THE PHYSICALITY OF SOUND PRODUCTION ON ACOUSTIC INSTRUMENTS

A thesis submitted for the degree of Doctor of Philosophy

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Abstract

This thesis presents practical research into sound production on instruments, working collaboratively with players, in order to build an understanding of the sounds available.

I have explored the way in which instrumental technique can be extended in such a way as to function as the basis for musical material. The function of 'figuration' has also be brought into question, by employing seemingly primitive, residual material pushed to such a degree that it is possible to hear what happens underneath a gesture.

Research in this area has been conducted by, among others, Helmut Lachenmann and Rebecca Saunders; I am drawn to the way their work highlights the tangible quality of sound. The exploration of the physicality of sound production inevitably encounters the problem that the finished work becomes a catalogue of extended techniques. My research has drawn on the work of these composers and has attempted to resolve this problem by exploring the way in which texture can suggest 'line' and the structural implications of sculpting self-referential material through angular and polarized divisions. This facilitates a Braille-like reading of a sound's progress by foregrounding a non-thematic sound-surface of resonance and decay.

This takes a positive and active approach to the problems of musical language, by questioning the functions and expectations put upon music. The possible solutions have been worked through in a series of works for mixed chamber ensembles, in order to investigate the palette possibilities of fusing instruments in intimate settings.

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The physicality of sound production on acoustic instruments

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I - Introduction

In this written component I present analytical and aesthetic reflections on the fourteen pieces in my portfolio for the following forces/instrumental combinations:

INVOCATION for solo pre-recorded voice (multi-track stacking optional)
The sky is thin as paper here for solo baritone
piano trio for violin, cello and piano
piano quintet for violin, viola, cello, double bass and 'prepared' piano
pariete di vetro for piccolo/flute, clarinet in b-flat, horn in f, violin, viola, cello and double bass
Piece for string quartet
THE RENDERER for string orchestra, percussion, piano, harp and celesta
Music for Three Cellos and Ensemble for three cellos, oboe, bass clarinet, two percussionists, harp, piano and steel-string guitar
Kapur for solo double bass, flute, clarinet/bass clarinet in b-flat, horn in f, piano, violin and cello
LEADER-reel-spool-GAPE for flute, oboe, clarinet in b-flat, bassoon, horn in f, percussion, piano, two violins, viola, cello and double bass
GAPE-spool-reel-LEADER for flute, oboe, clarinet in b-flat, bassoon, percussion, violin, viola, cello and double bass
cleave for string quartet
Double Duo for Violins and Bass Drums for four violins, large bass drum and kick-drum
Sitting on Gertrude Stein's Lap for solo piano

The ordering for the individual discussion of pieces within the portfolio falls into four main categories within the second half of the commentary. The fifth chapter deals with the two vocal pieces, the sixth chapter concentrates on mainly string material derived from finger-board positions. The penultimate chapter deals with four pieces that function as grounds with overlaid material and the interchangeable nature of solo lines or 'accompanying' material when viewed as a continuum. The final chapter covers three pieces (two for string instruments but not derived exclusively from finger-board positions) and a solo piano work that all reflect my earlier attempts at activating the static cells of material used.

Central to my work is an investigation of varying combinations of instruments working as one, with or without a ground-like continuum, the latter normally providing a ground of whitened erasures. The process of constructing a piece involves preparing blocks of progressively less contrasting material, cutting them up and placing them in sections, often of predetermined duration. The climate of constant re-orientation provided by the incorporation of physically motivated instrumental writing gives rise to several perspectives on the same type of material.

Early on in my research for this thesis, I was engaged in the exploration of sound production on acoustic instruments, and the way instrumental technique could be extended to function as the basis for musical material and even to suggest structures. It followed that the function of 'figuration' was brought into question, with my proclivity for seemingly primitive, residual material pushed to such a degree that it may be possible to hear what happens *underneath* a gesture (in terms of the effort required) through slightly varied repetition. I aimed to highlight the tangible quality of sound and explore the way in which texture might suggest a broader conception of 'line'.

