against compositional processes against conceptual processes against general musical processes?)

Linearity seems to be thematic in my thinking/coding. But even at that, the nesting (or whatever it is) is incredibly, incredibly densely knotted.

A lot is happening very much in situ.

(Probably worth noting that I'm really not interesting in noting down when they just describe the nuts and the bolts of the piece.)

So, if my emergent thesis is one of embodied constructivism, it's important to clarify just how much they're constructing: the performance, their way through it, a conceptualisation of the ensemble *and* audience, and, most importantly (and, given a broad ontology) *the piece itself*. And central to this is empathy.

As they all observe audience reactions, they elucidate this, importantly: the audience is visibly constructing the piece – discovering it, and building an awareness and a conceptualisation of it in their heads.

When they're wandering in some way, a lot of what they reflect on is finding some sort of point of focus – a person, a unison note, etc.

Lots of 'building a lexicon' – but really, they're more building a technical morphology, with exploring improv ideas based on one idea.

So: Yes, they're being pulled in myriad directions – composer, conductor (or just 'leader' of some kind), etc. – but, more interestingly, they're being pulled by their *constructs* of these! Cool. Those constructs are more worth exploring, and keep us from trying to do a psychological study.

Appendix C Data Processing Samples

C1: Comparative Data Processing Sample: VN1.5 and VN2.5

Both of these samples of processed data are based upon questionnaire responses from the same singer in different contexts (VN1.5 and VN2.5), in order to provide a comparison. These samples demonstrate the processes of coding and axial coding; how those axial codes become categories is a matter dealt with fully in Chapter 4. For economy of space, the axial codes discussed in Chapter 4 have been numbered, and their number inserted in the middle column of the table below to indicate which axial code any given code at hand ‘fed’ into. These particular questionnaire responses are strongly orientated towards conceptualising (Axial Code 10) – a quirk of this respondent; but, in other ways, they generally show the proportions of how singers’ responses ‘fit’ within various axial codes. Axial codes are annotated here to suggest where they began to rupture, blend, and expand within VN2. These categories are not numbered in the main body of the thesis; they are only numbered here for economy of marking in the following coding sample.

Category:

1. Finding the composers’ intentions
2. Comparing with traditions
3. Feeling lost
4. Hearing the ‘effect’
5. Understanding self and group
6. Contextualising and functionalising
7. Assuming one’s own levels of ability
8. Becoming aware of technique
9. Playing a game
10. Conceptualising

Responses from VN1.5 and VN2.5	Code	Axial Code
<p>VN1.5</p> <p>1. Please discuss your feelings towards the pieces we rehearsed and performed for this workshop.</p> <p>It was a completely new experience for me, and one I enjoyed very much. Perhaps the most fulfilling part of the day was the composers' willingness to be involved in the singers' experience of the works. This meant that the pieces, whilst quite overtly conceptual, were very realistic and completely performable, almost without fail. The main interest for me was the constraints put of the aleatory elements of the works. This could be in given reciting pitches, or in small themes that were outlined in the score; meaning that the work as a whole was completely reliant on the ideas of the musicians performing it, but still had idiosyncratic compositional features that were (often deceptively clearly) linked to the composer(s). Thus, everybody had the opportunity to create something within a work, but the composers' intention could still, in theory, be realised.</p> <p>There was also a much more traditionally notated and structured work, <i>Basho's Journey</i>, that (for me in any case) was the most relatable. The textures used in the vocal writing was not hugely experimental, but the writing was done in such a way that the result was very successful. In terms of extended techniques, this piece was almost completely lacking (save a few glissandi towards the end of the final movement). However, the textures of the voice were very well exploited harmonically, and the way in which the vocal parts interacted</p>	<p>Enjoying novelty. Notes 'willingness' of composers</p> <p>Interested in composers' involvement in <i>experience</i></p> <p>Dichotomising conceptual and idiomatic</p> <p>Defining parameters</p> <p>Parameters as the means by which composers and singers share process</p> <p>Composers intention as including sharing</p> <p>General preference for orthodox piece. [this work did not use aleatorism]</p> <p>Externalising perspective</p>	<p>2 1 1 1 10 10, 9 1 5, 4</p>

