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MELODY BY WAY OF ITSELF:
COMPOSITIONS 2015-17

LAWRENCE DUNN

A thesis submitted to the University of Huddersfield
in partial fulfilment of the requirements for the
degree of Doctor of Philosophy

The University of Huddersfield
September 2019

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ABSTRACT

MELODY BY WAY OF ITSELF: COMPOSITIONS 2015-17

The present thesis commentary begins with a conception of the melodic derived from Christian Wolff—of music’s existence as tied to succession and on-following. With this as a basis, the thesis explores a portfolio of compositions from three differing temporal standpoints. First, in a condition of afterness, examining the roles of digestion, embodiment, and homage in the compositional process. Second, in the condition of the ‘long present’, exploring the present-tense conditions of mood, melancholia, mourning, and their relation to melodic unfolding. Third, exploring the condition of ‘anticipatory consciousness’, examining the immanent tensions and futurity of monophony, drawing on theories of self-similarity, and the accretion of melodic identifiability and itselfness.

Alongside melodic aspects, the commentary examines the roles of Just Intonation in the portfolio music. The commentary adopts a synoptic approach, drawing from a wide range of musical and textual sources, including Christian Wolff, Harry Partch, Lou Harrison, Charlotte ‘Claribel’ Barnard, Conlon Nancarrow, Ornette Coleman, Josef Albers, Anni Albers, Robert Burton, Jorge Luis Borges, Heinz Bude, Carlo Rovelli and others. Alongside contemporary music theory and aesthetics, reference is made to theories of embodied cognition, histories of experimentalism, the Bauhaus and Black Mountain College, studies of the microbiome, the history of emotion, medieval music theory, theories of temporal succession, history of early-modern melancholia, and other subjects.

ACKNOWLEDGEMENTS

This body of work would not be here at all without the contributions of dozens of people. First, to the many fabulous performers and individuals with whom I've been lucky to work, creating the pieces in the portfolio: Matthew Shlomowitz, Mark Knoop, Serge Vuille, Tom Pauwels, Kasia Dulinska; Colin Frank, Irine Røsnes; Anton Lukoszevieve, Mira Benjamin, Philip Thomas, George Barton; Igor Toronyi-Lalic; Leo Chadburn; Winfried Ritsch; Juliet Fraser; Ilan Volkov, the BBC Scottish Symphony Orchestra; Clemens Merkel, Alissa Cheung, Isabelle Bozzini, Stéphanie Bozzini; John Garner, Marie Schreer, William Marsey; Sarah Saviet, Imri Talgam; Aisha Orazbayeva, Joseph Houston; Jeffrey Gavett, Andy Kozar, Carlos Cordeiro, William Lang. I must also thank my collaborating writers, Ian Heames and Caitlín Doherty.

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LIST OF PORTFOLIO MATERIALS

NB

Materials are provided in the order they appear in the commentary discussion

1. *Set of four* Nov–Dec. 2017 17'
 Score (original): violin, e. guitar, keyboard, percussion
 (track) Score (quintet version): violin, 2 keyboards, percussion, cello
1 Recording: studio rec. by Irine Røsnes, Colin Frank, L. Dunn, May 2018
 Alt. recording: quintet version, Apartment House, live, LCMF, Dec. 2018,
 video: <https://youtu.be/rrHyjrrK1XQ>

2. *Jumping song* Oct. 2015 7'
 Score: automatic piano, fixed electronics
2 Recording: live, RHEA automatic piano, Huddersfield, Oct. 2015

3. *While we are both* Nov–Jan. 2017 15'
 text: Caitlín Doherty
 Score (vocal): soprano, reduction of fixed electronics
 Score (full): soprano, three midi keyboards, celesta / chamber organ
3 Recording: live, Juliet Fraser, Huddersfield, Feb. 2017

4. *Ambling, waking* Mar–Apr. 2016 14'
 Score: orchestra
4 Recording: live, BBC Scottish Symphony, cond. Ilan Volkov, Glasgow, Tectonics, May 2017
 video: <http://youtu.be/PqTLZetKieY>

5. *For piano (singing / dancing)* Nov. 2015 / Jul. 2017 22'
 Score: piano solo
5 Recording: *Singing*: Lawrence Dunn, studio, 2015
6 *Dancing*: Philip Thomas, live, Huddersfield, Jan. 2018

6. *Carrying* Feb–Sept. 2017 14'
 Score: string quartet. Two versions, without and with Helmholtz–Ellis accidentals.
7 Recording: Quatuor Bozzini, Aberdeen, Oct. 2017
 Alt. recording: Quatuor Bozzini, Utrecht, Sept. 2018,
 video: <https://youtu.be/PaFwVzp6T4o>

7. *Your wits an E la* Dec–Jan. 2016 7'
 Score: two violins.
8 Recording: John Garner and Marie Schreer, live, London, Mar. 2016,
 video: <https://youtu.be/CGydIuk1ZJw>

8. *Habitual* May 2017 11'
 Score: violin solo
9 Recording: Sarah Saviet, live, Huddersfield, Mar. 2019
 Alt. Recording: Sarah Saviet, live, Cologne, Apr. 2018
 audio: <http://tiny.cc/snszcz>

9. *Claribel* Oct–Nov. 2016 21'
 Score: violin and piano
10 Recording: Aisha Orazbayeva and Joseph Houston, live, Huddersfield, Jan. 2017

10. *Three Heames Settings* Jun–Aug. 2016 13'
 text: Ian Heames
 Score: baritone, flugelhorn (trumpet), trombone, bass clarinet, electronics
11 Recording: Loadbang, live, Huddersfield, Nov. 2017

CD1 = tracks 1–6; CD2 = tracks 7–11. Total time: 145'

INTRODUCTION

§0.1 The Wolffian moment: melody and afterness

What use is melody? Where does it originate? In the early sixties, John Cage noticed during a performance of *Winter Music* that, instantaneously, “it had become melodic.”¹ ‘Christian Wolff prophesied this to me years ago,’ he later wrote. ‘He said—we were walking along Seventeenth Street—he said, “No matter what we do, it ends by being melodic.”’ Forty years later, Wolff wrote:

I also continue to think that all music, on a wide spectrum from plain and simple to intricate, is melody; and at the same time, each individual detail of a sound matters also entirely for its own sake.²

Alongside its care for the individuality of sounds, Wolff’s music is distinctively and idiosyncratically melodic. But despite its idiosyncrasy, Wolff nonetheless had stumbled on something general. Things find themselves to be joined. Sounds have their own individual immanent detail and life—but connexion remains. Music is ultimately tied to the fact of the following of one thing by another.

Cage’s musical practice was intimately concerned with duration: as material as much as measurement. Wolff’s particular insight was that duration is not neutral. As listening animals, whose listening is filtered through attention and consciousness, duration becomes partitioned into *before* and *after*. That which

1. John Cage, *A Year from Monday* (Middletown: Wesleyan University Press, 1963), 135.

2. Christian Wolff, ‘Sketch of a statement’ (1993), in *Occasional Pieces: Writings and Interviews* (Oxford: Oxford University Press, 2017), 199.

follows is tied to that which has been imbibed, preceding it. That which is experienced in the present is coloured by conscious and unconscious anticipation of that which will (or won't) follow. Music inherits itself; it is made out of accumulation. It is subject to, and concatenated among, unfolding and on-following.

To find, as Cage did, that things have become melodic, is to encounter a situation of unfoldedness on many timescales. Things which are previous have become unwittingly genetic for those that follow. Things which follow make-do in a situation that is not of their choosing. Such unfolded following-on applies as much to momentary instances of musical unravelling as it does to the entire lives of persons.

This is, admittedly, an idiosyncratic vision of melody, taken in perversely general or expanded terms. But then, taking melody in its own right seriously might be perverse. As Daniel Albright has put it, '*Melody* has been a suspect word for a long time. It has a bland, watery sound: *melody* is Bellini, *music* is Beethoven; *melody* is Irving Berlin, *music* is Schoenberg.'³ Melody is everything that is flowing, flowery, nice, conventional, ubiquitous, commercial, reactionary. For Albright, 'no one' (or, at least, as a historian of modernism, no decent modernist) 'wants to be a tunesmith.'

That tunesmithing is 'mere' tunesmithing, and that melody is 'mere' melody, deficient or lacking in substance, could be, in present contexts, part of its perverse attraction. Albright's partition—of music on the one hand, melody on the other—grants the melodic a certain troublesome danger. It is as if it needs to be bracketed out, as a threat to all music everywhere. Surely this was an attraction Wolff felt. Despite its ubiquity—or perhaps because of it—melody betrays a poverty of sufficient content. Basing one's entire vision of music on 'mere' melody, as if this derelict aspect could be somehow fundamental, has a perversity to it, delicious for a troublemaker such as Wolff. Wolff's music often explicitly aligns itself with poverty (he once stated that he hoped there would be a future for music which did not require electricity⁴); but compositionally too, his music has a tendency to alight on thinness or partialness, patterning itself as if certain aspects are missing or unobtainable. Cage's version of chance had grandness—an ambition to, famously, 'sober and quiet the mind thus rendering it susceptible divine influences'.⁵ No such loftiness in Wolff—his chance

3. Daniel Albright, 'Modernism's melos', *Parnassus: Poetry in Review* 32(1-2), 2011

4. Wolff, 'Electricity and Music' (1968), *Occasional Pieces*, 31.

5. Quoted by Wolff in 'Experimental Music around 1950: Consequences and Causes' (2009), *Occasional Pieces*, 272. Wolff calls this 'spiritual discipline'.

is closer to haphazardness. Wolff's music finds itself located on the floor, in the earth, made out of, and playing with, that which is readily available. Melody, as something thrown-out or dumped by the more lofty, is plentiful.

Importantly, though, Wolff's work began as primarily concerned with *discontinuities*.⁶ It was the search, in the fifties and sixties, for *actual* discontinuity—for the elaboration of musical events in and within 'zero time'—that was to betray the unlikely presence of melodic connexion. Melody, understood generally, is the acknowledgement of 'unexpected continuity': that things have even *unwanted* or unasked-for connexion and relatedness. Such genetic succession might be on scales not necessarily of immediate audibility or knowability, not least without obtaining more perspective than that which is immediately available. But such inheritances and connexions nevertheless inexorably characterise particular existence in the present.

Within 'zero time', however constituted, there remains a distinct pressure of the non-immediate, unwanted, unacknowledged and unchosen. It is the pressure of following, the pressure of having-to-make-do in the situation of the present, that is characteristically melodic. Such a making-do can be both known and acknowledged, and, at the same time, balefully ignorant. It might even be tragic or forlorn.

Even at the beginning, as Wolff detected, there is a semblance of the 'end' ('it *ends* by being melodic'). The melodic consists in constant forgetting and recollection. There is a circularity and spiralling. When taken in this most general form, the melodic amounts to succession, inheritance; retrospection, revival; affiliation, kinship, daughterhood, friendship; forgetting, misremembering, avoidance, ignorance; resemblance, imitation, homage; hope, yearning, disappointment, entrapment.

*

Why alight on melody now? The melodic, as an expression of successiveness, inheritance, strange continuity, is apt given the aesthetic priorities of the last thirty years or so. In the conclusion to his book on music since 1989, *Music After the Fall*, Tim Rutherford-Johnson alighted on the concept of 'afterness'.⁸ He

6. Wolff described how, during an English course at Harvard in 1951, he 'wrote . . . more or less a defence of "discontinuity" . . . in modern music, arguing that we needed a different sense of what constituted melody.' Email to Michael Hicks, 2006, quoted in Philip Thomas and Stephen Chase, *Changing the System: The Music of Christian Wolff*, 12.

7. Put as much by Cage, in *For the Birds*, 199.

8. Tim Rutherford-Johnson, *Music After the Fall: Modern Composition and Culture since 1989*, 260.

noted that afterness formed a distinct texture in works of the late twentieth and early twenty-first centuries—namely, a fascination with archives, ruins, post-ludes, aftermaths, and memoria. Meanwhile, the ‘ends’ of music, art, and history, had been variously and multiply declared from the late eighties on.⁹ The irony now of course is that today such talk of ‘endings’ is hopelessly dated.

Nevertheless, despite history being far from ended, afterness has not gone away. Historians of modernism have located afterness as a distinct quality of all postwar modernist (or ‘contemporary’) art.¹⁰ The historian Gerhard Richter has traced the concept through nineteenth-century aesthetics, to the early history of modernism—‘afterness’, then, is not new.¹¹ Afterness is forever in a condition of recapitulation. In particular today, it is inheritance, the handing-down and perpetuation of circumstances, that are increasingly the location of politics.¹² ‘No one,’ James Baldwin wrote, ‘no matter how it may seem, simply endures his circumstances. If we are what our circumstances make us, we are, also, what we make of our circumstances.’¹³ Where late-twentieth-century afterness had a forlorn ‘ended’ quality, now it is fraught and contested. The perpetuation of inequity, of racism, of disenfranchisement and violence, is a choice: and like any choice, its making is deliberate and continually renewed.

It is apposite, then, considering Wolff’s own socialist political outlook, that such a melodic conception of music—of music as on-following and accumulation—should be well-suited to political interpretation. Wolff’s own political music is well known. But aside from political texts and songs, I think of more general instances of waiting, transference and synchronisation, encountered in works like *Changing the System* and *For 1, 2, or 3 people* (fig. 0–1a, b). In playing Wolff’s pieces, one is often faced with a negotiation of inheritance: the player

9. In a musical context, Vladimir Martynov’s writings might be most potent in this regard: they have, since their release, sometimes unfortunately, acted as a continuing point of reference in discussions of contemporary music in Russia. His writings have not been translated into English. See Martynov, *Konets vremeni kompozitorov* (‘The End of the Time of Composers’), 2002; and *Zona opus posth, ili Rozhdeniye novoy real’nosti* (‘The Zone of Opus Posth., Or the Birth of a New Reality’), 2005.

10. As Sarah Collins puts it, ‘the category of “the contemporary” has come to have a natural association with various historical moments after 1945, in music as well as in the other arts, . . . [offering] a way of describing a prevailing mentality of ‘coming after’—of being post-war, post-modern, post-art and eventually, of course, post-history.’ Collins, ‘What was contemporary music?’, in *The Routledge Research Companion to Modernism in Music*, 59.

11. Gerhard Richter, *Afterness: Figures of Following*, Columbia University Press, 2011.

12. Thomas Piketty has done much to reinforce this, in his influential *Capital in the Twenty-First Century*, 2014. See also Patrick J. L. Cockburn’s *The Politics of Dependence: Economic Parasites and Vulnerable Lives*, 2018, which explores the interrelations between the welfare system, inherited wealth, unearned income.

13. James Baldwin, ‘Every good-bye ain’t gone’ (1977), *Collected Essays*, 776.

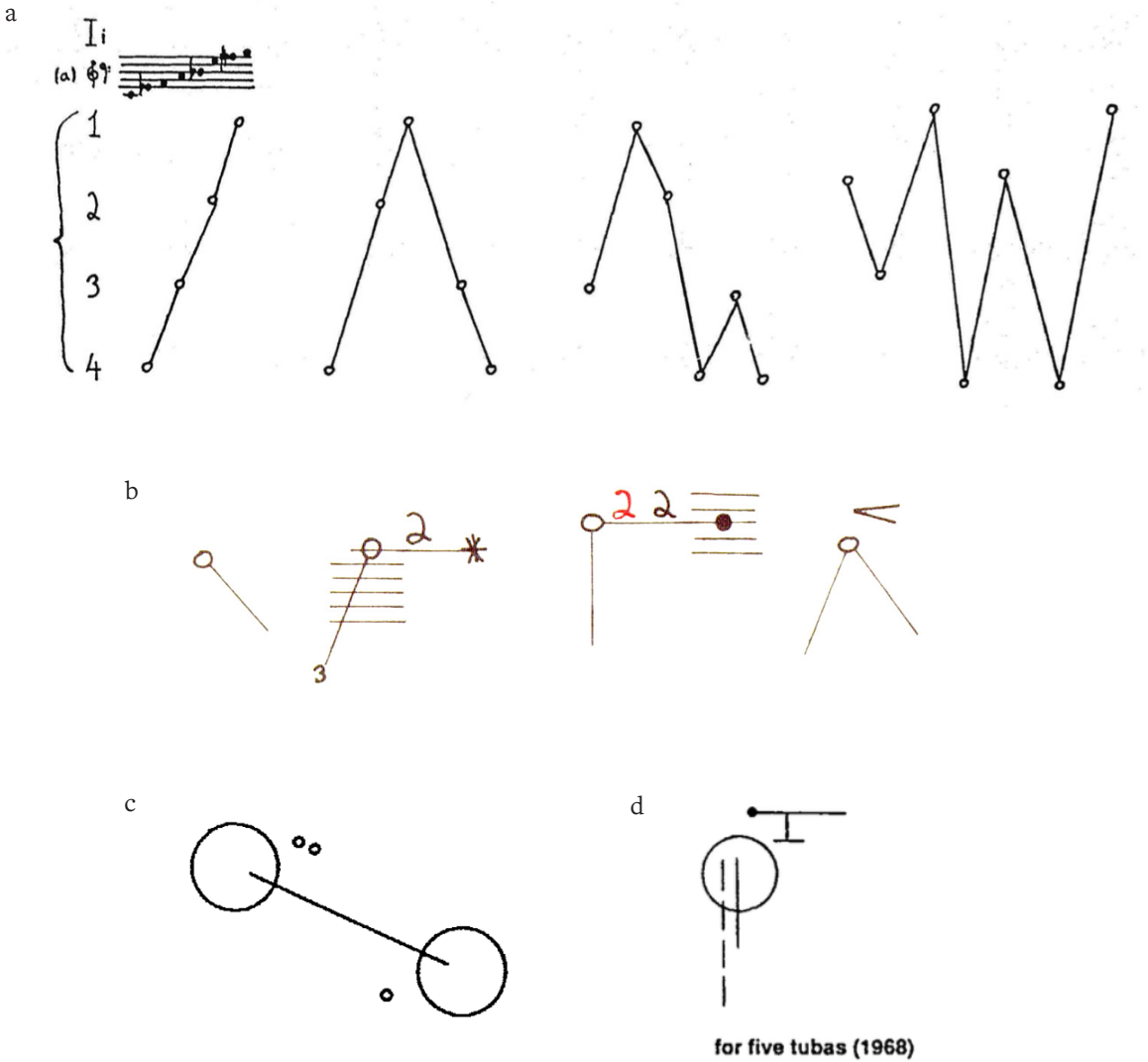


FIG O-1

a. Wolff, excerpt from *Changing the System* (1971), part II. (C.F. Peters)

b. from *For 1, 2, or 3 People* (1964), no. IV. (C. F. Peters)

c-d. titles of Anthony Braxton's Compositions 8C, & 4.

Reproduced from Ronald M. Radano, *New Musical Figurations: Anthony Braxton's Cultural Critique*, Apdx. A, 277-282

must often wait for something to happen, so as something else can happen. A waiting that cannot in general be rehearsed; it has largely unknown dimensions. Certain sounds might exist only to instigate others—they must await their own departure. Other sounds can only be instigated on the charge of a progenitor—they must await their beginning. Further, many sounds obtain their life only alongside fusion with other, concurrent sounds—sounds that were not ‘chosen’, as such, but must be coexisted with, in and through coincidental necessity. (Similar notations are found throughout Anthony Braxton’s scores. Even the diagrammatic titles of certain of his works for creative orchestra can convey hints of this successive transferral; fig. 0–1c, d.)

Is music, more so than other artforms, particularly prone to afterness? Wolff and Braxton’s special notations apart, it is of course the case that all musical notations convey some kind of unfolding and succession. This has much to do with musical notation’s origins as a daughter of writing systems, themselves linearly successive. (In addition, the earliest complete musical composition, the Seikilos Epitaph, see fig. 0–2, is a funerary object: notions of afterness are present from the earliest musical notations.) But even musicians not tied to notation are routinely confronted by the inherited, and thereby inevitably retrospective character of their practice. In improvising, from moment-to-moment, one is forever attending to what it was one just did: what it was to have done so, and what to do about proceeding from there. Composition is not dissimilar, and is occasionally, not unreasonably, regarded as glorified transcription. While visual arts are concerned with trace, and have time sedimented into them, those aspects of music that are expressly identifiable and locatable are only encountered through succession. Namely intervals and rhythms, but other musical gestalts also, only obtain their identity through successive relation.¹⁴ An interval is a difference between identifiable locations in pitch; a rhythm is a difference between identifiable locations in time. A modal final inherits its identity as such as daughter to its melodic progenitors.

Melody then would seem both inappropriately base, or too kitsch to warrant discussion; and at the same time, tied to profound, contested notions of inheritance and succession. It is both and much else between. My own peculiar interest in it I suspect came from teaching music to children: discovering first-

14. Classical Indian music theory holds that the seven *swaras* dividing the octave (equivalent to Do-Re-Mi etc.) denote not only a specific pitch but also the leading interval directly below that pitch. *Sadja* (or *Sa*) is equivalent to both Do and the interval Ti-Do. See Emmie Te Nijenhuis, *Indian Music: History and Structure*, 13.



FIG O-2

The Seikilos 'epitaph': the oldest completely surviving notated composition. Usually dated to the 1st century AD, it is a funerary object. The upper part reads: 'I am a tombstone, an image. Seikilos placed me here as a long-lasting sign of deathless remembrance.'

The song, the lower section, notates sung scale degrees above the text, which reads: 'As long as you live, shine / Grieve you not at all / Life lasts only a short while / Time demands his due.' See Thomas J. Mathiesen, *Apollo's Lyre: Greek Music and Music Theory in Antiquity and the Middle Ages*, 48-50. Images: Wikimedia Commons

hand that the process of melodic acquisition seemed simple on the surface, but was often curiously circular. In order to understand, say, the location of one pitch, the learner must find it by means of another.¹⁵ Children acquire music ‘successively’.

Sounds do not arrive neutrally: they are handed-down at us. Their heard substance of music is *a posteriori*. Hearing sounds ‘as themselves’, in the way that the New York School advocated, is itself another form of handed-over listening, that can be taught and practiced. For Cage, harmony was uninteresting until it became possible to incorporate within his preferred mode of listening. (Cage, after hearing James Tenney’s *Critical Band* (1988), said ‘if that’s harmony, I take back everything I ever said. I’m all for it!’¹⁶)

Do I mean to rehabilitate melody? Perhaps; though I would argue that given composers’ continuing yet unarticulated concern for it, located somewhat under-the-radar, it does not need rehabilitation so much as recovery. But even within the history of experimentalism, a rich seam of interest in the melodic can be found, not just in Wolff, but in Cowell, Ives, Rudhyar, Harrison, Braxton, Coleman, Monk, Behrman, Polansky and others (to limit the list just other Americans).

§0.2 The Portfolio and the Commentary

The portfolio of compositions contains ten pieces, compositions which have variety but also dwell, I believe, variously, within a similar world. The folio compositions, in order of completion, are listed in Table 0-1. (A more detailed breakdown of the portfolio materials is given on page 8.) Note that the pieces are discussed thematically, and not chronologically. Pieces 1 and 10 are discussed in the first chapter. The second chapter discusses pieces 2, 4, 6, and 8. The third chapter discusses pieces 3, 5, 7, and 9.

This thesis-commentary, accompanying the folio, is divided into three chapters. Each of these three chapters takes a differing view of the melodic, from

15. Putting it more precisely, contour and absolute location are mutually reinforcing. From infancy until around 4 years, ‘rough’ melodic contour can be reproduced, with reproduction of precise intervals generally less reliable. Children older than 4 or 5 can learn to reproduce intervals precisely. However, beginning with confidence on a single given starting note, without any other pitches of reference (such as a supporting bass progression, or melodic lead-in) is more difficult. See Corrigan & Schellenberg, ‘Music cognition in childhood’ (ch. 5), *The Child as Musician: A handbook of musical development*, 83.

16. *The Selected Letters of John Cage*, ed. Laura Kuhn, 2016, fn. 1047, p. 554

three different temporal orientations. The first chapter adopts a position of afterness, viewing ‘past’ material; the second chapter explores the condition of ‘long present’; the third chapter explores anticipation. Towards the end of the commentary, a collapsing of time itself—drawing on Jorge Luis Borges’ ‘denial of succession’—is discussed.

Grouping the compositions in this way allows for different priorities to be elucidated. But it should be said that the majority of these pieces have overlapping concerns and preoccupations—dividing them up according to temporal orientation is an act of exploration. An exploration of the tripartite phenomenon of melodic succession itself.

In the first chapter, ‘Digestion (and homage)’, subtitled ‘music coming after’ the focus is placed on how music comes to be embodied through the consumption of, and engagement with, already-existing musics. The successive qualities of compositional engagement are here used by analogy with melodic succession. It sketches a view of composition-as-digestion—as an imbibing of material, and a drawing it through the body. Of vicarious consumption at a distance; of how the composing body is located itself in a situation of afterness. As such, the relation between compositional embodiment and two portfolio pieces, *Set of four* and *Jumping song*, is discussed. Aspects of ‘feeling out for colour’, synaesthesia-at-the-keyboard, and ‘handed’ making, are explored. Also discussed in this chapter is how the portfolio music might relate to notions of ‘experiment’ and experimentalism, with links made to the Bauhaus and Black Mountain College approach Josef Albers, as well as the highly ‘experimental’ life of cephalopods. The pieces’ debts to other composers, especially *Jumping song*’s to Nancarrow, is discussed.

The second chapter, ‘Mood (and melancholia)’, subtitled ‘music in the long present’ focuses a predominant concern of these compositions, that of melancholy. The chapter views the melodic’s present tense—drawing on theories of *raga*, the melodic ‘mode’, both as ‘canonical’ shape, and mood. Here, the notion of mood, as amorphous emotive state, conducted in the present, is explored. Drawing on Robert Burton, melancholia is explored as the ‘encyclopedic’ mood—the mood to encompass all others. Reflections of the early-modern understanding of melancholia, as an ‘assemblage’ is discussed in this chapter, as is a form of melancholia as pre-emptive mourning, drawing on Agamben. The chapter closes with the discussion of the melodic ‘long’ present in the context

<u>TABLE O-1</u>					discussed in chapter:
1.	<i>Jumping song</i>	automatic piano	2015	7'	1
2.	<i>For piano (singing) / (dancing)</i>	solo piano	2015/17	19'	2
3.	<i>Your wits an E la</i>	2 violins	2015	7'	3
4.	<i>Ambling, waking</i>	orchestra	2016	14'	2
5.	<i>Claribel</i>	piano + violin	2016	20'	3
6.	<i>While we are both</i>	soprano + backing	2016-17	15'	2
7.	<i>Habitual</i>	violin solo	2017	10'	3
8.	<i>Carrying</i>	string quartet	2017	13'	2
9.	<i>Three Heames Settings</i>	bar., b. cl., tpt., tbn.	2017	13'	3
10.	<i>Set of four</i>	kbd., grt., vln., perc.	2017	18'	1

of illness, death, and grief.

The third chapter, 'The Capacity for Melody to Look Round Corners', subtitled 'music and anticipatory consciousness', draws together the various approaches to melodic anticipation found in the portfolio pieces. How might monophony relate to succession, memory, habituation, weaving, and tension? What is this music's relationship to self-reference? Drawing on conceptions of time and unfolding from Augustine, Carlo Rovelli, and Ernst Bloch's *Principle of Hope*, notions of immanent anticipation within the melodic are explored. The ancient mental representation of pitch-space, the Guidonian hand, is discussed in relation to the composition *Your wits an E la*. While the opening chapter utilises the thinking of Josef Albers, this chapter draws closely on the thinking and art of Anni Albers, concerning weaving, craft, and thread. Explorations of memory and forgetting as compositional approaches are explored in discussion of *Claribel*. The chapter also discusses the anticipation of the future, inscription of potential apocalypse in the present; the concept of 'futurability', drawing on Franco 'Bifo' Berardi. The final section discusses Jorge Luis Borges' 'denial of succession', where notions of time and temporal unfolding are finally collapsed. A coda discusses future possibilities for my compositional development.

What is this music like? As would be expected from the overall topic at work here, there is an overarching concern for things melodic. Yet local melodic aspects are only a reflection of a wider concern for the 'abstract' melodic; succession *as such*, explored in multiple ways across the portfolio compositions.

Much of the music explores Just Intonation, seeing melody and harmony as intertwined symbiotes. Alongside these concerns are a range of other preoccupations: circulation, coiling; descending, falling (sighing); floating, lightness, tunefulness; modal mixtures, chromaticism in a modal context; mixtures of memorable and unmemorable material; self-referentiality; culmination; chorales; close-harmony and parallel voicings; an opening ‘preamble’ or anacrusal phrase; ‘cornering’, or the ‘J-cut’; centredness on G; weaving, in melody and voice-leading; acceleration; tension; overdwelling, obsessiveness; melancholy and joyfulness (as shadows of one another); homage.

Beyond even these generalities, there are specific musical ‘tics’—such as an interest in melodic $\hat{6}$ – $\hat{5}$ movement; rising and repeated major sixths, used towards the ends of pieces; harmonic movement alighting on, or even obsessing over, ii–V. Triads appear frequently in this music. Perhaps I am of a generation to which the ‘danger’ of the triad was never quite apparent. As a teenager, I did disapprove somewhat of triadic harmony in ‘serious’ composition; the discovery of Nancarrow did much to dissolve this view. Certainly, I now find Just triads, such as the $5/4/3$ —along with other Just triadic sonorities—extremely rewarding and impossible to discard.

It can be difficult to isolate whether such preoccupations are compositional habits or choices. I believe they can be both—indeed, part of the project of this thesis commentary is to find ways to account for compositional decision-making that is at once habitual and chosen. I do not believe that any difficulty of separation between habit and decision is problematic.

Christian Wolff himself gave an interesting answer to the question, ‘what is your music like?’, suggesting that

art work like other kinds of work is socially conditioned, or better, is produced, willy-nilly, in a dialectic with social circumstances, that is, with ordinary life, especially material life. . . .

The most specific observation I’ve made about the effect of outward circumstances on my own work has been about, sometimes, its structures. I’ve helped raise four children. As many know, when the children are small this is time-consuming and somewhat unpredictable work, allowing various shorter snatches of unexpected free time (a child has, surprisingly, gone to sleep). To be able to write under these circumstances I found clear structural plans essential, involving quite short, focused structural units, about, say forty-five or so minutes worth of writing time.

The music then is an accumulation of shorter bits, a kind of patchwork (as in

quilting). . . . When I wrote my first straight-ahead, linear tune in 1970 in a piece called *Burdocks*, David Tudor remarked smiling that the new presence of our two very young children had brought something new to my music.¹⁷

I do not have children—though I did teach them for a while. But Wolff is right: the texture and structuring of ordinary life colours one’s making. I typically work at the piano, or keyboard—a topic discussed at some length in chapter one. I also do not write in the way that Wolff does, in short focused units; instead, material is largely assembled in fluid expanses. Perhaps not needing to attend to childcare enables these structural conditions.

Perhaps the most important social condition of this music is its being written for others to perform. It only exists because professional musicians have enabled and prosecuted its existence. This is by no means trivial. Professional musicianship itself requires years of training and huge investment to create. The musical conditioning of my own composition reflects the fact of my own social privilege—as a student for whom funding has been provided, and whose past musical training has also been paid for. The social conditioning of this work generally reflects the emergent circumstances of its making—but I would want to emphasise that its social conditioning does not go unreflected upon. At the very end of the last chapter, I discuss in more detail how social and political considerations might alter the condition of my musical work in the future. ■

17. Christian Wolff, ‘Music–Work–Experiment–Politics’ (1993), in *Occasional Pieces*, 201.

1

DIGESTION (AND HOMAGE)

music coming after

Standing back, I find that I proceed through and in a terrain nexus, doing singings with my fingers, so to speak, a single voice at the tips of the fingers, going for each next note in sayings just now and just then, just this soft and just this hard, just here and just there, with definiteness of aim throughout . . .

I sing with my fingers, so to speak, and only so to speak, for there's a new being, *my body*, and it is this being . . . that sings.

—David Sudnow¹

How many color patterns can your severed arm produce in one second?

—James Wood²

§1.1 Bodying digestively

Is the body itself melodic? What kind of unfolding does it gather? Material definitely comes into and goes out of it. It's made of more than it knows. It accrues identity; it is named. It digests—and makes itself out of the material it has digested.

In composition—and in playing music more generally—what is it about one's own choices that causes them feel to be *one's own*? Choices that can emerge spontaneously, as if regurgitated. Such a regurgitation can be difficult to find attribution for: what were our 'food habits'?

The attribution of 'ownness' to creative choices is an extension of the sense

1. David Sudnow, *Ways of the Hand: A Rewritten Account*, 129-30.

2. Wendy Williams, 'So you think you're smarter than a cephalopod?' *Ocean Blue* (blog), Smithsonian National Museum of Natural History, May 2011

of self. Our appreciated sense of self is ultimately a convenience created for us by our brains. We are a colony: of our own cells, and a vast microbiome of microorganisms. They have a significant role in mood, health, and thinking—the depth of which is still only emerging. What differs in ‘creative’ digestion is our greater familiarity with the ‘products’ of that digestion (as opposed to the alien, internal concerns of our gastrointestinal tract). But greater familiarity creates its own uncanninesses: the ‘ownness’ of our choices can fluctuate. In the process of compositional making, one’s own choices can later appear alien, no longer one’s own.

I dwell on such drifting and fluctuation in the ownness of compositional decisions namely because I habitually write at the keyboard. Is this an unusual thing for composers to do in the present? At least, in this chapter, I intend to address this mode of working with some critical self-awareness. Drawing on Josef Albers, research on embodied cognition, and ideas of nonhuman or transhuman embodiment, in this chapter I focus on two pieces, *Set of four* and *Jumping song*. With their engagement with homage, perhaps more than any other pieces in the portfolio, these compositions are particularly concerned with what happens when musical ‘food habits’ become digested and embodied via the means of the body at the keyboard. Of composition as a ‘feeling-out’ or ‘feeling-for’. Composition as grasping; via torsion and flexing. Of the relationship between homage—that is, material that exists prior, ‘food’—and its drawing out through the body.

Our brain, itself a bodily constituent, does much to ‘invent’ the body. Our ability to will a course of action is largely a phenomenon of our brain’s capacity to ‘accept’ a course of action as willed.³ We generally only recognise our having decided to do something, after we have decided it. This is a common feeling when creating music with an instrument—that one is forever catching up with, and running after one’s ‘bodily’ capacity for creation.

Musical decision-making, both improvised and pre-meditated, can obtain this uncanny and dislocated feeling because it consists in, essentially, too much action to be entirely marshalled voluntarily.⁴ Our capacities for voluntarism—

3. Among other regions, the precuneus has been linked to this ‘experience of agency’. See Schaefer et al., ‘Alien Hand Syndrome: Neural Correlates of Movements without Conscious Will’, *PLOS ONE* 5(12): e15010, 2010.

4. The neurology of improvising music has been the subject of multiple recent studies. Notably, areas of the brain associated with conscious planning and inhibition have shown to be deactivated, in studies comparing improvised creation of music to reproduction of music from memory. See Roger E. Beaty ‘The neuroscience of musical improvisation’, *Neuroscience and Biobehavioral Reviews* 51, 2015, 111.

or decided or deliberate action—are wider than our consciousness can reliably claim. As neuroscientist David Eagleman has put it, ‘consciousness is like a tiny stowaway on a transatlantic steamship, taking credit for the journey without acknowledging the massive engineering underfoot.’⁵

The perception of pain felt in a non-existent limb is commonly reported by amputees.⁶ But, tantalisingly, lesions to parts of the brain may result in what might be described as the reverse: so-called ‘alien hand syndrome’, where a real limb’s actions, despite being registered and perceived, are not accepted by the subject as ‘their own’. Such patients are said to have problems with ‘experience of agency’. Patients with lesions to the right hemisphere will sometimes report that their left limbs belong to the patient in the next bed, or even their mother.⁷

For much of the last century, academic and composerly thinking about music has tended to neglect its bodily character—typically through music’s conceptualisation through its constituent, abstracted parameters.⁸ A consequence of this emphasis on parametrisation has been a ‘return to the body’, visible in the contemporary music world from around the 1990s. (Parametrisation does, however, remain—but is now often being applied to aspects of performative embodiment itself.⁹)

Music has never not been embodied. But the body as such is not the same as the *concept* of the body. The ‘return to the body’ is the return to a specific concept of the body, as a site of aesthetic manipulability: a body potentially augmented, transformed, made fictive, morphed and dissolved.¹⁰ Humans have always explored these kinds of transformative manipulations—it is the materialism of the bodily that distinguishes this mode of conceptualisation as European. As the French ethnologist Maurice Leenhardt recounted, when working with the Kanaks of New Caledonia in the early 1900s, his suggestion that he had ‘introduced the notion of spirit into [the Kanaks’] mode of thinking’ was rebuffed. His

5. David M. Eagleman, *Incognito: The Secret Lives of the Brain*, ch. 1 (epub).

6. It’s also reported in some individuals with gender dysphoria: i.e. a phantom penis in pre-transition FTM individuals. See Cassandra Crawford, *Phantom Limb: Amputation, Embodiment, and Prosthetic Technology*, 225.

7. J. Cutting, *The Right Cerebral Hemisphere and Psychiatric Disorders*, 190.

8. E.g., Iannis Xenakis, *Musiques Formelles*, 1963. For historical context, see e.g. Joan Peyser, *To Boulez and Beyond*, esp. chap. 20; Robin Maconie, *Other Planets: The Complete Works of Karlheinz Stockhausen*, esp. chap. 5.

9. See, e.g., Rutherford-Johnson, *Music After the Fall*, 135ff; Jennie Gottschalk, ch. 3 ‘Physicalities’, *Experimental Music Since 1970*, 2016. See also Jennifer Walshe, ‘The New Discipline: Editorial and Statement’, *Musiktexte* 149, 2016.

10. Exploration of these issues is detailed at length in Ben Spatz, *What a body can do* (Abingdon: Routledge, 2015).

interlocutor responded: ‘Bah! You didn’t bring us the spirit. . . . We have always acted in accord with the spirit. What you’ve brought us is the body.’¹¹

The intertwining of musical models with embodiment has been argued to begin as early as the perinatal period—i.e. the foetus in utero.¹² Musical training itself can permanently alter networks across the whole body. String players, for example, have been shown to exhibit ‘a larger cortical representation of the digits of the left hand’ in the brain, an effect ‘correlated with the age when musical training started’. The volumes of auditory and motor cortices, the corpus callosum and cerebellum have all been shown to differ between musicians and non-musicians.¹³

There is a temptation to adopt Cartesian partitions, delimiting ‘the mind’ or ‘the self’ from the rest of the body. But the evidence from sufferers of brain injury would imply that ‘fingers of the left hand’, say, are part of our experience of self, extending all the way through them.

One might ask: what is it like to write music ‘at’ the keyboard? While one is there, is music something ‘thought’, or ‘heard’, or ‘handled’? ‘Hands are almost living beings,’ suggested Henri Focillon. If they are servants, they are servants ‘endowed with a vigorous free spirit, with a physiognomy. Eyeless and voiceless faces that nonetheless see and speak.’¹⁴ ‘Fingers’, Stravinsky wrote, ‘are not to be despised.’¹⁵ He added, ‘they are great inspirers, and in contact with a musical instrument, often give birth to subconscious ideas which might otherwise never come to life.’¹⁶

Is Stravinsky’s language here defensive? It seems there were those who did wish to despise ‘the fingers’—to relegate, or dismiss them outright. Perhaps the fingers are somehow ‘conservative’, providing access only to that which is ‘handed-out’ or ‘handed-down’. Stravinsky calls them ‘subconscious’—could that be a slur? The implication could be that their outputs be subordinated to

11. Quoted in Eduardo Viveiros de Castro, *Cosmological Perspectivism in Amazonia and Elsewhere*, HAU Masterclass Series no. 1, haujournal.org, 2012, 115.

12. See Sangeeta Ullal-Gupta et al., ‘Linking prenatal experience to the emerging musical mind’, *Frontiers in Systems Neuroscience*, 2013.

13. Robert J. Zatorre et al. ‘When the brain plays music: auditory–motor interactions in music perception and production’, *Nature Reviews Neuroscience*, Vol. 8, July 2007, 554.

14. Henri Focillon, ‘In Praise of Hands’, in *The Life of Forms in Art* (1934) (Cambridge: MIT Press/Zone Books, 1992), 157.

15. ‘As a matter of fact, I do compose at the piano and I do not regret it. I go further; I think it is a thousand times better, to compose in direct contact with the physical medium of sound than to work in the abstract medium produced by one’s imagination.’ Igor Stravinsky, *An Autobiography*, 1936, 7.

16. *Ibid.*, 129.

later rationality—to differentiate creation that is ‘received’ from creation that is ‘principled’.

I hope if there is a dichotomy here, it’s illusory. Comprehension and internal representation, of concepts as much as of objects, are readily dependent on the upper limb. It’s no coincidence that ‘grasp’ is synonymous with understanding.¹⁷ The body plays a role in determining how musical principles are conceptualised in the first place. Notions of tension and tightness acquired through analogous representation via the larynx, upper limb, and lungs. Metaphorical aspects of musical description—‘raised’, ‘high’, ‘*aigu*’, ‘sharp’, ‘above’, ‘bright’ and so on—are acquired through primordial embodiment. The motor cortex is typically activated even when only imagining music. If music is capable of parametric rational disembodiment, it is only to be reembodied later.

There remains, despite the recent ‘return to the body’, a suspicion, even prejudice, of composers whose work is conducted ‘at’ an instrument—‘at’, rather than, say, ‘with’. Working ‘at’ the keyboard suggests a certain rude ‘directedness’ toward it (perhaps in the way that talking ‘at’ someone is not the same as talking ‘with’ them). But conversely, as opposed to working ‘at’, working ‘with’ an instrument could imply kind of larceny: that the established capacities of an instrument (and by implication its instrumentalist) are to be bluntly utilised, lifted, hired, borrowed, bent, and perhaps discarded. Working ‘at’ suggests the artisanal workbench: that the labour of composition could be as manual as it is conceptual. The keyboard, as an extended bodily apparatus, becomes not so much a ‘limiting factor’ as another method of embodied sensing. Its bodying-out is interlinked within a network of already embodied musical capacities. (An apt comparison with this way of working is Morgan O’Hara’s¹⁸ remarkable drawing series *Live Transmission*, see fig. 1–1, where the actions of the hands are portaited and modelled through mirroring and imitation.)