I have examined the function of form in sculpting structures out of physically motivated yet self-contained material, looking closely at the role of recurrence and its implications over a sustained period of time. An earlier model for the approach I adopt can be found

in Mompou's *Musica Callada* where musical development is minimised or concentrated into small forms, I feel that many of my longer pieces actually have small forms. There follows an examination of the difference between the innate physicality of a gesture and extra-territorial or extended techniques that can potentially be sprinkled on any material as a seasoning. This preference for having physically motivated positions determine the resultant sound leads to a notion of some kind of 'passage-work' or figuration which is discussed within the third chapter.

The section on *muisca povera* reflects upon my predisposition for an impoverished aesthetic that paradoxically coincides with a decadent sensibility. I suggest that any musical object can transform itself from a banality to a luxury depending on the context. The astringent and single-minded quality of the works presented contrasted by the willingness to surrender to organisation by convolutes (such as equivalents to the literary cut-up or fold-in devices), almost as a trace of absented consciousness is also explored within the fourth chapter. The caveat here is that editing, deletion or rearranging is permitted as in any other method of composition. This approach provides a certain distance between any compositional intentions and the material at my disposal, thus transforming the state of 'blockage' into a creative space.

The conclusion could be seen as a continuation of the chapter on *musica povera* as well as a reflection on the overall mood of the works presented. I found that a projection of physicality through indulgent means worked through in isolation lead to a sense of ailing convalescence if not malaise.

Chapter 1 - Form and Structure

A reduced repertoire of physical instrumental gestures, with or without superimposed material, has formed the template for many of the pieces in my portfolio. This procedure is informed by a series of equivalences, approaching near-repetitions of contour, shape and procedure that suggest 'more of the same'. This "repetitive structure of sound objects"[1] embeds the physical genesis of each slightly altered or non-linear continuous cell, not only through recurrence but by a sense of infinite continuation that resists completion. The result is a striving for "repetition within a larger thing whose *telos* is not given…but is in the process of being formed."[2]

The application of this model to acoustic instruments prevents the reductionist severity of "trigger timbre"[3] (which suggests the mechanistic recalling of a fixed sound) because individual players influence and inflect each statement of the material. The physicality of sound production on acoustic instruments may be associated with an in-built sensuality due to the emancipation of timbre from the performer's interpretive realm. However, my research has moved towards allowing the physical aspect of a gesture to generate the raw material, taking physical positions, rather than pitch successions or even *Klangfarbe,* as a starting point. The treatment of this material has remained pared down, usually working through an inevitable and predictable process in a clear fashion with less and less imposed timbral manipulation. The subordination of grain-conscious details that flower more freely from a developmental form leaves a fixed framework of singular modes of playing that may initially yield striking results. However, the lack of progression and transformation leads to an intentional jading of the palette that is subsequently relieved through the most basic means. John Rahn writing on repetition with changes-of-context and its relation to cognition writes:

[1] François 1990: 112
[2] Rahn 1993: 50
[3] François 1990: 113

> This process of continual repetition, continual change-of-context constituting meaning, creatively folding a life back over its traces as it unfolds, is a source of great satisfaction, aesthetically desperate and desperately aesthetic…[4]

My work promotes a shift of emphasis from the sound source to the effort required to create sound in general, whose relation to the sound source varies from integral to arbitrary. Again, there is a certain free-fall resignation in relation to the resultant sonorities, tempered by patterned figuration that leads to a deceptively selective whole. This detachment was spurred on by the elemental presentation of a painted surface in relation to its underlying support in the work of Robert Ryman. The materials, wall, hanging space, choice of natural light play a key role in Ryman's works and are inseparable from the 'image'. I aimed for this basic physicality in my work and expelled the need to cultivate or 'compose-in' dramatic effect, hoping that the juxtaposition of distinct material types would provide an automatic frisson.