<p>made the piece not only very interested to perform but (I would imagine) very pleasing to hear.</p> <p>My favourite piece of the evening was [REDACTED]'s <i>Delays</i>. This was exactly the kind of work that this workshop was designed to create; something entirely conceptual, and always changing (especially thanks to the idea of altering the text to keep the information up to date). The facility to produce the reverb effect [REDACTED] desired was not simple, there were often times where one would have to be singing the beginning of a theme whilst listening to its ending, and still manage to repeat it entirely. This wasn't completely successful in performance, but with more work I believe it certainly could be.</p>	<p>Responding better to meeting of objective</p> <p>Engaged by spontaneity</p> <p>Challenge of event simultaneity</p> <p>Belief in 'polishing' process</p>	<p>10</p> <p>2, 6</p> <p>2</p> <p>7</p>
<p>2. Please reflect on the composers we collaborated with during the workshop.</p> <p>The composers were fantastic throughout the process, most impressive in their willingness to listen to singers, and in understanding what is (and isn't) practical and possible. This is especially impressive considering singers' notorious reputation within the musical community...</p> <p>As stated above, I thoroughly enjoyed being able to create during a performance, and to do so still with a very clear idea of the composer's original intention or concept. I believe it was a healthy relationship between both parties, the composers were malleable when needs be, but held their ground on certain, less flexible areas of the compositional process.</p> <p>For the most part, the composers were also very fair, they appreciated the minimal amount of rehearsal time (whether that is a strict need for aleatory music or not is another matter entirely...) and came up with simple, and highly</p>	<p>Troubled by perceived adversarial dynamic</p> <p>Technique as potential obstacle with composers</p> <p>Surprised – perceived composers as glad to work with singers</p> <p>Emphasising creative performance</p> <p>Creativity through compromise</p> <p>Situationally confined music</p> <p>Preferring music when less traditional</p>	<p>1, 5</p> <p>8</p> <p>1</p> <p>2</p> <p>10</p> <p>6</p> <p>8, 7</p>

<p>refined concepts that the singers could grasp immediately. This meant that there was little need for worrying too much about notes, or rhythms, and the whole event progressed much more quickly.</p> <p>There were two pieces though, that didn't quite tap into the ethos of this however. One was a large scale (which in itself is difficult with a choir of twelve singers) polytonal piece that need a lot more rehearsal to become successful, not to mention a substantial programme note. And the other, which was probably my second favourite piece, was based on the building of a whole tone scale—this piece had the potential to work fantastically well, it didn't really include many aleatory features, it didn't explore extended vocal techniques (other than the slightly superimposed microtonal singing of a D), but yet the textural and harmonic language was thoroughly interesting, and should definitely be revisited. It was a true challenge for the choir, but then, wasn't that the point of the day?</p>	<p>Avoiding obstacles</p> <p>More protracted as less comfortable (and successful)</p> <p>Developing sense of aleatorism as requiring certain parameters to be forfeit</p> <p>Framing aleatorism as designed (meant?) to challenge</p>	<p>7</p> <p>7, 8</p> <p>10</p> <p>10</p>
<p>3. Please describe how you interacted with other parties in the room during aleatorism, and your feelings towards them?</p> <p>There were some works in which strict interaction was wholly necessary, like Delays, or Basho's Journey, both in completely different ways. However it was in Percy Pursglove's piece, [title], that I really felt that I was engaging with the other performers in interesting and unprescribed ways.</p> <p>The cells that he had created (based on a clock-face-like graphic score) were repeated twice, and interrupted occasionally by a tutti signalled by the conductor. Whilst performing, I was acutely aware of what nearly every other performer was doing, especially those improvising. It was a thoroughly engaging experience, and one that I'm sure most of us</p>	<p>Interaction obvious in more 'traditional' pieces (pitch-wise)</p> <p>Most engagement during freest piece</p> <p>recalling/retaining instructions</p> <p>Noticing the non-ordinary</p> <p>Assuming group experience</p> <p>Competitive risk-avoidance</p>	<p>2</p> <p>2</p> <p>5</p> <p>2</p> <p>5</p> <p>5, 9</p>

<p>must have been aware of. This may have just been a nervous worry that I may be left alone to sing the last half dozen cells on my own (if strictly following instructions!), thus I was making sure I was always ahead of <i>someone</i>. But, I hope that I have more gall than that, and that I was in fact just enjoying everyone else interpretation of the individual cells, and perhaps adjusting my interpretation to align with (or oppose) theirs.</p>	Expressing courage	3
<p>4. Please discuss your own personal experience during the rehearsal and performance of aleatorism, or during the rehearsal and performance of works that included aleatorism.</p>	'Mellow' contrasting to usual experience	2
<p>The rehearsal process was incredibly mellow. Having been a choral singer for all of my adult life, I have had constant worries about pitches, rhythms, text, and blend during both rehearsal and performance—either individually or all at once. However, in this environment (for the most part, with the exception of <i>Basho</i>) none of these typical issues were raised much at all. Essentially, it was the goal of a group of singers and composers to work together to produce something new, and that was not only very fulfilling, but also quite exciting.</p>	Fewer 'traditional' things to observe	2
<p>Technically there was nothing outlandish (excepting [REDACTED]'s high Cs and moans in <i>Delays</i>), and given more time I would have liked to explore even further extended techniques—playing with overtones/subharmonics, using our mouths, lips, and nasal resonance in different ways, or exploring how the false folds could be used to cover the sound (in a health way), or really any form of throat singing.</p>	Matching fulfilment and excitement	9
<p>I don't think any of these techniques should have been shoehorned into any of the pieces we performed, as none of them really demanded it. But, regardless and exploration of all the new</p>	Recalling humour	9
	Bounding context – exploring further	6
	Identifying piece's objective	10
	Extended techniques as benefitting from open environment	6