The compositions *Set of four* and *Jumping song*, discussed in this chapter, do much to encompass modes of ‘handed’ making. But they also attempt to ‘digest’ homagic sources. Here, homage is as a form of vicarious personification, adop-

17. See in this relation, discussion of the metaphor UNDERSTANDING IS GRASPING in George Lakoff and Mark Johnson, *Metaphors We Live By*, 20.

In German, the root *greifen* (to grip, grasp) generates many concepts, including to understand (*begreifen*), attack (*angreifen*), provide (*vergreifen*), seize (*zugreifen*), and tangible (*greifbar*). Likewise, the number of concepts deriving from the equivalent *stehen* (to stand), another bodily root, is large. For example: to assist (*beistehen*), consist (*bestehen*), arise (*entstehen*), to be certain (*feststehen*), confess (*gestehen*), resist (*widerstehen*), and to understand (*verstehen*).

18. Born 1941. See <https://www.morganohara.com>.

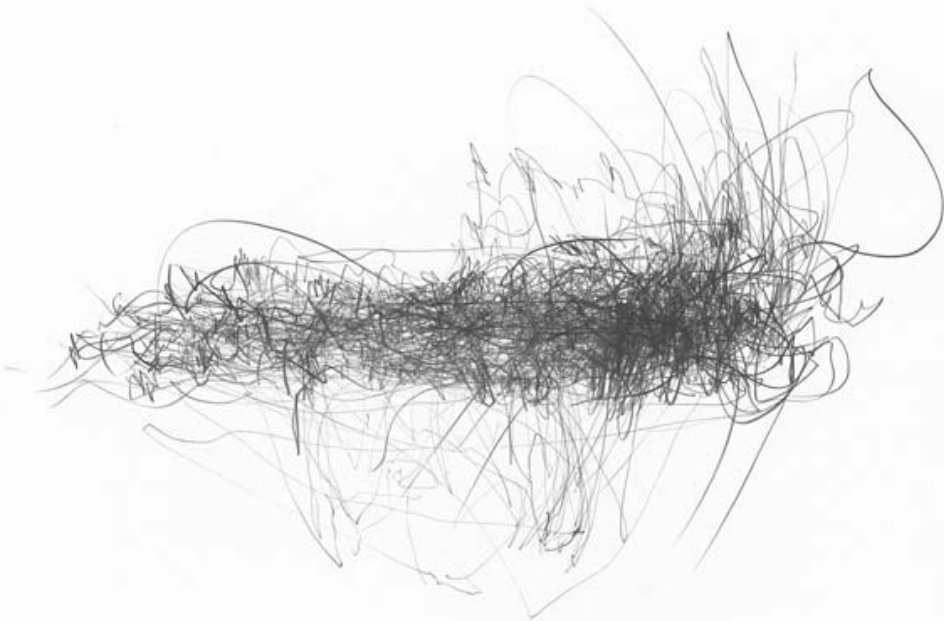


FIG 1-1

Morgan O'Hara: *LIVE TRANSMISSION: movement of pianist MAURIZIO POLLINI while performing SALVATORE SCIARRINO's Recitativo oscuro for piano and orchestra U.S. Premiere | PIERRE BOULEZ conducting the London Symphony Orchestra | Carnegie Hall | 11 March 2000*

tion, encapturing, recapitulation, regurgitation. The homagic source is drawn through the mind-in-the-hands, pushed through the fingers, enacted through the music's immanently decided motion from moment to moment.

§1.2 Colour through the fingers: *Set of four*

Set of four is a series of four movements for a mixed quartet of keyboard, guitar, violin and percussion, written in late 2017 for London-based ensem-

ble Plus-Minus. Each movement is of a different, asymmetrical length, and a differing character. Each movement is also dedicated in homage to a different composer, each of whom is living, and a friend (or mentor; on average about twenty years older than me).

In the context of the folio, *Set of four* could appear anomalous. Much of the folio's music is broadly contemplative—this piece is noisy, skittering, free-wheeling, eccentric, smiling. It is at times notespinning, at others square, even stiff. It seems to have split commitments.

But while it has its peculiarities, the piece's major preoccupations are in fact pertinent across the whole portfolio. To quote a few from the list given in the introduction, *Set of four* explores circulation, coiling; chromaticism (in a modal context); lightness, tunefulness; chorales; 'close-harmonic' parallel voicings; an opening 'preamble' or anacrusal phrase; cornering / the 'J-cut'; centredness on G; fixed just tuning; and other features mentioned in the introduction.

In this respect, *Set of four* could well represent a good introduction to the rest of the folio. As the last piece composed, *Set of four* is a culmination of these concerns, more or less deliberately incorporated together as emergent aspects from several years of composition. Nonetheless, the piece differs from the remainder of the folio in its attempt to be both a descendent of the pieces that antecede it, and to simultaneously undermine and outgrow them.

It is also a piece written for specific instrumentalists. The virtuosity of the keyboard part was written specially for Mark Knoop. The violin part, often muscular and solid, but also graceful, was written for Aisha Orazbayeva. The improvisatory percussion part was written for Serge Vuille (his curated concert series Kammer Klang often foregrounds experimental and indeterminate music). 'Tailoring' toward specific musicians—as well as a tailoring toward acoustic, temporal, and social situations—is an important part of the composing process.

(The recording submitted with the portfolio is a studio recording overdubbed by Irine Røsnes on violin, Colin Frank on percussion, and myself on keyboard and guitar. Another version, with an additional cello part, was written for and performed by Apartment House in December 2018.)

The guitar part is perhaps most explicitly 'tailored', written for Tom Pauwels' justly tuned guitar. This instrument is a copy of the National Steel guitar built for Lou Harrison—its tuning is Harrison's tuning used in his *Suite for National Steel Guitar* (1952/92).¹⁹ Harrison would refer to a fixed tuning such as this as

19. See Bill Alves, 'The Tuning of Lou Harrison's Suite for National Steel Guitar', <http://>

the ‘strict style’ of just intonation—as opposed to the ‘free style’, of melodic note-to-note just intonation.²⁰ With only a single fretboard, only a fixed tuning is possible. Thus in the piece, there are only twelve unique pitches, and their octave transpositions.

The ‘free style’ of just intonation is generally difficult to realise even on instruments without fixed tunings. Unfretted string instruments continually make reference to their open strings in order to tune just intervals—and ‘free style’ Just Intonation typically involves comma drift, which can be difficult to keep track of without fixed reference points.²¹ Fixed tunings are also more generally stimulating given an ‘at the instrument’ mode of making, where the immanent tensions between one pitch-class and another, within a finite set, are felt-out, and more immediate to the hand and ear. Broadly speaking, it has been this approach that has been adopted for the music in this portfolio.²² A direct and physical relationship with these tunings can be helpful in familiarising oneself, and one’s ears, with the particular character of different interval types.

This tuning, designed by Harrison, Bill Alves and William Slye, is centred on G. The significance of G is curious in the history of twentieth-century music in Just Intonation. Harry Partch always used G as the 1/1 (in Partch’s theory, the 1/1 is octave transferrable, so G can be named 1/1 in any octave).²³ The significance of G likely derives from its being lowest (and reference) string of the first instrument Partch designed in Just Intonation, the adapted viola, set to G₂, a fourth (4/3) below its standard tuning.²⁴ Utilisation of a G 1/1 was later retained by Lou Harrison.²⁵ In the present portfolio, all music in Just Intonation uses a

www.billalves.com/porgitaro/nationalsteeltuning.html. Similar tunings were used in other compositions of Harrison’s for guitar. For more background information, see Bill Alves and Brett Campbell, *Lou Harrison: American Musical Maverick*, 343ff.

20. See Lou Harrison, *Music Primer*, 6.

21. See for example Matthias Mauch et al, ‘Intonation in unaccompanied singing: Accuracy, drift, and a model of reference pitch memory’, *The Journal of the Acoustical Society of America* 136, 401 (2014).

22. The notable exception is the string quartet *Carrying*, discussed in chapter 2.

23. See also Richard Kassel’s discussion of Partch’s techniques in his introduction to *Barstow: eight hitchhiker inscriptions from a highway railing at Barstow, California (1968 version)*, lxxv.

24. Harry Partch, *Genesis of a Music*, 200.

25. For example in *Four Strict Songs* (1955), *Scenes from Nek Chand* (2002). David C. Doty (composer and editor of the journal *1/1: The Journal of the Just Intonation Network*) also has often used G as a 1/1. For other composers, the 1/1 can be set in different locations. Ben Johnston typically used C. La Monte Young, in *The Well Tuned Piano*, used E_b. Terry Riley, in *The Harp of the New Albion*, used C_#, with a modal centre of E_# (!).

See, respectively, John Fonville, ‘Ben Johnston’s Extended Just Intonation: A Guide for Performers’, *Perspectives of New Music*, Vol. 29, No. 2. (Summer, 1991), 106-137. Kyle Gann, ‘La Monte Young’s The Well-Tuned Piano’, <https://www.kylegann.com/wtp.html>. Joel K. Haack, ‘The Mathematics of the Just Intonation Used in the Music of Terry Riley’, *Bridges: Mathematical Connections in Art, Music, and Science* (1999), 101-110.

1/1 of G, apart from *While we are both*, which uses C. *Claribel*, a piece concerned with interaction between Just sonority and equal temperament, uses a 1/1 of A.

The conception of the 1/1 in Just tunings is distinct from a ‘tonic’. Modal tonics or finals are largely emergent, depending on the structure and habits of the modes and melodic trajectory used. The 1/1 in contrast acts as a permanent ‘background’, a point of reference as much as a point of gravitation.

Reference pitches are only relevant inasmuch as the overall pitch-level is agreed—i.e. at how many cycles per second. Yet Partch did maintain G₄ at 392hz, (or G₂ at 98hz), conforming with A₄ at 440hz. G₃₉₂ has some specific musical characteristics. With this G as a 1/1 and modal final, its root position major 5/4/3 triad sits to my judgment in the brightest position that is also stable within the treble register. The root position major triad on A₄₄₀ is just that bit more energetic to be completely stable: it’s perhaps for this reason that, when western instruments use this A to tune, it is taken as a dominant above D.

In contradistinction to Partch and Johnston, James Tenney’s music in Just Intonation typically uses a 1/1 of A, and not G. Indeed, Tenney’s music often explicitly centres itself on this pitch—*Critical Band* (1988) is a notable example. Using a reference A, as opposed to G, suggests a realignment and accommodation toward common-practice music of the eighteenth century and after—an accommodation anathema to Partch. For Partch, the realignment with G, and especially G₂, was just one of the ways in which he signalled his realignment with ancient Greek scala (filtered through the Guidonian gamut, of which the G₂ was the initial note, the *Gamma-ut*²⁶). The comparatively languid G, as opposed to an energetic A, also betrays the generally more contemplative quality of music in Just Intonation: purer ratios take time to be sounded. As Terry Riley has put it, ‘Western music is fast because it’s not in tune.’²⁷

For me, the ideological content of tuning systems is essentially uninteresting. This was a feeling sometimes expressed with some vehemence by Tony Conrad—his 1995 album *Slapping Pythagoras* can be seen as a direct rebuke to the Just Intonation ideology of La Monte Young.²⁸ Apart from any spiritual connota-

26. See Jan Herlinger, ‘Medieval Canonics’, in *The Cambridge History of Western Music Theory*, 168ff.

27. Quoted in Kyle Gann, ‘Just Intonation Explained’, 1997, <http://www.kylegann.com/tuning.html>

28. Table of the Elements V23, 1995. In the liner notes, Conrad writes: ‘Pythagoras, refusing to cross the bean field at his back, is dispatched by the democrats. The heterophony of the avenging democrats, outside, cheers the incineration of the Pythagorean elite, whose shrill harmonic agonies merge and shimmer inside their torched meeting house.’ The reference to the ‘Dream House’, La Monte Young’s long-running installation in Manhattan, is fairly obvious.



FIG 1-2

Fretboard of the Harrison National Steel guitar. Unequal distribution of frets shows the unequal step-size of the tuning. The string tuning is DADGAD.

tions, Just intervals are intoxicating due to their abundance and variety of colour. Such colour does not require ‘purity’ or ‘cleanliness’ to retain vibrancy. Much of the music in the folio makes use of synthesiser patches (such as those in *Set of four*) that wobble and drift indeterminately, sometimes by quite significant amounts. This drifting is intended to parallel the flexibilities and imprecisions of embodiedness—that intervals are ‘felt out’, both by the ear and by the hand.

This approach to Just Intonation is intended to be reflective of the messiness and imperfection of the real world generally. It also has to do with the idiosyncrasies of my own ear: lacking absolute pitch, the identifiability (or explicit nameability) of distinct pitches is ‘just out of ear’s reach’. Sedimenting this ‘out-of-reach-ness’ further, through use of semi-indeterminate drifting pitch is, for me, attractive.²⁹

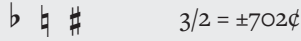
Today, the practice of Just Intonation makes significant use of digital technology. Before the 1980s, tuning a Just interval accurately was a tricky and sometimes laborious process of careful ear training coupled to measurement, craftsmanship and often organology. With the advent of digital synthesisers that could be tuned, and especially, the portable electronic tuner, Just Intonation could be ‘exported’ from the world of the organologist’s workshop and into the concert hall. Today, musicians who develop an interest in Just Intonation are generally reliant on digital tuning devices to train and fine tune their ears. (Tenney was probably the first composer to explicitly make use of digital tuners during performance—it is the reason for the prevalence of cent markings on his

29. For further discussion, see the section on *While we are both*, chap. 2, §2.2.

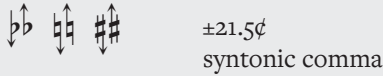
BOX 1

In the compositions in the portfolio, Just intervals are often notated using equal-tempered pitches accompanied by a cent marking. However, additionally, and within this commentary, Just intervals are also denoted by both ratios and accidentals of the ‘Helmholtz–Ellis’ design, developed by Marc Sabat and Wolfgang von Schweinitz. Each prime is given a unique accidental, providing a visual cue for the ‘limit’ of each interval.

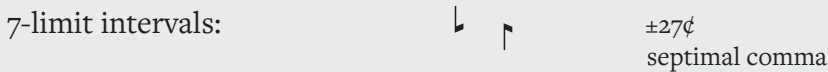
The standard naturals, sharps, and flats denote the 3-limit, Pythagorean intervals:



The 5-limit is introduced by addition of a ‘syntonic comma’, marked with arrows:



Intervals utilising higher primes can be notated by appending further symbols. Each denotes alteration by a small comma:



No intervals beyond the 13-limit are used in the portfolio compositions. Some example intervals are notated below:

3-limit intervals $3/2$ chain 5-limit intervals $5/4$ chain 6/5 chain

1/1 3/2 9/8 27/32 81/64 1/1 4/3 8/9 32/27 1/1 5/4 25/16 1/1 6/5 $36/25$ 5/3 8/5

7-limit intervals 11-limit intervals 13-limit intervals

7/4 8/7 21/16 7/6 11/8 12/11 13/16 16/13

Using these accidentals gives a precise means of accurately denoting the pitches of the harmonic series. Here they appear as *otonalities* of a low G₂ 1/1. Below is the inversion of the harmonic series, the so-called *utonalities*:

1/1 2/1 3/1 4/1 5 6 7 8 9 10 11 12 13 14 15 16

16/1 8/1 6/1 4/1 16/5 8/3 16/7 2/1 16/9 8/5 18/11 3/2 18/13 8/7 16/15 1/1

scores.³⁰)

While simpler ratios such as $5/4$, $7/4$, and $11/8$ are easy to learn, more extended ratios such as $13/7$, $14/11$, $21/16$ are trickier to obtain by ear alone. All of these intervals are so-called *otonalities*—derived from the non-inverted harmonic series as it appears in nature.³¹ (For further clarification, see box 1.) *Utonalities*, those intervals utilising *inversions* of the harmonic series, are, due to their not appearing in nature, more difficult to learn and recall accurately.³² A straightforward inversion of the first few partials of the harmonic series produces an extended minor; but beyond that, obtaining an intuitive sense of utonalities takes a great deal of familiarisation. It's perhaps for this reason that they remain so enigmatic, and fascinated both Partch and Ben Johnston, and a number of composers since. (The tuning of *Set of four* uses only otonalities. However, other portfolio compositions, such as *While we are both*, and *Three Heames Settings* use more complex tunings that makes use of a number of utonalities.)

Just intervals are organised according to the lowest prime that appears in their ratio—known as the ‘limit’ of an interval. Learning just intervals requires recognising the distinct ‘colour’ of the prime limits: there is a uniting colour to the intervals of the 7-limit that is fundamentally distinct from intervals of the 5-limit. As one travels up the primes, the distinctness of the colour becomes less pronounced. But at least as far as prime 13, the prime limits are the main way that musicians can learn and characterise Just intervals.

Organising a tuning according to its primes creates a ‘pitch lattice’, such as that in fig. 1–2. Here, with pitches organised according to their relative positions, the tuning can be seen to be dominated by two chains of fifths: one heading in the sharp direction from G $1/1$, another heading in the flat direction from C $21/16$ (i.e. $7/4$ above D $3/2$). The rest of the tuning is filled out with two 5-limit pitches (B \flat and F \sharp), and two 11-limit intervals (C \sharp and G \sharp), themselves both a fifth apart.

While Just intervals themselves have aural colour, for myself at the keyboard, pitches and modal centres have fairly reliable colour associations also.³³ While

30. Later composers following Tenney, such as Marc Sabat, Chiyoko Slavnics, Michael Winter and Catherine Lamb, use cent markings throughout their pieces in Just Intonation.

31. This terminology was introduced by Partch. See *Genesis of a Music*, 72; 88ff.

32. In studies of barbershop quartet groups, who typically use Just intervals in their vocal harmony, it is the often minor sixth $8/5$ (i.e. the inversion of the major third $5/4$) which is least accurately sung. See Matthias Mauch et al., ‘Intonation in unaccompanied singing: Accuracy, drift, and a model of reference pitch memory’, *The Journal of the Acoustical Society of America* 136, 401 (2014)

33. Without absolute pitch, I am essentially a ‘synaesthete at the keyboard’ only. Filling out

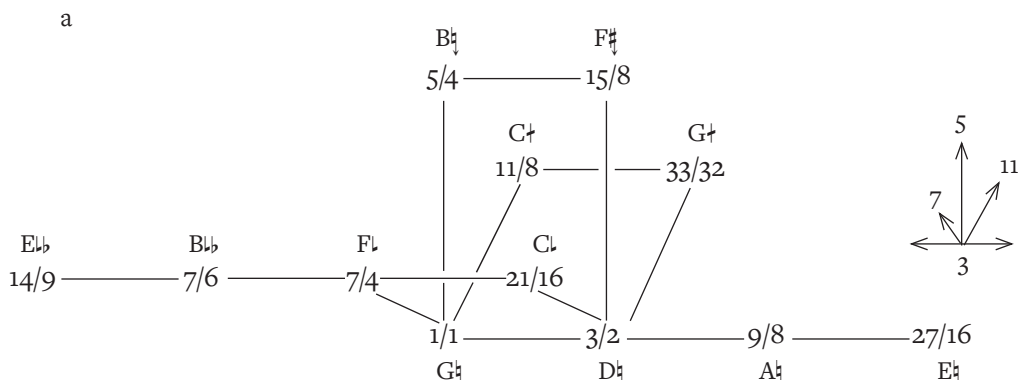


FIG 1-3

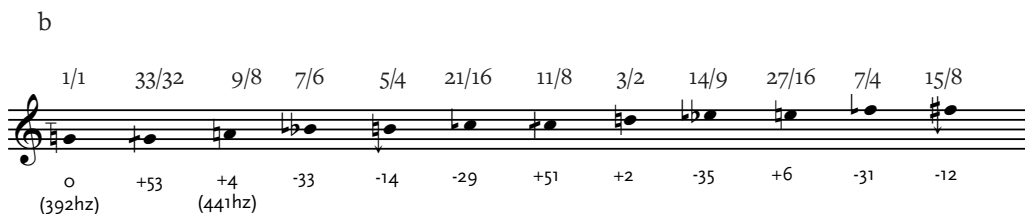
a. *Set of four* tuning: pitch lattice. Pitches arranged according to prime ‘limits’ (i.e. the highest prime number present in the fraction denoting the interval).

The 3-limit (horizontal) consists of ‘Pythagorean’ intervals arranged linearly: e.g. fifths, fourths, seconds ($3/2$, $4/3$, $9/8$). ($27/16$ is a Pythagorean sixth.)

The 5-limit (vertical) extends this to include the just third, sixth, and seventh ($5/4$, $5/3$, $15/8$).

The 7-limit (diagonal left) extends this further to include the ‘harmonic’ seventh ($7/4$), and septimal thirds and sixths ($7/6$, $14/9$). The fourth ($21/16$) above G is lowered by a septimal comma.

Finally the 11-limit (diagonal right) derives from the 11th harmonic ($11/8$). These pitches fill out the remainder of the twelve note tuning.



b. Tuning as distributed in a single octave. Cent deviations from equal temperament marked below.

A is blueish, perhaps signalling an energetic nature, modes of G are rather green in colour.³⁴ This ‘greenness’ is both of nature and innocence, but also associated with melancholy.³⁵ As with Viola’s ‘greensickness’ in *Twelfth Night*: ‘She pined in thought, / And with a green and yellow melancholy / She sat like Patience on a monument, / Smiling at grief.’³⁶ Aside from typically relying on a 1/1 of G, many folio pieces audibly alight on G or modes of G sometimes at significant moments, appropriate given the often melancholic character of the portfolio music (see chapter 2 for more discussion).

This analogy with colour is more specifically relevant to the thinking behind *Set of four*. The frontispiece (fig. 1–5) uses four of Josef Albers’ *Homages to the Square* both in reference to ‘homage’ (the piece is a set of four homages), and in reference to the exploration of colour interaction Albers’ work explored at such length.³⁷ It is pitch—and by extension harmonic and melodic succession and juxtaposition, as well as texture and timbre—that is here analogous to colour. The piece’s single twelve-pitch tuning is consistently reappraised, appearing in different guises, throughout the four movements. To take one example: the opening melodic 11/10 interval in the violin (see fig. 1–4), between B \flat and C \sharp , which is followed by 12/11, from C \sharp to D. In this context, the interval between B \flat and C \sharp is somewhat tense, leaning upward and ‘resolving’ to the D. However, elsewhere in the piece, in different contexts, the C \sharp is a point of gravitation—namely in mvt. 3, where the pitch is harmonised as a modal tonic (e.g. bars 233–4; 268–9). This sense that the colour and ‘tendency’ of the same just interval can differ completely in altered contexts is similar to the way that, as Albers elucidated in his teaching, a colour’s identity and appearance is heavily dependent on its visual surroundings (see fig. 1–6a).

the scheme, F is rather red. Other pitches organise themselves by fifths: D, like G, is greenish; E and B are yellowish/brownish; C rather colourless; sharps and flats are more intense versions of the natural colours.

Recently it has been suggested that synaesthesia overlaps significantly with absolute pitch, a finding that is unsurprising. Peter K. Gregersen et al., ‘Absolute pitch exhibits phenotypic and genetic overlap with synesthesia’, *Human Molecular Genetics*, Volume 22, Issue 10, May 2013.

34. The colours of the four Albers paintings used in the frontispiece roughly correspond to colour associations outlined above—with modes of G (green), D \flat and E \flat (yellowish/greenish) used particularly in mvts. 2 and 3. Mvt 4 pivots around an F7 chord (b. 577), red being a clear connotation. Timbre also affects colouration, with the noisiness of mvts. 1 and 4 contributing to the greys used in their corresponding paintings.

35. Though, of course, so is blue (i.e. the blues). (See discussion of *Ambling, waking*, chap. 2)

36. Viola’s ‘greensickness’ is lovesickness, or ‘erotomania’. *Twelfth Night, or What You Will*, 2.4.108–11, in Cambridge: Cambridge University Press, 2003, 98.

37. The frontispiece consists of the following works (clockwise from top left): *Study for Homage to the Square*, 1967; *Homage to the Square: SP–IV*, 1967; *Untitled (from Homage au Carré portfolio)*, 1965; *Homage to the Square: Starting*, 1968.

Vln., mvt. 1: 1-23

Gtr., mvt. 3: 268-72

FIG 1-4

Context dependent interval colour
in *Set of four*, mvts. 1 & 3.

Where colours are polar inverses, or close to such, one can readily detect vibrating boundaries. This visible vibration is phenomenologically quite similar to the ‘reinforcement buzz’ obtained by playing Just intervals (see fig. 1-6b). But in comparison to the eye, the ear’s ability to discern harmonic relations between pitches clearly outclasses any ability our eyes might have to discern harmonic colour juxtapositions.³⁸ Nevertheless, Albers’ experimental attitude to colour aligns with my attitude toward pitch. ‘Colour,’ he wrote ‘is the most relative thing in art.’³⁹ Pitches are not so dissimilar: the tension, and torsion, between one pitch and another is never entirely defineable; moreover, it differs greatly according to register, pace, timbre, harmonic and melodic context. In the same way that Albers encouraged a practical engagement with the relation between colours—juxtaposing differently coloured papers in order to discover how their perceived colours transform through interaction—so too with pitches. ‘Continuing comparison—observation—“thinking in situations”—is promoted. . . . It is discovered that certain colors are hard to change, and that there are others that are more susceptible to change.’⁴⁰

Despite—or perhaps because of—its presence at Black Mountain College, Albers’ workbenchlike, Bauhausian experimentalism has been, at least among

38. Vibrating boundaries tend only to be visible with directly complementary colours. They were used extensively in sixties psychedelic posters by designers such as Wes Wilson and Victor Moscoso, the latter being directly influenced through attending Albers’ seminars.

39. Josef Albers, *The Interaction of Color*, 1.

40. *Ibid.*, 9.

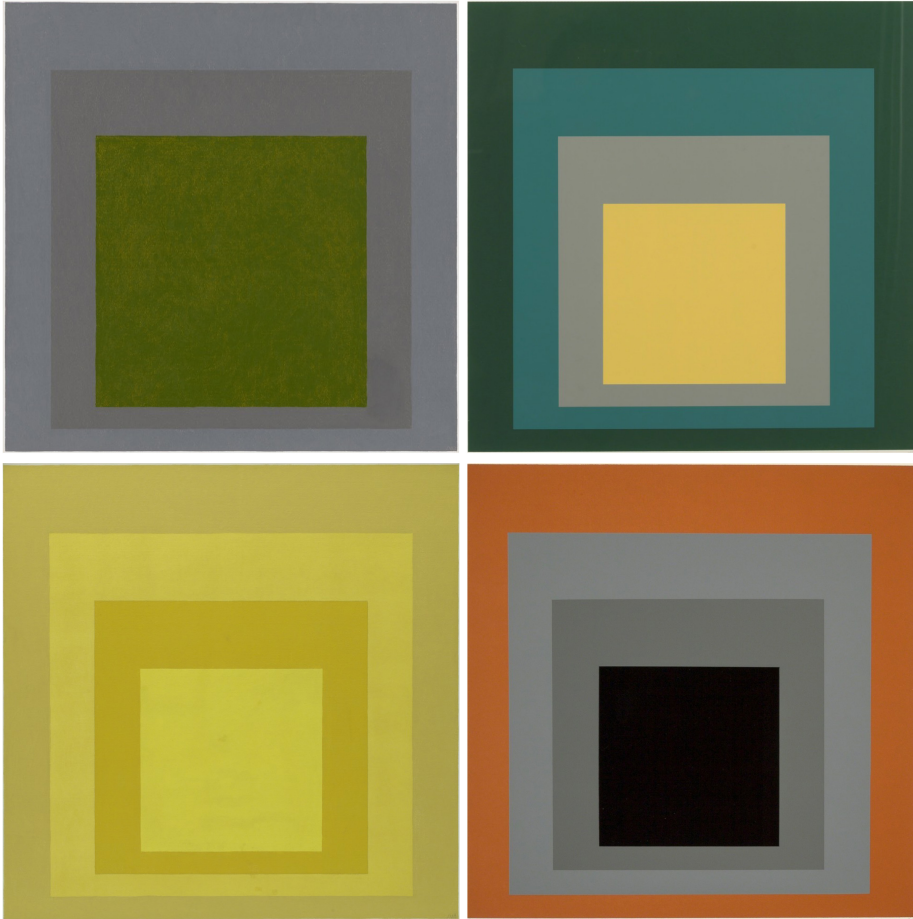


FIG 1-5

Frontispiece to *Set of four*. Each movement is here represented by a different Albers painting: top row is mvts 1 & 2, bottom row is mvts 3 & 4.

These choices were made through approximate synaesthetic association to the music of those movements.

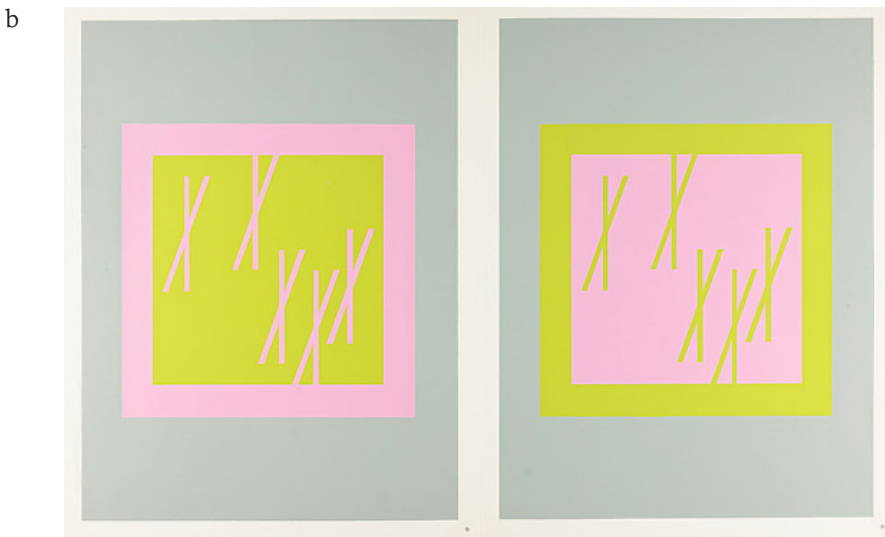
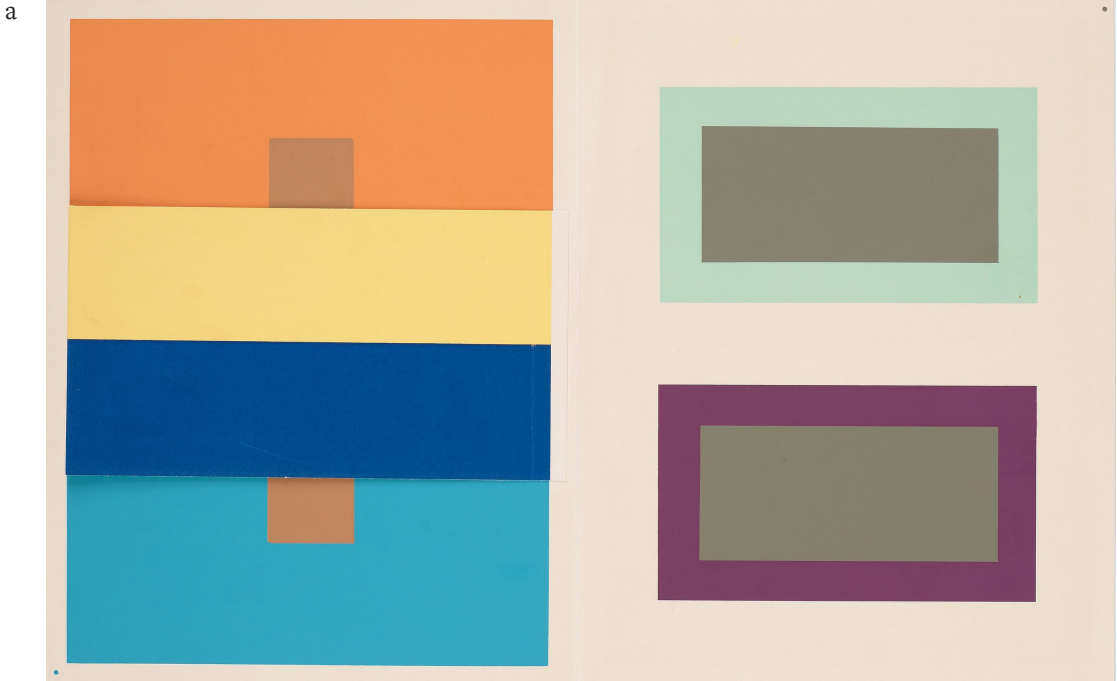


FIG 1-6

a. Albers, *Interaction of Color*, plate IV-1. The small squares of colour on the left are the same, but appear different through differing context. The central yellow/blue band can be lifted, allowing the brown squares to be recognised as a hidden rectangle of uniform colour. (The brown rectangles on the right are also a single colour, appearing differently through context.)

b. *Interaction of Color*, plate XXII-2. Example of vibrating colour boundaries. The green and pink colours are harmonic inverses.

(Images reproduced from *The Interaction of Color*, Yale University Press, 1963.)

composers, outshone by later Cageian thinking. But Cageian non-intention is more peculiar to Cage than is typically admitted: many later musicians associated with experimentalism did not generally subscribe to non-intention so readily.⁴¹ Instead, amongst many musicians following Cage, with no special reference to Albers or Bauhausian thought, there was nonetheless an eagerness to ‘get the hands dirty’—often via studio technology or improvisation—rather than resort to abstract non-intention. But despite its contrast with Cageian aloofness, it is arguable that, for Albers, the student of the interaction of colour should be no less self-abnegating: ‘Because of the laboratory character of these studies, there is no opportunity to decorate, to illustrate, to represent anything, or to express something—or one’s self. Here successful studies present a demonstration.’ For Albers, while the discoverable relativity of the workbench was crucial in its permanently eye-changing capacities, it was not an end in itself. Experimentation was part of a wider trajectory towards ‘coordination, interpenetration . . . conclusions, new viewpoints. . . . *Life*, not school, is the goal.’⁴²

This way of thinking about experimentalism is attractive. It is, in any case, not a singular project, not a project for mind-cleansing or enlightenment (aspects of Cageian ‘dogma’ which, it’s often forgotten, he gradually retreated from after the seventies). Albersian experimentalism has more to do with the betterment of the *senses*—as opposed to the betterment of the *self*—a fact whose semblance of neutrality has allowed it to continue to be represented in the pedagogy of visual arts training (inasmuch as art schools continue to maintain this kind of teaching alongside more conceptual approaches).

In any case, *Set of four*’s approach to harmony is profoundly sensory—‘felt-out’, grasped in the hands. One potential parallel to this ‘feeling out’ for colour is that of octopuses (and other cephalopods generally). Octopuses are intelligent animals, living unusually short lives, at most around five years. Highly experimental and curious, and reliant on camouflage and other ad hoc defence mechanisms (such as mimicry), octopuses have the majority of their neurons distributed

41. As Lou Harrison put it, ‘Such as I am, I would generally rather chance a choice than choose a chance.’ *Music Primer*, 21. Relatedly, Conlon Nancarrow remarked, in conversation with Cage, ‘so you choose notes by chance, would you ever choose mushrooms that way?’ Cage replied: ‘No!—you could die.’ Nancarrow said: ‘Well!?’ Relayed by Eva Soltes, in radio documentary ‘A Sense of Place: The Life and Work of Conlon Nancarrow’, *Other Minds*, Internet Archive, <https://archive.org/details/NancarrowSenseofPlace>, 22:09.

42. Albers, ‘Speech at Black Mountain College luncheon at the Faculty Club’ (1938), quoted in Eva Díaz, *The Experimenters: Chance and Design at Black Mountain College*, 20 / n.17 (163). See also Helen Molesworth with Ruth Erickson, *Leap Before You Look: Black Mountain College 1933-57* (New Haven: Yale University Press, 2016).

throughout their bodies—around three-fifths. Their limbs are independently capable of what could be called independent thought-action. (Responding to the environment even when amputated, philosopher Peter Godfrey-Smith has compared an octopus’s body to an ensemble of free improvisers.) Cephalopods are forever reflective of the environment, their skin imitating the patterning seen around it.⁴³ This camouflage and world-reflection is mediated via limbs that are capable not just of independent thought, but also independent perception: as well as taste, ‘an octopus can see with its skin. . . . Octopus skin itself can both *sense* light and also produce a *response* that affects the skin’s color’.⁴⁴

James Wood, a researcher on cephalopods, imagines how an octopus might generalise its own capacities, if the usual scientific situation were reversed: ‘the octopus thinks: “All right. I’m going to make an intelligence test for humans, because they show a little bit of promise, in a very few ways.” And the first question the octopus comes up with is this: How many color patterns can your severed arm produce in one second?’⁴⁵

The notion that human hands might in an analogous way be able to feel out for, adjudicate and establish colour, is potent. It certainly rings true for my experience at the keyboard, feeling out for the corners of a voicing, interval or tuning. Both the four-voice close-harmony ‘chorale’ that opens mvt. 1 of *Set of four*, and its accompanying keyboard and percussion parts, betray this ‘cephalopodal’ feeling out (fig. 1–7a and 1–8).

Figure 1–8 attempts to depict something subtle: namely the effect of unequal tuning on the psychology of an at-the-keyboard making. As I’ve tried to represent by resizing the keys in proportion to their tuning relative to one another, intervals between notes have varying tensions and tightnesses. While the linearity of the diagram can’t represent the consonance/dissonance between individual pitches (this can be better gleaned from the tuning lattice diagram, fig. 1–2a), nonetheless a linear resizing of the keys of the keyboard gives a sense of the unevenness of the pitch landscape. Like the octopus’s tentacles, the fingers feel out for tightness and looseness, the colour and texture of the relation between locations in the field of pitches.

In a piece run-through with ‘homagic’ digestion, the opening close-voiced

43. Marine biologist Roger Hanlon gives an excellent introduction to this subtle camouflage in this lecture, <https://www.youtube.com/watch?v=oDvvVOlyaLI>

44. Peter Godfrey-Smith, *Other Minds*, 2016, chap. 5, epub.

45. Wendy Williams, ‘So you think you’re smarter than a cephalopod?’ *Ocean Blue* (blog), Smithsonian National Museum of Natural History, May 2011. See also Sy Montgomery, *The Soul of an Octopus: A Surprising Exploration Into the Wonder of Consciousness*, 2015, chap. 2, epub.

DIGESTION (AND HOMAGE)

a



b

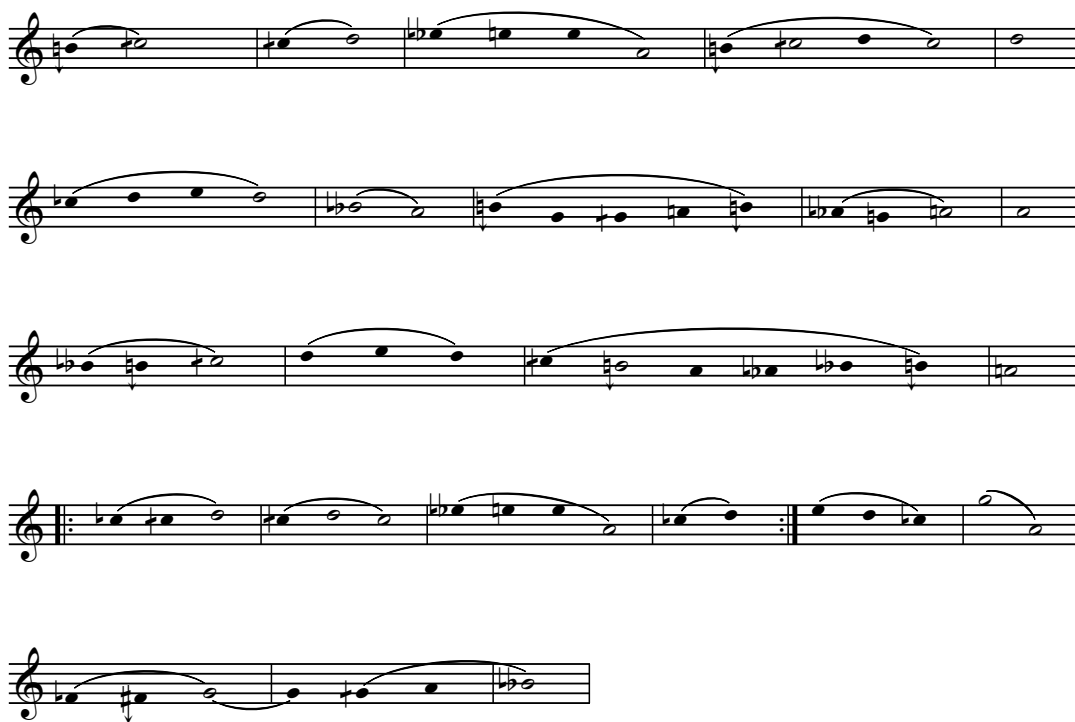


FIG 1-7

a. Opening close-harmony 'chorale',
Set of four, mvt 1, bb. 1-67.
'Cephalopodal' harmony?

b. Complete melodic material of violin,
Set of four mvt 1.