This 'free-hand' distances my work from any rigorous algorithmic approach; the structural delineations prove too non-rational to fit in with a generative model. Such an approach may, in some way, be connected to Adorno's notion of "bad serious music which may be as rigid and mechanical as popular music"[5]; indeed, the relationship between the exposition and the conception of the whole may be merely "fortuitous" within an "extraneous framework"[6]. However, the delight in stacking gradually altered taxonomical sets dispels any notion that "the whole is never altered by the individual event"; even if the austerity of approach seems "aloof" and "imperturbable" it will not go "unnoticed throughout the piece"[7]. Adorno's critique of set forms as leading to the mutilation of details "by a device which it can never influence and alter, so that the detail remains inconsequential"[8] may also apply to my use of frameworks, with the caveat that my forms are not "pre-given and pre-

[4] Rahn 1993: 53
[5] Adorno and Simpson 1941/2002: 441
[6] Ibid.
[7] Ibid.
[8] Ibid.

accepted" and are often so elemental (e.g. blank alternation) that they resist the implications associated with the concept of classical 'form' as applied to contemporary music. His writing on context, contrast and themes in isolation being "disrobed to insignificance"[9] may also seem to apply to my omission of any exposition and development. But I would resist Adorno's negative characterisation of these tendencies: it does not, for instance, make room for the contemplation of the nuanced, mottled repetitions that surface in Morton Feldman's late work:

> Feldman's music, in deconstructionist terms, is composed of no recurring, no irreversible significations; it is composed of 'modulations' (i.e. slight internal variances), differences which are not opposites but shiftings, ongoing displacements, de-centerings, un-fixings: a chain of differences.[10]

Brian Kane, writing on 'Aspect and Ascription in the Music of Mathias Spahlinger', gives an account of a 'phenemological' appreciation of structure in Spahlinger's *éphémère*. Kane comments on the impossibility of parsing the repetitive, cyclic pattern that dominates the work into a unity but intuits that the "pattern is accruing new sounds with each cycle"[11]. There follows a drawn-out exploration of the significance of the insistent, "garish" percussion rim-shots that lacerate Spahlinger's work, the feature that provided Mahnkopf with ammunition for a reductive deconstruction of Spahlinger's anti-'polyphonic' material. Kane writes that the rim-shot's "arrival and prolongation succeed in negating the formal design of the piece in the listener's imagination. When (nearly) mechanical repetition reaches this degree of saturation, the attentiveness of the listener becomes focused on only the smallest resulting differences in resonance. The arrangement is diachronic – the present object negates the previous. Moreover, there is nothing even resembling 'apperceptive overload'. The material is so ridiculously simple, so ridiculously reduced that there is no problem for the listener to absorb all that he hears."[12]

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[9] Ibid.: 439
[10] Sabbe 1995:
[11] Kane 2008: 599
[12] Ibid.: 602

All music inevitably elapses in time, a structure that 'goes away'; this problematizes and obscures the comprehension of an ordered process that may reflect any hypothetical aims (highlighting physical practices, not results, in my case). This approach should be distinguished from Lachenmann's use in the early works of sound as "information about the conditions of its creation" or the impression of "sound as information about its decay"[13], due to the absence of any afterglow aura that might reveal any of the ignition's components. A structure akin to Gertrude Stein's use of "prolonged present" leading to "continuous present", "beginning again and again" if not "using everything"[14], as outlined in her essay *Composition as Explanation,* characterises my approach to prolonging 'material types' by revelling in unassuming recurrence. Wayne Koestenbaum describes Stein as being in a state of "rested development" and observed that she "writes against maturity, against development….by enjoying the arrested state of going nowhere."[15] This sensibility that allows an artist to resign, in a world-weary way, to the most blank, recurring material may be steeped in melancholia, but a reward may be found in the transformative power of building up voluminous stacks of such moments. Writing about his approach to the blank paintings of Robert Rauschenberg, John Cage found that he could view them like he had done with Abstract Expressionism – "namely, a surface having no centre of interest, which was not necessarily confined by the frame."[16] Cage even evaded the need for ideation in his earlier Rauschenberg essay:

> Ideas are not necessary. It is more useful to avoid having one, certainly avoid having several (leads to inactivity). Is Gloria V. a subject or an idea? Then tell us: How many times was she married and what do you do when she divorces you?[17]

Persistently employing undeveloped, skeletal fragments of 'single-category' or one dimensional material, juxtaposed without the interpolation that would form a traditional phrase, promotes a sense of the objects being spatially placed on top of