<p>and exciting things voices can do would be fantastic, especially in such a open and supportive performance environment.</p> <p>VN2.5</p> <p>1a. Please discuss any general feelings towards the pieces we rehearsed and performed for this workshop.</p> <p>More than anything, I was really impressed with the variety of compositional method used in this project. The composers had really thought about their desired intentions, and that preparation and commitment shoed in the final result.</p> <p>1b. How well do you think you adhered to the composers' intentions? How did you come to understand those intentions?</p> <p>For the most part (barring the odd error) I felt that both I as an individual and the choir as a whole mangled to recreate most of what the composer was looking for in each instance. This was thanks to their ability to write wholly performable music, and their hands-on involvement in the worshipping/rehearsal process. In fact, I believe the choir, given slightly preparation time, could have only improved on the interpretation of the works, especially in the more improvisatory sections. It was a new world for most of the signers (myself included), in terms of exploring jazz, and it made for exciting music-making.</p> <p>2a. Please reflect generally on the composers we collaborated with during the workshop.</p> <p>As before, for the most part the composers really gave themselves to the project, and delivered fantastic pieces of music. This is both from a choral and instrumental perspective in my opinion.</p>	<p>Prioritising diversity of method</p> <p>Assuming intentional preparation</p> <p>Perceiving intentional preparation</p> <p>Setting in opposition intention and error</p> <p>Performing as recreating</p> <p>Attributing performance success to conscientious composer</p> <p>Exploring greater interpretive freedom</p> <p>Rehearsing improvisation</p> <p>Exploring new worlds</p> <p>Honouring full commitment</p> <p>Assessing based on past experience</p> <p>Equating idiomatic writing and commitment</p>	<p></p> <p>1 (evaluating)</p> <p>1</p> <p>10</p> <p>10, 1?</p> <p>1</p> <p>7 (expanding)</p> <p>7 (expanding)</p> <p>1</p> <p>2</p> <p>1, 10</p>
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<p>There were times when I felt that some could have been more committed to working with the signers, and understanding that writing for the voice is a completely different skill to writing for a horn. There was some distinctly instrumental writing, that felt a touch superimposed on to the voice parts. It worked, however, so my reservations are somewhat auxiliary.</p>	<p>Opposing instruments and voices</p>	<p>10, 2</p>
<p>2b. How was working with these composers different to your experience during the Frontiers event (if you were involved)?</p>	<p>Prioritising functionality over individual concerns</p>	<p>10</p>
<p>Very different, mainly because jazz musicians are just built to work differently. There was an almost polar opposite approach in fact. The 'classical' composers seemed very concept lead, and the ideas and intentions for the works were distilled from the very beginning of the process. This sometimes meant that the execution of the work suffered, as more time was spent on developing the concept than the substance. The 'jazzers' however, seemed to approach from more active a perspective. Get involved, try things out, experiment, and then develop. This meant that (in general) the execution was to a high standard, but sometimes the concepts felt a little less firmly grounded.</p>	<p>Differentiating training on inherent level</p>	<p>10 → 2</p>
<p>3a. Please describe how you interacted with the conductor.</p>	<p>Tracing construction around conceptual intention</p>	<p>1</p>
<p>In a different way to the previous project. This felt very 'band' led. That's not necessarily a good or a bad thing. It felt like the composers often wished to take more control of their piece, rather than delegate to the conductor (another polar comparison with the classical composers).</p>	<p>Differentiating concept and substance</p>	<p>1</p>
<p>3b. ...how you interacted with other singers.</p> <p>As always; it didn't seem to make an enormous difference to the relationships within the choir. Certainly there were fewer singers, and that meant that every part was quite exposed, but in a</p>	<p>Differentiating concept and construction</p>	<p>1</p>
<p></p>	<p>Concept – suffering at expense of process (inversion of previous direction of 'suffering-at-expense-of')</p>	<p>10, 7</p>
<p></p>	<p>Reading 'conductor' as 'leader'</p>	<p>5</p>
<p></p>	<p>Neutralising affront to me Feeling/observing control in situ</p>	<p>10 (control)</p>
<p></p>	<p>Composer 'delegating' to conductor – control.</p>	<p>10 (control)</p>
<p></p>	<p>Choral unity holding out</p>	<p>2</p>
<p></p>	<p>Noting vulnerability/exposure</p>	<p>3</p>
<p></p>	<p>Drawing on experience</p>	<p>2</p>