DIGESTION (AND HOMAGE)

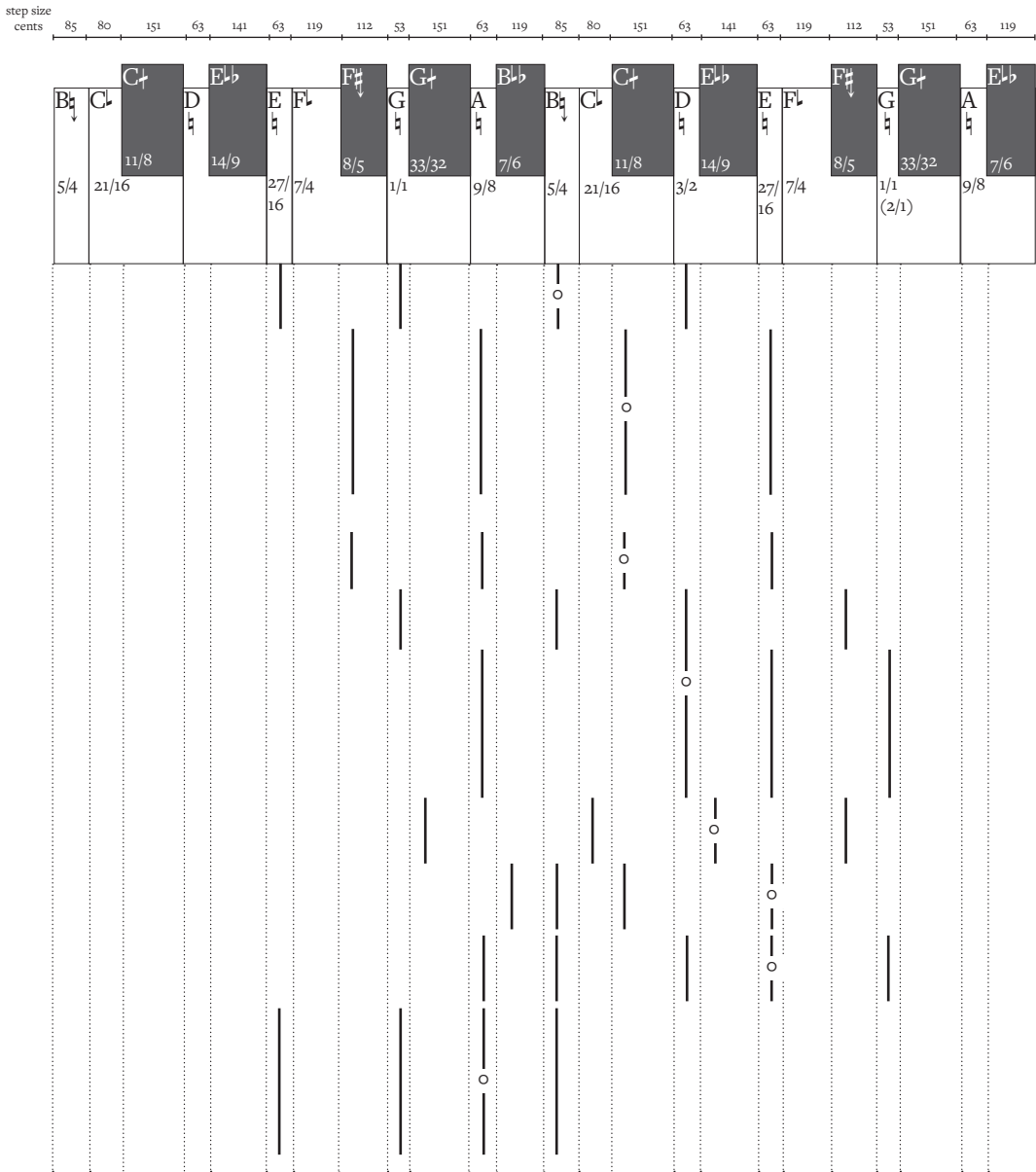



FIG 1-8

a. Schematic of opening close-harmony 'chorale', *Set of four mvt 1*, bb. 1-23, mapped onto a keyboard whose keys are proportionally sized to the non-equal Just tuning.

Lines shown — o — denote violin pitches. (All other lines are pitches played by the guitar.)

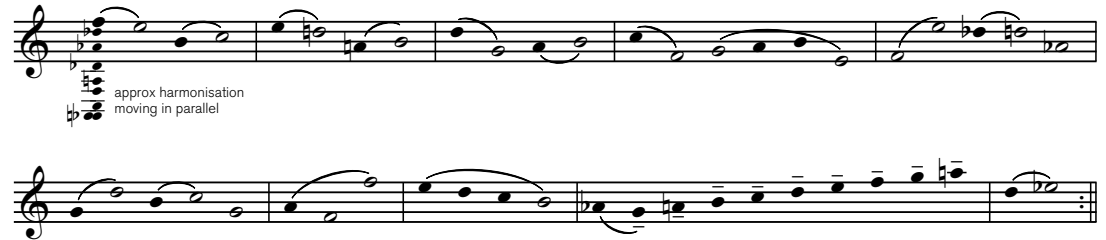
a



rubato

b

sounding 8va
rubato



approx harmonisation
moving in parallel

FIG 1–9

a. Ornette Colamen, ‘Broken Shadows’,
opening, from 1969 LP *Crisis*.

b. Coleman, opening of *Skies of
America*, recorded with the London
Symphony Orchestra, 1972.

chorale is a site of undeclared homage: namely of Ornette Coleman’s harmonologies. While close-harmony voicings are an arrangement technique dating back to the *fin-de-siècle* and to dance bands of the 1910s and 20s, Coleman’s harmonologies—free transposition of melodic material continually transforming parallel movement—might be the apotheosis of the technique. This chorale, in its small way, intends to capture something of Coleman’s particular metier. Coleman’s melodic approach typically focused on individuated intervals as points of exploration. Short phrases establish an interval as both a frame for gap-fill, and also an item of ‘colour’ in itself: as Peter Niklas Wilson suggests, for Coleman, ‘the quality of a musical interval is more important in itself than the relation of the notes composing the interval to any putative tonic.’⁴⁶ (See transcriptions of *Broken Shadows* (1969) and *Skies of America* (1972), both displaying this ‘dyadic’ melodism well, fig. 1–9.) For Coleman, ‘harmony is not predetermined, but emerges from . . . interaction’. This interaction can sometimes be enormous: the opening of *Skies of America* displays parallel harmonisations spread across three octaves, and an entire orchestra.

Homage is an vital aspect to *Set of four*, both in outward dedication, and unde-

46. Peter Niklas Wilson, *Ornette Coleman: His Life and Music*, 79.

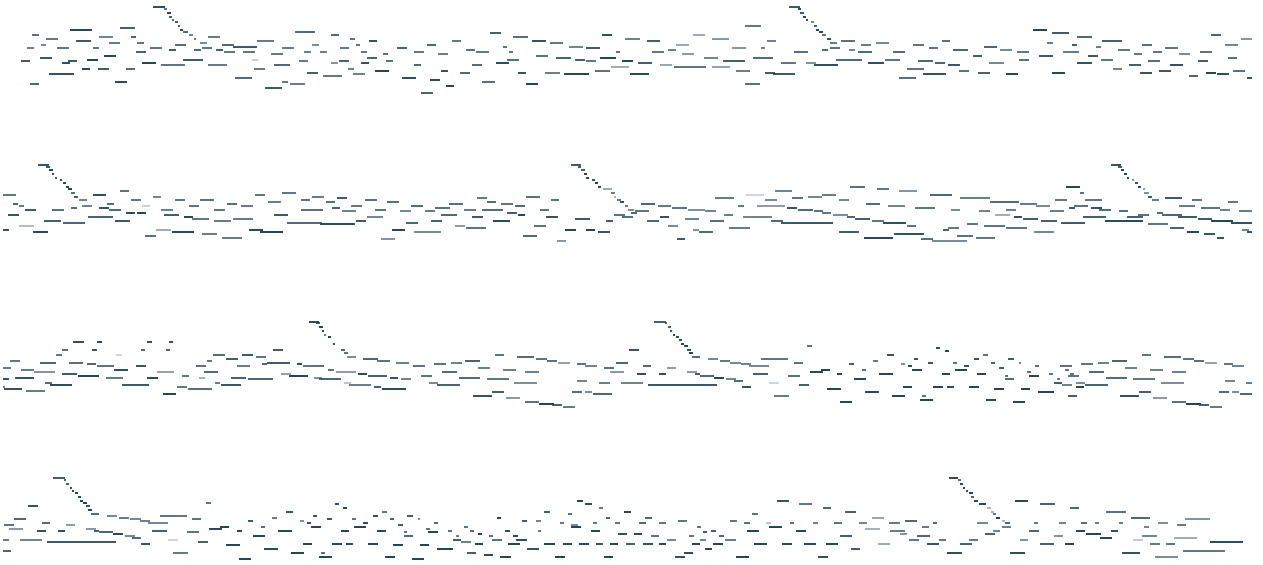


FIG 1-10

Set of four mvt 1, keyboard part, midi sequence diagram.

clared imitation. The four movements themselves are specific homages to four composers—figures who are influences, colleagues and friends. The opening movement’s debt to Bryn Harrison has to do mostly with its busy keyboard part, and like in Harrison’s music, material gestalts momentarily poke through the texture only to disappear back into it. Harrison’s pieces *Repetitions in Extended Time* (2008), and particularly, the *Piano Quintet* (2016), are useful points of comparison: namely the quintet’s fast, busily mellifluous piano part (fig. 1-11b). While Harrison’s approach to rhythm is quite improvisatory—approximately twelve pitches a bar, their placement stretched and contorted from moment to moment—the pitches are procedural, outlining a chromatic aggregate, with many octave transpositions. In *Set of four* mvt. 1, the keyboard part by contrast avoids explicit procedure in favour of layers of voiceleading (see fig. 1-10), crisscrossing from diatonic gestalts in the upper register to a more ‘knitted’, chromatic texture below. Additionally, the keyboard patch is set up such that the notes below middle C produce pitched tone only when *released*, with a more noisy sound produced while the key is depressed. Thus the actual detail of the notation is really more of a written-out textural prompt: a chaos of Harrisonian

DIGESTION (AND HOMAGE)

a

73

76

80

b

40

43

46

FIG 1-11

a. *Set of four mvt 1, kbd, bb. 73-80*

b. Bryn Harrison, *Piano Quintet, piano, bb. 40-47.*

DIGESTION (AND HOMAGE)

a

Patch 1

Keyboard

non ped. *mf molto legato, overlapping notes, ad lib.* *sim.*

nb.
keyboard notes below middle C have a
sounding pitch only when key is released
(while key is depressed, there is a more noisy/chaotic sound)

Violoncello

guiro bow

m no louder than kbd.
always drifting pitch
scratchy, messy, improvisando bowing
freely alternate between tremolando, louré,
flautando, and occasional circular bowing

bowing rhythm:
fluctuating between ♪ and ♩ .
e.g. $\text{♪} \text{ ♩} \text{ ♩} \text{ ♩} \text{ ♩} \text{ ♩}$. etc.

Kbd.

Vc.

b

Busy; also calm
♩ = 100min. *guiro bow*

Violoncello

9

17

25

33

41

FIG 1-12

a. *Set of four*, quintet version, mvt 1,
bb. 1-8, keyboard and cello parts. Note
pitch mirroring between keyboard and
cello.

b. Cello part alone, bb. 1-46.

detail. Given the indeterminate nature of the synthesiser patch, the keyboard encompasses an un-set-down-able texture, felt-out by the player, with an uncanny disconnect between the fingers and the sounding result. In the quintet version of the piece, written for Apartment House, the additional cello part mirrors this phenomenon (see fig. 1–12). Rhythms are indeterminate; the ‘guiro bow’ scratchy and indistinct; the pitches following roughly the contour of the keyboard, but a couple steps behind, in line with the keyboard’s note-off pitches.

The second movement is a homage to Amber Priestley, an American composer based in the UK for many years. In this movement I tried to capture the rare childlike curiosity of her music. In her piece *Feel thinGs wAy aBout, Certainly Don’t admirE* (2008/15), one encounters a variety of ‘square’ sounding melodies, appearing initially in the bass, followed by curious sectional divisions, the piece hovering somewhere between song-form and a suite.⁴⁷ This movement has something of this structure, while not being as seemingly arbitrary and whimsical as is Priestley’s work. After beginning with a rather overextended introduction, this movement arrives at a thoroughly square, if meandering, song form, and a childlike folkish melody.

Despite its fully formed appearance at rehearsal 18, in fact this tune has been prefigured in the bassline throughout the movement’s introduction—though not in any particularly obtrusive or obvious way. The arrival of the melody is intended to be at once surprising and familiar. While not a deliberate quote, it naturally resembles many folk tunes in its mostly pentatonic pitches. (Compare, for example, the opening of the Irish reel ‘Primrose Lasses’, fig. 1–13a) The combination of square, diatonic melody with seemingly arbitrary chromatic wandering is also something found in Priestley, in for example *Did Not Feel Very Well At Skool* (2015).⁴⁸ As in Priestley’s music, despite its appearance of irony or abruptness, this folk-like melody is intended to be sincerely meant. A dwelling on childlike, folklike material, ‘sincerity beyond irony’, betrays also the influence of Quentin Tolimieri, whose large-scale pieces for General Midi synthesisers were a significant point of inspiration during the composition of the portfolio pieces.⁴⁹

47. Live recording by Block4 recorder quartet, Eightforty, 2015, <https://soundcloud.com/840series/amber-priestley-feel-things>

48. Live recording at Music We’d Like To Hear, 2015, <https://soundcloud.com/amber-priestley/amber-priestly-did-not-feel-very-well-at-skool>

49. See this excerpt from Tolimieri’s *Castle of Dromore*, 2010, a seventy-minute exploration of the eponymous Irish folk tune. <https://soundcloud.com/quentin-tolimieri/excerpt-one-the-castle-of-dromore>. Tolimieri is discussed in Eldritch Priest’s *Boring Formless Nonsense*, 178.

DIGESTION (AND HOMAGE)

a

b

c

FIG 1-13

a. 'Primrose Lassies'. Note shape marked x , with similar shape in melody b.

b. *Set of four* mvt 2, melody at rehearsal 18.
c. Opening bassline: simplified/extended version of melody b.

Continuing with an account of homages in this piece, the third movement is a homage to Sergei Zagny, an unusual Russian composer of minimal and conceptual pieces.⁵⁰ With a multifarious output, his music ranges from several-hours-long pieces for church bells, recordings of Lenin passed through a vocoder, and deliberately plain rescorings of Tchaikovsky.⁵¹ Music of the late

50. Zagny's scores and audio recordings are mostly freely available on his website, <http://conceptualism.letov.ru/sergei-zagny/SERGEI-ZAGNY.htm>.

51. Respectively, *The Bells* (2008), https://www.youtube.com/watch?v=JU__Gkse4oM; *Lenin: What is Soviet Power?* (2018) <https://www.youtube.com/watch?v=bTZFsWWVozU>; *Fragments*

eighties and nineties presents his own idiosyncratic brand of (post-)minimalism—for example, *Sonata* (1990), with its motoric *alla breve* and curious voice leading (fig. 1–14a). Like certain British minimalists (Nyman, Bryars, John White), Zagny’s music often references old (perhaps defunct) genres: canons, barcarolas, Machaut-like counterpoint, figured basses, change ringing patterns.⁵² Like Priestley, Zagny’s music is greatly childlike⁵³—with his scores often appearing like puzzles or games (e.g. *Pieces 1-3, Magic Stars*), often filled with special notations inviting the performer choose their own path between sections (see fig. 1–14b).

While movement 3 of *Set of four* does not present optional pathways, sedimented into the music alongside its Zagny-esque motoric *alla breve* is a sense of continually ‘inventing a path’—a moment-to-moment having-to-decide what next. The music somewhat absentmindedly winds its way into the future, sometimes over-obsessing on individual shapes and phrases. This is a consequence of the movement utilising a ‘model’—a chorale (see fig. 1–15a), not heard explicitly, but which is used as a basis for continuing variation. *Set of four* mvt. 3 is not nearly as spare as Zagny, but the voiceleading and harmonic progression of the chorale owes something to Zagny in its roundabout harking-back to older baroque models.

Digested into this movement, particularly in the culmination toward the end, is the instrumental psychedelic rock of British producer Joe Meek (e.g. ‘The Blublight’ from the 1960 album *I Hear a New World*, fig. 1–16a). Indeed echoes of Meek’s ‘space-age’ sixties style are present throughout the piece.⁵⁴ Meek was able to capture an eery and simultaneously naive innocence, so characteristic of that paranoid and optimistic era. Repeating pitches—overdwelling on them—lends such tunes innocence, something characteristic of this movement of *Set of four*.

Also present throughout this piece are descending fifths, in the first and third movements most prominently. The tune in mvt. 2 also outlines a fifth, *mi-la*

from Swan Lake (2003), Fancymusic, FANCY014, 2013.

52. Zagny teachers harmony and counterpoint at Moscow conservatory, a fact that might account for his interest in these topics.

53. See the 2011 set, *Child’s Music*. Soviet and post-Soviet Russian art often adopted a childlike character, particularly nonconformist poets, such as Kharmis, Vvedensky, Nekrasov. One reason for this was that nonconformist writers often worked as children’s authors to earn a living. Ilya Kabakov began his career as a children’s illustrator: predilection toward storytelling is a characteristic feature of his later installation work. See Ainsley Morse, *Detki v kletke: The Childlike Aesthetic in Soviet Children’s Literature and Unofficial Poetry*, PhD diss., Harvard, 2016. See also Boris Groys, *The Man Who Flew Into Space From His Apartment*, 2006.

54. During rehearsals for both the premiere and the studio recording, ‘outer-space’ was a frequent stylistic reference for the musicians.

DIGESTION (AND HOMAGE)

a

b

FIG 1-14

Sergei Zagny:

a. End of first section of of *Sonata* (1990)

b. Opening of Piece No. 2 from *Pieces 1-3* (1990)

(filled with two passing tone). Such quasi-cadencial shapes obtain a feeling of exhalation: but note, it is in the descending shape $\hat{5}-\hat{1}$ and not the inverted shape $\hat{8}-\hat{5}$. (Note also the descending fifths in the bassline to ‘The Bubligh’.) What does this shape signify? Alongside exhalation, perhaps a kind of innocence (I recall memories of crude ‘perfect cadences’ from student keyboard studies—see fig. 1-15b). The descending $\hat{5}-\hat{1}$ fifth is also dwelt on at length in Cassandra Miller’s *Duet for Cello and Orchestra* (2015), for me a greatly meaningful piece.

DIGESTION (AND HOMAGE)

a

(i)

(ii)

b

c

FIG 1-15

a. Set of four, mvt 3. ‘Model’ chorale, forming the basis for continuing variation throughout the movement. Divided into two ‘sentences’ (i) and (ii), the continuing variation flits around and between them, excerpting and repeating sections. The harmonisation marked in figures was the first to be composed; only remnants remain in *Set of four*, within more highly chromatic wandering.

b. Blunt, root-position ‘cadence’. Analogous shapes in the ‘model’ chorale (i.e. b. 2) are always harmonised with the relative minor.

c. Keyboard part, rehearsal 49. Here one can see an almost verbatim arrangement of phrase (ii) in C \sharp major (written enharmonically).

DIGESTION (AND HOMAGE)

a

b

c

FIG 1-16

a. Joe Meek, 'The Bubligh', from *I Hear a New World* (1960).

b. Laurence Crane, *John White in Berlin* (2003), bb. 171-5.

c. *Set of four*, mvt. 4, guitar part (concert pitch).

Finally, the fourth movement pays homage to Laurence Crane. This movement amounts to a clear mimicry of Crane's slow, triadic approach: for example, latter passages of *John White in Berlin* (though almost anything Crane has composed adopts this mode of working). Crane's enigmatic music has a unique combination of irony and sincerity, aloofness and commitment. (He is also an hugely warm and generous person, an important figure to many younger composers.) While potentially the most obvious example of mimicry in *Set of four*, it is the most self-mocking or self-ironising: squeaks and buzzes from the percussion and synthesiser combine with absurd vibrati in the violin, an on-the-nose weirdness probably too fragrant to be 'true' Crane. (Crane's weirdness is gentler, less obnoxious.)

All of these figures whose music is 'digested' in *Set of four*—the dedicatees Harrison, Priestley, Zagny, Crane; the non-explicit influences of Albers, Coleman, Tolimieri, Meek—display their own personal versions of experimentalism. Just as Albersian colour experimentation could be seen as an analogous method for composition, these homages each comprise a set of vicarious, possible experimentalisms. Experimental music, certainly by now, is such a loosely associated family that its boundaries must be continually redrawn and reinvented. There are everywhere small lineages and outposts; there have been some feuds and reconciliations. As participants now, late to the party, we choose our own ancestors. Composers of my generation are here and there both joining or sabotaging this party, critiquing it, or outgrowing it. Musicians and curators are rediscovering overlooked figures, occluded by better known artists (Johanna Beyer, Julius Eastman, Tony Conrad, Charlotte Moorman for instance). Soviet experimental music of the 1920s and 30s has only fairly recently become open to recovery.

There is then a sense that, applied now, the term 'experimental music' might have become a meaningless catchall; or worse, a tribal signifier. Tribal signification was certainly a component of the movement in the US. But of all musical tribes, experimentalism ought to be *least* afraid of becoming 'meaninglessly loose', of unlimited accommodation and potential, given that ultimately the movement amounts to a set of open practices as opposed to lineages. Indeed, many associated with the movement would not necessarily agree that 'experiment', as a moniker, has ever been particularly helpful, given the general dissimilarity between experimental music (so-called) and scientific experiment. Other metaphors—such as testing, speculation, hunting, fiddling, burrowing, traversal,

homemaking—may or may not be more helpful. Neither does the presence of chance operations signal any special condition of experimentality or non-intervention. As Duchamp put it, ‘Your chance is different from mine’, meaning that ‘my’ chance is a way of expressing an aspect of *me*; and ‘yours’, you.⁵⁵ Cage thought the reverse: that chance was a way toward dissolution of the self and its preferences. If Duchamp and Cage could have had such diametric views about chance, is it any wonder that we, half a century later, cannot nail down a stable understanding of determinacy or decisioning in the context of an artistic ‘experiment’. Perhaps, as with its attitude to homagic sources, a piece like *Set of four* is in the business of affectionate, vicarious consumption—late to the party, eating what has been left of the idea of ‘experiment’, distorting and digesting it, and excreting it through bars of notes.

§1.3 Mechanical sublime: *Jumping song*

In 2015 I was lucky enough to be involved in a project utilising a computer-controlled piano-playing device. Named RHEA, designed by Winfried Ritsch, a group of composers were able to present new works for the instrument with guidance from Peter Ablinger, alongside selections from Ablinger’s own *Quadraturen III*.⁵⁶ Somewhat similar to a Disklavier (though it could additionally receive midi information over the internet in real time) it was infinitely more flexible than a roll-driven reproducing piano, where a complex roll might take months to punch—if, that is, one has access to a punching machine.

One composer who did was Conlon Nancarrow, whose presence looms large over composition for the player piano. There can be few other composers who combined a singular focus on one instrument with relentless innovation. The player-piano had been a sometime point of attraction for composers in the early part of the last century—Stravinsky’s fascination with player pianos lasted through the late 1910s well into the 20s.⁵⁷ For other composers the instrument

55. Eva Díaz, *The Experimenters*, 94. Duchamp also introduced chance composition with his *Erratum Musical*, included in the 1934 Green Box. These are two inkblotted sheets, transformed into notation, written around 1913. See Herbert Molderings, *Duchamp and the Aesthetics of Chance*, 125.

56. Namely *III*: *Letter from Schoenberg*, a piece which uses sound analysis and midi quantisation to create a pianistic ‘synthesis’ of a recording of Schoenberg angrily complaining about an inferior recording of the *Violin Phantasy*. See http://ablinger.mur.at/txt_qu3schoenberg.html

57. Pianola rolls were not something an ordinary composer could make without help from a manufacturer. Stravinsky’s *Etude for Pianola* (1917) was written on the instigation of the Aeolian company, in whose Paris building he maintained a studio for most of the 1920s. On the instigation of Edwin Evans, the company commissioned a series of contributions from such modernist

was thought to be at best a marginal curiosity (Stravinsky's fascination with the instrument was regarded by Robert Craft as 'one of the inexplicable eccentricities of his career'⁵⁸), and the instrument was rendered obsolete and quaint by the 1930s. For Nancarrow, singularly dedicated to this eccentric, marginal instrument, one cannot help but see the political parallels: Nancarrow the leftist, in empathy for a discarded, outmoded musical ally.

Even if roll-punching machines had been more accessible, composing for this instrument is uniquely labour-intensive.⁵⁹ Nancarrow's process involved the creation of at least two paper scores: a sketch, followed by a 'punching score', marked-up with a ruler to aid with precision punching. Then, the roll itself would also often require marking-up with guides and rulers, particularly in the case of a complex tempo canon. (This only increased in complexity when, around the end of the fifties, Nancarrow detached his punching machine from its 'quantised' ratchet, enabling notes to be placed anywhere with a fine degree of precision, allowing him to explore acceleration.) After the roll had been marked up, the laborious work of punching, correction, and re-punching, could begin—a process that could take months (see fig. 1–17). The outcome of this process would be a composition which could be heard in situ only, by its composer and anyone else who happened to be present. Nancarrow for many years did not have the means to make copies of punched rolls. And had he not spent many months drawing out neat study scores, to enable publication of his life's work, few would have ever heard of his music.

This quantity of compositional labour is remarkable: Nancarrow's right arm, the one occupied through years of roll-punching, became more muscular than his left.⁶⁰ Music for nonhuman performers—electronic music, automatic music—often gives the impression of disembodiment. Not so here: Nancarrow's studies for player-piano have, sedimented into them, a vast quantity of physical and mental labour.

The ease of use that could be obtained with the modern computer-controlled

notables as Malipiero, Casella, Grainger, Howells, Goossens, Delage, as well as, Hubert Parry and Alexander Mackenzie. It's also likely that Ravel's enigmatic *Frontispice* was composed specially for the instrument. See Rex Lawson, *The Aeolian Company: Original Compositions and Arrangements for Pianola*, liner notes, NMC 2008.

58. Vera Stravinsky & Robert Craft, *Stravinsky in Pictures and Documents*, 164.

59. Nancarrow's punching machine was custom-made for him by a machinist in New York in 1947. See Kyle Gann, *The Music of Conlon Nancarrow*, 43.

60. See Bruce Duffie, 'Composer Conlon Nancarrow: A Conversation With Bruce Duffie', 1987.



FIG 1-17

Conlon Nancarrow, roll-punching with a 'punching score'. Late 1950s. (Photo: reproduced from 1750 Arch Records S-1777)

system was alarming by comparison. Once it had been assembled and attached to the piano (admittedly not a trivial task), material could be drafted in a matter of hours, or generated live. It was easy to feel almost drunk with power—one wondered what Nancarrow might have produced had his working process been as efficient as ours. (I had only very short amounts of time to work with the computer-controlled piano, perhaps ninety minutes at most.)

I noticed also that for the other graduate composers, and arguably for Ablinger as well, Nancarrow seemed remote from their thinking and composition for the instrument. The instrument amounted to an 'acoustic midi synthesiser', assuming a condition of blankness or neutrality. I did not have this attitude.

How much pressure should we expect to be exerted by such a monolithic repertoire, associated with a single instrument? Nancarrow's overdominant position as regards the player piano, as an object of compositional speculation, might lead some writing for the instrument today toward a position of disavowal. It is this repertory-pressure (or even 'homagic' pressure) which can induce treatment of an instrument as blank, or a presumption of blankness.

But for myself, where a composer's output is so all-encompassing as was Nancarrow's, denying the psychological pressure of that output on the condition of the instrument seems churlish. What has always attracted me to Nancarrow's composition is the width and inclusivity of his approach: his juxtaposition of great mathematical precision with a sincere commitment to wilfulness. Blaise Pascal's division between *l'esprit de geometrie* and *l'esprit de finesse* couldn't be more united than in his Studies.⁶¹ Against meticulous isorhythm, canon, and

61. Blaise Pascal, *Pensées*, L.670, in *Pensées and Other Writings*, tr. Honor Levi, 150ff. See also

a



b

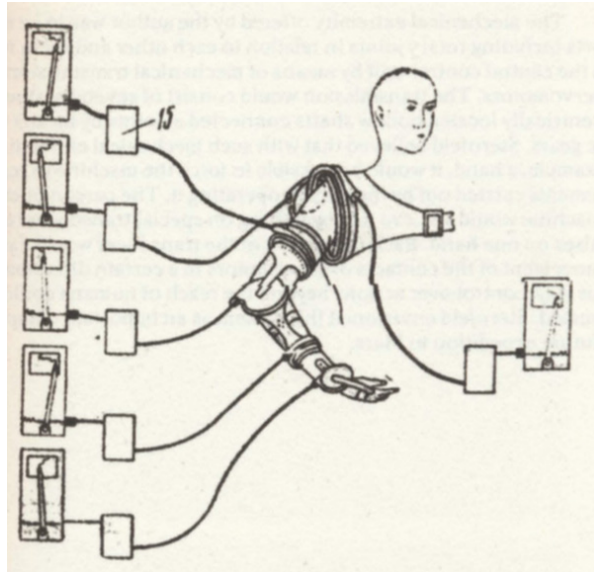


FIG 1-17

a. Early experiments in motion capture, focusing on the physical trajectories of a pianist's hand, Soviet Central Institute of Labour (CIT), 1925, by Nikolai Bernstein and T. Popova.

The Institute, founded in 1920 by avant-garde poet Alexei Gastev, was seen as much as a giant work of art as a research laboratory. Gastev's intention, according to Alexey Smirnov, was the eventual creation of 'an anarchical network of socially engineered Cyborgs with liberated minds.'

b. ANDROID system for recording movements of the human upper limb. Patented by Ary Sternfeld in 1931. Sternfeld was the first to calculate flight trajectories to the moon and Mars.

Images reproduced from Smirnov, *Sound in Z: Experiments in Sound and Electronic Music in Early 20th Century Russia*, 2013, 111/118/120.

calculated acceleration, Nancarrow juxtaposed wilful colourism, meandering line, violent arpeggios, ripping chromatic glissandi, improbable voice-leading, boogie-woogie, flamenco and tango. It was this wilful finesse that *Jumping song* attempted to vicariously capture.

Jumping song does things that his compositions never quite did, using an approach he may have regarded crude or even brainless. At its centre is a row of 437 chords, repeated nine times (see fig. 1–19a/b). They proceed at a speed—656 per minute, or around 11 per second—that would be impractical if not impossible for a paper roll, where holes punched close together at the same pitch-level are read as a sustained note. Like the second movement of *Set of four*, the piece is in, essentially, a song form, with a ‘verse’, ‘bridge’, a varied return to the verse, a short transition and coda. Additionally, like *Set of four* mvt. 1, it is a ‘chorale prelude’: in both movements a dense and busy accompaniment is set against a slowish ‘chorale’ harmonised largely in parallel.

Atoning for the absent labour of the roll-punching is a human performer, who, in exercise clothing, jumps alongside the piano, turning with each repetition of the 437-chord loop. Such performed exercise cannot replace the mental and physical effort of roll-punching, though it signals at least some acknowledgement in that direction. It also amounts to a sympathetic externalisation of the ‘effort’ that the nonhuman performer is simultaneously exerting—a Nancarrowian ‘sympathy for the nonhuman’, perhaps. In the process of composition, the 437-chord loop was played in to the computer manually: sedimented into the midi file is the presence of its composer’s hands. The automatic piano could then even be seen as a *transhuman* performer, reproducing the human performance of the chordal material at an inhuman speed. The computer-controlled piano here is akin to early Soviet experimental motion capture (fig. 1–18), attempting to encapsulate impulses from the human body and relay them to machines, so as to enable long-range human action, with inhuman increases in potential strength or speed.

After beginning with a bare octave in the treble, a preliminary or anacrusal snatch of the motoric chordal loop in the bass (chords 3–8 in b. 4) briefly prefigures the loop before it begins in earnest. This is alongside the opening chorale melody in the treble. One point of comparison with the opening of *Set of four* mvt. 1 is the gap between the first phrase and the one that follows. In both cases, despite an anacrusal ‘stumble’, the beginning of the piece nonetheless arrives

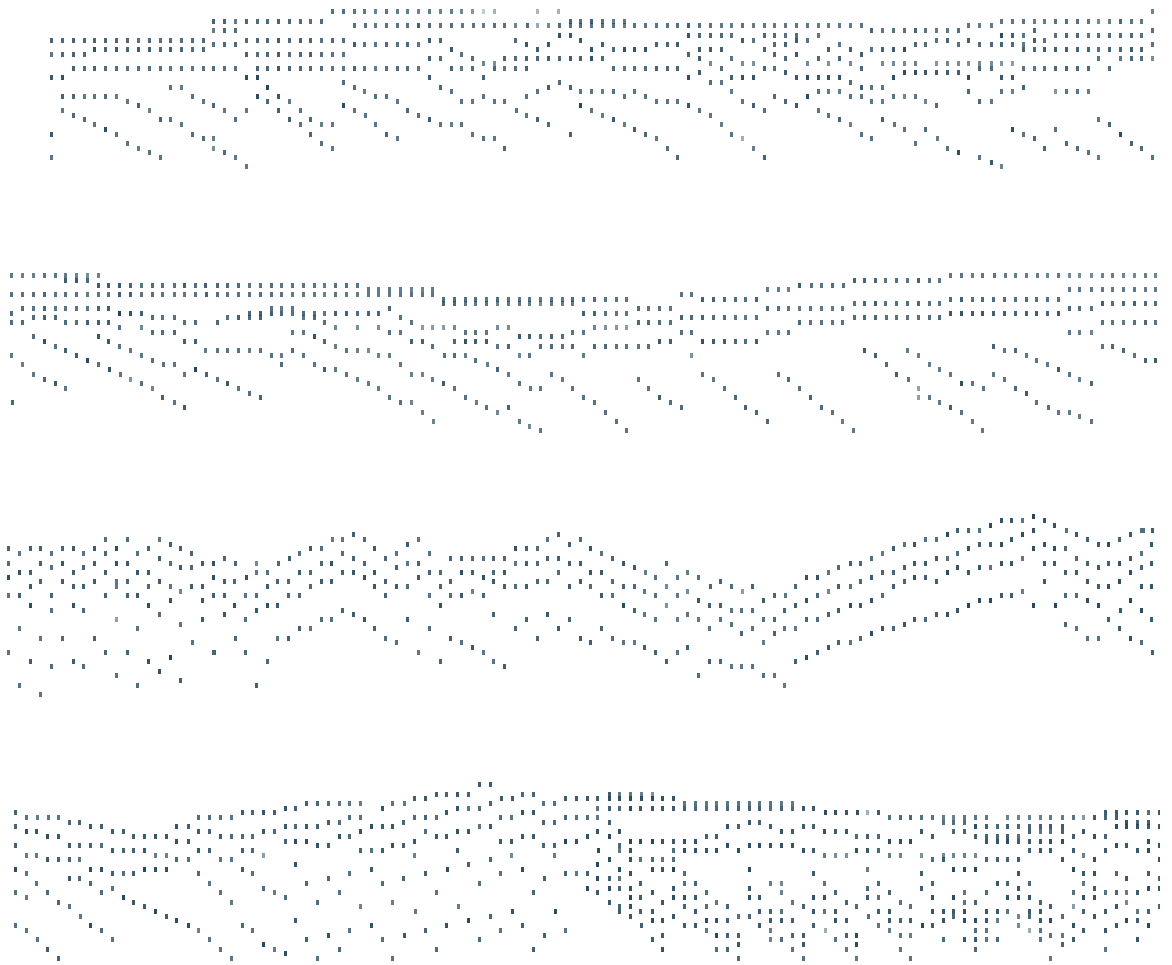


FIG 1-19a

a. *Jumping song*, 437-chord loop, midi sequence diagram.

DIGESTION (AND HOMAGE)

4 $\text{♩} = c.164 (\text{♩} = 82)$

10

15

21

27

34

41

47

53

The image displays a single-staff musical score in bass clef, representing a 437-chord loop. The notation is organized into measures, with measure numbers 4, 10, 15, 21, 27, 34, 41, 47, and 53 clearly marked. The music is written in a complex, dense style, featuring a wide variety of chords and intervals. The tempo is indicated as approximately 164 quarter notes per minute, which is equivalent to 82 half notes per minute. The notation includes many beamed notes and complex rhythmic patterns, creating a highly textured and intricate sound. The key signature is not explicitly stated but appears to be B-flat major or D minor based on the accidentals used.

FIG 1-19b

a. *Jumping song*, 437-chord loop, notation, from rehearsal 1.

with a certain hurry. This hurried arrival is followed by a period of ‘waiting’, with the following phrase only entering after an uncertain period has elapsed. We proceed from beginnings in a condition of unsureness. The melos arrives, only to then have to begin again, after having registered its arrival.

The opening motive, $\hat{5}-4-\hat{1}-\hat{5}$, in its bare outline of scale degrees 1 and 5, is similar to motives found in *Set of four* (e.g. bb. 423–4; see also fig. 1–15a), as well as other portfolio pieces.⁶² It owes something to blues, as if transposing up a blues bass progression and reconfiguring it as a melody. Blues, of course, is a deep constituent of Nancarrow’s work, relevant from the earliest works (Studies Nos. 3 and 6) to the last works of the 1980s (*Tango?*, 1983).

The paeanic metre of the chorale (i.e. short-short-short-long, fig. 1–20a) also occurs in Nancarrow, in for example the late Studies Nos. 46 and 47 (see fig. 1–20b). Chorale-like textures are also common, found in, e.g. Study No. 25. Likewise, the use of a ‘row’ of chords is another Nancarrowian technique, albeit rare, notably used isorhythmically in Study No. 11.⁶³ Study No. 11 uses a series of 15-chord isorhythms, at around 180 chords per minute on average—*Jumping Song* proceeds through its chordal material 3.6 times faster by comparison.

Other aspects of Nancarrowian cast in *Jumping song* include its prevalent semitonal leading-tone voice leading, particularly in the upper part of the fast bass chords and in the coda (fig. 1–20c). Nancarrow, unlike Lou Harrison,⁶⁴ was fond of this semitonal ‘tightness’, often using ‘phrygian’ semitone-tone-tone (STT) tetrachords, and their inverse (TTS) (notably in the opening to Study No. 46, the early Study No. 7, as well as the ‘flamenco study’, No. 12).⁶⁵

The melody of the chorale in the coda (fig. 1–21a) is similar in its chromaticism to the ‘ontological clock’⁶⁶ of Study No. 27 (see fig. 1–21b): the obsessive, chromatic ticking-away that forms the enigmatic centre around which the rest of the study spins. *Jumping song* is also run through with triads and perfect cadences: common features throughout Nancarrow’s composition, often appearing as abrupt endings in later pieces which otherwise seem highly abstract and

62. Namely *Ambling, waking*. See chapter 2, §2.3.

63. See Gann, *Music of Conlon Nancarrow*, 97ff.

64. Harrison remarks: ‘One remembers the lovely Landini cadence . . . (& with distaste, the constant chromatic “leading-tone” appoggiaturas in nineteenth century European compositions).’ Harrison, *Music Primer*, 13.

65. It’s notable also that Study 20 (‘cloud’), begins with a semitone, and not a wholetone, as was common to Ligeti’s pieces to which it’s habitually compared. See Gann, *Music of Conlon Nancarrow*, 105ff.

66. As quoted in Roger Reynolds, ‘Conlon Nancarrow: Interviews in Mexico City and San Francisco’, *American Music* 2/2 (1984), 9.

DIGESTION (AND HOMAGE)

a 'verse' ($\hat{5}$ $\hat{4}$ $\hat{1}$ $\hat{5}$)
 loop 1 (2x) loop 2

b ($\hat{5}$ $\hat{6}$ $\hat{4}$ $\hat{5}$ $\hat{5}$)

c

... chromatic passage ...

FIG 1-20

a. *Jumping song*, melodic material. Outlining 'song form' divisions.

b. Nancarrow, Study No. 47, melodic material for comparison.

c. *Jumping song*, voice-leading in upper part of chord loop.

DIGESTION (AND HOMAGE)

a

b

(transposed 8va)

stacc. sempre etc.

FIG 1-21

a. *Jumping song*, chorale at rehearsal 12. All triads are in root position.

b. Nancarrow, Study No. 27, central staccato 'ontological clock' material, transposed 8va for comparison with upper melody of chorale

without tonal centre.⁶⁷ The coda chorale also uniformly uses root position triads, commonly found in Nancarrow.

In general, those aspects of Nancarrow digested and paid homage here are his harmonic habits, melodic tics, chorales, penchants for blues and flamenco. Perhaps such wilfulnesses are insignificant in comparison to his considerable technical achievements, in isorhythm, canon, convergence and acceleration. Yet his more wilful compositional habits have an intoxicating and personal quality of their own. As with the homages in *Set of four*, it is this amorphous musical disposition that I was attempting to vicariously digest and reinscribe.⁶⁸ As Nancarrow put in an interview, 'I still have no [orthodox] harmonic sense, of harmony

67. Study No. 48a is an example. See Gann, *Music of Conlon Nancarrow*, 223ff.

68. 'My essential concern, whether you can analyze it or not, is emotional.' Reynolds, 'Conlon Nancarrow: Interviews', 23. 'It is the duty of the artist of today,' Laszlo Moholy-Nagy wrote in 1950, 'to penetrate the still unrecognized defects of our biological function, to investigate the new fields of the industrial society and to translate the new discoveries into the stream of our emotions.' Quoted in Moholy-Nagy, *Painting, Photography, Film* (London: Lund Humphries, 1969) 149.

as harmony. I never studied it. [But] I've always been interested in voice leading. For me that's the important thing in any piece I make.⁶⁹

In some sense, *Jumping song* consists *entirely* of voice-leading. Apart from their rapidity, its rhythms are unsophisticated. What *is* voice leading?⁷⁰ It is clearly not simple adjacency—is it that aspect of what follows that glues it to what came before; the snatch of afterness latent in beforeness. Through this gluey, knitted tension, *Jumping song's* chords liquidly and ambidexterously concatenate from one to the next. Harmony here is less of a motivating concern as much as an instance of Csikszentmihalyi's flow⁷¹—where flow consists in a transcendental sheer dexterity. Just as Nancarrow's music could flock, cascade, spin kaleidoscopically, this piece attempts, by resorting to little else than voice leading, to gravitate, flow, jump and land.

One might ask, what does it mean to be engaged in all these homages? In both *Set of four* and in *Jumping song* there is an attempt to take in and consume at a distance aspects of a homagic source. Another composer's dispositions and habitualities are captured and encapsulated in composition, as necessarily subsequent. These works are sedimented in a condition of afterness: acknowledging that they exist in a world of already extant materials, from which life and energy is drawn. Such a conditioning in a situation of subsequence, and following, corresponds to analogously to voice-leading and melodic unfolding itself: that which follows is genetically related to that which precedes, navigating its unchosen situation with adoption of disposition.

In both *Set of four* and *Jumping song* the presence of homage, as an expression of afterness, is a recognition of its inevitability. It represents a grappling on my part with such an unavoidable condition. To pretend that a composer today could remove themselves from received or extant material is naive if not actively foolish—far better to consider the matter directly, adopting parentage, consuming and digesting it. Moreover, the aesthetic of self-removal has become *itself* a kind of homage—of Cageian non-intention, which at several generations remove has become reified as such.

Just before the ending section of *Jumping song*, there is a moment where after the end of the ninth loop of bass chords, and a series of clusters and chromatic masses, the bass dwells on a passage of triads in repeated eighth-notes (rehears-

69. Gann, *The Music of Conlon Nancarrow*, 39.

70. David Huron has recently written an extensive exposition of the phenomenon: *Voice Leading: The Science Behind a Musical Art* (Cambridge: MIT Press, 2016).

71. Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience*, Harper Collins, 1990.

al 11, bb. 510–27). This is the ‘chorale’ passage that reappears again in the coda, repeated three times, this time across the entire register of the instrument (i.e. that in fig. 1–20a).