[13] Wilson 1994: 18
[14] Stein 1926/1993: 494
[15] Koestenbaum 2000: 312
[16] Cage 1961/1978: 187
[17] Cage 1961/1978: 99

each other in an architectural manner. I aim to realise this structure by employing a singular, integrated over-all form that contains instances of polarised and singular material types. The use of such residual 'material types' treated in such an accumulative and insistent manner, re-introduced over relatively extended periods of time, gives rise to an imbalance of the 'worth' of constituent parts in relation to the sum of the whole. The play between varying acoustic phenomena is closely related to the dialectical exploration of form often ascribed to Lachenmann as the dialectics of refusal and order, which alters the relationship between perception and expectation. Lachenmann, however, eventually dismissed the traditional dual treatment of sound and form; he found that "the idea of sound ultimately" results "from the tentative concept of form"[18] and vice versa. The sensitive approach of arriving at a concept of structure through listening and ordering an object in its own environment does not seem to apply to the treatment of such one-dimensional material. Instead, it could be seen as working in opposition to Lachenmann's theory that sound functions as a "multi-dimensional structure of orderings…not rapidly conveyed as a flat acoustical stimulus" which gradually unfolds "through a multi-layered, multi-significant process of feeling out a transient construction…"[19]. The container that stores the repetitive scraps of sculpted material in my work becomes as much a 'feature' of the finished work as the nature of the actual material, and operates elusively as a Barthesian, unnameable 'third meaning'.

Drawing a listener's attention to clearly defined patterns and the process of charting the rate of alternations makes up for a lack of thematic growth or mutation on a subcutaneous level. This detached organisational approach leads to a closed system, contradicting Lachenmann's use of "dynamic transformations", following from the consideration of form as an aspect of sound that is "projected into time" like an "arpeggio of static and/or dynamic sound situations."[20] Even in works where I have engaged more overtly with traditional forms (alternations are immediately suggestive

[18] Lachenmann 1995: 6
[19] Lachenmann 2002: 36
[20] Ryan 1999: 23

of a 'rondo' shape), there is no sense that the ordering provided the catalyst for the work's individual aims – there is no sense of responsibility or indebtedness. Such naïve recognisable forms are left with minimal identifiable characteristics due to the imbalance between duration and the 'weight' of the constituent parts in terms of overall scale, thus avoiding complex modernism or post-modernist archetypal play. Much of Lachenmann's output seems to circumvent the audience's capacity to chart the course of a particular gesture through extreme saturation or a gaping chasm: "the ratio of changing acoustical parameters is often either radically low, so that his gestures appear totally isolated, or so high that fields of manifold overlapped activities freeze into static blocks."[21] Form in some of Lachenmann's later work seems to function as an extension of audible resonances, wherein protraction of resonance itself leads to the material being presented in proportionally unorthodox balances. The material is not necessarily developed in the traditional sense but sustained "beyond the length that might make it containable", opening the "music out onto different planes".[22] Any systematic and relentless listing of musical objects within this aesthetic of imposed sparing-ness may be explained away as 'structural thinking', to borrow more terminology from Lachenmann. Perhaps the most extreme example of this approach in his output would be found in the final *Ein Kinderspiel* movement: *Schattentanz/Shadow Dance,* which consists exclusively of a compound rhythm being beaten out on the highest two notes of the piano. The vexatious and limited material gains significance "through resonance, hallucinations, or imagined melodies that the pianist can't even control, because it comes through the resonances, which give you many other lower frequencies".[23] Through such seemingly one-dimensional material the composer aims to transform the "change of hearing…from an abstract model to a series of 'challenges'".[24]

[21] Hockings 1995: 10
[22] Pace 2001: website
[23] Steenhuisen 2003: website
[24] Lachenmann 1982: reproduced in Bohy 2003: 5