<p>small chamber choir we expect that anyway, so it's nothing unusual. Even in the improvisatory sections, it seemed to still feel relatively constrained.</p> <p>We definitely weren't losing our free jazz virginity.</p> <p>3c. ... how you interacted with instrumentalists.</p> <p>Working within a rhythm section is great. It really adds to the stability of a choir, just like the use of chamber organ in more regularly performed renaissance repertoire.</p> <p>Working with the soloists is a little different because, especially during improvisation, the singers were definitely trying to take their cues from the lead soloist, if there was one. I'm not entirely sure this was successful in performance, but it was interesting nonetheless.</p>	<p>'Constraining' improvisation within choir</p> <p>Degrees of improvisation</p> <p>'Stabilising' via instruments</p> <p>Comparing different styles</p> <p>Differentiating soloists and ensembles</p> <p>'Taking cues' from soloists</p> <p>Assessing process in performance</p>	<p>10, 6</p> <p>10</p> <p>2 (?) 2</p> <p>5</p> <p>5 10 (process)</p>
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Appendix D Selected Scores

D1: Galbreath, *Undismantling*, with my performance annotations.

Via Nova IKON 1 *Undismantling* Daniel Galbreath DG

1. Breath in and out through the mouth, very slowly moving the tongue upward toward an [s] position over the course of several breaths. During this stage, explore how breathing works: begin by exploring the edge of breaths, only later moving toward inhaling more deeply, examining different ways the body deals with inhalation.

2. Continue in pattern of inhalation-exhalation on what is now a hiss, but as you do so, move the tongue around the top of the mouth and explore different tongue shapes, making different sounds for each breath.

3. One singer add a [k], so that the exhalation is a 'kssssss...' sound. Other singers join at their leisure (no longer moving the tongue around). For a while, now, all are saying 'kssssss...'. Try elongating the initial [k] sound sometimes, so it becomes variations on [ç].

4. After a while, one singer (pre-selected by the conductor, unbeknownst to the rest of the choir) should choose to undertake this process:

- (Still beginning 'notes' with a [k]) gradually bring the lips in during the sustained [s]...
- ... until almost whistling on any pitch(es). still with the [s] tongue placement (it will sound airy and indistinct)
- Change the formation behind the whistle, and add voice, so that you are singing an [u] while whistling.
- Open the whistle until you are simply singing an [u]. This should be in the pitch A.

5. That singer's A should remain constant. Once the other singers detect that note being held, they should begin undergoing the same process as outlined above, taking their time, exploring sounds and pitches (not necessarily arriving on an A; see below).

6. Still on an [u], eventually, an F Major chord should be arrived at. Also eventually, the breaths should align so that the chord is held, and rested from, together.

7. Each singer, in their own time, should then undertake the following process (using the score extract below):

- Depending on which pitch of the 1st chord you've chosen (if you've chosen an F, you may choose either pitch sequence), after the choir has sung the triad together sufficiently, move, as an individual, to the next note (for one breath-length), then back to your triad note (for several breath-length notes).
- Then venture further afield: after repeating the above several times, sing not only the next note, but also the one after that, before returning to several F major triad notes; then explore even further (when you return to the FM notes, you needed regress through all those you passed through to reach it: simply return immediately).
- Continue until you have attained the last note.

8. Whoever is the first to complete 7c should begin singing through the phrase of the extract as written, with the written text, on their own voice part, at a tempo that seems appropriate. Once this occurs, others should, one by one, join them, singing their own part in tempo with the originator of this section.

9. Once all are singing the music provided below, and have done so several times, it may be pulled apart – words and pitches may be repeated, elongated, or omitted; silences may occur; an overall *dim.* should take place. Gradually it should become so soft as to be on the edge of the voice; once your singing is more unvoiced than voiced, stop.

- how felt physically?
- what memory?
↳ how for

(1) best together

(2)

(3)

Lux ae - ter - na

Appendix E Supporting Recordings

1. Cardew, *The Great Learning*, QCC performance (March 2017)
2. Cardew, *The Great Learning*, ETC performance (March 2017)
3. Galbreath, *Undismantling*, Via Nova Performance (May 2016)
4. Pursglove, *Tender Buttons*, 'Eggs', performance at the Huddersfield Contemporary Music Festival (November 2016)
5. Pursglove, *Tender Buttons*, 'Rhubarb', performance at the Huddersfield Contemporary Music Festival (November 2016)