What does an overlap of this kind signify? A structural procession of this kind could be seen as analogous, in film editing, to the ‘split’ edit, where the sound of one scene is overlaid on another. They come in two forms: the ‘L-cut’, where the sound of a preceding scene lasts longer and is overlaid on the scene following; and the ‘J-cut’, where the following scene is prefigured through overlaying on the previous. They’re everywhere in film editing, to the extent that they often go unnoticed.⁷²

In music, though, it is unclear how to truly identify the ordering—separating the J-cut from the L-cut. Can we say that the chorale appears first in the bass, rehearsal 11, only to appear ‘subsequently’ in the coda? Or does it only fully ‘appear’ in the coda, with its previous sounding a *prefiguring* of something not yet completely in occurrence? In music, temporal ordering can be confused. We might hear the shadow before the subject comes into audibility; or we might hear the subject itself, with its subsequent shadow being brighter and more dazzling. We cannot know which is the shadow and which is the subject.⁷³

Chapter three of this commentary explores the phenomenon of anticipation, of ‘cornering’—the tension introduced by the incipient expectation that a certain thing will follow. But the phenomenon is tied to afterness too. One could analogously compare the phenomenon to walking from the corridor into a room, turning a corner, crossing the threshold of the doorjamb—seeing a little of the room one will enter before one enters it (as in the interconnected rooms of Mike Nelson’s 2000 installation, *The Coral Reef*, fig. 1–22).⁷⁴ The relation between anticipation and recollection, between beforeness and afterness, is covalent and intertwined.

The coda to *Jumping song* is both spontaneously arrived-at and prepared

72. A classic example of the J-cut would be the overlaying of the calls of the newspaper boy, before the appearance of the scandalous newspaper headline (‘Candidate Kane caught in love nest with “Singer”’), in the scene transition in *Citizen Kane* (at 1hr 10mins).

Walter Murch discusses the technique in the context of dialogue scenes, where subtle psychological cues can be introduced through split edits between characters. ‘Dagnet’, *In the Blink of an Eye* (Silman-James Press, 2001), 64.

73. One can see this technique at work also in *Set of four* mvt. 2, where the bassline prefigures the appearance of the main melody (at rehearsal 18; i.e. fig. 1–13c prefiguring 1–13b).

74. For information about this work, see <https://www.mattsgallery.org/artists/nelson/exhibition-3.php>. The phenomenon was also used extensively in the installations of Ilya Kabakov: for example, *Labyrinth: My Mother’s Album* (1990). Detailed in *Ilya Kabakov: Installations 1983–2000*, ed. Toni Stroos, vol. 1, 228.

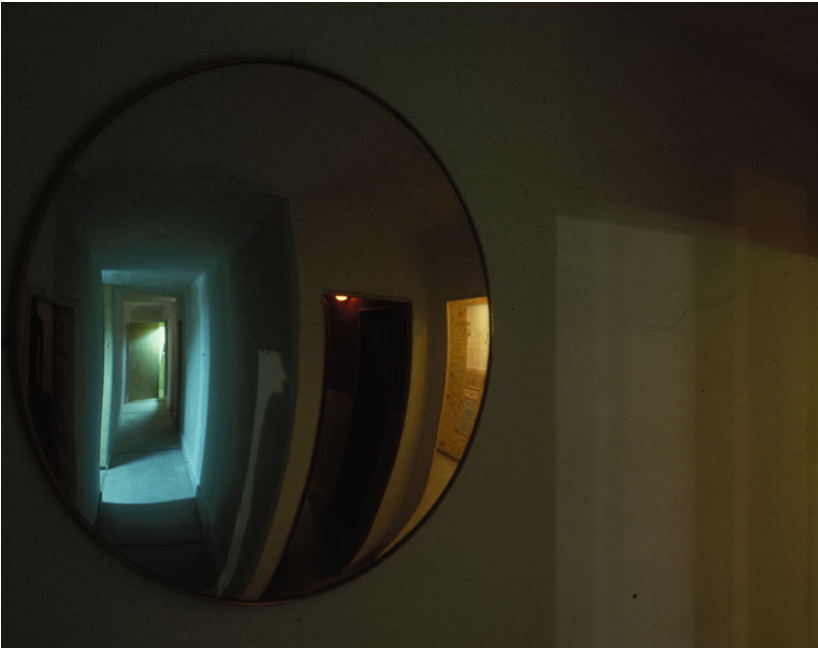


FIG 1–22

from Mike Nelson,
The Coral Reef (2000),
 installation. (Photograph:
 Matt's Gallery)

through prefiguration. The intent is to create something at once surprising and familiar. Perhaps this is what afterness amounts to—that the conditions of the present are constructed out of already familiar materials. Their reconstitution is seemingly unsurprising—yet events, when they do occur, still shock. Passing through the threshold, cornering from one room to another, can do much to reset our minds: we frequently forget what it was we came into a room for.⁷⁵ In the case of a musical prefiguration, arriving in an auditory scene that is at once shocking and unsurprising, familiar and unexpected, is a phenomenon of afterness. Having cornered, and crossed the threshold into a new auditory scene, we may forget what it was we had been anticipating. ■

75. See Radvansky, G. A. et al., 'Walking through doorways causes forgetting: Further explorations' *Quarterly Journal of Experimental Psychology*, 64 (2011), 1632-1645.

2

MOOD (AND MELANCHOLIA)

music in the long present

Even in the midst of laughing there is sorrow.

—Robert Burton¹

§2.1 Mood, disposition, presentness

Concerning itself with afterness, homage and digestion, the previous chapter located itself ‘subsequently’. In a situation of ‘having eaten’; consideration for what one has imbibed, its reconstitution and transformation. If the last chapter adopted a position of afterness, this chapter attempts to find presentness. The situation of present awareness and internal-reflection—of mood and feeling.

There is a relationship here. Much has been made of recent research into the so-called gut-brain axis: the relation between the gastrointestinal tract, the hormonal system, and the brain. There appear to be surprising connections between sustenance, digestion, the gut flora, and mood.² The relationship appears to be remarkably intricate—treatments for mood disorders via alterations of diet are being explored. Antidepressants can cause significant gastrointestinal irritation. 95 per cent of all serotonin is manufactured within the gut: as a neurotransmitter it is associated with, amongst much else, the regulation of appetite, mood, and sleep.

The confluence of these subjects—the digestive, the dispositional, the somnambulant—formed an important point of reference during the composition of the portfolio. Mood is tied to our existence as digesting beings, as constituted out of that which is imbibed. But mood as such, as rehearsed and experienced in an expanded present, is also of interest. I take a wider view of the term, incorporating senses derived from the German term *Stimmung*: attunement, disposition,

1. *The Anatomy of Melancholy* (Farrar & Reinhart, 1927 [1621-51]), 1.1.1.5, 126. Burton is glossing Proverbs 14:13.

2. E.A. Mayer, ‘Gut Feelings: The Emerging Biology of Gut-Brain Communication’, *National Review of Neuroscience*, July 13; 12 (8) (2011), 453–66.

tone, atmosphere. *Stimmung* is also the word for the tuning and temperament of instruments: in English temperament is already synonymous with disposition. But mood is also a cousin of ‘mode’—i.e., an ordering—and thus obliquely related to melody, if we take melody to be the way of traversal through such an ordering. Tantalisingly, mood also refers to the grammatical concept of conditionality—namely of the *realis* and the *irrealis*: the aspect of language that allows one to speculate as to that which may or may not be the case.³ Thus the concept of mood brings together many incipient concerns particular to (experimental) music: the situation of the present, sensation, tuning, ordering, internality, the imaginary and the speculative.

‘For a long time,’ the German writer Heinz Bude has suggested, “‘mood’ was a rather disreputable concept, associated either with public mood and its manipulation by the mass media, . . . or with mind and mood management, yoga and swimming, muzak and colour theory.’⁴ ‘Mood,’ in short, ‘belongs to an entertainment and wellness industry,’ whose ultimate dealing is in paid-for respite. ‘Surely mood is kitsch.’ The word in English certainly has its kitsch overtones. (The phrase ‘mood-music’ comes to mind.) But the German *Stimmung* has a rather more distinguished lexical history, undergoing a series of semantic and philosophical transformations from the second half of the eighteenth century. Beginning with Johann Georg Sulzer’s ‘psychological *Stimmung*’, Sulzer’s attempt to describe the ‘tuning’ of the spirit, the concept makes appearances in Goethe, Kant, Schiller, Höderlin. Later, *Stimmung* became especially important to the philosophy of Martin Heidegger.

After a century of at best ambivalent (if not actively hostile) attitudes to emotion and mood, revivals of academic interest have occurred mostly in the last fifteen years. The potential in *Stimmung* for German literary criticism was promoted by Hans Ulrich Gumbrecht in a series of columns later collected as *Stimmungen lesen* (translated as *Atmosphere, Mood, Stimmung*)⁵. In parallel, interest in emotion and its histories has also accelerated in anglophone literary studies, notably with the six-volume *Cultural History of the Emotions* published by Bloomsbury this year.⁶ (Erik Wallrup’s *Being Musically Attuned* is at present

3. F. R. Palmer, *Mood and Modality* (Cambridge University Press, 2001).

4. Heinz Bude, *The Mood of the World* (Polity Press, 2018), chapter 1, epub.

5. Gumbrecht, *Atmosphere, Mood, Stimmung: On a Hidden Potential of Literature* (Stanford University Press, 2012).

6. Susan Broomhall, Jane W. Davidson, Andrew Lynch eds., *A Cultural History of the Emotions*, Bloomsbury, 2019.

the only book-length consideration of *Stimmung* in music.⁷)

As a conditionality, mood could be regarded as an antithesis to that which was described in the previous chapter. In contrast to a ‘digestive’ subsequent, that of afterness given a situation of ingestion, mood is oriented towards a being-in-the-world, conducted in the present. For Heidegger it was central to his primordial concept of ‘thrownness’ (*Gerworfenheit*). ‘A mood assails us. It comes neither from “outside” nor from “inside”, but arises out of Being-in-the-world, as a way of such Being.’ ‘When’ (or if) ‘we master a mood, we do so by way of a counter-mood; we are never free of moods.’ Moods and ‘states-of-mind [disclose] Dasein in its thrownness, and—proximally and for the most part—in the manner of an evasive turning-away.’⁸

But for Bude, ‘mood is perceived as problematic precisely because it undermines the self-evident scientific distinction between a subject that processes information and an object from which information emanates. The world is present in mood but, instead of being outside me, I find myself within it.’ Mood is superpositioned in confusion between inwardness and outwardness. It isn’t especially clear where moods, as encountered by a listener or reader, are located—are they ‘in’ the artwork? Or ‘in’ the listener’s encounter? Are they ‘brought out’, or ‘imposed’? Are they ‘depicted’, or ‘rehearsed’?

My particular interest in mood has been expressly coupled to that of melancholia—considered as a mood in its own right, but also as an overarching ‘meta-mood’: the ‘mood of all moods’. Melancholia (which shows itself in multiple guises and fashions throughout the portfolio, and particularly in the compositions discussed in this chapter) could be the mood which is capable of incorporating all the others. It is the ‘encyclopedic’ mood. Following Robert Burton, melancholy is the characteristic mood of self-consciousness. The knowledge of loss, and of finitude. It is the ‘Socratic’ mood, the mood of the acknowledgment of limits.

Melancholy’s typical guise is the shadow of mourning—sometimes a pre-emptive shadow. In Giorgio Agamben’s terming, ‘melancholia offers the paradox of an intention to mourn that precedes and anticipates the loss of the object.’⁹ Referencing Agamben in an essay on melancholy, Slavoj Žižek takes a dim view

7. Erik Wallrup, *Being Musically Attuned: The Act of Listening to Music*, Ashgate, 2015.

8. Martin Heidegger, *Being and Time*, tr. John Macquarrie and Edward Robinson, 176/137.

9. Giorgio Agamben, *Stanzas: Word and Phantasm in Western Culture*, 20.

of such a saturnine condition, as morbid or pathological.¹⁰ He quotes what he calls an ‘old racist joke about Gypsies: when it rains they are happy because they know that after the rain there is always sunshine, and when the sun shines, they feel sad because they know that after sunshine it will at some point rain.’ Zizek’s habit of lampshading (acknowledging racism but not offering a critique of his own) shows up here; melancholia is laughable. My view differs: there is nothing fundamentally unreasonable about such a melancholic position. It readily sums up the bearing of much of the music discussed in this chapter.

§2.2 Melancholy objects: *While we are both*

Is there a melancholy gravitation? In English there are only certain conditions it is possible to ‘fall’ into—one may fall asleep, but not fall awake; fall silent, but not fall timid. If melancholia is to be a sickness, one could ‘fall sick’ with it; but such a phrasing seems archaic. More commonly we *are* sad, we *are* melancholy.

If one could fall into melancholy—if melancholia is itself a kind of falling—it could be close to what the filmmaker and writer Hito Steyerl described in her essay ‘On Falling’. ‘Imagine you are falling. But there is no ground.’

‘Paradoxically,’ she continues,

while you are falling, you will probably feel as if you are floating—or not even moving at all. Falling is relational—if there is nothing to fall toward, you may not even be aware that you’re falling. If there is no ground, gravity might be low and you’ll feel weightless. Objects will stay suspended if you let go of them. Whole societies around you may be falling as you are.¹¹

In such a situation, one’s only intimation of movement is the interiority of feeling, the dropping of the stomach. This kind of horizonless floating-as-falling was something I tried to capture in *While we are both*, a piece for soprano and fixed audio (or soprano and four keyboards) written originally for Juliet Fraser.

At the time of her visit to Huddersfield in early 2017, Juliet was touring Feldman’s *Three voices*. In the piece, Feldman’s ‘tombstone’¹² speaker-cabinets are co-participants in an onstage triptych, abstracted ‘human nonhumans’. Follow-

10. Slavoj Zizek, ‘Melancholy and the Act’, *Critical Inquiry*, no. 26 (2000), 657–681.

11. Hito Steyerl, ‘In Free Fall’, *E-Flux Journal*, no. 24, April 2011.

12. Quoted in Joan La Barbera’s performance instructions, in Feldman, *Three Voices*, Universal Edition [1982] 2007, i. The piece is also discussed at length in Paul Griffiths, *Modern Music and After*, ‘Feldman and Loss’, 278ff.

ing this vein, and knowing that it would be a piece for soprano and loudspeakers, I gravitated toward a piece exploring the relation between the human and nonhuman. Technology as presence and participant—as a transformation of the human—but also as other. My initial move was to set text of a friend, poet Caitlín Doherty, from her collection *Satellites* (Cambridge: Tipped Press, 2012). Written variously to and from the point of view of the dog Laika, the first animal to orbit around Earth, the collection captures, in its dwelling on orbiting bodies, a sometime dance between the human and the non-human. The second poem of the collection imagines a dialogue between two satellites that collided in 2009:

On the collision of Iridium-33 with Kosmos 2251

I wait for you in orbit
arching through the spheres
& over Siberia

your glow
is limitless horizon &

I cannot stop the way you fall
as I fall quick behind you

shine at me
you glint so well

that I am fooled in silence
we never miss the atmosphere

to brush against you once
in fifty million chances
would be enough but

you have been sleeping
since I first passed you by
[. . .]

I love you and they have miscalculated

The collision of these satellites caused significant fallout of debris which has yet to decay or burn up completely.¹³ The poem uses these non-human orbiting bodies as metaphors for the relations, and collisions, between human people. *Satellites* explores the possibility of the non-human as, or becoming, persons; of seeing the non-human as and in the human. ‘I love you and *they* have miscalculated’—the human ‘they’ as the opposite counterpart in a catastrophic dance between non-human and human bodies.

While this text was unavailable, Caitlín was able to create a bespoke text for this project. In its own way it captures aspects of the same subject matter—connection and disconnection, references to sleep, communication and miscommunication, a reference to ‘love’ towards its close:

13. ‘Russian and US satellites collide’, *BBC*, February 12, 2009, <http://news.bbc.co.uk/2/hi/science/nature/7885051.stm>.

what light fear blanches
 the alarm
 the photographic*
 hours delay waking until
 sleep again

concede it to a grey-
 not-love, the morning
 calls with no promise
 to refresh

& weighting is beyond
 this hour, each word
 a serious intent
 an object pain

there are only so many
 Messages of Love
 I can send to you
 while we are both awake
 the ocean becomes dark
 we trade symbols of hearts
 freely and in colour

*alternatively, 'a photo sensitivity'

From the opening dwelling on waking fear, to the last stanza's acceptance of limitation and finiteness, it is a poem run through with an awareness of circumscription: 'there are only so many / Messages of love / I can send to you / while we are both awake'. It is a boundedness and finitude both known and concomitant with a persistent gazing toward dissolution: 'the ocean becomes dark'.

One reading of the poem is as an allegory of communication—between lovers, or friends. Indeed (as it occurred to me some time after finishing the composition) it can be read as communication mediated by mobile phone. Often used as morning alarms ('what light fear blanches / the alarm'), their wide screens blanchingly white, photographic slabs. They convey messages in weightless text ('& weighting is beyond / this hour, each word / a serious intent'). As with the colliding satellites, the poem could be written from the point of view of the phone, the melancholy object itself. Does the last stanza imply a human-to-human trading of hearts (i.e., ♥), or a non-human object witnessing of the love of its human owner?

Caitlín and I didn't expressly discuss the idea of the narrator as the personification of a non-human device. But to have a lyric told from the point of view of a prosaic non-human object (such as a phone) is affecting. (And personally resonant: an early musical memory is of They Might Be Giants' *Flood*, 1990,¹⁴ whose opening song 'Birdhouse in Your Soul' is told from the point of view of a

14. Elektra 60907.

night-light.¹⁵)

While we are both treats the four stanzas of Caitlin’s lyric as four distinct sections; and additionally, the first three lines of the last stanza are treated somewhat separately. Moreover, an opening section of around three minutes for the instrumental backing alone, establishes the piece’s spacious pace. From there, each stanza as set lasts around three minutes. (Measuring this pace, over a duration of fifteen minutes, the total of 102 syllables amounts to an average of around one syllable per 8.8 seconds.)

The opening section itself establishes much of thinking lying behind the piece: the opening gesture itself is significant. The octave C is intended to hang in midair, as a groundlessly suspended object, following Steyerl’s falling-as-floating. Only once the E-flat triad arrives does the octave acquire its character of an appoggiatura, moving $\hat{6}-\hat{5}$. (Similar ‘suspended’, monophonic gestures are found in openings of *Jumping song*, *Ambling, waking*, and *Three Heames Settings*.¹⁶)

C, as the $1/1$ of a 12-note Just tuning, could be the objective-centre of the world the piece inhabits. Yet, at least until the final section, centricity on C is generally elided. (Notably, the opening gesture transforms the $1/1$ into an appoggiatura.) The $1/1$ is typically elided by taking modes and subsets of the tuning, a similar technique to that adopted in *Set of four* (§1.2). In *While we are both*, only at the end is there modal harmony centred on C (i.e. from rehearsal 21)—but even there, centricity is complicated by a simultaneous ‘flat-subdominant’ pedal, of F \flat .

The tuning structure of *While we are both* does not exceed the 7-limit. (See fig. 2-1.) Nevertheless, there are some idiosyncracies to it. One is the mirroring, around G \sharp $3/2$, of F \flat $21/16$ below and A \flat above (see fig. 2-2 below). Around the G therefore encloses the third $2 \times 8/7$ (or $64/49$), a very wide major third.



FIG 2-2
While we are both,
septimal enclosure of $3/2$

For the first two-thirds of the piece, modes of this set are taken that do not use the $1/1$ (C) as their final (or tonic). Rather, from the outset until bar 220, it is predominantly E \flat that is taken as a modal final. When the tuning is distributed inside an octave (see fig. 2-1b), one can redefine any note as a new, ‘virtual’ $1/1$,

15. Neil Gaiman discusses the song in ‘Music and the people who make it’, *View from the Cheap Seats*, chap. 7, London: Headline, 2016.

16. See §§1.3, 2.3, 2.5 respectively.

MOOD (AND MELANCHOLIA)

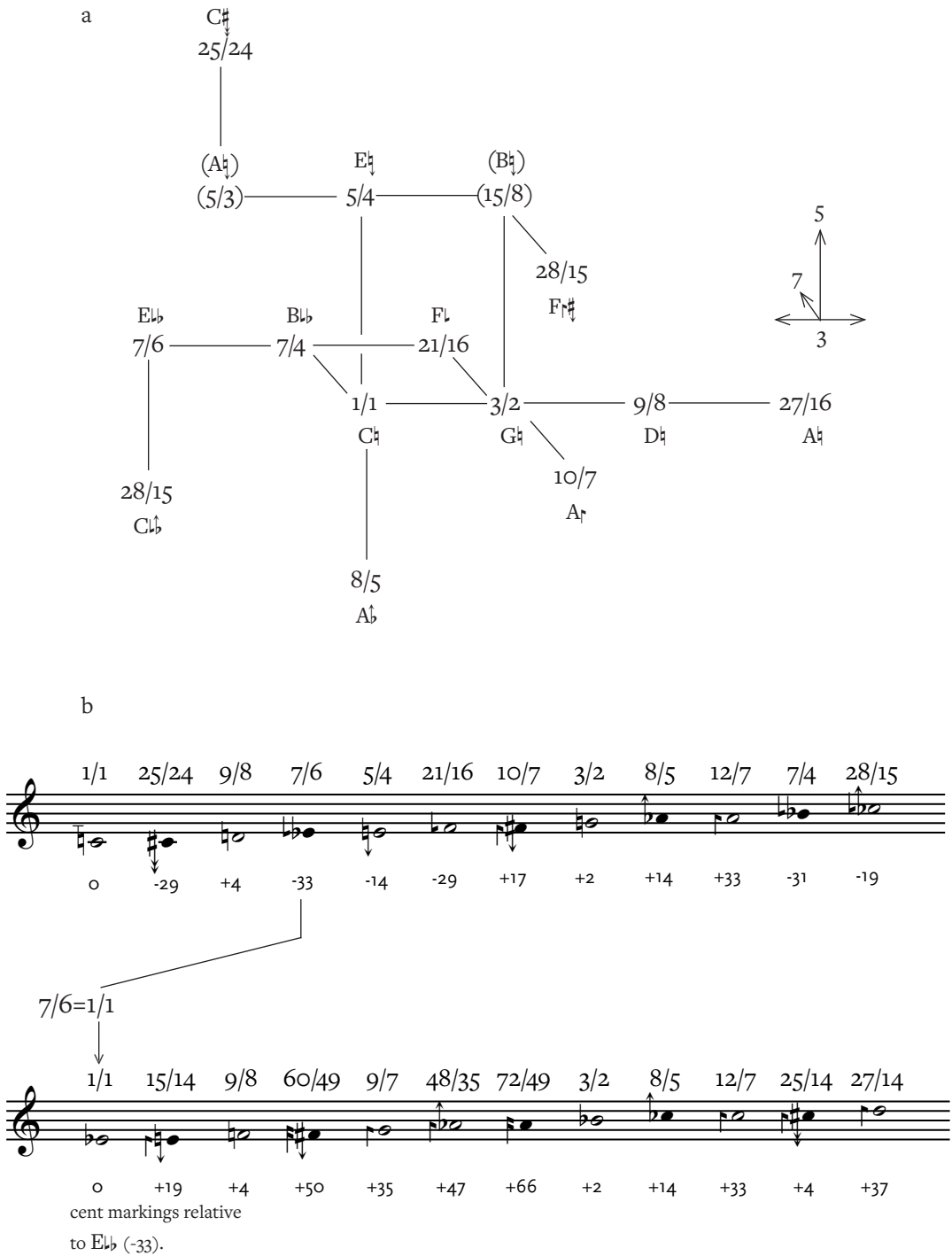


FIG 2-1

While we are both:
 a. Tuning lattice. Pitches in brackets are 'virtual' and not used.

b. Distribution of pitches in the octave, with 1/1 of C, and 'virtual' 1/1, Eb

taking a mode of the tuning. As a sub-set of the overall tuning, $E\flat$ is written plainly as $E\flat$ ¹⁷—allowing for the new ratios between notes to be seen from this orientation. As is the case with the mode centred on C, the mode centred on $E\flat$ retains the $8/7$ interval between the 6th and 5th diatonic degrees (i.e. between $C\flat$ and $B\flat$). Thus, there is a mirroring in the opening gesture of the piece, with the held C leading to $B\flat$, and the repeated $\hat{6}-\hat{5}$ movement later in the piece between $A\flat$ and G. Both of these gestures comprise the same $8/7$ interval.

An added complication to this tuning regime is the drifting of the pitches of the main two synthesisers. These patches drift indeterminately by a maximum of ± 21.5 cents ($81/80$, the syntonic comma) approximately every thirty seconds. Yet in this context, the comma has no Just function other than to turn each pitch into a ‘cloud’: a nebulosity that, while centred on a specific spot, is permanently drifting, never quite locatable with exactness.

Aside from the drifting pitches, Steyerlian falling-as-floating is caught also in the use of over-the-barline ‘stumbles’—the moment leading to rehearsal 2 for example; another at rehearsal 21. Likewise, the rhythm of the final section, where chromatic scales weave up and down, in a stumbling rhythm. These stumblings amount to an ‘anticipatory’ quality to this music. Despite being located very much in the present, throughout one has the sense of a ‘melancholy gravitation’.

Most significant in this relation is the previously mentioned moment at bar 220, where the texture, after having collapsed into the lowest depths of the bass register, is entirely reduced to a wide fourth, held for around 25 seconds. This interval is not a perfect fourth—it is in fact the unusual, dissonant $48/35$. This is the interval between $E\sharp$ ($5/4$ above C) and $A\flat$, the very sharp $12/7$ septimal major sixth. In reality, $48/35$ is not held as such for long, the synthesisers drifting toward $11/8$ or $4/3$. Then, the $A\flat$ moves to the G, $8/7$, creating the $\hat{6}-\hat{5}$ motive. The intent here was to create a movement occurring both ‘suddenly’ and ‘eventually’. What hitherto had seemed a point of stasis becomes at a stroke a suspension or appoggiatura—very much in reflection of the opening. Motives of this shape—outlining a major second or thereabouts—have been common throughout the piece up until this point. Does the listener detect, or anticipate, such an incipient inclination before it arrives?

Such ideas of incipient anticipation are discussed more fully in chapter 3. For now, a reduction of the total treble melodic material of the piece is provided

17. i.e. raised by a septimal comma with respect to its position in the mode centred on C.

MOOD (AND MELANCHOLIA)

The musical score consists of ten staves of music in a single system, all in treble clef. The key signature has two flats (B-flat and E-flat). The notation includes various note values, rests, and fingerings. Fingerings are indicated by numbers 1-6 above or below notes. Dynamics include *cresc.* and *dim.*. There are two boxed numbers, 1 and 2, marking specific points in the music. The first staff has fingerings 6, 5, 3, 2, 1, 6, 5. The second staff has (5) and 6. The third staff has (6) and 5. The fourth staff has (5) and 6. The fifth staff has (5) and 6. The sixth staff has (6) and 5, and a boxed number 1. The seventh staff has (6) and 5. The eighth staff has a boxed number 2. The ninth staff has (6) and 5. The tenth staff has no fingerings.

FIG. 2-3 (and over)

While we are both, melodic reduction of vocal part and prominent instrumental parts.

MOOD (AND MELANCHOLIA)

FIG. 2-3 (cont.)

3

what light fear blan - ches

the a - - larm

4

the pho - to - gra - phic

5

hours de - lay wak - ing un - til

sleep a - gain

6

the a - - larm

MOOD (AND MELANCHOLIA)

FIG. 2-3 (cont.)

7
con - cede it

8
to a grey- not- love,

9
the mor - ning calls

10
with no pro - mise, pro mise to

-re - fresh

11
owh

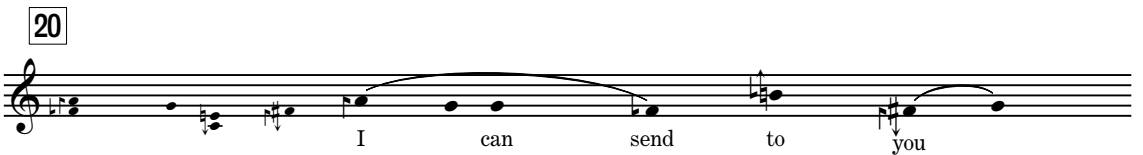
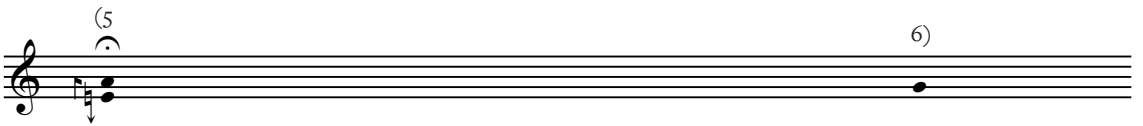
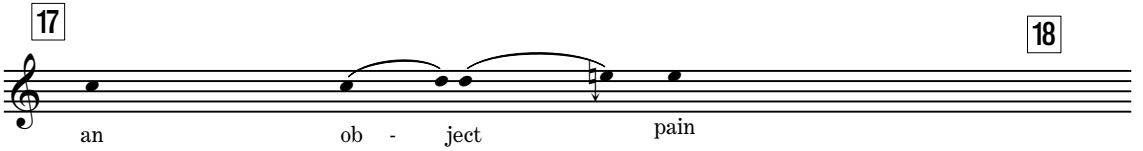
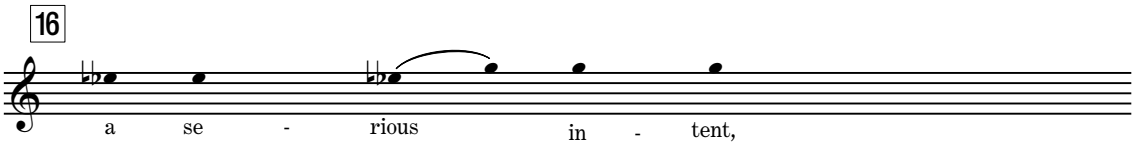
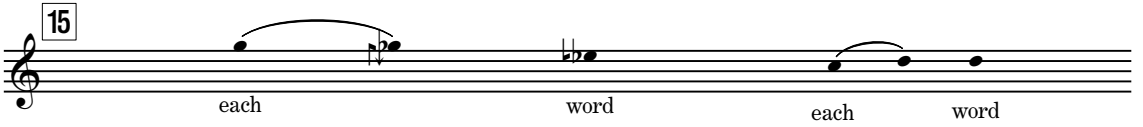
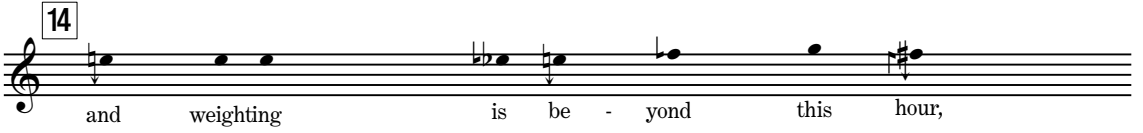
owh

12
owh

13
owh

MOOD (AND MELANCHOLIA)

FIG. 2-3 (cont.)



MOOD (AND MELANCHOLIA)

FIG. 2-3 (cont.)

21

while we are both
a - - wake the o - - cean

22

be - comes dark
we

23

trade sym - bols

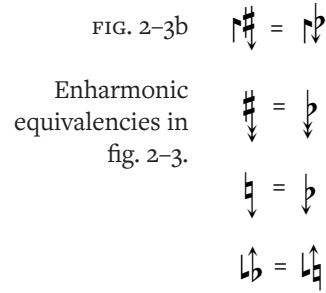
24

of hearts
free - ly and in

25

co - lour

in fig. 2–3. Shown here are predominant phrases, arranged according to likenesses in contour, their trajectories condensed onto a single staff. Unlike the full and vocal scores, here Helmholtz–Ellis accidentals are used, to more accurately illustrate the Just harmony. Note here that for the sake of modal clarity (given that many ‘flat’ modes are used in the piece, initially of E \flat and then later of A \flat /D \flat), the following enharmonic equivalencies are made:



What emerges from summarising the total melodic material in this way? The intention is, in a piece of music that is largely through-composed, to isolate instances of similarity and resemblance. The music, while never exactly the same, is constantly moving through similar shapes and characteristic intervals (notably $\hat{6}-\hat{5}$). Assembling the music in this way enables a clearer display of these resemblances, as well as the alternation and intertwining of vocal and instrumental passages. Additionally, in the second stanza, one can see the resemblance between the music at rehearsals 7 and 12, whose material is related; and likewise the repeated use of two-note slurred phrases, in both the soprano and the accompaniment, following rehearsal 18.

Throughout the piece, the interval of 8/7 remains key—an uncharacteristically large second, but one which retains a poignant near-familiarity, being so closely associated with the harmonic series (i.e. the interval between the 8th and 7th partials). When associated with melodic movement $\hat{6}-\hat{5}$ (as opposed to the $\hat{8}-\hat{7}$ of the harmonic series) the interval obtains a certain wistfulness: it moves not as a true appoggiatura, as much as from a ‘near’-consonance to a full-consonance.

The melodic tendencies of this piece place it closer in some ways to *raga*, in that not only does it adopt a specific tuning or mode, but associated characteristic methods of traversal. Hindustani *ragas* are not simply scales in the Western sense; *ragas* may have the same pitch content, but differ according to their characteristic contour, methods of progress and traversal, hierarchy of tones, etc.¹⁸ *Raga* is, too, an exploration of a specific (‘long’) present—each having a charac-

18. As Joep Bor puts it: ‘As well as the fixed scale, there are features particular to each raga such as the order and hierarchy of its tones, their manner of intonation and ornamentation, their relative strength and duration, and specific approach. Where ragas have identical scales, they are differentiated by virtue of these musical characteristics.’ Bor, *The Raga Guide* (Nimbus, 1999), 1.

MOOD (AND MELANCHOLIA)

The image displays two systems of musical notation for the piece 'MOOD (AND MELANCHOLIA)'. The first system consists of two staves (treble and bass clef) with various annotations above and below. Annotations include 'bb. 1-2', 'culmination to b. 45', 'bb. 113-4', 'mode emerging from chromatic cluster, b. 192ff', and 'dense, low sonority, bb. 213-4'. The second system also consists of two staves, with annotations 'long pause, b. 220ff', 'b. 250', 'b. 270', and 'ending, b. 311'. The notation includes complex chordal structures, some with arrows indicating movement or emphasis, and rests.

FIG. 2-4

While we are both, characteristic vertical sonorities.

teristic associated time of day. While in its stanzaic structure *While we are both* differs from the sectional, acceleratory structure of most *raga* performances, in its focusing on characteristic methods of modal traversal, the piece attempts to capture some of the incipient presentness of *raga*. The music attempts to locate itself, as it were, in the ‘long now’.

As well as characteristic melodic movement, the piece also obtains certain characteristic chordal sonorities—some of them outlined in fig. 2-4. When written with full Helmholtz–Ellis notation one can see some of the harmonic complexity at work here, given the interaction of many different Just ratios. However many of them are arrived at through accretion; and most outline near-diatonic sets. One can also observe the oblique symmetry between the opening sonority and the closing one, with the juxtaposition of a treble C against an E \flat major chord, and the final juxtaposition of an C major triad with E \flat in the bass. While it is not intended for this to be a conscious recalling of the opening, the tying of the end to the beginning was something I felt to have some poignancy, subtly reinforcing the present-tense position of the music.

§2.3 At the boundary: *Ambling, waking*

Another piece expressly tied to exploration of melancholia was *Ambling, waking*, a piece for orchestra written in Spring 2016.

Why write for orchestra? The orchestra is certainly an institution replete with complications for any composer working today. For many composers, it is an institution simply to be avoided, remaining distant, impenetrable, concerning. Nevertheless, within the experimentalist movement, there were a number composers who worked with orchestras (in particular the New York School: Brown¹⁹ and late Feldman in particular). But for others, there was the wish to abolish the orchestra altogether; or to re-create it from the ground up. For some, such as Ornette Coleman in *Skies of America*, the orchestral institution is already of such separation that it becomes simply another medium, with its strictures, into which he could make an extended visit.²⁰ It may be another sign of personal perversity that I decided to try to write an orchestral piece as part of the present portfolio—whose next largest composition was for five players. (I think I wanted to prove to myself that I could do it. My own jury remains a little out.)

In *Ambling, waking*, the orchestra remains at a remove. The frontispiece, Pissarro's *Entrance to the Village of Voisins* (fig. 2–5a) sums up the position the piece intends to take: Pissarro shows the illustrious Louveciennes,²¹ and the Chateau Voisins, viewed through the trees, from the village boundary.²² The orchestra is like that Chateau, seen *en plein air*, somewhat frozen at the close of the nineteenth-century. Louveciennes, for all its aristocratic or rural pretensions, is a suburb. The modern orchestra too is an essentially suburban entity: each section is its own cul-de-sac; desks are scattered like multiple households. (The conductor, and soloist, are like the urban centre, around which the suburbs of

19. See Rebecca Y. Kim, ed. *The Music of Earle Brown*, Ann Arbor: University of Michigan Press, 2017, particularly the article 'Remarks Delivered to the national music council, New York city' (1966), 280ff.

20. Albeit one that was personally and professionally difficult—the recording sessions of *Skies of America* were fraught, given the London Symphony Orchestra's objections to Coleman's entire ensemble performing with the orchestra. See Peter Niklas Wilson, *Ornette Coleman: His Life and Music*, 188.

21. Louveciennes, to the west of Paris between Marly-le-Roi and Versailles, was home to Saint-Saens, Leconte de Lisle, and was painted also by Sisley, Renoir, and Monet.

22. 'If—as Arnold Hauser and many students of the movement have long maintained—Impressionism was an urban art form, born around the tables of the Cafe Guerbois in Paris during the second half of the 1860s, it was in the suburban countryside west of the capital that the notions of modern painting discussed in Paris were first tested.' Richard Brettall, *A Day in the Country: French Impressionism* (Los Angeles County Museum of Art, 1984), 79.

a



b

Musical score for Maurice Ravel's 'L'Enfant' (vocal score). The score is in G major and 6/8 time. It features a piano accompaniment and a vocal line. The piano part consists of chords and arpeggiated figures. The vocal line includes the lyrics: 'J'ai pas envie de faire ma pa - ge, / I do not want to learn my les - son,'. The score is marked with 'pp un peu en dehors' and 'p'. The title 'THE CHILD / L'ENFANT' is written above the vocal line.

FIG 2-5

a. Camille Pissarro, *Entrance to the Village of Voisins* (1872). Image: Wikimedia Commons.

b. Ravel, *L'Enfant et les Sortilèges* (vocal score). Entrance of contrabass solo in natural harmonics.

the sections are arrayed.)

I grew up in suburbs. My mother and uncle played in orchestras—I can hardly pretend to outsider status. But my experience of them as a player was only as an itinerant percussionist. The percussionist is at the boundary, and mostly silent, listening, or daydreaming. The triangle player is like a child who has been invited to dine at the adults' table, watching their conversation alternately entranced and bored. From this position, the orchestra seems forever overinflated, like the overinflated furniture in *L'Enfant et les Sortilèges*.²³

A childlike wandering at the boundary, ambling, daydreaming, only half-awake, was what I intended to capture in this piece. Ambling, from the title, is derived from Latin *ambulo*, meaning to wander, and related to *ambio*, meaning boundary, compass, movement 'around'. As an institution of layers of inclusion and exclusion, the orchestra is an institution of peripheries, rendering its auditors and its composer peripheral, posed at its edge. Pissarro's location at the boundary to *Voisins* is gently reinforces these social distances, the horse and cart contrasting to the grand chateau, placed in instantaneous juxtaposition. Likewise, the piece attempts to obtain the *en plein air* quality of Pissarro's image: the capturing of a single moment of permanently rendered present. Time passes more slowly for children, afternoons often neverending—as is the case for Collette's wicked child in the opening of *L'Enfant*. T.J. Clark suggests this suspension of past and future in Pissarro also to be as a consequence of resignation—a retreat into a late, second childhood. In modernity, 'everything we value in the past . . . is being destroyed by progress. Progress is odious and absurd; and yet we cannot argue that what we value in the past should survive, because it too was odious,' its odious miseries ameliorated by progress itself. 'So what', Clark asks, 'does a modernist do then? Find a way to make art eliminate the double perspective of past and future altogether, is one answer, since both are now horrible. Find a way to be truly banal, truly momentary'.²⁴

I wouldn't want to align too heavily with Clark's assignation of banality. But some form of suspension between past and future, of a continuous momentary, a 'long present' with periodic transformation, is a feature of the piece, as with all the other works discussed in this chapter. Beginning with a high roll on the piccolo timpani—a floating at the top of the range—the opening of the piece

23. See e.g. Roger Nichols, *Ravel* (Yale University Press, 2011), 265ff.

24. T.J. Clark, *Farewell to an Idea: Episodes from a History of Modernism* (Yale University Press, 2001), 127.

fills out an atonal chord based on the superimposition of the harmonic series of C and D. Throughout the piece, the majority of the harmony and melody is largely derived from collections of natural harmonics, with inflections here and there. Ravel caught something childlike about the natural harmonics in the opening of *L'Enfant et les Sortilèges* (see fig. 2–5b). Ravel juxtaposes this melody²⁵ with parallel fourths and fifths in the oboes, material that will return at the close of the opera. In *Ambling, waking*, it is parallel major thirds which are the material of return. They appear initially in bassoon and alto flute, and then later in oboe and clarinet. (See the series of reductions, fig. 2–6.) The solo for the latter, again both at the top of their ranges, marks a significant point of coalescence (fig. 2–6b), before a breakdown in texture which only begins to be recovered towards the end. (The piece's ending, for violins alone, is also based on parallel major thirds.)

Significant to the piece is the role of the trombone. Appearing first after the solo for oboe and clarinet, the trombone, and its prolonged solo, is something like the spiritual centre of the piece—its characteristic *Stimmung*. The trombone is associated with the funereal, given its use in Beethoven's *Equali*.²⁶ (Bruckner also composed similar pieces. In similar contexts it is found in Mozart's Requiem and in Stravinsky's *In Memoriam Dylan Thomas*.) Here the trombone is limited to notes of the harmonic series in E, at the top of its range. The trombone explores first mode of this collection, a mixolydian mode of F-sharp, with a melodic '3-2-1' as 11/10/9 above E.²⁷ (Note that, with the $\hat{3}$ being the 11th partial, this figure outlines a neutral third.) After this melodic figure is echoed in a short duo for two clarinets, at rehearsal 12 appears a 'mixolydian cycle' (fig. 2–6c) of two chained plagal movements for winds and harp. This chordal movement is another instance of viewing 'at a distance', as it were, though from another direction—the orchestra 'viewing' the blues.²⁸

Plagal movement occurs throughout the piece, both structurally and within more local movement. This might be taken to be an extension of the already

25. Ravel wrote of *L'Enfant*: 'The emphasis is on melody'. Nichols, *Ravel*, 266.

26. See Howard Weiner 'Beethoven's *Equali* (WoO 30): A New Perspective', *Historic Brass Society Journal*, vol. 14 (2002), 215.