Technically speaking, resonance can occur when two parts of a frequency's impedance have the same value and "a tiny applied force will produce a huge response".[25] This model can be dialectically applied to the restricted sound palettes as discussed above, as an instance of suspending expectations. Lachenmann states that such a moment's complexity reaches "'zero' and 'infinity' at the same time: a listening situation that the composer…can never develop in all its ramifications, but can allow to self-generate"[26] as it resounds, just like friction contributing some sort of "mechanical impedance" which cannot be compensated for. The particular kind of fragility that seems to flower from this way of working is beautifully exemplified in Nono's *Fragmente-Stille, an Diotima* for string quartet. The particular examination within that work of what "can occur in spaces of passing time, in atmospheres of dying sound, in silence" may be an example of what Roland Barthes describes as a "digression".[27] Such space and clear differentiation between pause and sound-event makes the psychological process of ordering more explicit to the listener. Nono did not desire to make use of preconceived fixed structures but favoured "creating elemental preconditions for structures – of which silence is only one – often via massive, almost archaic simplifications – to draw attention to the anatomy and also the structured nature of sound itself", therefore allowing "structuredness to be perceived".[28] Lachenmann, writing about Nono's late quartet, commented on the array of fermata that are stacked-up in seemingly "artless configurations" and dignified by *pianopianissimi* dynamic markings and the "radical reductions and refinements in playing technique which demand of the player a new and often unfamiliar degree of self-denial and self-discovery".[29]

Dora Hanninen, in her appraisal of Morton Feldman's *Coptic Light,* advocates a shift in analytical focus towards what evolutionary biologist Ernst Mayr called 'population thinking'. This approach involves a cumulative shift from 'individuals' to

[25] Johnston 1989: 239
[26] Lachenmann 2004: 4
[27] Stäbler 1999: 70
[28] Lachenmann 1999: 25—26
[29] Ibid.: 27

'populations'; the latter is described by Hanninen as a set of segments – defined by their 'range of variation' and the 'distribution' of these properties among segments in the population. This approach is wise when dealing with a work such as *Coptic Light,* in that it is mostly made up of eight-bar units, slightly and sometimes distinguishable by shifts and slight alterations in patterning and orchestral distribution. More recently, Bryn Harrison has explored the role of time, memory and recursive structures through presenting "a series of quasi-repeating panels, moments in which similar material might be marginally stretched or compressed"[30] in a similar fashion.

> In late Feldman pattern extension tends to involve not literal repetition but semblances of repetition – numerous, often uncoordinated, adjustments in duration, timbre and pitch. Feldman's penchant for pattern extension by near repetition poses a distinct cognitive challenge: the proliferation of near repetitions frustrates attempts to prioritize events by distinctive features, and thereby categorize, or even remember, individual instances. The result is superabundance of nuance that eludes conceptualization, leaves listeners with little to report, analysts with little to say.[31]

The decision to hang the construction of a work on something as elemental as four pitch-class dyads that may only be stratified by register 'displacements', seems to belong to a dialectic of what Lachenmann referred to as 'artless art'. Writing on the hand-woven carpets that inspired Feldman for many of his later works, Kendrick and Tattersall write that the "persistence of pattern which runs throughout the art of the East is due to the inclination of the craftsman to let well alone."[32] Gerhard Stäbler discusses his use of patterned number sequences and even Morse Code in forming a work as devices that may represent "repetition without reiteration…to encounter musical means that transcend pure reproduction, hoping to *dig out time*."[33] I fail to appreciate how incorporating musical equivalents to text poetry, telephone numbers or numerology-inspired series honours the interrelated and organic nature of musical energy. Indeed, any engagement with using music to evoke physical equivalences

[30] Saunders 2008: website
[31] Hanninen 2004: 227
[32] Kendrick, A.F.; Tattersall quoted in Feldman 1981/2000: 139
[33] Stäbler 1999: 73

seems reliant upon too basic a metaphor to create a piece 'about' extra-musical elements. Montage form, however, is a valid approach that allows the composer freedom and licence to give a free hand to the musical objects that for me have to be pre-selected and to play out in various combinations and orderings.