27. i.e. A \sharp G \sharp F \sharp .

28. Mixolydian cycles of this kind became particularly prominent in the 1960s, notable is the extended sequence in Hendrix's 'Hey Joe'. However mixolydian chord of \flat VII (often conceived as IV/IV) was present in blues of the 1930s—for example Skip James' 'Hard Time Killing Floor', and 'Jesus is a Mighty Good Leader' (1931). See e.g. Nicole Biamonte, 'Triadic Modal and Pentatonic Patterns in Rock Music.' *Music Theory Spectrum*, vol. 32, no. 2 (2010), 95–110.

MOOD (AND MELANCHOLIA)

a

b

FIG 2-6
Ambling waking, reduction, excerpts:
 a. bb. 1-15
 b. bb. 44-5

(over)
 c. bb. 100-123
 d. bb. 140-155

MOOD (AND MELANCHOLIA)

C

100 **12** ww

112 **13** vlas (harm) sim. vcs (harm) ww sim.

118 **14** marimba/harp

d vlas vcs (harm) 140 **18** harp vcs (harm) tbn ww hns cb (pizz)

MOOD (AND MELANCHOLIA)

FIG 2-6d (cont.)

145

vlas
vcs (harms)

harp +8vb
cbs (harm)
tbn solo

ww

marimba

hns

cb (pizz)

tuba

149

153

vlas
vcs (harms)

harp +8vb
cbs (harm)
tbn solo

ww

tuba

marimba (2nd time)

vins (2nd time)

hns

cb (pizz)

'blue' otonal harmonic series, the harmonic seventh being characteristic of blues. Ben Johnston suggests as much, adding that the 7th partial could be, by extension, symbolic of sexuality.²⁹ Alongside harmonic sevenths, intimations of blues are present throughout the piece—parallel major thirds; melodic dwelling on first, fourth and fifth degrees of modes;³⁰ major-minor sonorities; languidness; call and response. These are especially present in the piece's latter half. From rehearsal 13 (see fig. 2–6c), the piece transforms itself into a kind of 'leichte tänze',³¹ with the mixolydian cycles in the winds layered against a lightly mechanistic circulation in the violas and celli. The return of the trombone at rehearsal 19 (fig. 2–6d), once again outlining '3-2-1' shapes, cements its centrality to the overall shape of the piece.

The trombone writing seeks to combine this 'innocence' of neutral-third 3-2-1 with the funereal. It is this funereal that is referred to in second title word, 'waking'. Waking as in mourning; or, again with reference to Agamben, the pre-emptive mourning that 'anticipates the loss of the object.' Just as the piece intends to beat at the bounds, wandering around the edgeland so as to view from a distance, the piece's mourning is also derived from liminality. The knowledge of loss, located in the present, that denotes the present's far edge. The liminal threshold that demarcates present-tense being from non-being. The double meaning of waking in English—of mourning, but also awakening—is fortuitous. Waking up, the liminal coming-into-the-world, a transition into the present, just as waking-as-mourning captures transition out of it.

Of all musical genres, blues is perhaps unique in being named after a mood. That melancholy is woven throughout blues is obvious. But the orchestra is expressly not a blues institution—it is a body ultimately tied up in whiteness, an outgrowth of the early-modern colonial era.³² The piece does not intend to 'arrange' blues for the orchestra; instead, blues is a further point of ambulation, around which the orchestra walks the boundary. As I suggest at the outset, the orchestra is a problematic, even complicit body. But in writing for it, one comes

29. Ben Johnston, 'Regarding La Monte Young' (1995), in *Maximum Clarity*, ed. Bob Gilmore, (University of Illinois Press, 2006).

30. Compare the initial melody of *Jumping song*, discussed chap. 1, §1.3.

31. I use this terming in reference to Walter Zimmermann, whose pieces *10 Fränkische Tänze* (1977, a string quartet) and *Ländler Topographien* (1977, an orchestral piece) from his cycle *Lokale Musik* (1977–2005) were an influence on this section of the piece.

32. Most of the instruments of the modern orchestra reached their present condition only after acquisition of African and South American materials, such as the oboe's and clarinet's grenadilla (instead of boxwood), and the modern violin bow's pernambuco. See, in this relation, D. R. M. Irving, *Colonial Counterpoint* (Oxford University Press, 2010), 95ff.

to realise that all classical and contemporary music (and much of Western music generally) is tied to similarly characteristic complicities. Melancholy blueness—ordinary blueness, the blueness of the simple everyday, what John Livingstone Gwaltney portrayed in his celebrated ethnography *Drylongso*³³—is something of great distance for an institution as overbearingly white and non-everyday as the modern orchestra. As Ted Gioia puts it, blues ‘music sings of small everyday details of individual lives. But behind this façade always sits a larger catastrophe, invariably unspoken, but no less present for this silence.’³⁴ It is the same catastrophe that lies on the other side of the imperial façade of the orchestra: it is entirely unspoken, passed over. It is the unspoken, mourned-for *Stimmung* of this passed-over content that the piece attempts to capture, if only by ambulation and osmosis.

§2.3 The melancholy cascade: *For piano (singing / dancing)*

Classically, melancholia was both an affliction and a mode. A mode in every sense: a way of moving, an ordering, a fashion, a set of habits. It was also a result of knowledge and learning: a product even of exaggerated self-awareness. Such a self-consciousness was what granted early-modern melancholia its affected self-articulation. For Jacques in *As you like it*, melancholia seems to be close to collage:

I have neither the scholar’s melancholy, which is emulation, nor the musician’s, which is fantastical, nor the courtier’s, which is proud, nor the soldier’s, which is ambitious, nor the lawyer’s, which is politic, nor the lady’s, which is nice, nor the lover’s, which is all these; but it is a melancholy of mine own, compounded of many simples, extracted from many objects, and indeed the sundry contemplation of my travels, in which my often rumination wraps me in a most humorous sadness. (4.1.10–18)³⁵

Jacques’ distinction between the scholar’s ‘emulation’, and the musician’s

33. *Drylongso: A Self Portrait of Black America* (Random House, 1980; reprinted by The New Press, 1993).

34. Ted Gioia, *Delta Blues* (W. W. Norton, 2008), 13. One could further make the link to ‘waking’, the morning of course being a commonplace refrain in blues. Gioia suggests: ‘The familiar “I woke up this morning” . . . is never merely a nondescript response to the familiar ring of an alarm clock . . . [it] brings with it half-remembered dreams and nightmares . . . This submerged region is the true psychological terrain of the blues.’ (p. 14)

35. In Shakespeare, *As You Like It* (Cambridge University Press, 2000), 161.

‘fantasy’, is telling. It is a distinction particularly potent for composers, those musicians who most fancy themselves scholars. For composers, both of these melancholias are thoroughly entangled. Emulation, as the prerequisite for joining a community of other learneds, is the melancholia arising from the inevitable paleness of comparison. The musician’s fantasy, in contrast, is extemporaneous, inward, escaping—and lacking in the assumed diligence towards forebears that the scholar’s emulation would demand.³⁶

Robert Burton, the great scholarly ‘compounder’ and pluraliser of melancholy was himself certain that ‘too much learning (as *Festus* told *Paul*) hath made thee mad . . . ’tis the common tenent of the world, that Learning dulls and diminisheth the spirits, and so by consequence produceth melancholy.³⁷ Students, and others bound to papers are afflicted by melancholia because they are forever sedentary, do not exercise, and do not make themselves available to the ‘common disports which other men use’.³⁸ Of course Burton’s giant book, at over five-hundred-thousand words, can hardly be the work of a person who preferred to get out of the study. (But he never did pretend to be a role model.) His subject was limitless in its ability to be further traversed by means of digression and pluralisation. As Drew Daniel has argued, early-modern melancholy was always, in the manner of Jacques’ litany, an assemblage, pulled together from as many disparate, symbolic, physiological and astrological aspects that were to hand. ‘Even at the individual level, melancholy is already plural’.³⁹

These two piano pieces, *For piano (singing)* and *For piano (dancing)*, explore differing aspects and angles of plural melancholy. In certain senses they are mirrors of one another. *Singing* amounts to an attempt to find diversity within a broadly singular landscape—limited to homophony, with melodic movement constrained and largely stepwise. *Dancing*, by contrast, is an attempt to unite diverse material within an overarching, encyclopedic singular. They offer differing views of similar conditions, such as ‘fullness’ or plenitude. In *Singing*, fullness is present, but miniaturised or domesticated—distributed among chords that,

36. The composition doctorate itself is a physical instantiation of these two symbiotic melancholias—one in the form of the portfolio, a display of creative fantasy; the other in the form of the commentary, the establishment of a set of acceptable emulations.

37. Robert Burton, *The Anatomy of Melancholy*, 1.2.3.15, 260.

38. *Ibid.*, 260.

39. Drew Daniel, *The melancholy assemblage: affect and epistemology in the English Renaissance* (New York: Fordham University Press, 2013), 7. See also Raymond Klibansky, Erwin Panofsky, and Fritz Saxl, *Saturn and Melancholy* (London: Thomas Nelson and Sons, 1964); László F. Földényi, *Melancholy* (New Haven: Yale University Press, 2016).

while quiet, are not spare or lacking in colouration. In *Dancing*, fullness is more outwardly apparent: the player is sometimes given chords with too many notes, falling over themselves at speeds too quick to move between. The music sometimes cascades into an outburst, but these eruptions are less instances of violence than momentary expressions of oceanic feelings always-already present.

Both pieces are also examples of exploration in additive rhythm, which could be another example of fullness or over-muchness. Here, rhythms are of such detail that one cannot straightforwardly mentally subdivide them. Instead one can only 'feel' them, intuit their weight rather than count it out. These rhythms are not bounded within a tuplet grouping, squeezed into a frame; neither do they ricochet either side of a pencilled-in beat-marker. Especially in *Singing*, the rhythm *is* the beat: rhythm and meter are one and the same. The rhythm has no armature to hang off; it must be felt directly.

This attitude toward rhythm could correspond to Heinz Bude's remarks about mood: that mood does something to confuse the relation between the world and its apperception, between the item and its frame, between figure and ground. The rhythm here is its own framework. It is this intention to be both uncountable and immanently graspable that is characteristic. In fact like much of the music in the portfolio, *For piano (singing)* is concerned with directness; it does not fall away into haze, or smear itself (like *Dancing* does) into oceanic outbursts.

Melodically, both pieces use related material. *Singing* opens with a phrase whose contour is $\hat{1}-\hat{4}-\hat{3}-\hat{2}-\hat{1}$, where the initial $\hat{1}$, and $\hat{4}$ and $\hat{3}$ are individually repeated. (See figs. 2-7 and 2-8 for summaries of melodic material.) In *Singing*, melodies are constructed from similar shapes, of a rising fourth 1-4, a 3-2-1 descent, usually with individual pitches repeated, in a changing harmonic context. Harmonically, while $\hat{4}$ is initially sounded as a dominant seventh to D, the piece never cadences. The central articulation point at bb. 123-4, where the A^7 is restated, resolves only to G major. The intention for the piece is to drape melody-harmony (for they are one and the same in this piece) across an expanse of ten minutes such that it is self-suspending, never entirely landing, despite a perception of gravitation. Modal centrality is present only to be subjected to generally constant modulation; the piece concludes, but does not close.

For piano (dancing)'s material, while differing greatly from *Singing* in outward cast, is related. (See comparison between figs. 2-7 and 2-9.) This piece is also

MOOD (AND MELANCHOLIA)

Not too slow $\text{♩} = c.50$ NB. $\text{♩} \times = \text{♩}$

a

Piano

7

14

b

203

209

81

cf.

FIG 2-7

For piano (singing) with 1-4 and 3-2-1 shapes marked:

a. Opening, bb. 1-16¹
 b. Closing, bb. 203-212

MOOD (AND MELANCHOLIA)

The image displays a musical score for piano (singing) titled "MOOD (AND MELANCHOLIA)". The score is organized into several phrases, each represented by a single staff of music. The notes are primarily quarter notes, with some eighth notes and accidentals (sharps and flats). The key signature is one sharp (F#), and the time signature is not explicitly shown but appears to be common time. The phrases are arranged vertically, with some starting on a higher staff than the previous one. The final phrase ends with an ellipsis (...).

FIG 2-8

For piano (singing): summary of opening melodic material. Organised by phrase/contour.

MOOD (AND MELANCHOLIA)

a.

Piano

ff sempre, non dim.

4 (C) — 1

4 — 1

4 — 1

4 — 1

4 — 1

6

4 — 1

4 — 1

4 — 1

1 — 2 — 3

1 *sim.*

11

/2 — 1

1.

2. *8va*

4 (G) — 1

17

4 — 1

3. *8va*

21

(C)

(A)

1 — 2

(D)

3

(h)

FIG 2-9

For *piano* (dancing), excerpts. Annotated showing 1-4 and 3-2-1 motives, and their inverses.

- a. Mvt. 'a', bb. 1-44.
- b. —"—, bb. 96-134.
- c. Mvt 'b', bb. 280-300.
- d. —"—, bb. 390-398.

MOOD (AND MELANCHOLIA)

FIG 2-9a (cont.)

The musical score consists of four systems, each with a treble and bass staff. Fingerings and articulations are indicated throughout.

- System 1 (Measures 25-29):** Treble clef, key signature of one sharp (F#). Measure 25 has a trill over the first note. Chord diagrams for (B) and (E) are shown above the staff. Fingerings: 1-4 (measures 25-26), 2-3-2-1 (measure 27), 1-4 / 2-1 (measures 28-29).
- System 2 (Measures 30-35):** Treble clef. Measure 30 has a trill over the first note. Fingerings: 1-4 / 2-1 (measures 30-31), 1 (measures 32-35). Measure 35 has a trill over the first note.
- System 3 (Measures 36-40):** Treble clef. Measure 36 has a trill over the first note. An *8va* marking is present above measure 36. Fingerings: -2-3-1 (measures 36-37), 3-2-3/1 (measures 38-39), 3-2-1 (measure 40).
- System 4 (Measures 41-45):** Treble clef. Measure 41 has a trill over the first note. Chord diagram for 1 (Bb) is shown above measure 41. Fingerings: -1 3-2-1 / 3-2 (measures 41-42), 2-1 (measures 43-44), 3-2-1 (measure 45).

MOOD (AND MELANCHOLIA)

FIG 2-9b

96 $3(B) - 2 - 1$ $3 - 2 - 1$ $4 - 1$ $4 - 1$ $1 - 3$ $2 - 1$ 1

101 $- 4$ $1 - 2$ 1 $1 - 2 - 3$ $4 -$

107 1 $1 - 2$ 3 $1 - 2 - 3 - 2 - 1$ 3 $1 -$

113 $- 2 - 1$ $2 - 3$ 4 1 $2 - 3 - 2 - 1$ 1 $1 - 2$

122 $- 3$ $/2$ 1 $1 - 2/$ 4 $4 - 1$ $3 - 2 - 1$ 3

132 $2/$ $3 - 2 - 1$ 2 $1 - 2 - 3$

MOOD (AND MELANCHOLIA)

FIG 2-9c

b.

Dolce
280 ♩=72
p
non ped. *sempre*

286
poco

291

296

8va-----|

FIG 2-9d.

The musical score consists of two systems. The first system, starting at measure 390, shows a piano accompaniment with a treble staff and a bass staff. The bass staff features a tritone interval labeled as 4 (B) - 1 (F) (tritone). The second system, starting at measure 395, continues the piece with various melodic and harmonic fragments. Fingerings are indicated throughout, such as 3-2-1, 1-3, and 4-1. The notation includes slurs, accents, and dynamic markings like *p*.

particularly concerned with melodic fourths, both upward and downward, and also makes extensive use of the descending 3-2-1 and its inversion 1-2-3. The section from the point of clarification at b. 95 is a case in point—the right-hand melody, and the left-hand parallel triads, are built almost uniformly from fragments of 1-2-3 (or 3-2-1) shapes, and of rising or falling fourths. Cascades of the sort first appearing at b. 68 are built from stacks of descending fourths (or ‘near-fourths’—i.e. thirds, augmented fourths). A fourth ends the first movement; they appear throughout the second movement, initially woven into the fabric of the dance-like material, but eventually finding themselves isolated, as at b. 331 and 349.

What ought these melodic fragments signify? The 3-2-1, like those which appear in *Ambling, waking*, hovers somewhere between sheer triteness and simple innocence. Childlike unsureness of this sort is attractive—that, perhaps at any moment a melody revolving around 3-2-1, like that of mvt. 2 of *Set of four*, might collapse into something resolutely stupid. At least in the case of *For piano (singing / dancing)* the use of 3-2-1 and 1-2-3 has an elemental approachability and joy—at the same time as a continuing, dark anxiety.

The fourths have their childlike relation too. Returning to Ravel’s *L’Enfant*, a point of contact is the ‘maman’ motive, appearing toward the opening, and at the close of the opera. It is a sigh, of gratitude, of love, of joy—and at the end of the

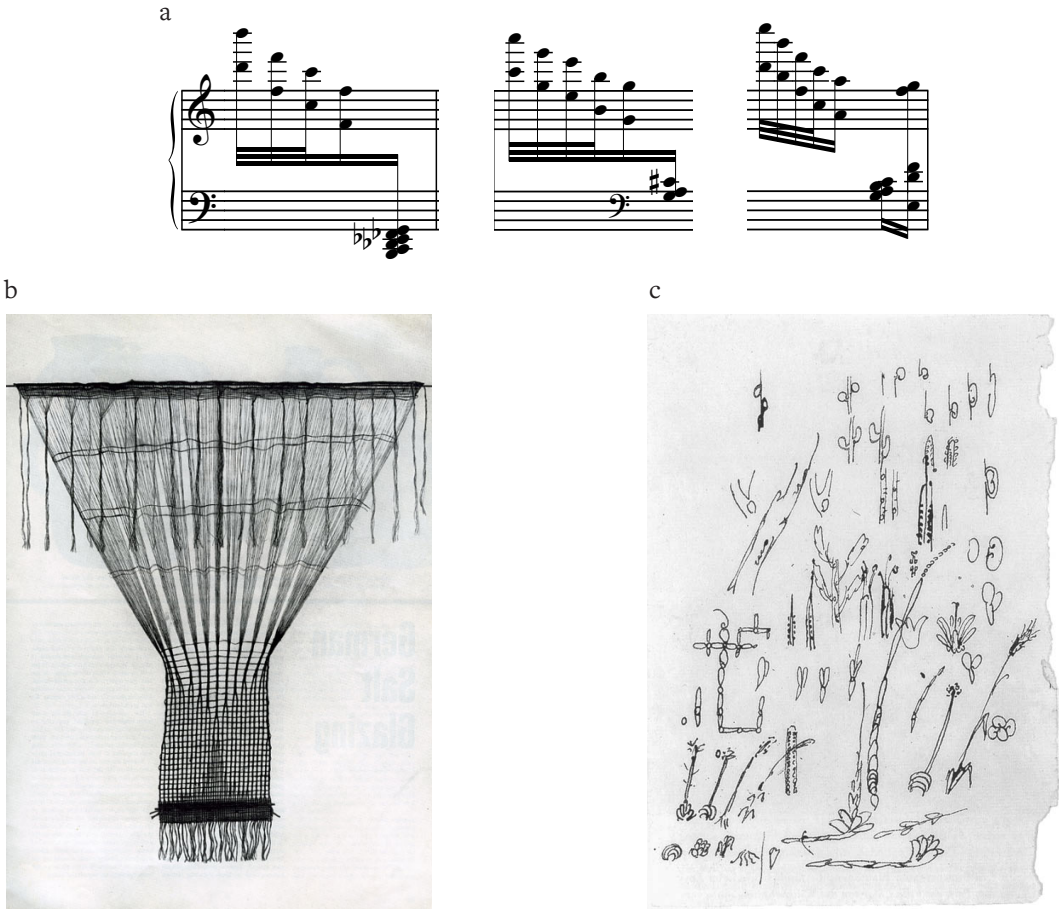


FIG 2-10

a. *For piano (dancing)*, three 4-1 cascades:
bb. 68, 72, 78.

b. Lenore Tawney, *The New Tapestry*,
1963. (Reproduced from *Craft Horizons*.)
c. Goethe, 'Study of buds, flowers and
branches', 1787.

opera, tearful desperation and reconciliation.⁴⁰ Concatenating these sighs into a stream such as the kind appearing at b. 68 (fig. 2-10a)—is this the 'melancholy cascade', the melancholy assemblage, of sigh-piled-on-sigh? (Compare here the cascading, draping tapestry of Lenore Tawney, fig. 2-10b, used as a frontispiece for the work—perhaps a resemblance to funeral shawls?) The melodic fourths that poke themselves out from the texture toward the conclusion of *Dancing* are tics of anxiety, the sigh that is a sharp breath, almost a sob. The fourth right at the conclusion is more glancing; but still an momentary exhalation. (There are four 'chimes' of repeated chords shortly prior to it.)

40. Nichols, *Ravel*, 268.

In retrospect I recognise a difference between these two pieces—where *Singing* retains a much more straightforward approach towards ‘tender’, heartfelt or singular melancholia, it is *Dancing* that recognises melancholia to the compound phenomenon that it is. Throughout it appears in dialectic with joy, as the shadow of joy, as that which joy is not, or which joy awaits to become. The symbiont of joy, in that ‘true’ joy, the joy-as-such in adulthood, is that which recognises its limitation. (As Burton put it, ‘Even in the midst of laughing there is sorrow.’⁴¹)

These pieces, and particularly *Dancing*, are mosaic in their stumbles through joy which is also melancholia. Materials are laid together in assemblage. The piano here is like a maker of clay tileware, of changing sizes and weights, laid side by side or stacked upon one another. Or like Goethe’s ‘Study of buds, flowers and branches’ (fig. 2–10c)—the pieces present a litany of separated shapes, bearing family resemblance, sometimes overlapping.

§2.4 Breathing and pregnancy: *Carrying*

Given that melancholia, and pre-emptive mourning, had been ideas I’d been immersed in throughout 2015–16, it was curious and troubling to find these preoccupations unexpectedly run up against events. In December 2016, my step-father, to whom I’d been close, was diagnosed with terminal cancer. He died in early 2017.

Ultimately, the lived experience of mourning can’t be simulated or even particularly prepared for. Such life experiences also differ markedly from private or ‘literary’ melancholia. The transformative effect such events have on the people surrounding one, who live through them in parallel, is significant. Where melancholia is a mood of individuation, mourning is a family affair. As Freud notes in his essay ‘Mourning and Melancholia’, mourning has an acknowledged source.⁴² Melancholia’s origins are more diffuse, implicit, unaccountable.

Far more profound for myself was standing witness to the unfolding of a death firsthand. It is not something that is easy to prepare for or comprehend subsequently. The changing moods experienced while assisting a terminal family member stretch from sadness and tiredness to irritation, boredom, anger, distraction, fear and guilt. Most noticeable to me was the increasingly extended

41. *The Anatomy of Melancholy*, 1.1.1.5, 126.

42. Sigmund Freud, ‘Mourning and Melancholia’ (1917), in *The Standard Edition of the Complete Psychological Works*, vol. 14, ed. and tr. James Strachey (Hogarth, 1957; reprint Vintage, 2001).

present a dying person ends up inhabiting. Breathing becomes a physical task. Taking on liquids is an explicit process, a process that almost becomes ritualistic. The patient is increasingly located in their present experience of pain; this condition of the extended present, the living inside it and the watching its unfolding, stretches to the patient's surrounding carers. As Audre Lorde wrote during in her own experience of cancer, 'I feel like I'm counting my days in milliseconds, never mind hours. And it's a good thing, that particular consciousness of the way in which each hour passes, even if it is a boring hour. I want it to become permanent. . . . Now I am anxious for more living to sample and partake of the sweetness of each moment and each wonder who walks with me through my days.'⁴³

Shortly after my step-father's death, it was necessary to draft material for Quatuor Bozzini, who I would be working with in April 2017. (The preparation of *While we are both*, including its final sections, were also completed during this period.) This was not an especially enjoyable experience, and in this state my tendency was to overproduce. I prepared around twenty minutes of material for the Montreal workshops, stitched together into an overarching form. There were in fact a number of things I was looking to test with the quartet: transformations of texture, long-range melodic directionality, metamorphosis. I also was curious about rhythmic unison within the quartet—the piece at times approached jazz or tango, which isn't necessarily inside the Bozzinis' characteristic idiom. The workshops didn't go badly—the quartet are wonderful to work with, and the work-in-progress performance given in Montreal was well-rehearsed and performed. But the experience of listening to this music left me barren. I disliked almost everything about what I had composed—its details, its overall shape, its style, its overburdening.

In hindsight, the situation is undoubtedly clearer. But during the period, processing grief was not amenable to creative output. Retreating from the Montreal material, and eventually revising it, was an uncomfortable experience. Removing passages was not a problem—doing so was generally cathartic—rather, it was finding new approaches or textures that was more difficult.

This string quartet, then, consists of a significant quantity of reflection. Begun during February, it was only completed in September—it is the piece of music it has taken me longest to compose. (The pieces *For piano (dancing)*, *Habitual*,

43. Lorde, *The Cancer Journals* (Aunt Lute Books 1997 [1980]), entry Oct 5 1978, chap. 2, epub.

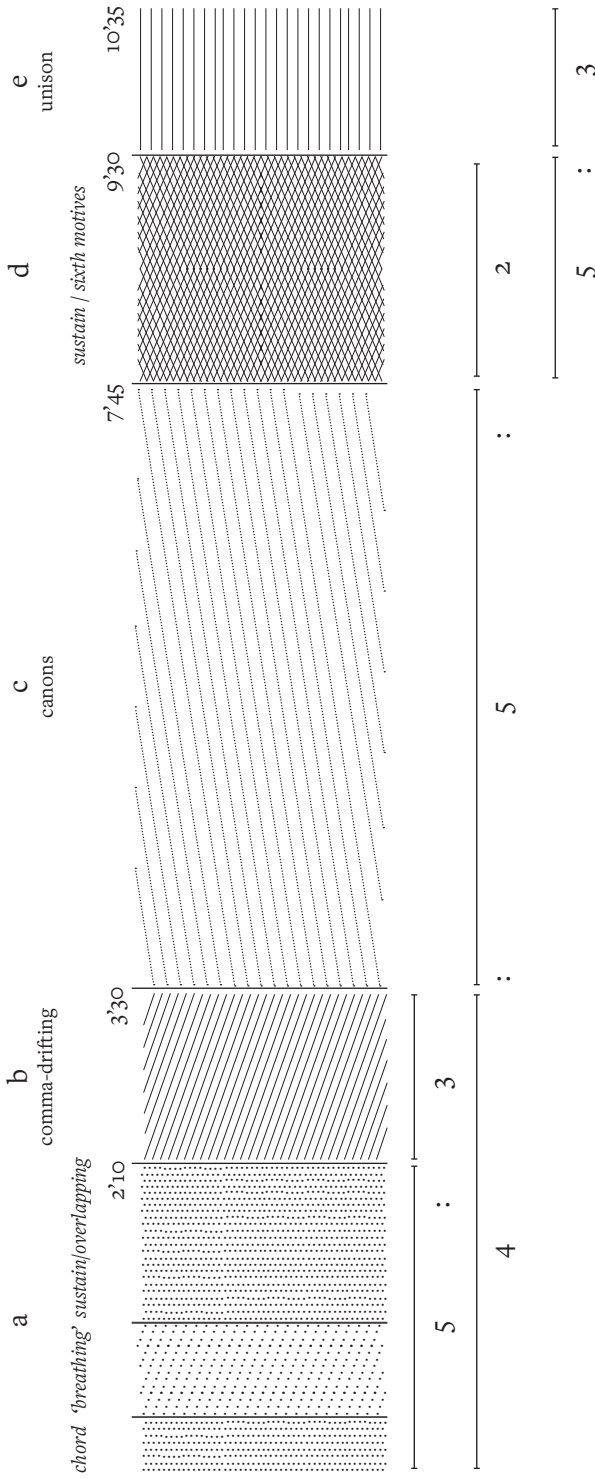


FIG 2-11

FIG 2-12

(over)

Carrying, reduction, bb. 1-13.

Carrying, string quartet: form, approximate timings and proportions.

a.

1/1 = C4

1

11/8 9/8 1/1 1/1 9/8 1/1

9/8 7/8 21/16 63/64 9/8 63/64 3/2 11/8 3/2

2

11/8 5/3 5/4 77/32 5/3 11/8 9/8 5/4 1/1 33/32 7/8 9/8 7/8 5/6 11/8 5/4 1/1

3

15/8 11/8 3/2 2/1 15/8 3/2 9/8 9/8 28/27 5/4 6/5 15/8 1/1 3/2 5/3 1/1 105/64 3/2 6/5 21/16 5/4 9/8 63/64 1/1 9/8 11/8

and *Three Heames Settings* were also written during this period.) By the end of its writing, my interest in melancholia as a sincere compositional topic was essentially drained.

The final piece may be the most complex harmonically and structurally in the portfolio. In five sections, its form is lopsided, though there are proportional relationships between its passages. Its proportionality is laid out in fig. 2–11. The most noticeable aspect of this lopsided form is the large canonic section at the centre, though each section is intended to have its own intensity and character.

The opening chord replicates, in its bass, the $\hat{6}-\hat{5}$ movement characteristic of *While we are both*: here too, this gesture is a kind of sigh, albeit one that both begins and closes on a place of relative instability. From the reduction (fig. 2–12), one can see the structure of this chord, a $\frac{6}{4}$ triad with an otonal ‘augmented’ chord above. (The upper chord is $11/9/7$, with the lower chord constructed by taking two $3/4$ s below the $/7$, adding a just third, $E\flat_4$, above.) This then coalesces into a ‘breathing’ section that follows, each pitch otonal to G (the $1/1$).

The image of the strings ‘breathing’ in such a way, with repeated tones, was something I couldn’t get out of my imagination. Such respiration locates the music firmly within the present, reflecting something of what Lorde captured in her own description of time expansion—the long present of illness. The music begins with a great exhalation, in order so that it may obtain a position of centredness.

At rehearsal 2, one sees a series of pivots and overlayings. Beginning with a sixth chord in G, an anticipation pitch pivots to a harmonic seventh centred on the 11th ($C\sharp$): a distant and quite ‘dark’ sonority compared to the brightness surrounding it. A similar pivoting back to otonal harmony in G follows; and from b. 8 the music gradually modulates to D, overlaying a complex series of harmonies. (The full lattice of Just pitches used in sections ‘a’ and ‘c’/‘d’ is given in fig. 2–13.)

The section that follows, ‘comma-drifting’ (fig. 2–14) is a remnant of material composed for the Montreal workshops, reduced to something of a skeletal frame. (The adapted section was a kind of lopsided waltz—see fig. 2–15.) I returned to the phenomenon of comma drift, an idea I had pitched to Clemens Merkel in meetings in London in December 2016. The increasing comma drift is here caused by the interaction of the $5/3$ sixth interval ($E\flat_4$ above G) with the subsequent perfect $3/2$ fifth (to $A\flat_4$). Because the $5/3$ Just sixth is lower by a syntonic comma, to be in tune with it, any note a fifth away must be similarly lowered.

MOOD (AND MELANCHOLIA)

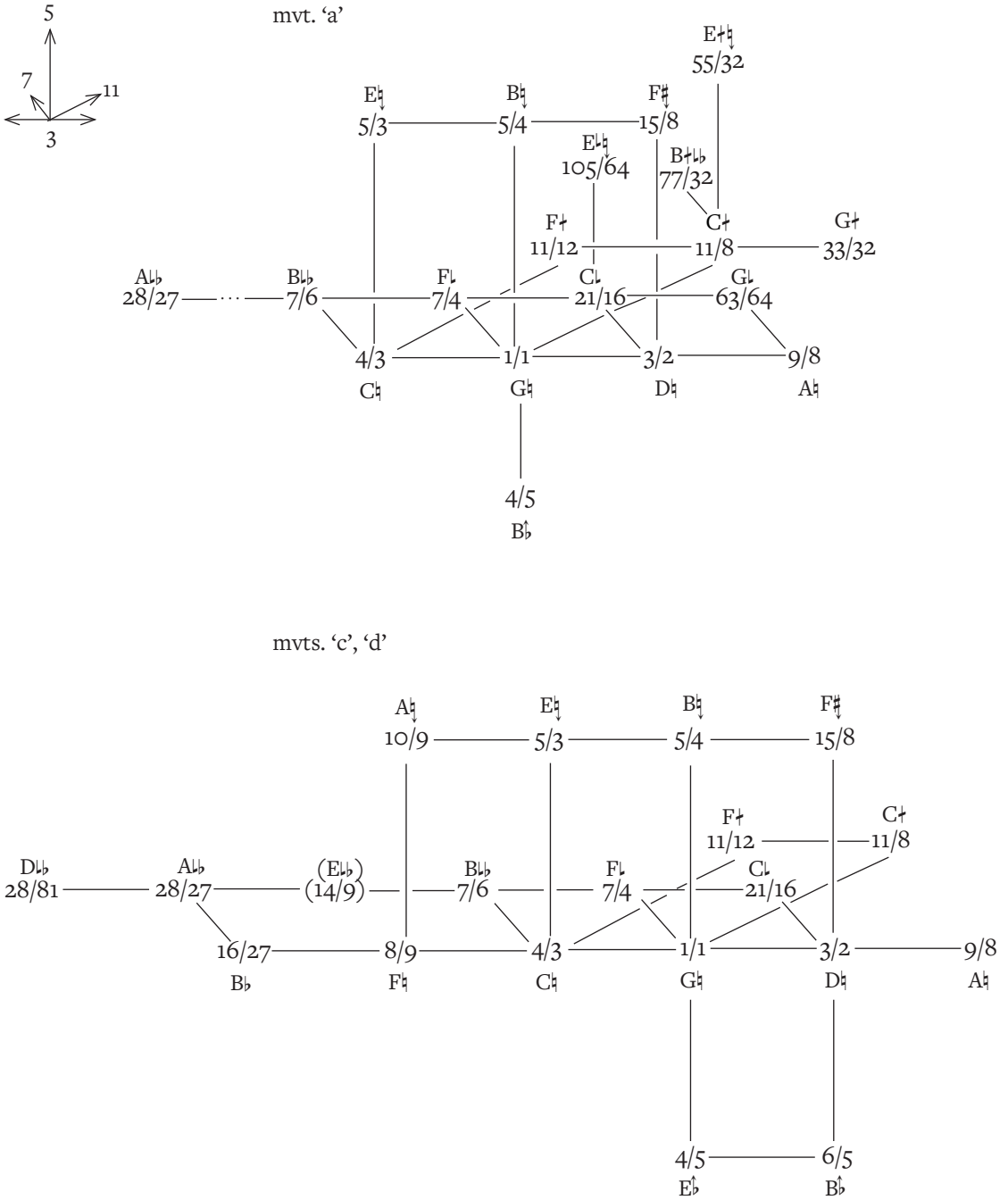


FIG 2-13

Carrying, pitch lattices for movement 'a' and movements 'c' and 'd'. Pitches in brackets are not sounded.

MOOD (AND MELANCHOLIA)

Comma drifting, ♩=c.72

b.

14 tutti *mf* *sonoro*, as little beating possible
 pitches written enharmonically from reh. 4

4

21

(5/4 above
Vin II.)

5

28

6

7

Vins. beating
against low strings

FIG 2-14

Carrying, mvt. 'b', 'Comma drifting'.

MOOD (AND MELANCHOLIA)

FIG 2-15

Carrying, early version. Material from this section was adapted to form 'Comma drifting', fig. 2-13.

6

p dolce -25

p dolce -27

p dolce

p dolce

62

sim. -33

-31 -25 *sim.* -31 -25

sim.

69

-33

II III IV III o

75

II III

3

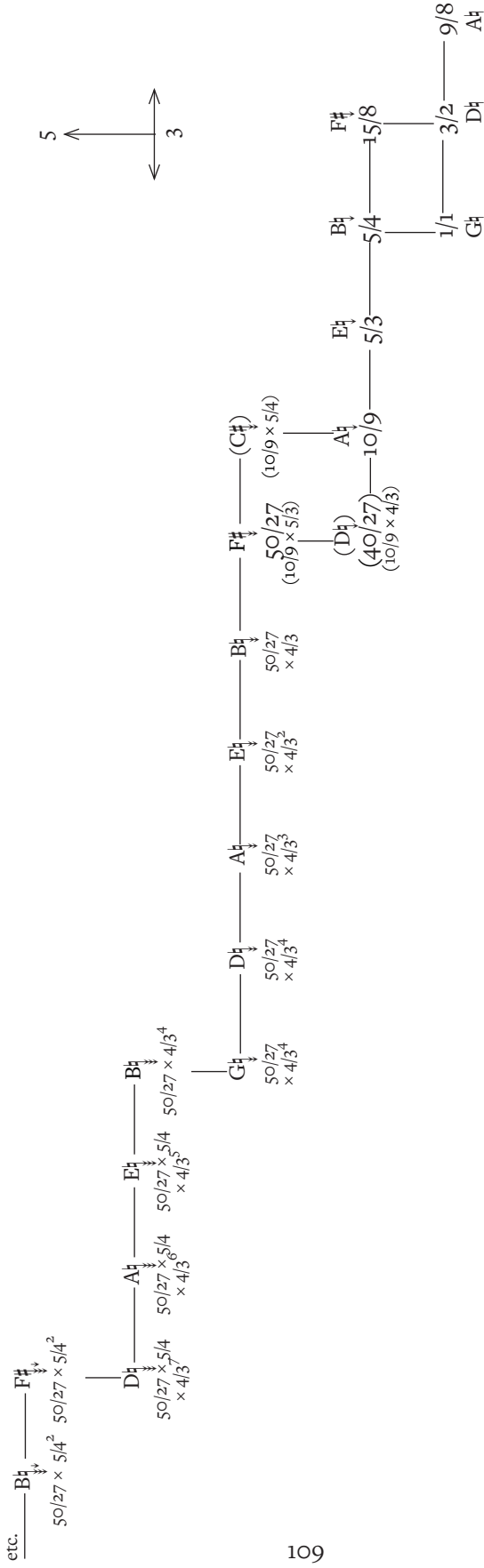


FIG 2-16

Carrying, mvt. 'b' (see fig. 2-13), pitch lattice. Pitches in brackets are not sounded.

Thus with each new sixth, a new syntonic comma is added, gradually accruing. This simple two-voice harmony (doubled at the octave) gradually ascends IV-V-vi in D—but the overall pitch drifts *down* due to the accrual of commas, such that by the end of the section, the pitch has migrated almost a full tone. (This pitch migration can be seen as part of a lattice, fig. 2–16—with $3/2$ s on the horizontal axis, $5/4$ s on the vertical.)

There is a metaphor here, one that suffuses all music in Just Intonation: that the obtaining of fluid beatlessness, of purity of intonation throughout a moving texture, causes drift. That which is completely pure drifts away from one's grasp; that which is locateably ready-to-hand is tempered and rough. One could regard this as a (crude) parallel to the uncertainty principle of physics—any progression of intervals that are precisely in tune with one another causes the absolute location of pitches to fall away; and pitches that are precisely located can never be exactly, beatlessly in tune with one another.⁴⁴

In practical terms, a section of music as simple as this ought to be tunable by ear (though the Bozzinis, as they have done since they worked with James Tenney in the nineties, play with tuning machines). But any music even slightly more complicated, performed with the given intent that all intervals should be completely beatless, may leave unresolvable ambiguities (or drift so excessively as to be impractical). All a capella singing groups tend to drift for this reason—a progression of I–iv–ii–V adds a comma and drifts downwards; a progression of I–V–ii–iv removes a comma and drifts upwards.

The irony of the Just intervals is that, while they are learnable and hearable, and of intense and characteristic colour, for most musical situations they are too wild, too unwieldy to be of consistent use. Given these simple diatonic progressions, one can never guarantee that all thirds and fifths can be perfectly Just all the time. Indeed, true $5/4$ thirds and $5/3$ sixths might be themselves too 'hot' to handle, too vibrant for most of the music we're used to, for our ears that have been so rigorously tempered.

Even fig. 2–16 does not contain all the unique pitches in this section (it would need around the same number again to be complete). By rehearsal 6, the second violin has drifted *seven* commas from its initial position: around three-quarters

44. These two paradigms map fairly neatly onto ideal notions of 'relative' and 'absolute' pitch. Ideal 'relative' pitch would be the precise tuning of an interval, only with reference to an existing pitch. Ideal 'absolute' pitch requires either a temperament (such as equal temperament) or that the musician allows for 'wolf' intervals (such as those between the supertonic $9/8$ and submediant $5/3$).

MOOD (AND MELANCHOLIA)

C.

FIG 2-17

Carrying, mvt. 'c', canon.

of a tone, or 140 cents.

The majority of the music in the portfolio does not use adaptive Just Intonation—meaning that it does not avoid ‘wolf’ intervals, or intervals where a pure interval (such as a fifth $3/2$, or a fourth $4/3$) has been flattened by one comma. Wolf intervals are those that are avoided in adaptive Just Intonation, and their avoidance is what causes comma drift. After the section of comma drifting comes a long canonic section, which reintroduces the wolf interval almost immediately after it had been so studiously avoided: here appearing in the third bar of the canon, under the *segno*, where other strings join following the viola. In a typically Justly tuned diatonic scale, one finds this wolf interval between degrees $\hat{2}$ and $\hat{6}$ where the sixth degree is tuned to $5/3$. The interval between $5/3$ and $9/8$ is not a perfect $3/2$ fifth; instead it is $40/27$ —in other words, $3/2$ minus a syntonic comma ($81/80$). I have a fondness for this interval: it is not particularly easy to learn or tune by ear, but within a Justly intoned diatonic context, it can both bite and melt away mysteriously.

MOOD (AND MELANCHOLIA)

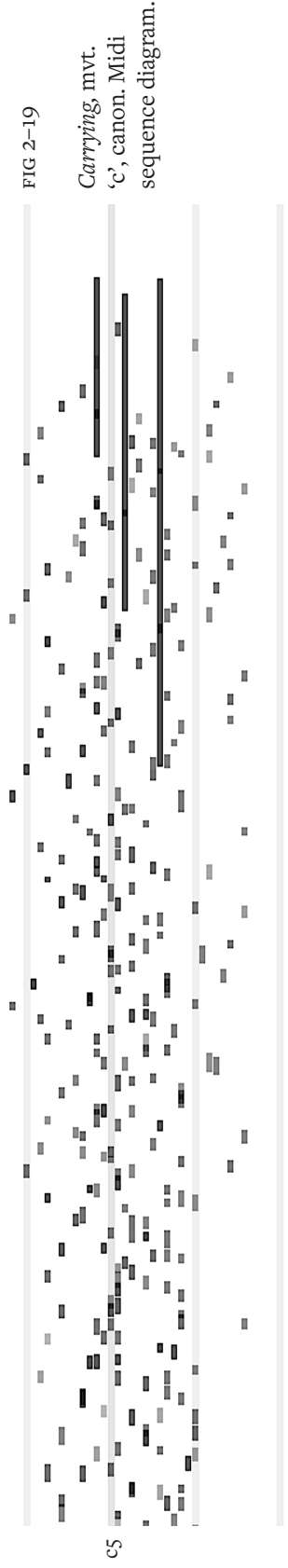
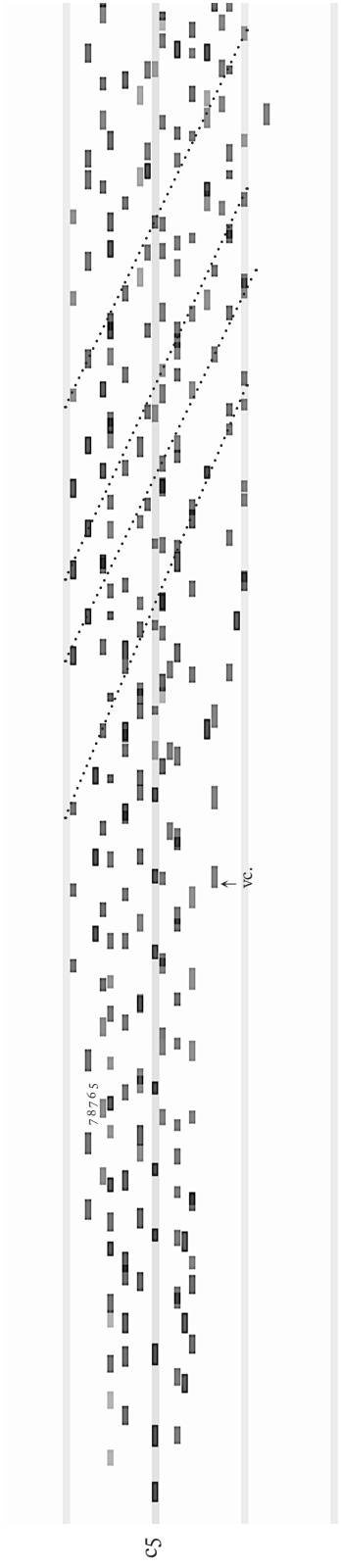
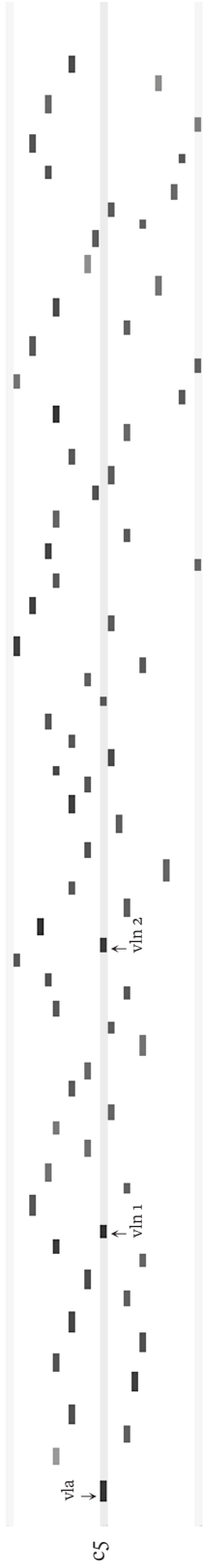
The image displays three systems of musical notation for a piece titled "MOOD (AND MELANCHOLIA)".

- System 1 (Measures 29-33):** Features a treble clef with a key signature of one sharp (F#) and a 4/4 time signature. Fingerings 7, 8, 7, 6, 5 are indicated above the first staff. A box containing the number "3" is positioned above the third measure. The bass clef part includes the instruction "pizz." (pizzicato) and a fermata over the final measure.
- System 2 (Measures 34-38):** Shows a treble clef with a 2/4 time signature. The bass clef part includes the instruction "arco" (arco) and "pizz." (pizzicato). A measure rest of +21 is marked at the beginning.
- System 3 (Measures 39-42):** Features a treble clef with a 2/4 time signature. Fingerings 2, 3, 2, 1, 6* are indicated above the first staff. A dotted box encloses measures 40 and 41, with a note below it stating "...adapted in *Carrying*, mvt. 'd'.". The bass clef part includes the instruction "arco" and a measure rest of -29.

FIG 2-18

Carrying, early version, showing adapted melodic contours forming part of canon (fig. 2-16).

The canon itself (fig. 2-17) is built from multiple alternating high-low pairs, a technique that results in a canon whose individual lines are difficult to parse. In essence, it is two-part counterpoint, split into non-synchronous lines, a technique I explored also in *Habitual* (see chap. 3). Buried in this counterpoint are references to deleted material from the Montreal workshops (see fig. 2-18). In that material, there was a continued exploration of motives $\hat{7}-\hat{8}-\hat{7}-\hat{6}-\hat{5}$ and



$\hat{6}-\hat{7}-\hat{6}-\hat{5}-\hat{3}$ or $(\hat{2}-\hat{3}-\hat{2}-\hat{1}-\hat{6})$ in the major mode. As the canon overlaps with itself, it was intended to fleetingly capture these descending motives also, as can be seen from the midi sequence reduction, fig. 2–19. Additionally, the transposition of the canon down a fifth in the cello leads to a ‘bass’ that wanders around 4, 5, and 6/b6, itself a callback to the workshop material.

A number of these have been marked with dotted lines; but notice also that the nature of the counterpoint allows also to see rising lines, roughly orthogonal to the dotted lines drawn. This kind of criss-crossing structure, of simultaneous long-range downward and upward voice-leading, is used in *Set of four* (mvt. 1), *While we are both*, and elsewhere. (Designing the canon *dux* so it would create such patterns was a stimulating challenge.) The effect of such criss-crossed voice-leading is one of a kind of dynamic stasis—melodic gravity is invoked, though the music obtains a certain weightlessness despite the invocation of gravitational pull. It is another attempt to keep the piece located in the ‘long present’, with forces of rising and falling counterbalanced against one another.

The leaping (perhaps ‘yodelling’) sixths in mvts. ‘d’ and ‘e’ make a link with material in *Claribel*, IIb, (discussed in more detail in chap. 3), in a section of that piece intended to also depict the long present, the arresting or suspension of time. Movements ‘c’, ‘d’ and ‘e’ of *Carrying* are intended to be overlaid on sections IIb and III of *Claribel*, a superimposition that formed the soundtrack for the film *Ten trains, forty questions*.⁴⁵

Why is the piece titled *Carrying*? There are several reasons. As well as attempting to capture the condition of the ‘long’ present—an excess of time, carrying over—the piece also tends towards inflation, lightness, fullness, breathing. The different sections of the piece attempt to represent different aspects—the thickened mvt. ‘a’, the clarity of mvt. ‘b’, the weightlessness of mvt. ‘c’, and so on. These images of carrying attempt to frame carrying-with, pregnancy, the intake of air.⁴⁶

The identification of grief with carrying is not wholly mine, but applicable

45. The film was produced for Gaudeamus Muziekweek 2018, <https://www.youtube.com/watch?v=bpzplkvN-dc>.

46. While not something published at the time of composition, Sophie Lewis’ recent remarkable discussion of holding and carrying, in the context of pregnancy and surrogacy, is an apt comparison here: ‘Let us assume that it is . . . the holders [of water] who truly people the world. “Water management” may sound unexciting, but I suspect it contains key secrets to the kinmaking practices of the future. . . . Surrogates to the front! By surrogates I mean all those comradely gestators, midwives, and other sundry interveners in the more slippery moments of social reproduction: repairing boats; swimming across borders; blockading lake-threatening pipelines; carrying; miscarriage.’ Sophie Lewis, *Full Surrogacy Now*, Verso, 2019, chap. 8.



FIG 2–20

Jean-Baptiste Oudry,
Les deux aventuriers et le talisman (Photo: Wikimedia Commons)

too in this case. Michael Rosen’s poetry 2002 collection of prose poems titled *Carrying the Elephant* revolves around Rosen’s son, who died suddenly from meningitis aged eighteen. The title comes from a text where Rosen describes finding an engraving by Jean-Baptiste Oudry, *Les deux aventuriers et le talisman*: ‘A man is carrying an / elephant – bending under the weight of it. / . . . What’s more, the man is trying to walk.’⁴⁷

The engraving itself hovers somewhere between comic and tragic—the expression on the elephant’s face is almost apologetic, as if he realises what he has made the man do, for reasons beyond his control. He seems inflated: if he weren’t heavy and weighing his companion down, perhaps he could be filled with helium and ready to launch them both into the sky. I’m sure Rosen observed this absurd undercurrent—grief is both heavy and at the same time absurd in its abrupt landing.

It remains unclear to me exactly what relation grief has to creative labour. But since 2017 I have become less and less interested in melancholy as a compositional subject, despite writing several pieces, discussed in this chapter, which explored it. Literary melancholia has the benefits of aesthetic distance. Grief itself, as lived, is not aesthetic. Yet, as must be clear from the foregoing discussion, it is readily aestheticised, both in pieces such as *Carrying* and in texts such as Rosen’s. How to square this? I have no firm answers. Rosen has this to offer,

47. Michael Rosen, *Selected Poems* (Penguin Books, 2007) 110.

in another text from the collection: 'don't tell me that I mourn too much / and I won't tell you that you mourn too much / don't tell me that I mourn too little / and I won't tell you that you mourn too little . . . / I may get it wrong, I will get it wrong, I have got it wrong / but don't tell me'.⁴⁸ ■

48. Rosen, *Selected Poems*, 116.

3

THE CAPACITY FOR MELODY TO LOOK ROUND CORNERS

music and anticipatory consciousness

The previous two chapters took two different stances with respect to temporal orientation—the first, in a condition of afterness; the second adopting exploration of the ‘long present’. This chapter explores the complement of those two orientations, that of anticipation: orientation toward the future.

Time, according to physicist Carlo Rovelli, is something like a network. Time is an expression of the interaction between objects. Like a family tree, there is no universal frame of reference—there is instead a plurality of interrelations. The human experience of duration is a phenomenon of our particular scale and level of acceleration—as he suggests, time amounts to what ‘appears when we look at things and neglect the details.’¹ Ultimately, ‘the notion of the “present” does not work: in the vast universe there is nothing that we can reasonably call “present.”’

There is, in other words, no ‘neutral’ perspective, Rovelli suggests. The present is a useful—and beautiful—construction of mind. Rovelli quotes Augustine, who in the *Confessions* stated that

It is within my mind, then, that I measure time. I must not allow my mind to insist that time is something objective. When I measure time, I am measuring something in the present of my mind. Either this is time, or I have no idea what time is.²

‘Augustine’s exposition of the idea’, Rovelli surmises, ‘is based on our experience of music.’ He continues:

When we listen to a hymn, the meaning of a sound is given by the ones that come before and after it. Music can occur only in time, but if we are always in the present moment, how is it possible to hear it? It is possible, Augustine observes, because our

1. Carlo Rovelli, *The Order of Time* (Riverhead Books, 2018), part I, chap. 5, epub.

2. Augustine, *Confessions*, chap. 27, §36.

consciousness is based on memory and on anticipation. A hymn, a song, is in some way present in our minds in a unified form, held together by something—by that which we take time to be. And hence this is what time is: it is entirely in the present, in our minds, as memory and as anticipation.³

Rovelli's account of time here, poised between memory and anticipation, aligns with what I called non-neutral duration. As outlined in the Introduction, following Christian Wolff, non-neutral duration is the understanding that perception of duration is partitioned—into, crudely, *before* and *after*. Composition as such would be the manipulation, either explicit or happenstance, of this repeated partitioning.

But of course the simple prepositions *before* and *after* hide much in the way of temporal subtlety. The order of events is often confused, or assumed by the brain. Memory and anticipation are hardly stable: they are forever informing one another. Anticipation is in some sense an accretion of memory: prediction based on experience *a posteriori*. In the case of *deja vu*, that which has not yet arrived might seem familiar when it does. Or conversely, familiar materials may be voided of familiarity through repetition.⁴ The present chapter is an exploration of these phenomena: of several compositions whose focus is anticipation, and the manipulation of anticipation and recollection; of futurity and familiarity.

§3.1 The spiral hand: *Your wits an E la*

A common metaphor in discussions of music—particularly melody and harmony—is that of tension. In, for example, Ernst Bloch's *Principle of Hope*, Bloch suggests that 'the tension of sound' is

the most characteristic feature of melody: that in each one of its tones the next one is latently audible, lies in the anticipating person, therefore in the expression, which is here above all a humanized expression. There would perhaps be music even if there were no ears, but there certainly would be none if there were no musicians who first composed the movement of sound and its psychical energy[.]⁵

3. Rovelli, *The Order of Time*, part III, chap. 12.

4. Leon A. Jakobovits was the coiner of the term 'semantic satiation', where the familiarity and sense of words can be altered through repetition. See *Effects of repeated stimulation on cognitive aspects of behavior: some experiments on the phenomenon of semantic satiation*, PhD thesis, McGill University, 1962. http://digitool.library.mcgill.ca/R/-?func=dbin-jump-full&object_id=113683&silos_library=GENO1

5. Ernst Bloch, *The Principle of Hope* tr. Neville Plaice, Stephen Plaice and Paul Knight (MIT Press, 1986 [1959]), vol. 3, 1062.

Bloch's idiosyncratic vision of musical unfolding is tied to his larger conception of 'anticipatory consciousness'—his expansive exploration in the *Principle of Hope* of the possibilities of anticipatory orientation within human thought. (Beginning with daydreams, Bloch expands to drives, premonitions, fear, yearning, religion, politics, and much else.)

A philosopher with a fondness for music (discussed at length in both this work and in earlier books) Bloch certainly caught something in his perception of latent audibility. The experience of performing music, poised between memory and anticipation, is as such in the sense that the performer grapples with mental representation of a pitch before it is sounded—particularly when playing instruments whose pitch is tied closely to the tension of the body (e.g. the voice, natural brass instruments, strings).

The Guidonian hand, the chief representation of pitch for over six hundred years, was unique in capturing a mental representation of tension in being organised in a coiling spiral (fig. 3–1). Before the increasing ubiquity of keyboard instruments generally replaced it, the Guidonian spiral was the main way pitches were bodily externalised and referred to. (The partner of the Guidonian spiral was the ladder, or *scala*, familiar to us today as the stave. With higher pitches 'above' lower ones, it captures the incipient tension of gravitation, of lifting and falling—what Karol Berger calls a 'crucial imaginative breakthrough', not arrived at until the ninth century.⁶)

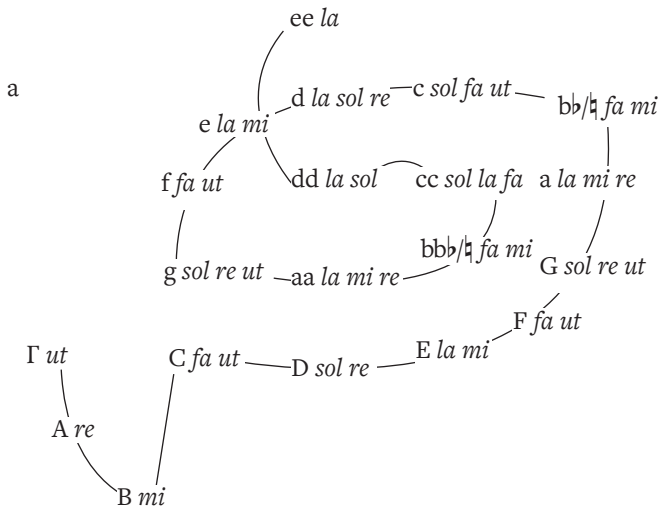
The Guidonian hand, and its spiral, is a form of spatial awareness—a way of identifying and externalising pitch, naming each, applying a unique and characteristic 'tension' to each pitch. As such the hand is a physicalisation of pitch memory, and pitch anticipation.⁷

The representation of rising pitch as a spiral is somewhat disorienting for modern sensibilities, where one might expect a more straightforwardly geometric representation.⁸ Combined with the intricacies of hexachordal solmisation,

6. Namely, in the *Musica enchiriadis*, Karol Berger, 'The Guidonian Hand', in *The Medieval Craft of Memory*, ed. Mary Carruthers and Jan M. Ziolkowski, University of Philadelphia Press, 2002, p. 78.

7. The hand has its origins in a method for remembering the sequencing of church feasts. See Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge University Press, 2008 [1990]), n. 101, 406.

8. The Guidonian spiral mirrors the tonotopical structure of the cochlea in the inner ear—though in reverse. 'Contrary to intuition', as Geoffrey Manley puts it, higher frequencies are detected at the base of the spiral, with lower frequencies travelling further, detected as the spiral coils toward the apex. See Geoffrey A. Manley, 'The Cochlea: What It Is, Where It Came From, and What Is Special About It', chap. 2 in *Understanding the Cochlea* (Springer Handbook of Auditory Research vol. 62), Springer Publications, 2017, p. 19.



b



c

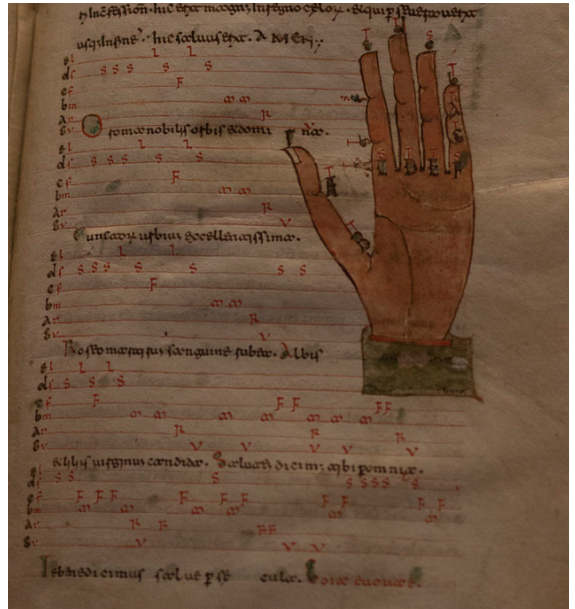


FIG 3-1

a. Guidonian spiral, diagram. Begins on the bottom left with gamma (Γ) ut.
b. Guidonian hand, 16th century (University of California, Berkeley, Music Library MS 1087)

c. Guidonian hand, 11th century (Montecassino Archivio dell'Abbazia Cod. 318). (Both images: Wikimedia Commons)

the Guidonian hand can seem thoroughly alien, unless one is trained in it from an early age.

The solmisation syllables are the true methods of orientation, defining their position relatively and contextually, with regard to their surrounds. The syllable *mi* is defined as the only pitch which has a whole tone below and a semitone above. The syllable *fa* is the only syllable to have a semitone below, when ascending—hence the proverbial *fa super la*,⁹ the flattened note above *la* (i.e. B^b, or E^b in a transposed mode).¹⁰ The gamut is thus made up not of discrete pitches but of places, or ‘corners’—the *durum* (hard) corner, the *molle* (soft) corner. The name of the syllable determines its character, as does its approach, and placement with regards to its surrounds.

While not explicitly composed with reference to the medieval gamut, the two violin piece *Your wits an E la* (2015) attempts to capture aspects of this Guidonian representation: namely, the as-yet-unsounded pitch, which is nevertheless physically or psychologically represented. The last note of the gamut, *ee la*, maps to the high E of the treble clef (the note of violin’s open first string). At the centre of *Your wits an E la* is a long glissando in two double stops, lasting around four minutes, whose ending highest pitch (the top of Violin I’s double-stop) is this high E. The open first string is never itself played, but is present in a ghostly form, as practically the only firm ‘ear-hold’ during the performance of the glissando through which the players may orient themselves. The intention of the glissando is to capture the immanent ‘tension’ of pitch—but by smearing away the discrete *scala*, leaving only the tension of the arm and hand on the fingerboard, and the memory and anticipation of pitch in the mind. In such a regime, pitches become uncornered, unnamed: their familiar representations drift in and out of focus. In this sense, even if the high E string is sounded (quietly plucked by the left hand during the glissando), it represents a physicalisation of what otherwise is a mental picture of a note, a pitch-place, the last ‘corner’ of the Guidonian spiral.

Other spiraling representations of pitch are found in tradition Japanese notations, namely the *goin-hakase*, which represents rising pitches with a horizontal bar rotating clockwise. See W. P. Malm, ‘Japan’, III. §2, Ex. 8, *Grove Music Online*, <https://doi.org/10.1093/gmo/9781561592630.article.43335>

9. The Latin mnemonic is ‘Una nota super *la* semper est canendum *fa*’ (‘A note above *la* is always to be sung *fa*’). While *musica ficta* of this kind were probably part of medieval performance practice, the phrase does not seem to be older than the sixteenth century.

10. The centrality of *mi* and *fa* was recognised as late as J.S. Bach, whose canon BWV 1078 is titled ‘*Fa Mi et Mi Fa est Tota Musica*’. See David Yearsley, *Bach and the Meanings of Counterpoint*, (Cambridge University Press, 2002) 59.





On the Guidonian hand, the highest pitch, the E la, either hovers just above the middle finger, or spills over to its other side, being apportioned the top joint on the side of the nail. This was the limit of the gamut (despite notes higher than this appearing on occasion—Robert Fayrfax’s motets are examples). ‘E la’ was itself a word representing (according to the OED) ‘something “high-flown”’, a place of yearning or elevation. The title comes from a quotation from Thomas Nashe: ‘You must straine your wits an Ela about theyrs.’

At the same time as ‘rising’ in pitch, the glissando ‘falls’ in harmony, the initial chord being $12/11/8/7$ in D, and the ending chord being $9/7/6/5$, an octave higher ($18/14/12/10$). As the chord rises, it expands and simplifies, ‘higher’ partials transforming into ‘lower’ ones. (The undecimal colour of the initial chord, with the presence of the 11th partial, is gradually smeared into a purely septimal colour of the $9/7/6/5$ chord by the end of the glissando.)

The harmonic complexity of the tetrad can be represented to some extent by the Tenney height of the two stacked dyads.¹¹ (At present, an efficient model for harmonic fusion—or ‘consonance’, expressed mathematically—for tetrads is not yet fully developed.) The $12/11$ and $8/7$ dyads are rated 7.04 and 5.80 in Tenney Height, ($\log_2 pq$ of an interval p/q) where lower values are more harmonically fused (or ‘consonant’). The $9/7$ and $6/5$ dyads are 5.98 and 4.91 respectively. (For comparison, the perfect fifth $3/2$ is 2.58; the octave $2/1$ is 1.00.) The ‘smearing’ of the initial tetrad into the second is heightened additionally by its passing through many inharmonic chords inbetween, such that the return to a more harmonically fused (or ‘beatless’) tetrad at the close of the glissando is striking. (An image of the glissando, as performed by Marie Shreer and John Garner, can be seen in the spectrogram, fig. 3–4. An idealised representation of the rising pitch can also be seen in the same figure.)

Surrounding the glissando is a generally straightforward modal melody, confined to the second mode above the D $1/1$ (i.e. having a central tone of E), notably with a sharpened undecimal $G\sharp$. The rest of the mode is the ‘intense’ diatonic (on D), resulting in a wolf interval ($40/27$) between degrees $\hat{1}$ and $\hat{5}$ (i.e. between $E\sharp$ and $B\sharp$). Also present in the mode is the raised and lowered sixth degree ($C\sharp$ and $C\flat$), the former tending toward $E\sharp$, the latter tending toward $B\sharp$. (This is a tendency that is mirrored in Lou Harrison, who wrote in the *Music Primer*

11. The ‘Tenney height’, also called the Harmonic Distance Function, was introduced by Tenney in the 1979 article, ‘The Structure of Harmonic Series Aggregates’ (1979), in *From Scratch: Writings in Music Theory*, chap. 11, 2015.

of his preference for  to , and  to , regarding the rising leading-tone ‘with distaste’.¹²)

These tendencies can be seen in the paradigmatic summary of the whole piece, fig. 3–2, which organises the melodic pitches according to initial appearance. The repetitive or internally referential structure here is deliberately accretionist, captured by the visual summary. Aside from the appearance of each unique pitch, there are several basic melodic contours—



—respectively, the inverted *torculus*; descending scale; up-down-down¹³; enclosure; and expansion, which are used variously in different combinations and locations, shown in fig. 3–3. These are bookended by the descending sixth, also appearing at the end following the glissando.

As one of the earlier compositions in the portfolio, *Your wits an E la* potentially lands a little too squarely, with the reappearance of the melodic fragment at the end. Yet nevertheless, following the long glissando, the aural effect of the return to a melody of discrete pitches does something to confirm the condition of ‘always-already floating’, as it were. The phenomenon is akin to the visual transferral of lateral movement—after, for example, watching a lengthy left-to-right scrolling video, the residual appearance of lateral movement is transferred to an otherwise stationary environment.¹⁴ Pitch differs in its always-already containing the potential for incipient gravitation and anticipation—as Bloch alluded to in his description of melody in the *Principle of Hope*. For all his generalities, Bloch’s points of musical reference were typically conventional¹⁵; *Your wits* attempts to encapsulate anticipatory qualities of pitch that are more general than conceptions of diatonic leading found in common-practice tonality.

Your wits an E la also does a number of things for the first time, later taken up in other pieces. The piece is an early example in the portfolio of asymmetrical form, pursued later in *Carrying*, *Set of four* and *Habitual*. The repetition, or loop

12. Harrison, *Music Primer*, 13–14.

13. Also called the *Pes subbipunctus*

14. For example, perception of residual movement after watching a scrolling score video: ‘Gerubach’, ‘BWV 971: Italian Concerto in F Major (Scrolling)’, <https://www.youtube.com/watch?v=jNEFrRYE5Po>

15. Bloch discusses Berlioz Brahms, Beethoven, Handel, Bach, Wagner, Mozart in *The Principle of Hope* (vol. 3, 1057ff). Musical discussion also figures at length in *The Spirit of Utopia* (Stanford University Press, 2000 [1923]), 34ff.

THE CAPACITY FOR MELODY TO LOOK ROUND CORNERS

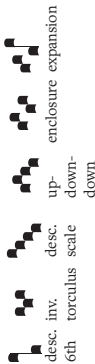
The musical score consists of 20 staves. The first 19 staves are organized into pairs, with the first staff of each pair containing a circled number (1 through 7) indicating a specific melodic feature. The notation includes various rhythmic values, accidentals, and phrasing slurs. The 19th staff is marked with a circled 5 and the text "repeat of 5". The 20th staff is a single staff containing a "glissando" instruction over a series of notes.

FIG 3-2

Your wits an E
la, paradigmatic
summary by pitch
entry

The three staves show a melodic line with a circled 8 above a note and a circled 9 above a subsequent note, illustrating the concept of pitch entry.

six basic melodic contours



♩ = 50-70

Deliberate, plain, dancelike
 Vln. 1 & 2 non vib., non legato sempre
 facing one another

alternatively, phrase 3 or 4 can be played here

Gliss lasting 4min.
 Sit on initial chord,
 then move on



approximate "reaching" points



Vln. 1 & 2

Pitches used in melodic material

Manchester/Oxford,
 Winter 15/16

FIG 3-3

Your wits an *E la*, annotated score, showing principle
 melodic contours; set of pitches used.

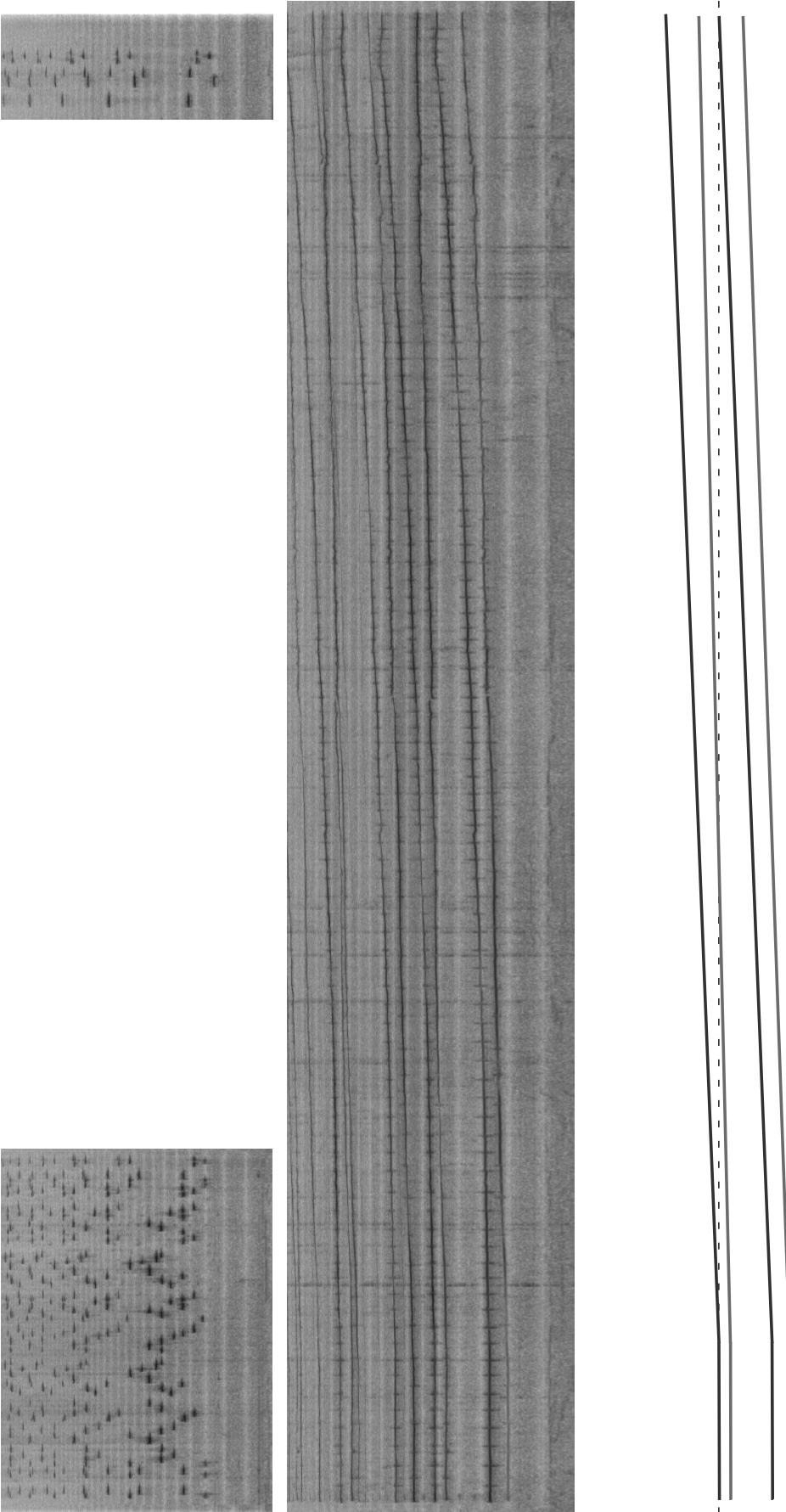


FIG 3-4

Your wits an E la, complete material, spectrogram.

Below the spectrogram is an idealised representation of the glissando, using straight lines (black = vln. 1; grey = vln 2). One can see just how close to this the performers were able to get. (Note that periodic vertical lines are bow changes.)

of an initial melodic gesture—in this instance almost a ‘handshake’ or ‘curtsey’—is a technique adopted in a number of pieces in the portfolio: *For piano (dancing)*, *Habitual*, *Three Heames Settings*. If this is expanded to include not just a repetition but a separation of the initial figuration, half-abortively or discontinuously outlined relative to its subsequent material, such an approach to beginnings is almost universal across the portfolio compositions.

§3.2 The event of the thread: *Habitual*

The solo violin work *Habitual* (2017), written for violinist Sarah Saviet, can be considered sibling to *Your wits an E la*, given its concern for spiralling and circulation, as well as its instrumentation (and explorations of a mode of E). The piece is perhaps the most single-minded exploration of melodic phenomena in the portfolio, and is also the only monophonic work (the dyad double stops on the fourth page are the only exceptions).

At the centre of this piece is a concern for ever-revolving self-similarity, alongside gradual transformations of density, recognisability, torsion, anticipation and forgetting. The piece is particularly concerned with self-interaction and threading, such that an apt metaphor for the piece’s approach could be in Anni Albers’ writing on weaving. The bringing of the thread ‘into tension’ is ‘the main function of any loom’, Albers writes—the tensile interaction of the (vertical) warp and (horizontal) weft.¹⁶ Weaving is subject to many such tensions—the emergent tension within the total weave; the tension between design plan and emergent patterning; the tension between the outward-facing pattern and its shadow (or the ‘front’ and the ‘back’); the tension between the top and the bottom, as the pattern is constructed. Such tensions are analogously present in music: the tension between the note sounded and the note not-yet-sounded; the tension between the note heard and the previous note having ceased.

The monophony of *Habitual* engages with a form of continuity that is continually in dialogue with its immediate surrounds, coming in and out of tension with this continuity in a manner akin to weaving. Unlike painting, weaving is a constructive process with a particular directedness—from one end of the warp structure to the other (in other words, from the top of the structure to the bottom). As such, activity at the loom is closer to the construction of continuous

16. Anni Albers, *On Weaving: New Expanded Edition* (Princeton University Press, 2017 [1965]), 36.

forms, such as composition (or film editing), where directedness in a single direction is a component of assembly.

It is perhaps this particular directedness that was captured by Albers' terming 'the event of a thread'¹⁷: the interaction of the thread with itself, instantaneously, and continuously, over the course of construction. 'The interrelation', Albers writes, between structure and raw material, 'the subtle play between them in supporting, impeding, or modifying each other's characteristics, is the essence of weaving.'

Falling into an initial broad movement (a.) with several sections, and a shorter second movement (b.) with a much more singular characteristic, *Habitual* is a virtuosic work, which nonetheless confines itself to a number of limitations. The compass of the piece is curtailed—stretching from B \flat 3 (below middle C), up only to F \sharp 5 (at the top of the treble clef). Intervallically, no jumps larger than an octave are found, and most are smaller. Quarter-tones are used, but only at the end of the piece. Against these limitations are some complexities: a melody which is constantly revolving and weaving amongst itself, often with no stable pattern. Rhythms which are highly asymmetric, and at times unfeelably fast, and essentially too complex for the brain to conceive at the rate at which they are executed. Like other compositions in the portfolio, rhythm here is almost entirely additive—rhythms relate only to one another, and resist being cast relative to a grid. In this sense, rhythm is as 'woven' as the monophony is—rhythms are often divided into pairs of notes, connected by a beam. Like the warp and weft, the rhythms are often coupled to their dual. In performance the player feels one rhythmic value in relation to its immediate partners who shadow it.

The patterning of the monophony can be seen from the graph of the midi sequence, fig. 3–5. Beginning with an opening phrase that is repeated, the initial patterning centres on arpeggiation, at b. 20 beginning to introduce the scalic descending passages used throughout the rest of the piece. For much the structure, the monophony is divided into two interwoven threaded lines—as can be seen in fig. 3–5 at the third line (from b. 78). Passages such as those at b. 89 explore the interaction of these two contrapuntal lines, intertwining and exchanging their metrical emphasis.

The passage at b. 104 is in some sense the centre of the piece, especially the phrase beginning at b. 108, which takes two interleaved descending pentachords

17. *Ibid.*, xi.

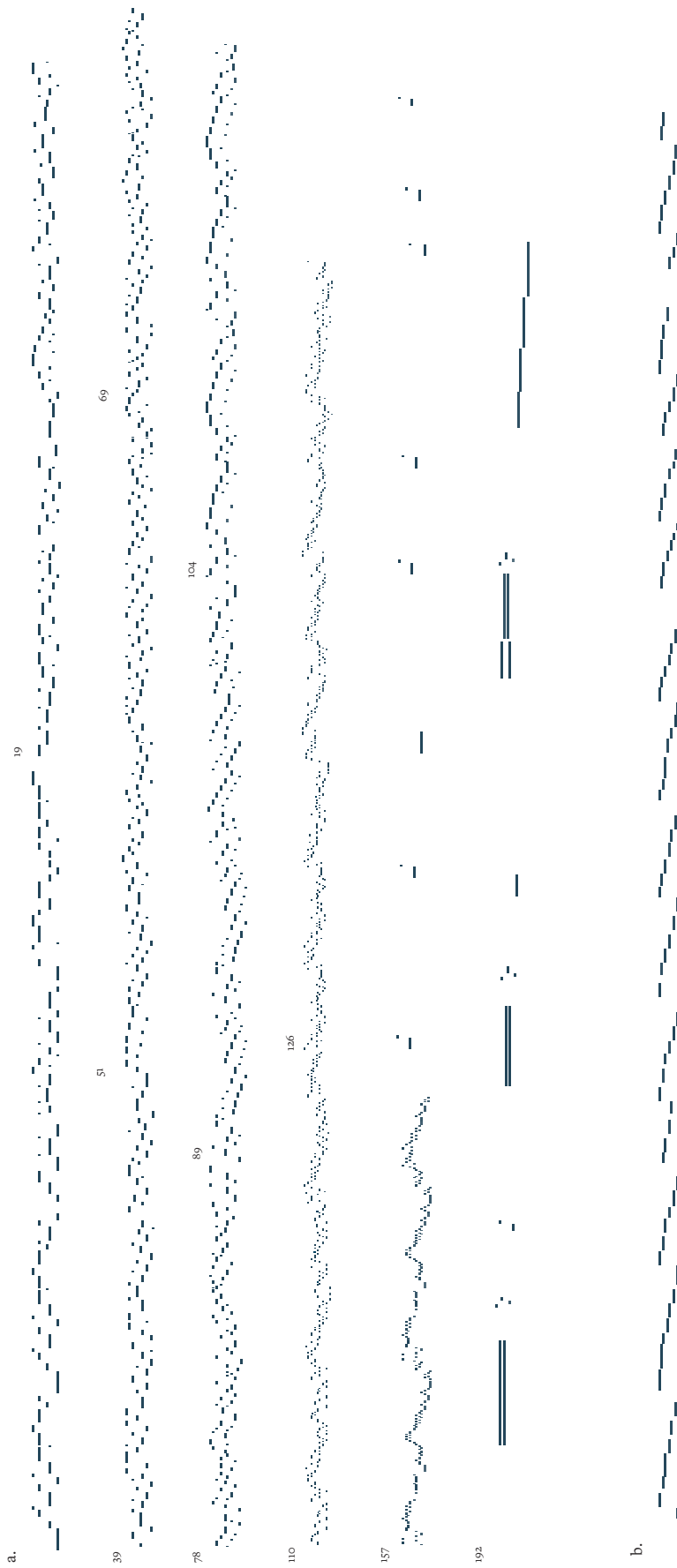


FIG 3-5

Habitual, complete material, midi sequence diagram.
The two movements are labeled a. and b.

(5-4-3-2-1 in E and B), descensions that are never fully completed until then. Shadows of these descending shapes are felt as early as b. 19; likewise b. 51; but it is only at b. 108 that they are stated fully and simply.

This passage bb. 104-109 is an outlier in a transforming textural *matière* only increasing in detail and rapidity. This picks up in earnest at b. 110 (line 4 of fig. 3-5), with cascading and fraying lines that are not so much contrapuntal as ornamental, modulating through modes of F \sharp (b. 124), G \sharp (126), A \sharp (131), though without definitive closure. Only the ending phrase, closing on a final of C \sharp , offers anything bordering definitiveness; even there it is fleeting.

Much of the rhythm is its own armature. The rapid passage, from b. 110, is constantly disrupted by addition of augmentation dots, with 32nds, augmented 32nds, and 64ths in a stream that resists easy mental computation. At full tempo, of $\downarrow=84$ ($\downarrow=168$), a 32nd lasts c. 90ms, a 64th 45ms; in comparison, a human eye blink lasts 300-400ms.

Throughout the section, shadows of the 5-4-3-2-1 pentachordal descent lie behind the florid movement. This appears in a drastically skeletal form from *Lo stesso tempo* (b. 171)—here, these slowly descending fifths recall the passage at b. 108. Throughout this section, downward voice leading in the upper voice is maintained consistently: from b. 187, the top line descends E \sharp -(D)-E-D-(B)-C \sharp -C \flat -B, with the lower voice shadowing this sequential descent. The triadic movement too mirrors melodic aspects from earlier, such as b. 25, though again only in this skeletal section are these shapes presented so distinctly.

The last scale at b. 209, and final movement, ‘b’, smear out the tone-semitone corners of the diatonic modes used up until this point. Here, minor thirds, between E and C \sharp , or A and F \sharp , are subdivided equally using three-quarter tones. To return to the solmisation syllables mentioned earlier (§3.1): with the semitone removed using the neutral second, the identity of any pitch within any potential diatonic scheme is removed; the location of *ut* or *fa* is rendered ambiguous. The diatonic 5-4-3-2-1 descent is only apparent as such because of the semitone outlined 4-3 (or 3-2 in a minor mode): here semitones are placed elsewhere, or smeared away through neutral seconds. The semitone makes a return towards the end of the movement (as the last interval).

Both movements are concerned with aspects of continual self-similarity—most directly visible in movement ‘b’, which adopts a single contour but never repeats an exact progression of pitches or rhythms. The same is generally true

of movement ‘a’, with the exception of the passages that are expressly repeated with repeat marks. Rather, in ‘a’, passages make continuing reference to past passages already heard and other passages not yet heard: this is monophony as a kind of network. Continuity is folded, familial, forever on the borders of recollection.

To obtain a sense of this continuing self-similarity, while simple piano-roll diagrams such as fig. 3–5 help, other methods can assist also. A self-similarity diagram¹⁸ can be designed by taking each unique pitch and giving it a distinct colour. They are graphed on a square, beginning at the top left. These unique colours are then reflected on their repetition through the pitch structure. A section of the diagram is shown in fig. 3–5: these are the starting pitches up to the first half of b. 25, with each of the pitches displayed alongside the self-similarity diagram. The first pitch, E, is coloured magenta. Where two of the same pitch are repeated, a large block is formed: magenta blocks about a third and half of the way along indicate the repeated E’s, at bb. 8–9 and 14. When pitches are repeated, they are reflected above and below the diagonal line. For whole streams of pitches, parallel diagonal lines are produced. The interpolation with C#’s b. 17–20 creates a checkerboard-like pattern.

The full self-similarity diagram, for the complete piece, is shown in fig. 3–7. Divisions in the structure coinciding with repeated sections are indicated: as can be seen, ‘long diagonals’ appear when a stream of pitches is repeated. The detail here can be overwhelming: but it can at a stroke represent the complex interwoven patterning at work within a line of monophony.

Representing monophony in this way captures something of the self-similar ‘texture’, or *matière* of the piece. The representation does not provide an especially efficient ‘analysis’; neither does it necessarily allow easy deconstruction of the work. Rather, the diagram intends to provide an image of the interwoven fabric of continual resemblance—analogue to the memory while listening. The gradual accretion of patterning, as the pitch-stream proceeds from the top-left, mirrors the accretion of memory. In the same way that repeated sections are most audibly salient, the diagram’s long diagonals are most visually salient; but throughout the work, snippets of repeated pitch sequences intertwine and en-

18. Also called a self-similarity matrix. See Jonathan Foote, ‘Visualizing music and audio using self-similarity,’ *Proceedings of the seventh ACM international conference on Multimedia*, 1999; Jun, S., Rho, S. & Hwang, E. ‘Music structure analysis using self-similarity matrix and two-stage categorization’ *Multimedia Tools and Applications* 74: 287, 2015.

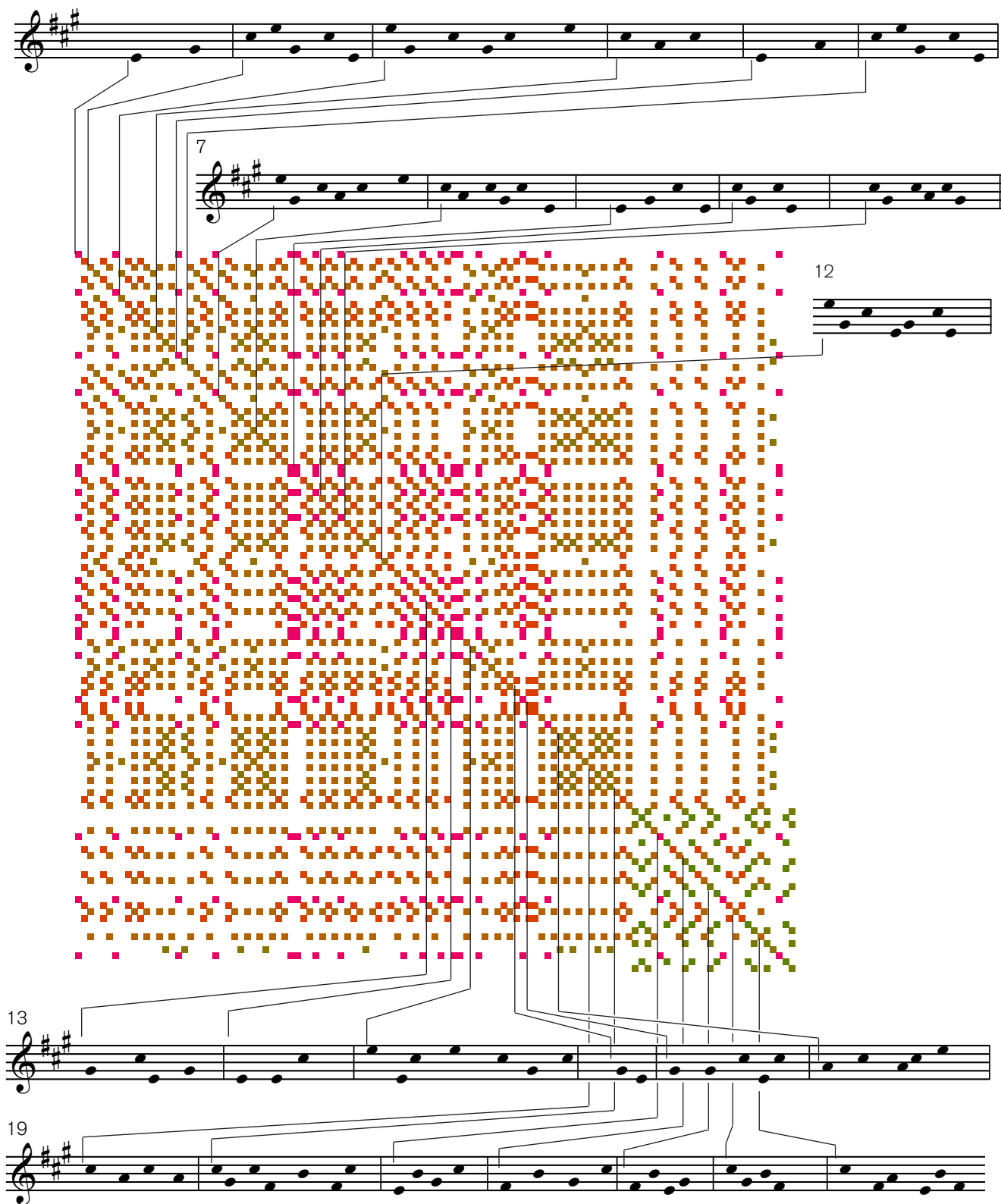


FIG 3-6

Habitual, bb. 1-25, excerpt of self-similarity diagram.

Each pitch has a unique colour, the central pitch stream proceeding diagonally from top left. Repeated pitches are reflected above and below the line, creating a symmetrical pattern

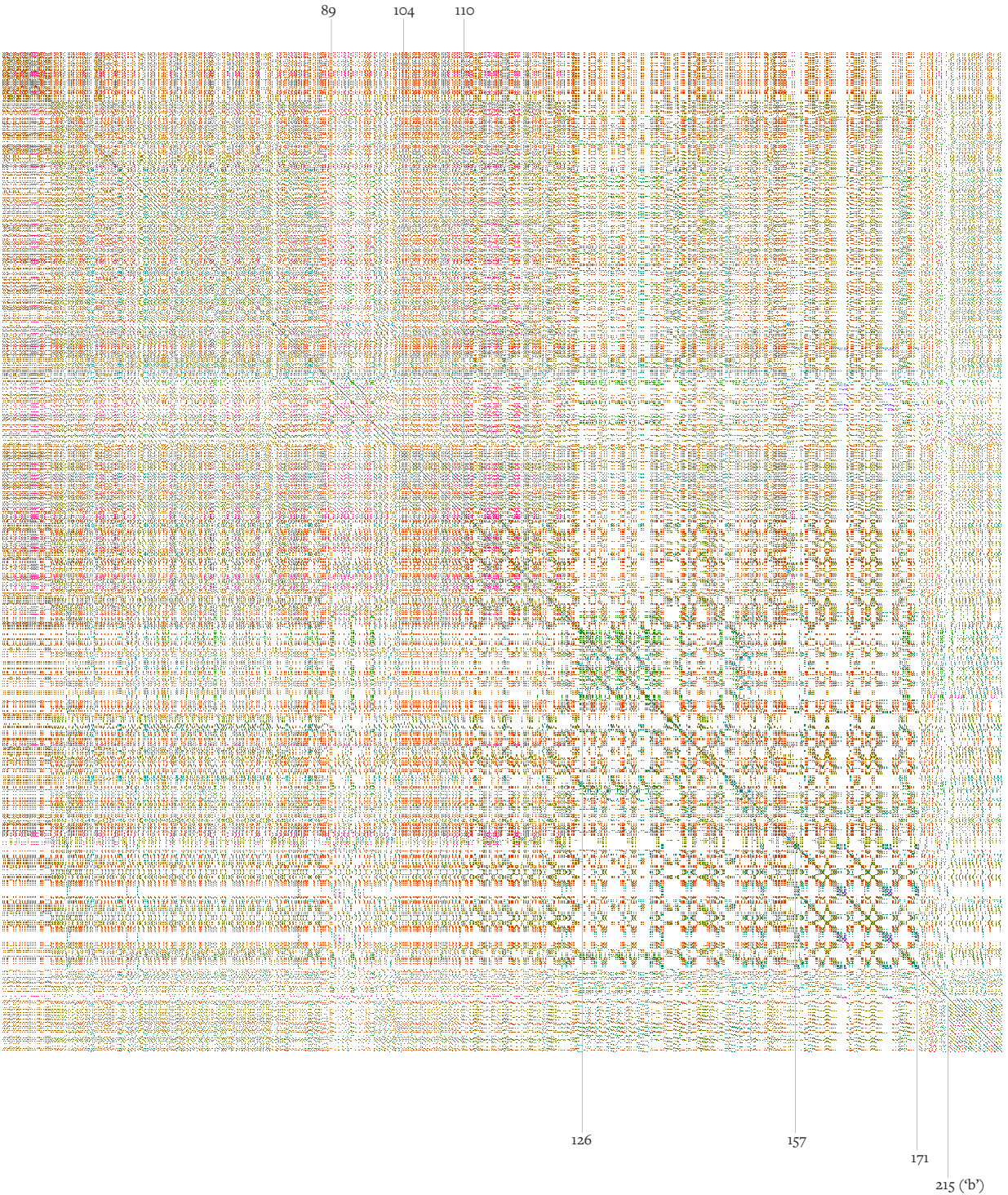


FIG 3-7

Habitual, complete material. Self-similarity diagram of pitches.
Significant formal divisions are marked using bar numbers and lines.

fold, accreting but without consolidating firmly within memory.

In *On Weaving*, Anni Albers discussed the difference between the structure and *matière* of a fabric, the *matière* being the surface quality of the material as opposed to its analytic construction. Typically, the term *matière* was used to describe visual appearance: ‘grain, roughness or smoothness, dullness or gloss’. Albers suggests expanding the boundaries of the term to include ‘qualities of appearance that can be observed by touch’, adding: ‘There seems to be no common word for the tactile perception of such properties of material, related to inner structure, as pliability, sponginess, brittleness, porousness’.¹⁹

These diagrams do much to analogously represent such tactile perceptions of monody, as it is through time incorporated into memory and anticipation. An alternative representation is shown in fig. 3–8: here each *interval* between pitches, rather than each unique pitch, is graphed in the same way highlighting repetition. This diagram presents a further analogous representation of the tactility of listening—and, one might add, the tactility of playing, with intervals between pitches exerting themselves physically through the violinist’s left hand. In this diagram, one can see the intervallic *matière* of the work falls into two distinct halves: the first, coloured more reddish, is dominated by arpeggiated intervals larger than tones and semitones. The second half, from b. 110, is bluish-purple, the colour given to smaller intervals of tones and semitones, representing scalic movement.

Anni Albers’ woven wall-hangings often resembled these diagrams in their rectilinear patterning. Her pictorial weaving *Development in Rose II* (1952) (fig. 3–9) mirrors the segmentation present in fig. 3–8, with repeating motifs in different locations on the plane. Even from a reproduction, one can sense Albers’ intense attention to tactility: these are hangings which were intended to be touched.

Another way of capturing the transforming ‘texture’ of *Habitual*’s monophony is to simply graph the intervallic movement linearly. This is shown in fig. 3–10. Much simpler than the previous self-similarity diagrams, a graph such as this one, taking time into consideration, is clearer at representing the acceleration across the piece. Likewise, the spacious material from b. 171 is clearly graphed as such. The self-similar motion of movement ‘b’ (the last line of the figure) is highly apparent.

19. Anni Albers, *On Weaving*, 45.

89 104 110

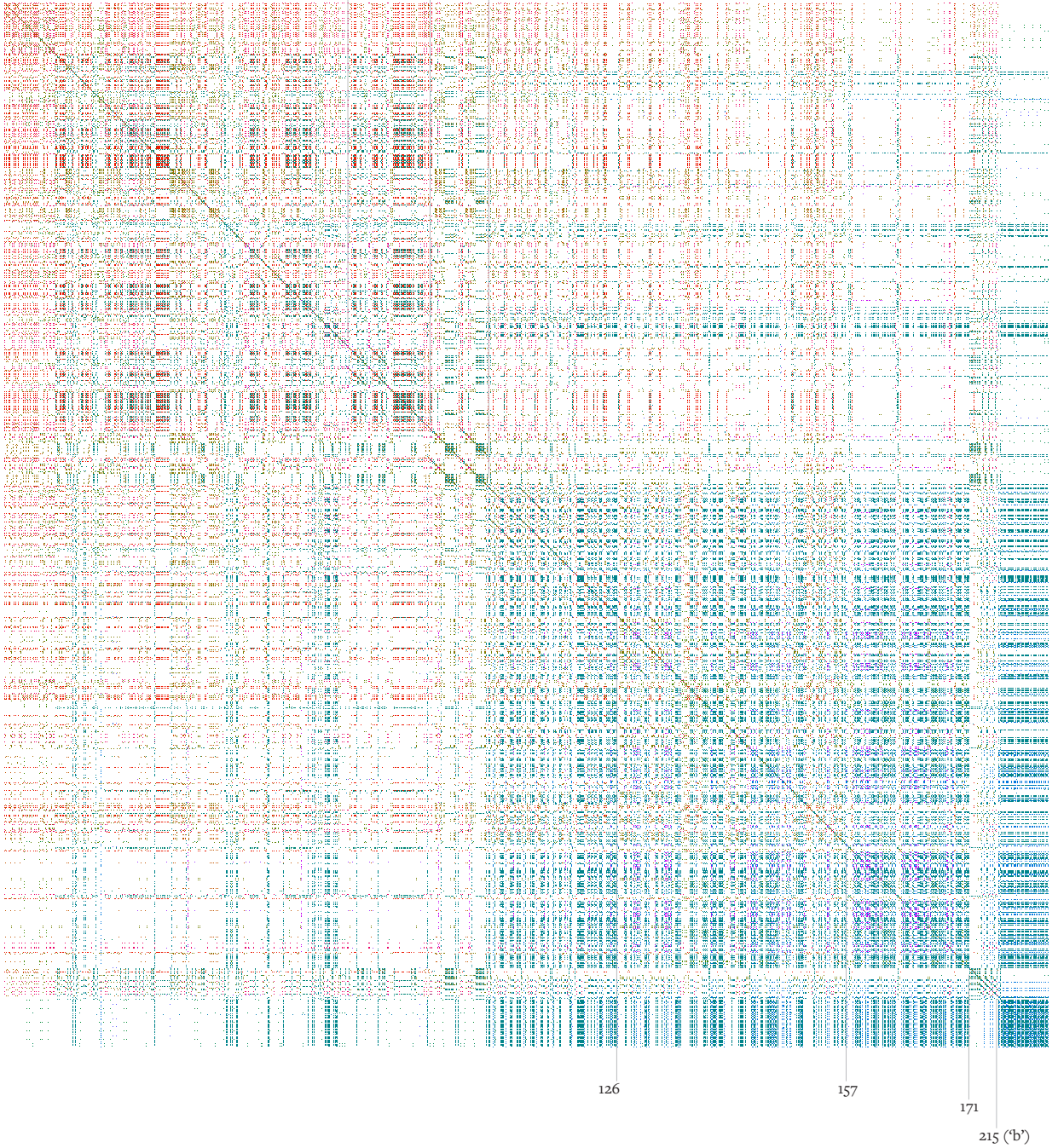


FIG 3-8

Habitual, complete material. Self-similarity diagram of intervals. Significant formal divisions are marked using bar numbers and lines.

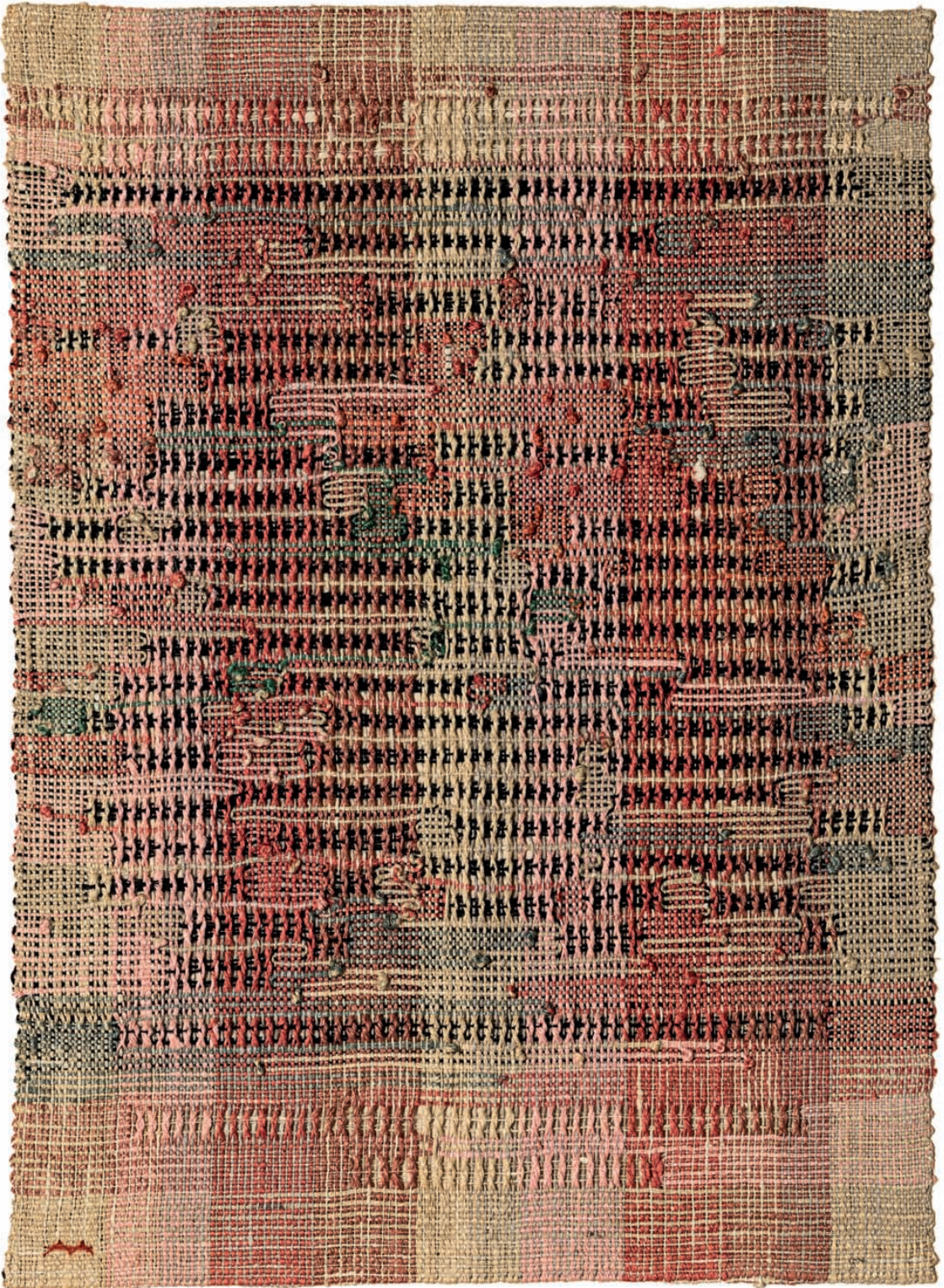


FIG 3-9

Anni Albers, *Development in Rose II* (1952).
(Image reproduced from *On Weaving*.)

semitones

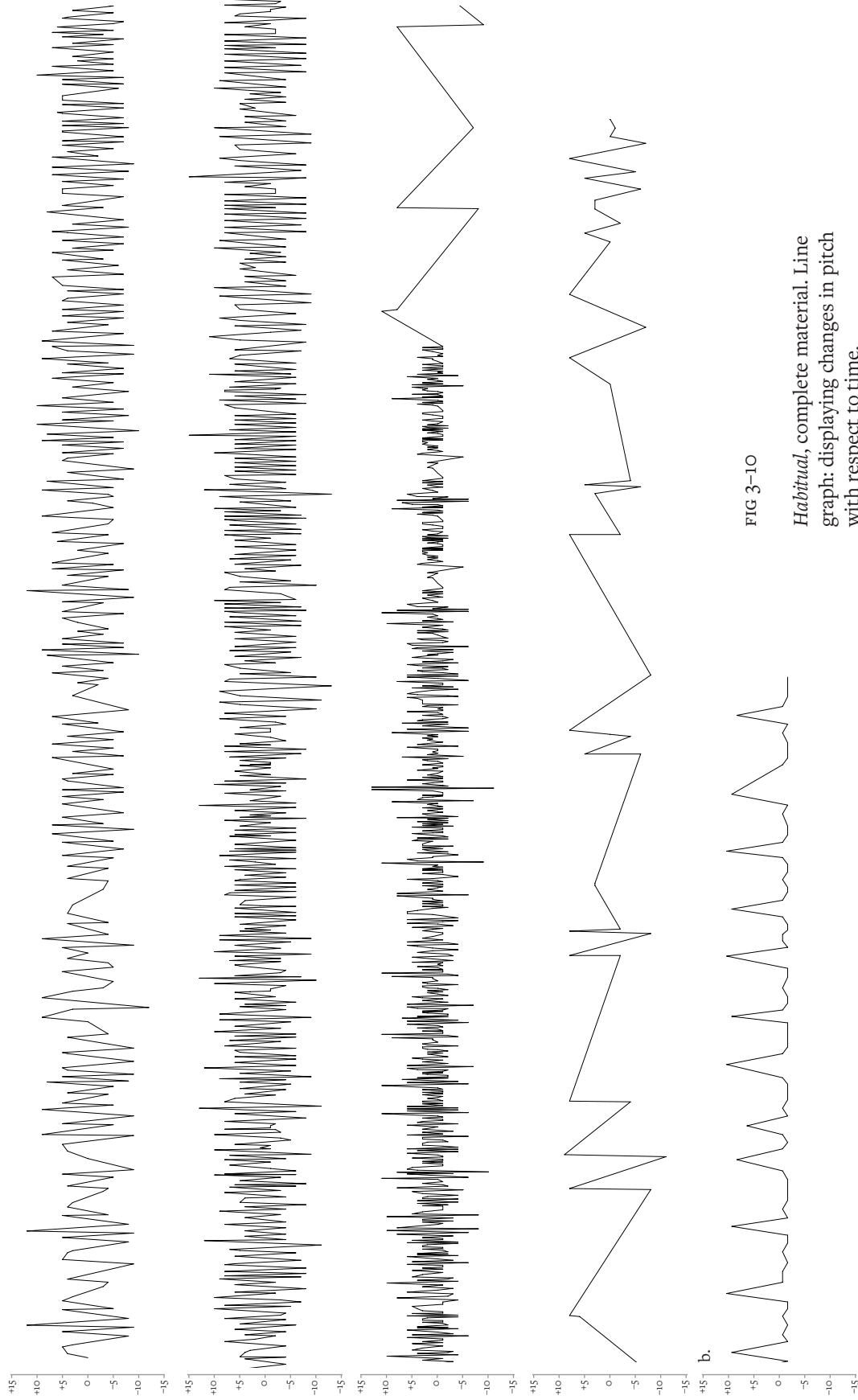
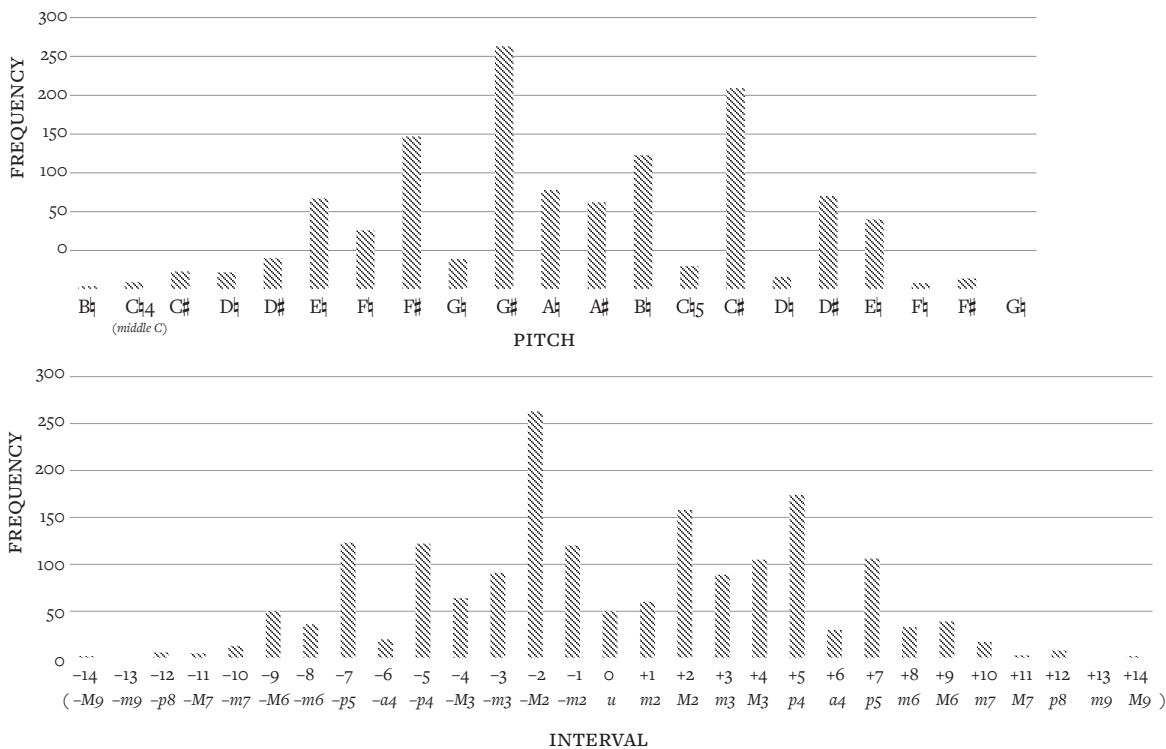


FIG 3-10

Habitual, complete material. Line graph: displaying changes in pitch with respect to time.



FOLLOWING PITCH

		oct. 4										oct. 5											
		→B ₄	→C ₄	→C _#	→D ₄	→D _#	→E ₄	→F ₄	→F _#	→G ₄	→G _#	→A ₄	→A _#	→B ₄	→C ₅	→C _#	→D ₅	→D _#	→E ₅	→F ₅	→F _#		
STARTING PITCH	oct. 4	B ₄					4																
	C ₄		2		1	2			2		2												
	C _#		5	2		7			2		4		1	1		1							
	D ₄				1				6	1		11		1		1				1			
	D _#			13		5		7	4		8		1	2									
	E ₄				2	2	2		15		33	15	5	17		18		2	5		1		
	F ₄					9	1	4	20		18	2	11	1	2	3		5					
	F _#	4		1	3	2	11	29	3		50	7	9	30	2	23	2	12	7		2		
	G ₄								3	5	5	4	2	1		3	2	4	7	3			
	G _#		2	3	2	3	26	17	52	9	6	24	19	26	1	75		29	18		1		
	A ₄			4	7	2	11		6	10	22	1	2	8		35		12	8				
	A _#					6	5	7	4	10	31	5	5	1	3	14	2	9	5	3	2		
	B ₄				4	1	19	1	18	1	32	23	8	3		27		14	16		6		
	oct. 5	C ₄						1		1	1	1	8	2	3	6	2	2	1	1			
		C _#						28	6	42	1	48	18	11	57	14	3		14	14	1	2	
		D ₄							2		1			2		4	6			1			
		D _#				1	4	2	11	1	26	3	20	9	1	33	4	3	2				
		E ₄				2		4	1	7		21	11	5	13		10	4	10	2			
		F ₄										2		3					3				
F _#									1		4	3		1		1		1	3				

FIG 3-11

Habitual, monophony statistics. Frequencies of pitches and intervals are given, as well as the incidence rate of one pitch following another. The most common pitch sequences, indicated by the darkness of the cells, are G_#4-C_#5, C_#5-B₄, G_#4-F_#4, F_#4-G_#4.

What all these figures do is capture the dialogue between chaos and self-similarity within monophony: the texture is not predictable moment-to-moment, but accretes a general character, through a spiralling, circulating continuous variation. It is music bounded by linearity, by limited ambit, and by a particular propensity for movement: descension, modality, gradual transition from disjunct to conjunct movement.

In its continual circulation, it is music that foregrounds the accretion of habit—hence the title: both habit and the concept of *habitus*, deriving from Pierre Bourdieu, form a background here. *Habitus* amounts to the acquisition of unspoken-of intuitions about action: what Bourdieu called ‘transposable dispositions . . . “regulated” and “regular” without in any way being the product of obedience to rules, objectively adapted to their goals without presupposing a conscious aiming at ends’.²⁰ Monophony here is determined by character and proceeds by feel, traversing through a world of limited ambit. The monophony is in exploration of its own landscape of traversal, without necessarily ‘realising’ it. Not so much repetition as circulation, resemblance, digression.

What kind of environment does monophony traverse? As I’ve tried to illustrate with this piece, it is an ultimately ‘networked’ environment, of linkages, between that which precedes and that which follows. (Figure 3–11 shows the ‘statistics’ of *Habitual*’s monophony: the distribution of discrete pitches and intervals; and the incidences of one pitch being followed by another.²¹) Anticipation of future activity is formed through acquisition of habit. Dispositions obtain predispositions. The hypothesis of *Habitual* is that monophony—melody—consists in self-interaction: acquired character as texture and ‘feel’. What links Bourdieu’s concept of *habitus* and Albers’ concept of tactile *matière* is, precisely, ‘feel’. Feel for that which the intellect can only provide descriptions for, or confabulation after the fact; feel requiring delicate sensibility or training, as Albers advocated. The capacity for melody to look round corners amounts to a capacity for the feeling out of landscape and accreted environment, acquired through memory and anticipation, through habitual movement.

§3.3 Anticipation and forgetting: *Claribel*

20. Pierre Bourdieu, *Outline of a Theory of Practice* tr. Richard Nice, (Cambridge University Press, 1972), 72.

21. In this relation, see similar analyses in David Huron, *Sweet Anticipation: Music and the Psychology of Expectation* (MIT Press, 2006), chap. 13.

I include the violin and piano work *Claribel*, written in autumn 2016, in this chapter, but its ‘retrospective’ qualities might have easily placed it in the first chapter. In five distinct sections or movements, grouped Ia, Ib; IIa, IIb; and III, the piece is an elaborate exploration of virtuosity, mnemonics, and particularly domesticity, implied as I felt by the chamber instrumentation. (The piece was written for Aisha Orazbayeva and Joseph Houston, who were visiting Huddersfield in early 2017. Subsequent performances were given by Sarah Saviet and Imri Talgam.)

The presence of the violin as a soloistic instrument in the piece nevertheless makes for appropriate placement in the present context, next to *Habitual* and *Your wits an E la*. Melodic preoccupations with certain similarities are present particularly in the opening section Ia, for violin alone. Each section has a different instrumentation and texture, as follows:

Ia : violin solo (with five bars of piano interruptions)

Ib : violin and piano, desynchronised

IIa : violin and piano, synchronised, homophonic

IIb : violin solo

III : violin and piano, synchronised, polyphonic

This was not the order of composition however, which proceeded almost exactly backwards. Ordered according to their sequence of writing, the sections are: III, Ib, IIa, IIb, Ia. There was a significant gap (several weeks) in between the writing of III and the rest of the piece.

The notion of domesticity as a working metaphor for the piece only occurred during this break period. Already during the composition of (what became) mvt. III, I had begun to juxtapose the equal-tempered piano with sustained Just intervals in the violin. Beginning with a ‘wolf’ fifth in the violin part, the violin dwells repeatedly on F \sharp , while the piano moves through modally mixed harmonies (generally exploring centricity on B, though after the cadence b. 399 the harmony is quite varied). Revisiting the material after it was written, the ‘hymnal’, impressionistic (bordering kitsch faux-Debussy at e.g. b. 466) quality of this music came into better focus. Combining these nineteenth-century allusions with the juxtaposition of Just harmony against equal temperament, and

especially an ‘overdwelling’ and repetition of single pitches (the repeated F \sharp), suggested a possible compositional path forward.

Charlotte Barnard, nicknamed Claribel, now largely forgotten, was one of the most commercially successful English composers of the nineteenth century. Active for only around ten years (from 1859 until her death in 1869), she was one of the first composers to obtain a royalty agreement with her publisher. She also popularised the verse-refrain song form (most ballads of the time were entirely strophic). Shortly before her death, it emerged that her bankrupt father, then the County Treasurer of Lincoln, had stolen and lost around £30,000 of her earnings.²²

Barnard’s writing is typical of the mid nineteenth-century bourgeois ‘parlour’ music. If it is remembered at all today, it is not a variety of music thought of kindly. In comparison to more prestigious art song (especially German Lied), it is foresquare middlebrow doggerel; compared to more exciting and suggestive music-hall fare, it is stuffy and bloodless. Additionally, the parlour ballad was one of the few genres where work by female composers was accepted for publication.

Ironically Barnard’s most successful song (‘Come Back to Erin’, fig. 3–12a²³) was the one she was able to disguise as a traditional Irish air, the one that rendered her most ‘invisible’. Using this tune, along with another, ‘I Cannot Sing the Old Songs’ (see fig. 3–12b), which appropriately captured the sentimental longing of the genre, I adopted a method utilising forgetting, as opposed to transcription. Cursorily looking at these tunes, after a couple of weeks I then returned to compose the rest of the piece—beginning with Ib, then IIa, IIb, and Ia. Only at the end of the composition process did I look at these songs again.

I felt this approach might do something to capture buried aspects of domestic chamber music—its bourgeois status, concern with respectability and sentiment, its confinement to social codes, its contortion of gender roles. Victorian aesthetics in musicmaking were initially willfully rejected by modernists, and

22. See Derek B. Scott, *The Singing Bourgeois: Songs of the Victorian Drawing Room and Parlor* (Ashgate, 2nd ed., 2001), chap. 3 and 3b. See also Phyllis Smith, *The Story of Claribel (Charlotte Alington Barnard)* (J.W. Ruddock & Sons, 1965); Paula Gillett, ‘Entrepreneurial Women Musicians in Britain: From the 1790s to the Early 1900s’, in *The Musician as Entrepreneur, 1700–1914: Managers, Charlatans, and Idealists*, ed. William Weber (Indiana University Press, 2004), 207.

23. Both these songs come from A. S. Irving’s ‘Five Cent Editions’, published in Toronto in the 1870s. (Most lack dates and copyright ascriptions.) Both come from the Olnick Rare Book Room at the University of Toronto, digitised at <https://archive.org/details/olnickarchives>. Archive.org also includes many 78rpm recordings of both songs. ‘Come Back to Erin’ was of sufficient popularity that a 1914 film with the same name was produced by Gene Gauntier.

I Cannot Sing the Old Songs.

Words and Music by CLAREBEL.

Slowly
Piano.

1. I can - not sing the old songs I sung long years a - go. For

heart and voice would fail me, And fool - ish tears would flow. For

by - gone hours come o'er my heart, With each fa - mil - iar strain, I

can - not sing the old songs, Or dream those dreams a - gain, I

can - not sing the old songs, Or dream those dreams a - gain.

8.

I cannot sing the old songs,
For visions come again,
Of golden dreams departed
And years of weary pain.
Perhaps when earthly fetters shall
Have set my spirit free,
My voice may know the old songs,
For all eternity.
My voice may know the old songs,
For all eternity.
They are too dear to me.

2.

I cannot sing the old songs,
Their charm is sad and deep,
Their melodies would waken
Old sorrows from their sleep.
And though all unrecotten still,
And sadly sweet they be,
I cannot sing the old songs,
They are too dear to me.
I cannot sing the old songs,
They are too dear to me.

then overlooked and forgotten, even amongst musicians not interested in playing twentieth century music. The vast swathe of nineteenth century easy and popular classics, songs and airs, produced for a wide market and performed by amateurs in the home, remains obscure, unfashionable and discarded. This sort of buried musicmaking retains a strange dusty allure given that I didn't encounter it even as a child—this kind of music was old-hat even for my grandparents, born in the East-End of the 1910s. (It was also out of their 'class bracket'—their preference was for the more suggestive, music-hall song of the First World War period.) Barnard's 1860s harmonies are bland and her melodies are ungainly (both these tunes outline tritones at points—b. 1 of 'Erin', b. 4 of 'Old Songs'). The fact, despite her relative success during her lifetime, of her almost complete forgottenness, and the forgetting of women composers more generally, lends a compositional approach based on forgetting a sad appropriateness.

Discussing the material of *Claribel* in the order it was composed—Ib, IIa, IIb, Ia—one can see gradual developments across the structure that are obscured by its later arrangement. One of the techniques utilised in using a composition process based on forgetting and recollection is a composed-out 'hesitation', generally present here as the repetition of a single pitch. The piano material of Ib (the first to be written) differs in that melodic fragments are buried in a mass of modal-chromatic haze, which eventually dominates the texture. 'Remembered' snatches of melody emerge from a textural mass, themselves typically harmonised with *fin-de-siècle* style close-harmony. The initial fragment retained in the bass from b. 125 is of the shape $\hat{7}-\hat{8}-\hat{7}-\hat{6}-\hat{5}$ (a shape resembling aspects of the bridge in 'Come Back to Erin' (b. 15-6), labeled γ in fig. 3-13). The shape is later picked up in earnest in IIa. (Principle melodic material of the whole piece is summarised in fig. 3-13. Note that this material has been synthesised after the fact: during the composition of the piece, Barnard's melodies were not examined on paper; only memory was used.)

The rest of Ib's recalled melodic fragments are generally pentatonic—with only limited resemblance to Barnard's songs. (The piano writing here recalls Ives, and the pentatonic interruptions resemble the 'Te Deum' opening to Ives' 'From Hanover Square North' from the *Orchestral Set No. 2*, a piece I had been studying during the period.)

Only at IIa does a firmer recollection of this material emerge, though even here it is smeared and often unsure. The structure here is one of eventual clari-

'Come Back to Erin'

verse

bridge

'I Cannot Sing the Old Songs'

Claribel: Ia.

Ib.

Ib.

cf. Ives, 'From Hanover Square North'

IIa.

IIa.

IIb.

FIG 3-13
Principle melodic material: 'Come Back to Erin' /
'I Cannot Sing the Old Songs'; *Claribel*, Ia/b, IIa/b.
Certain contour resemblances are labeled α , β , γ .
(The order of composition was Ib, IIa, IIb, Ia.)

fication: after an ‘in media res’ opening, a gradual settling on descent from $\hat{8}$, as well as dotted rhythm. The repeated Cs from b. 335 are again an instance of composed-out hesitancy—or an ‘overdwelling’. The clarification of the melody from b. 344 indicates just how far from Barnard’s original melody my memory had strayed: the meter is triple (not duple), the harmony quite different (dwelling lengthily on the chord of ii, creating a drawn out ii–V movement, not something found in Barnard). The melody includes hymnic repetition of single pitches (particularly C), a kind of homophonic ‘dramatisation’ of overdwelled hesitancy. Aside from momentary reference to descending scales (not a significant feature of either of Barnard’s melodies) the most significant remnant of ‘Erin’ and ‘I Old Songs’ is the second-beat dotted rhythm—though in *Claribel* it is often placed irregularly in meter. Did the visual prominence of the phrase at the top of the second page of ‘Erin’ (fig. 3–12b) contribute to the prevalence of descending scales in *Claribel*?

Writing through the memory continued with Ia, which became the opening of the piece. Here, again, one can see composed-out hesitation, overdwelling on C. Melodically, resemblance to Barnard’s own forms is at best fragmentary and oblique—does the opening exploration of $\hat{1}\text{--}\hat{3}\text{--}\hat{4}$ recall the $\hat{4}\text{--}\hat{3}\text{--}\hat{1}$ of b. 2 of ‘Erin’? (Labeled α in fig. 3–13.) As the movement continues, the violin melody gradually becomes more concerned with its own development and acceleration, and less with any ‘mnemonic’ duties: such an accelerationist approach to form anticipates *Habitual*.

The important ‘breakthrough’ in memorially writing-through Barnard’s melodies was the appearance of the rising sixth in IIb and then Ia (labeled γ in fig. 3–13). IIb makes a point of dwelling on this figure at length, elongating the second pitch through repetition, eventually repeating the interval 23 times. (Similar rising sixth figures, though less repetitious, are found in Ia.)

What might the numinous section at IIb signify? Firm overdwelling and repetition of a single figure for me captures the singularity of ‘mnemonic lag’ at issue in this piece—namely, what the repetitious engagement with material that has been only very partially remembered ‘feels like’. For me, it is this that is at the heart of melos: the accretion of mnemonic character (in simple terms, accretion of levels of ‘catchiness’), such that material aspects of line can be held on to. In IIb we see an instance of ‘dramatised’ forgetting, as if all that could be recalled from ‘Old Songs’ were its first two notes. Obsessive repetition could imply the

attempt to recall what follows—or a resignation toward forgetting. The repeated F \sharp here recalls the F \sharp s repeated at length in mvt. III, the first music to be composed. Until this point, it had been C that had been most ‘overdwelt’ upon: IIb thus represents a transition from material based on recollection of Barnard to a prefiguration of material in mvt. III, unrelated to any of Barnard’s melodies.

Of the portfolio pieces, *Claribel* is the most outwardly concerned with manipulation of mnemonics—both during the composition process, and in its resulting character. The piece aims to present the listener with material that will float in and out of ‘recollectability’. Such recollectability is nonetheless something the rest of the portfolio was concerned with: the accretion of recollectability I would seek to tie to ‘itselfness’. Explored in the previous section on *Habitual*, in its accretion of self-similarity, monophony’s poising between memory and anticipation is that which generated identifiability, and itselfness—‘melody by way of itself’, in other words. In the case of *Claribel*, the process of obsessive, half-failed compositional recollection results in musical material which is, for the listener, intended to be equally mnemonically pliable. Its identifiability as such is in a state of flux. It is a sounding music that attempts to replicate aspects of pliable recollection—with some parts swimming to the front of memory, others dissolving away.

§3.4 Feeling that remains in dusk: *Three Heames Settings*

A Blochian ‘anticipatory consciousness’ plays a strong role in the final piece of the portfolio to be discussed, *Three Heames Settings*. A piece for baritone, trumpet, trombone, bass clarinet and electronics, it was written for the US-based group Loadbang. At its centre are three sonnets by British poet Ian Heames, taken from a large collection published in 2016 (Face Press).

I first heard Heames’ writing around 2013 (giving a recitation of a number of similar sonnets from memory). It stayed with me, and I resolved to create some musical setting for it. Like Caitlín Doherty, Heames is associated with the younger generation of poets in the orbit of J.H. Prynne.²⁴ Unlike other poets in the group, who follow Prynne in creating densely textured poetry, often caustic

24. Namely the ‘Cambridge’ poets, though aside from Prynne, most are no longer based there. Heames’ own Face Press has also published Doherty in anthology. Other small presses associated with this group include Materials, Equipage, Critical Documents, Tipped Press, Barque Press, Veer Press, as well as Bloodaxe.

a.

Scientists studied a small delicate type of desert moss.
Caught one of the emotional support dogs
weeping.

I think we will see some dust
rise over the new city. The hard lot of the enamoured.
Have you seen
the video [. . .]¹
The linear sea path where the world's petals fall,
crying to the flood
[. . .]²

Stars shine on the solar farms of extinct forms,
in addition to the heavy shedding they experience.
[. . .]³

¹ of the surfing fawn? ² like a fawn / leaping.

³ The invisible worm has an en suite on Air Force One.

b.

But this,
for every seabed lifted,
isn't only fame.
The whole
cast,
probably an athlete
caught out by a sudden tide.
Almost as statuesque,
a diver in a robotic suit
found, smaller than sand and larger than clay—
love is
between anyone
the only translucent thing.

interlude

c.

Dust,
why settle,
do not go.
Nor spy, nor sorrow, on a song lyric lily.
I am doing push-ups and can hear a helicopter.
I don't like
crumpled things.
A random drove. A temporary high. The guaranteed au-
tumn.
Feeling that remains in dusk. Our two shells, lost
touch, tired in the sand. Torn seers
ghost into the long limos as a cicada dies.
Something else arcs down over the power plant
[. . .]¹

¹ with the complexity of a temple.

and politically charged, Heames' writing is gentler, yet with its own particularly unique atmosphere. They are often tender, with a glancing lyric 'I'—and at the same time, are parched, anthropocene, even post-apocalyptic. These were qualities I was looking to amplify in these settings.

The notion of 'setting' here has a double meaning: Heames' writing establishes a clear sense of locale. Sand, dust, seabed, seapath, flood, clay, tide, power plant—these are horizontal, wide spaces, blank, lacking in vegetation, apart from 'desert moss'. Heames' repeatedly uses the image of a helicopter, perhaps the characteristic image of Heames writing: a machine descending through its rotors' horizontal motion, throwing up clouds of dust.

The piece is in three sections, 'a', 'b' and 'c', with an interlude. (See outline of

texts used above.) The two outer settings, ‘a’ and ‘c’, are those that include the lyric ‘I’, and have been set with aspects of recitation. The recitation is intended to be blank, innocent, almost lobotomised—poised somewhere between the vocal style of Robert Ashley and Douglas Rain’s HAL9000. (Jeffrey Gavett, who gave the first performance, was unamplified, and given the largeness of Huddersfield’s St. Paul’s Hall took a more outward, projected style.) These settings also cut certain lines—partly out of deliberate fragmentation, but also through the elision of certain images.

The first and third settings are also united through their exploration of ‘mountainous’ melodic contour, climbing-toward and descending-from a ‘peak’: a diagram of the bass clarinet part of mvt. ‘a’ can be seen in fig. 3-14. This line, played *portato non legato*, interacts with recitation and more sustained material in the tape and the two brass instruments. One can see from fig. 3-14 the opening ‘loop’ of material, from b. 3 to b. 9 (the quasi-Mozartian technique used in other works such as *Habitual, For piano (dancing)* and others). But organised in this way one can see the relatively straightforward resemblance of contour throughout the rest of the line. Greater detail of continuous resemblance within this line can be seen in the self-similarity diagram, fig. 3-15, similar to those shown previously in the discussion of *Habitual* (fig. 3-7). The patterning of this line, with its repeated ‘x’ shapes, signals the ‘peaks’ and ‘troughs’ of the contour. In addition, one can see the large repeated passage, at the close of the movement (somewhat obscure in fig. 3-14 and score), which repeats b. 17-41, with slight alterations. This repetition is shown by the large diagonal parallels on the bottom right.

The comparison with the third setting can be seen in figs. 3-16 and 3-17. Fig. 3-16, showing the trombone line, illustrates a more smoothed, sinusoidal contour. The line is replicated in canon in the bass clarinet: crossing and intertwining, underneath a detailed, knitted and arpeggiated pattern in the tape (the full diagram of this section is seen in fig. 3-17). The contrast between the lines of the first and third settings is with the more mnemonic character of the bass clarinet line in the first setting: the salient ‘peaks’ to its motion, alighting on the same pitches. In the third setting, the ‘mountain peak’ contour has been eroded away, smoothed, with salience further diluted through interaction of *dux* and *comes* between the trombone and bass clarinet. Self-similarity in this section is also much less salient, as can be seen from fig. 3-18: here one can compare the

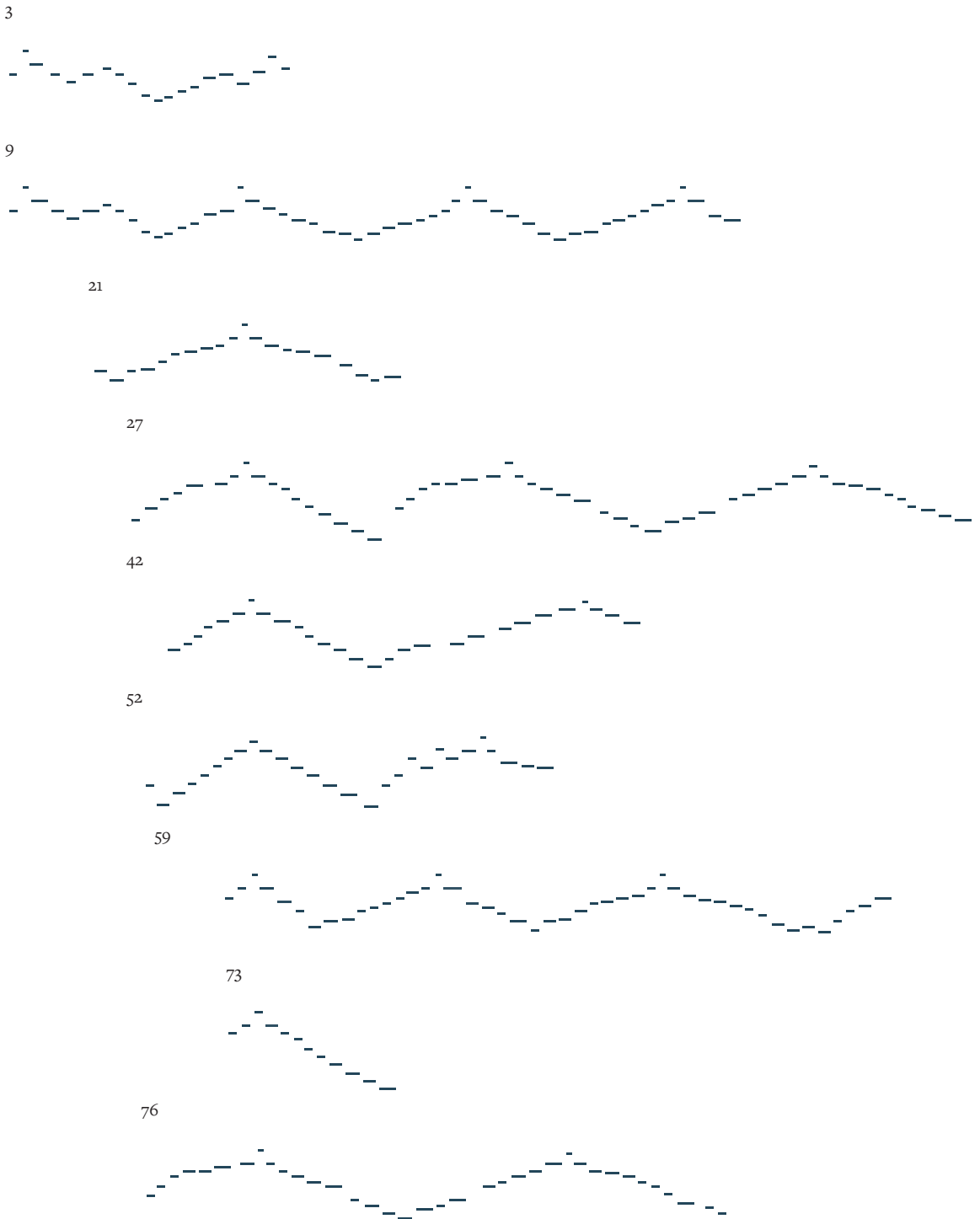


FIG 3-14

Three Heames Settings, mvt, 'a',
bass clarinet line. Organised by
contour. Bars marked.

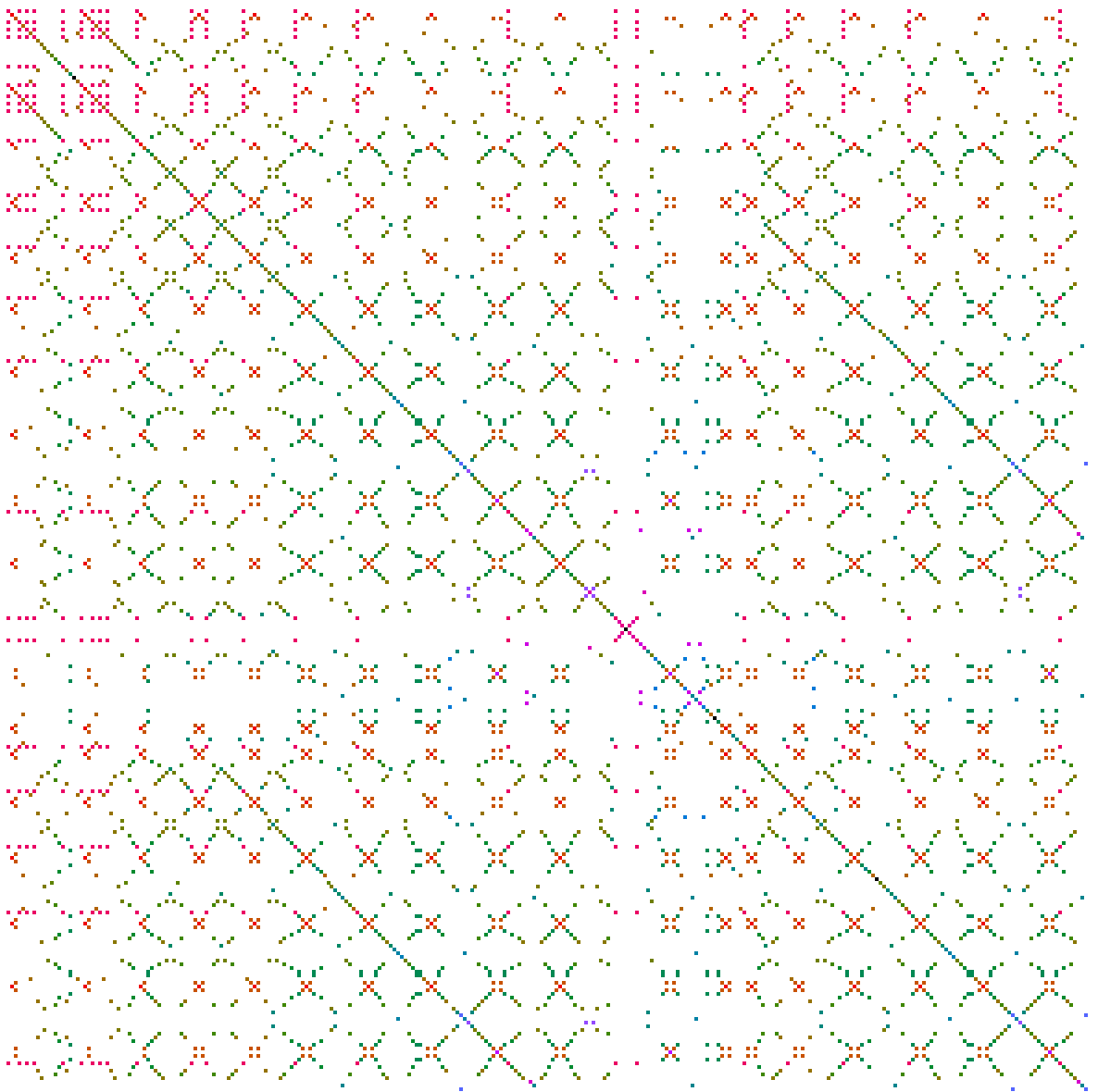


FIG 3-15

Three Heames Settings, mvt. 'a', bass clarinet line. Self-similarity diagram. (Compare figs. 3-6, 3-7.)

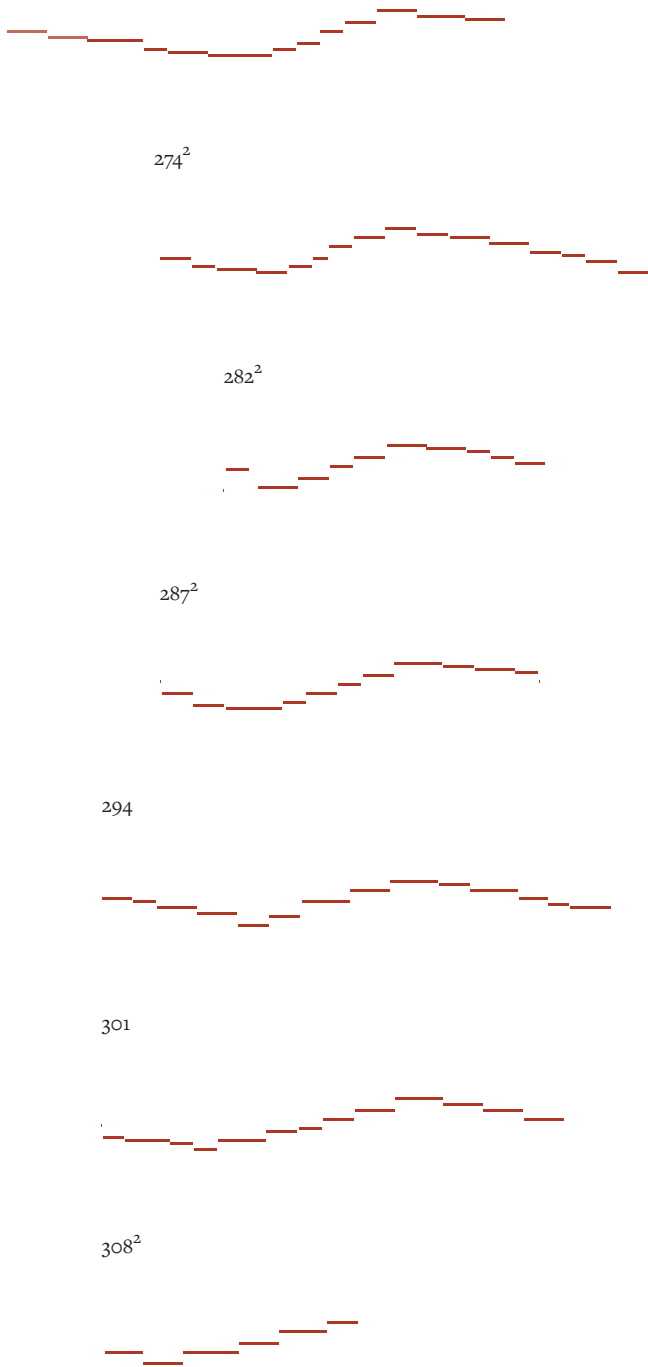


FIG 3-16

Three Heames Settings, mvt, 'c', trombone line. Organised by contour. Bars marked

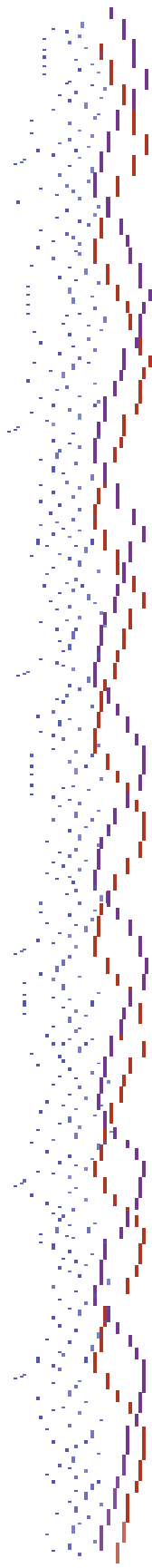


FIG 3-17

Three Heames Settings, mvt. 'c', complete midi sequence diagram.
Trombone = red; b. clarinet = purple;
electronics = blue. Note periodic appearance of three-note fall motive in electronics, at top of texture.

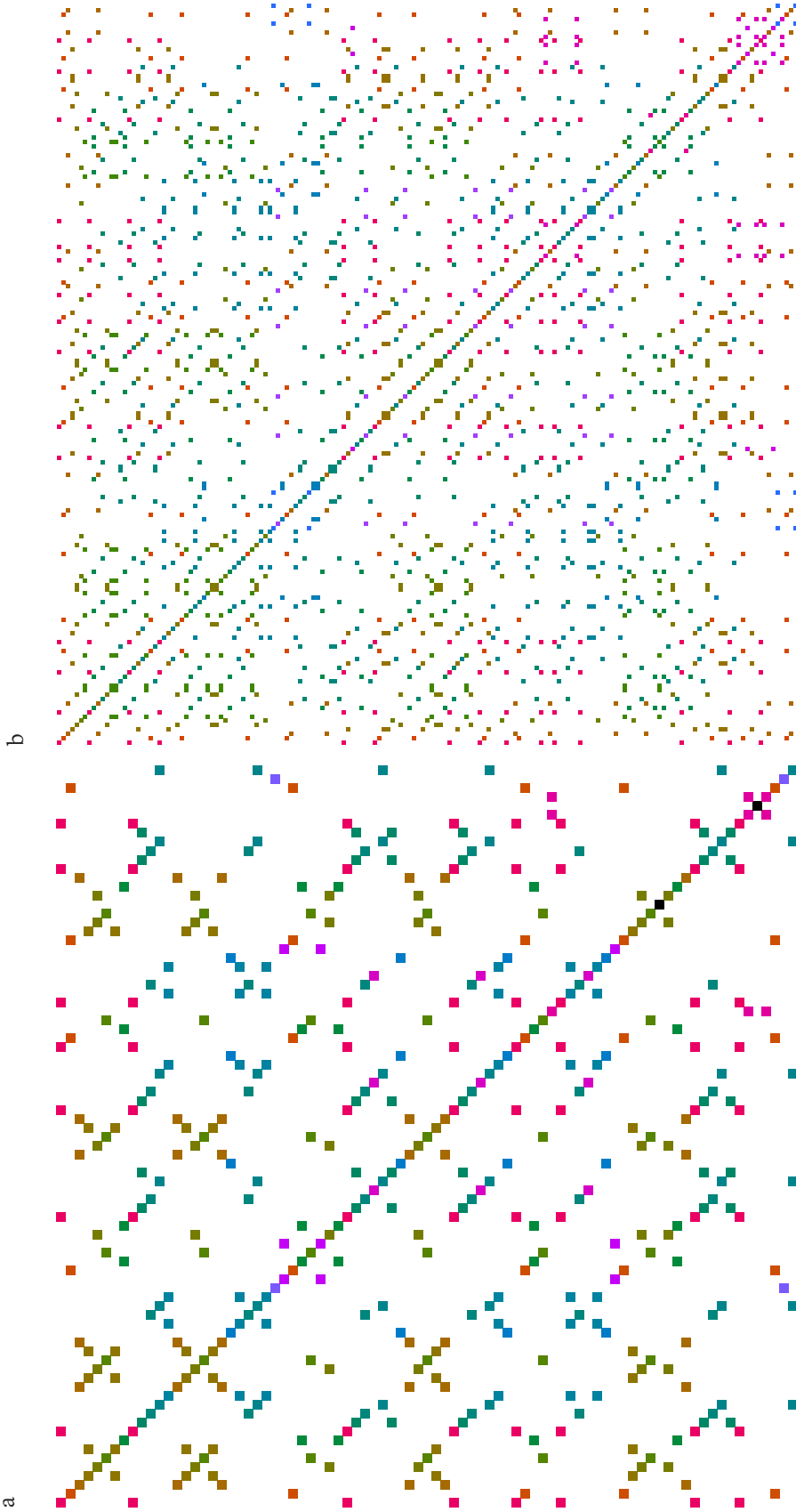


FIG 3-18

Three Heames Settings, mvt, 'c', self similarity diagrams.

a. Trombone line alone.

b. Trombone and bass clarinet lines interleaved together as a monophonic line.

trombone line on its own, and the interleaved trombone and bass clarinet lines taken together as a single pitch-stream. While contour is quite regular, there is no exact repetition. Even with their imitative interaction (fig. 3-18b), the overall structure is still much more indistinct in comparison with the bass clarinet line in the first setting (fig. 3-15).

The second setting differs from the first and third, in being entirely sung. The writer is seemingly more distant, an observer: the lyric 'I' is absent. The text begins with dispassionate narration: an esturine, diluvial setting (recalling the 'flood' imagery from the first text). An ambiguously described figure ('The whole / cast, / probably an athlete [. . .] a diver in a robotic suit') seems abandoned; an Ozymandian artefact of some unknown origin. But then, an abrupt transition, to a tender lovesong fragment: 'love is / between anyone / the only translucent thing.'

This fragmentary moment of tenderness, abruptly emergent from this dusty, flooded, postdiluvial landscape, predicably forms the heart of the whole work. Love imagery pervades Heames' sonnets—but here, the selection of texts served to deliberately isolate this subject. The presence of 'love' as a lyric subject harkens back to Doherty's *While we are both* ('there are only so many / Messages of Love / I can send to you / while we are both awake'). Both are perhaps unexpectedly tender moments within larger expanses of, in the case of the *Heames Settings*, lobotomised detachment (and in the case of *While we are both*, disappointment and pain). This moment also emerges at almost exactly the golden section of the whole work (the final bar line at around 800 seconds, and b. 199 at 495 seconds— $495/800 = 0.61875$, almost the exact golden ratio).

Melodically, a motivic link is also made here in this third setting, with the word 'love' set to a $\hat{6}-\hat{5}$ fall (b. 199–206), as well as a focus on contrast between the minor $7/4$ and major $15/8$ sevenths (b. 215 vs. 221), both prominent aspects of the closing section of *While we are both*. Additionally, the harmony focuses here on an identical voicing of G major, b. 239 in *While we are both*, b. 200 in *Three Heames Settings*. The difference here is that the G major Just $5/4/3$ triad is smeared by the presence of the diminished fourth, $32/25$, in the electronics.

As I suggested in chapter 1, modes of G, and G itself, are often central to the portfolio's music, not just through G's historical significance to music in Just Intonation, but also compositionally—this moment a case in point. The tuning structure of *Three Heames Settings* is likewise centred on G, with two overlapping

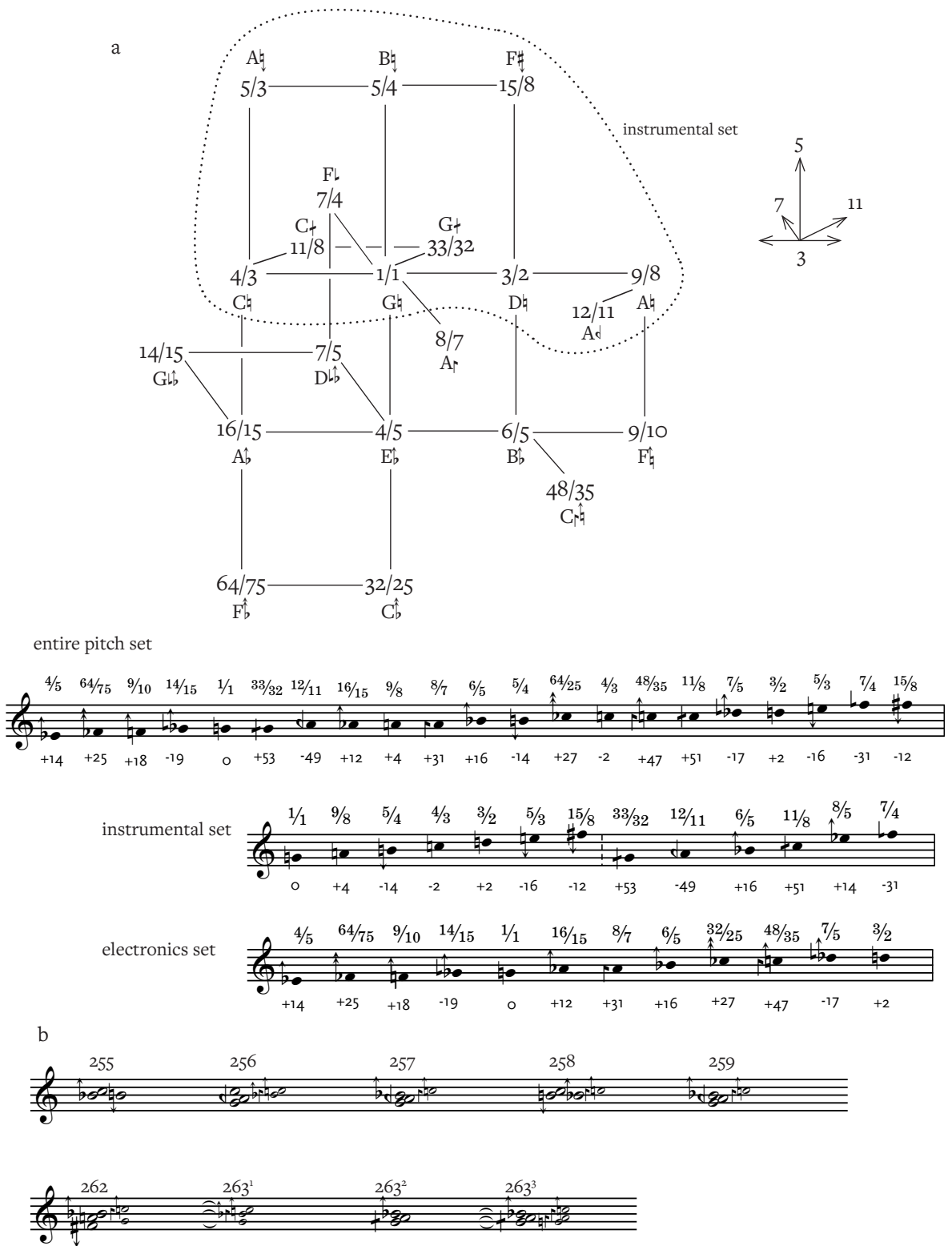


FIG 3-19

Three Heames Settings

a. Tuning lattice and distribution of pitches within the octave.

b. 'Interlude', progression of clusters. Note interleaving of instrumental and electronics pitch-classes to create dense harmony in a small area.

12-note tunings, one in the instruments and another in the electronics, forming a 21-note Just gamut. The lattice can be seen in fig. 3–19a, with the encircled part being the pitches confined to the live instruments. (The two tunings overlap on G $1/1$ and D $3/2$.) G forms the central pitch of the second setting, with the bass of the electronics part often alighting there or implying centrality. The interlude reinforces the second setting’s closure on G, with alternation between $1/1$ and $3/2$ in the bass, against a series of enclosures and clusters above. The final section of the interlude, a Ligetian *fortissimo*, concludes on a microtonal cluster on G (see fig. 3–19b)—its pregnant resonance carrying over to the entry of the third setting. The other two settings alight for on pitches major thirds away from G: the first setting alighting on E \flat as a polar pitch; the third setting (initially) settling on B \flat . (On the tuning diagram, fig. 3–19a, one can see these pitches as immediately above and below the G $1/1$.)

Like other pieces discussed in this chapter, this is music poised, as it were, between anticipation and recollectability. With the exception of the interlude (with its two distinct parts), each of these settings uses musical material in broadly uniform or anti-sectional manner, akin to baroque practice. Material is never repeated exactly, but its salience is consistent and often forthright. Anticipation of future movement is baked into previous habits.

In positioning all of this music between recollection and anticipation, the attempt is to collapse, or reinscribe, aspects of temporal unfolding. That material which has not yet been heard is inscribed in that which is being heard; and that material which has just been heard is as if a version of previously heard material. The piece looks to capture a kind of musical *deja vu*—which is resolutely not the same as repetition. Rather, for the listener is created a sense of having heard this particular music before; or that its future trajectory is perfectly what was expected, without being able to ascribe or predict its future motion.²⁵

One could regard this ‘flat’ or undifferentiated attitude towards futurability as a reflection of Heames’ own approach subject matter. Heames’ locations are horizontal and seemingly dimensionless. They often lack clear reference frames: text b. is ambiguous as to scale (‘smaller than sand, larger than clay’). None of the poems are particularly clear as to who they address, or who is doing the addressing; or whether the speaker is large or small, remembering or foreseeing, emotional or emotionless, human or nonhuman, in the future or the past or both

25. See in this relation, on variation (vs. repetition) Elizabeth Margulis, *On Repeat: How Music Plays the Mind*, 176ff.

or neither. In reflecting these aspects of the text, this music is the most ‘flatly’, or ‘circularly’ anticipatory of the whole portfolio. It tries to musically capture the text’s dimensionlessness, ambiguousness as to position and reference frame.

Is this, perhaps, ‘music of the future’—*zukunftsmusik*? Certainly, the airlessness of Heames’ writing recalls aspects of Stefan George’s ‘air from another planet’, in Schoenberg’s canonical example of *zukunftsmusik* in the second string quartet (op. 10). But this is music that also attempts to capture the ambiguous futurability of the present: the inscription of all futures within the present; the collapsing of recollection with anticipation. Futurability, a term borrowed from Franco ‘Bifo’ Berardi, amounts to what Berardi calls ‘the multiplicity of immanent possible futures [. . .] already inscribed in the present.’²⁶ Drawing on the history of emancipatory movements and anticipation of future emancipation—recalling Bloch—Bifo contrasts these yearnings with the dead hand of deterministic governance under neoliberalism, with its ever greater reliance on gigantic data flows and increasing attempts at technological pre-emption.

Heames’ writing, and this piece by extension, conforms to some extent to the apocalyptic mood of present culture. Heames’ texts were written prior to Autumn 2016, usually taken to be the inflection-point according to liberal culture. But, as for many other writers, it was clear following 2008 the likely direction of political travel. Perhaps it captures a fallout-laden future, full of ambiguous remnants and artefacts, dust, blasted horizons, floodplains and tides; more likely it sees those elements as already inscribed into present conditionality.

In his remarkable 1947 essay ‘A New Refutation of Time’, Jorge Luis Borges outlined a striking ‘denial of succession’:

Hume denied the existence of an absolute space, in which each thing has its place; I deny the existence of one single time, in which all events are linked. To deny coexistence is no less difficult than to deny succession.

I deny, in a large number of instances, the existence of succession. I deny, in a large number of instances, simultaneity as well.²⁷

Futurability is collapsed. Perhaps he is winking; yet Borges is never more serious than when he was potentially writing in jest. And in this case, his philosophical position is mostly initiated not through extension of the idealists (Hume, Berkeley—though he uses their writing as a buttress) but rather through

26. Franco ‘Bifo’ Berardi, *Futurability* (Verso, 2017), introduction, epub.

27. Jorge Luis Borges, *Selected Non-Fictions*, ed. Eliot Weinberger (Penguin, 1999), 322.

anecdote. A short account originally titled ‘Feeling in Death’, of walking through Barracas in 1928, at evening, Borges describes stopping for a moment at a street corner, seeing simple one-story houses, walls with portals, a fig-tree merging into shadow, in the distance the river, the sound of crickets. A scene that could have taken place, as Borges put it, at any time within the last hundred years:

This pure representation of homogenous facts—the serenity of the night, the translucent little wall, the small-town scent of honeysuckle, the fundamental dirt—is not merely identical to what existed on that corner many years ago; it is, without superficial resemblances or repetitions, the same. When we can feel this oneness, time is a delusion which the indifference and inseparability of a moment from its apparent yesterday and from its apparent today suffice to disintegrate.

The number of such human moments is clearly not infinite. The elemental experiences—physical suffering and physical pleasure, falling asleep, listening to a piece of music, feeling great intensity or great apathy—are even more impersonal. I derive, in advance, this conclusion: life is too impoverished not to be immortal.²⁸

Borges was attempting to grasp at something deeper than simple nostalgia, or reverie. His account, of the experience of flat, or dimensionless time at evening, is echoed in Heames’ text: ‘Feeling that remains in dusk.’ Ambiguity as to time period, and order of events, is a frequent characteristic of his writing. The texture of these texts is postdiluvian—it casts forward to some unknown future state of ecological catastrophe; and at the same time recalls the figure of Gilgamesh after the deluge, regarding all humans transformed into clay.²⁹ For Augustine, and for Rovelli, quoted at the opening of this chapter, time is difficult to isolate outside of its concatenation within human experience. Borges ends up concluding as much: ‘To deny temporal succession, to deny the self . . . appear to be acts of desperation, and are secret consolations. . . . Time is the substance of which I am made. Time is a river that sweeps me along, but I am the river’.

The successive quality of the melodic, poised between memory and anticipation, is an instance of this intensely human concatenation. Time travel is simply the retention of memories of events which other humans agree not to have yet occurred. Succession, as such, is tied to reference—that which follows and succeeds is that which can be pointed to. Melody comes into its own by way

28. *Ibid.*, 138. (Alternate translation of story at 324.)

29. Gilgamesh, Tablet XI, 125-35. See Andrew George (tr.), *The Epic of Gilgamesh: A New Translation*, Penguin, 1999, p. 93.

of similar points of reference and recollection—‘by way of itself’. Such is the analogy with the overall lived experience of succession. In other words, succession is indelibly humanly—it was perhaps this that led Borges to seek to deny it. As if, in that moment at dusk, he spontaneously glimpsed, if only for a moment, something unbounded by common human unfoldedness. It was, as he wrote, a ‘secret consolation’.

§3.4 Hope, disappointment, okayness: future considerations

When we are satisfied with this new order of feeling, there will no longer be any paralyzing despair at the rising sun or at its setting. Between the equanimities of the people walking by, the girls will know okayness and the women will know effortlessly eloquent awe. The people and the animals will easily read faces.

—Anne Boyer, ‘Formulary for a New Feeling’³⁰

Going on, in compositions of 2018–19 I have tried to follow the trajectory set in motion through compositions of 2017, in particular a gradual shedding of ‘personal’ melancholy towards a more ‘general’ conditionality. Compositions of 2018, such as the percussion quartet *Disappointment rondeau*, head towards something both angrier and more whimsical. (The piece attempts to capture the wish to escape humanity—and the indelible humanness, and vanity, of such a wish.) Present compositions include a large-scale project of settings of texts by Lisa Jeschke, from her 2018 chapbook, *The Anthology of Poems by Drunk Women*³¹—a collection of great fury, as well as dark humour. Another present project is a composition for Ensemble Modern (to be premiered March 2020 in Frankfurt), tentatively titled *We are all okay*. Exactly how to respond to the situation of the present remains a fraught question, one I am not certain of. (I experienced severe compositional block during both 2018 and 2019.) Exactly what role new music is supposed to play, and how it might best be mobilised, is a question for which there are no straightforward answers. I still believe, at least for myself, that new music could form some combination of consolation and stimulation, anger and hope.

We live in a culture profoundly frightened about the future. As Svetlana Boym pointed out around 2000, ‘The twentieth century began with a futuristic utopia

30. Anne Boyer, *Handbook of Disappointed Fate* (Ugly Duckling Presse, 2018), 111.

31. Materials Press, 2018

and ended with nostalgia.³² The proliferation of nostalgias has now become so overwhelming that it can feel suffocating. The twenty-first century has seen a revival of various experimentalisms, with their attached concern for presentism and futurism. The idea of the future is itself an object of nostalgia. Nostalgia has even reached the ‘anti-nostalgic’ art movements, concerned with renunciation of the past. Boym, in her writings, did her best to come into an accommodation with nostalgia. Given the rise of fascist political movements, each with their own attendant nostalgias, it is increasingly hard to do likewise.

Positioned against rosy images of things past is the other operating metaphor typical of the present period—that of the abyss, the ‘cliff-edge’.³³ I would like, if possible, to refuse both these positions. Nostalgia does not interest me—my focus, in this thesis commentary, on aspects of succession, and, indeed, melody, has been motivated in part from an attempt to write-through, and perhaps purge, these considerations from their usual charges of nostalgia or backward-facedness. Rather than emulation or adulation, I opted, in the initial chapter, to use the metaphor of digestion—implying a consumption and reconfiguration of extant and past materials. But neither do I find it artistically interesting any more to stare into the abyss.³⁴ It is easy enough to do as much while reading the news. Neither Washington nor Moscow;³⁵ neither the abyss nor the memory lane. Exactly how to achieve such a ‘third campist’ position is a question as yet out of reach.

Ernst Bloch emphasised the interrelation between hope and disappointment—that hope as such existed within the conditionality of disappointment.³⁶ To simplify, hope as such is precisely that which is capable of being disappointed. I am not an optimist by character; but then in a situation of recurring disap-

32. Svetlana Boym, *The Future of Nostalgia* (Basic Books, 2001), introduction, epub.

33. The image conforms well to George Lakoff and Mark Johnson’s orientational metaphors GOOD IS UP; BAD IS DOWN / VIRTUE IS UP; DEPRAVITY IS DOWN. See Lakoff and Johnson, *Metaphors We Live By* (University of Chicago Press, 2003 [1980]), 16-7. Lakoff discusses the concept itself in ‘Why the Fiscal Cliff Metaphor Won’t Die’, *Alternet*, Dec 3 2012, <https://www.alternet.org/2012/12/lakoff-why-fiscal-cliff-metaphor-wont-die/>.

34. The metaphor is impossible to disassociate from Lukacs’s famous description of the Frankfurt School as inhabiting the ‘Grand Hotel Abyss’: ‘a beautiful hotel, equipped with every comfort, on the edge of an abyss, of nothingness, of absurdity. And the daily contemplation of the abyss between excellent meals or artistic entertainments, can only heighten the enjoyment of the subtle comforts offered.’ Comforts or no, we all live there now. Georg Lukacs, ‘Preface’ (1962) to *The Theory of the Novel*, tr. Anna Bostock (MIT Press, 1971 [1920]), 22.

35. cf. Editorial, ‘For the Third Camp!’, *The New Internationalist*, Vol. 6 No. 3, April 1940, 67-8. <https://www.marxists.org/history/etol/newspape/ni/vol06/no03/editorial.htm>

36. ‘Discussion between Ernst Bloch and Theodore Adorno’ (1964), in *The Utopian Function of Art and Literature: Selected Essays*, tr. Jack Zipes and Frank Mecklenburg (MIT Press, 1988) 16-7.

pointment, one is consoled by the fact that such disappointment is possible at all. To retain disappointment means that one has not lost contact with its hoped-for inverse. In other words, as long as the world continues to disappoint us, we know that we have the capacity to imagine a better one. But undoubtedly, we have run out of time for melancholia. We cannot afford to not have hope. It remains unclear what such an affordance should truly signify, psychologically speaking. In amongst the psychological barrage, I hope that in future music, I will be able to grapple better with what such an affordance could mean, for all of us. ■

BIOGRAPHY

Lawrence Dunn was born in Walthamstow in 1991, of mixed British and Anglo-Indian background. Composing from an early age, he attended Trinity College of Music, training as a pianist and percussionist. In 2009 he won BBC Young Composer of the Year, later studying at the University of Cambridge and the University of Huddersfield. He taught music at Rushey Green Primary School, Catford. In 2018 he was shortlisted for the Gaudeamus Award. His music has been performed by, among others, BBC Scottish Symphony Orchestra, Apartment House, Plus-Minus, Slagwerk Den Haag, Quatuor Bozzini, Juliet Fraser, Philip Thomas and Sarah Saviet. Forthcoming works include a new piece for Ensemble Modern, performed March 2020.

www.lawrencedunn.co.uk

COMPLETE LIST OF WORKS , 2015-18

- Trio 'O Jean Armour'*, piano trio, 15', March 2015; fp at Eightforty, London.
- Jumping song*, automatic piano and performer, 7', October 2015; fp by RHEA, Huddersfield.
- For piano (singing)*, piano solo, 10', November 2015; fp Gregor Forbes, Glasgow.
- Your wits an E la*, two violins, 7', Dec-Jan 2016; comm. Listenpony, fp by Mainly Two, London.
- More music for the asleep*, wind ensemble with piano and five singers, 4', Dec-Jan 2016; fp by Orkest de Ereprijs, Apeldoorn.
- Sentimental drifting music*, a. fl., mez. sop., gui., elec., 13', Feb. 2016; workshopped by Trace Ensemble, Huddersfield.
- Ambling, waking*, orchestra, 14', Mar-Apr. 2016; fp by BBC Scottish Symphony Orchestra, cond. Ilan Volkov, Glasgow.
- Midsummer harp studies*, harp solo, 15', Mar-Jun. 2016.
- Contradanse*, viola and perc., 10', May-Oct. 2016; comm. Sound and Music, for Sounding Motion, fp London.
- Claribel*, violin and piano, 20', Oct-Nov. 2016; fp by Aisha Orazbayeva and Joseph Houston, Huddersfield.
- Two hundred pieces of music*, indeterminate instrumentation, c.200', Oct. 2016; fp by The Set Ensemble, Cheltenham.
- Trio for R*, piano, cello, guitar, 12', Nov-Dec. 2016.
- While we are both*, soprano and fixed electronics / soprano and four keyboards, 15', Nov-Jan. 2017; fp by Juliet Fraser, Huddersfield.
- Carrying*, string quartet, 14', Feb-Sept. 2017; workshop perf. and final perf. by Quatuor Bozzini, Montreal / Aberdeen.
- Habitual*, violin solo, 12', May 2017; fp Sarah Saviet, Aldeburgh.
- For piano (dancing)*, piano solo, 11', June 2017; fp Philip Thomas, Huddersfield.
- Three Heames Settings*, bar., tpt., tbn., b. cl., elec., 12', Jul-Aug 2017; fp Loadbang, Huddersfield.
- Set of four*, kbd., e. guit., vln., perc., 17', Nov-Dec. 2017; fp Plus-Minus, London.
- Disappointment rondeau*, perc. quartet., 8', Apr-Jun 2018; fp Slagwerk Den Haag, Utrecht.
- Maya Verlaak*, piano, piccolo and assistants, 1', Oct. 2018.

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