Despite the conventional need in musical analysis to deconstruct the formal components of a work, it must not be forgotten that the simple decision to employ a single-movement shape or continuous block can be the most significant feature in terms of the audience's perception. Such a vast expanse of uninterrupted musical material alters one's perception of time, in a manner akin to Bernd Alois Zimmermann's concept of abstracting spatial time in order to expand the experienced present through pluralism. A reluctance to let a certain sound-event or procedure slip away can lead to suspicions about obvious breaks in the overall structure. There is also a poignant suggestion of savouring the moment that one may intuit from such an insistent, saturated form – like Faust's plea for the moment to linger a while longer. I would argue that silence and even contrasting material, which may initially seem to facilitate a *tabula rasa* state or release, if repeated and used in a patterned manner, becomes a part of the whole. Structure is normally seen as the element that saves a certain kind of contemporary music from becoming a catalogue of so called 'extended techniques'. This is related to the pre-Romantic artistic ideal which demands painstaking craftsmanship, and calls for careful weighing and placing of each sound event to create a symbiotic whole. David Lesser writes of Lachenmann's single movement structures that "they place enormous demands on a composer's abilities of long-term musical planning, pacing, deployment of textural variety"[34], as if there were some rubric that could be applied to making value judgements relating to such criteria. The substitution of formalization for form should only concern analysts who resist the appreciation of a work on its own terms.

[34] Lesser 2004: 111

> mechanical repetition is non-figurative, it has no systematic attributes, no formal implication, is capable of endless continuation. in contrast, organic, figurative repetitions are limited in number, often they appear in groups of no more than two or three, they create punctuation and teleology. in both cases one can say: repetition engenders separation. figurative repetition is one of a partial figure which has a qualitative beginning and end. mechanical repetition, on the other hand, is practically endless: one cannot identify the beginning of a loop or of a wheel.[35]

This approach should be distanced from the more conventional 'pattern-meccanico' works of György Ligeti which programmatically evoke machinery that has gone awry. There is nonetheless a similarity in that the two approaches necessarily provide a level of continuum and a sense of activated stasis. Metre signatures also become less relevant when working with cyclical or swirling repetitions – general coordination of cells remains necessary but strict and faithful readings of complex rhythms is not tantamount. Ligeti also stacked and accumulated fragments of small units consisiting of a small number of pitches that behave on a more fundamental level than scalic, modal or pitch-class sets. The circling arpeggiation in my work *pariete di vetro* operates in a less sophisticated, attuned way than similar figuration might in a work such as Ligeti's Second String Quartet, in that the units seem more segregated and lack any internal voice-leading. There is, however, a shared quality in that no one part is allowed to predominate – all is equal in terms of expression (or the lack of it) and articulation. Ligeti wrote that what attracted him was the "idea of superimposing several levels, several different time-grids moving at different speeds, and so very subtly achieving rhythmical deviations."[36]

Despite being motivated by a more stripped-down approach to repeating patterns I have drawn on Harrison Birtwistle's work *Silbury Air* as a model for my work in terms of structural clarity (the work broadly falls into two halves) and the preponderance of pulsing and obsessive ostinati that underpin it. I did not wish to mimic the use of a sophisticated 'pulse labyrinth' as a complex of interrelated tempos

[35] Spahlinger 2008: 589
[36] Häusler quoted in Clendinning 1993: 204

but was attracted to the blatant refusal to allow pulse to settle into a measuring role with motional implications. I wanted to draw on the simple, almost automatic, role that recurrence plays within the labyrinth, where "upon completion of each intuitive cycle he returns to the same pitch (E), the same bar length (4/16), the same instruments (string quintet) and the same dynamic (*pppp*) BUT not the same velocity."[37] The power of such a pattern relies on overlapping and recurrence in the most explicit way. At the end of the first page of the composer's score for *Silbury Air* there is a sustained E in the brass and double bass; a semi-quaver pulse in the piano, harp and marimba and a bar-long pulse in the remaining strings and a crotchet pulse in the woodwind. The prevalent semiquaver unit remains at a constant speed and the bar-long string pulsation shifts from a four-semiquaver unit to five while the four-semiquaver unit is given over to the woodwind. Despite a cutting-across of metre, these changes are made seamless because "at least one of the old elements remains in the new".[38] This is a form of clear yet sophisticated phasing that has informed my layering of cells in an indirect way. Birtwistle is perhaps indebted to the early conscious use of repetition by Debussy in *Sirènes* from the *Trois Nocturnes,* where most statements of material are repeated at least once and many are repeated over and over, forming pervasive ostinati. This approach allows a work to continue and play out at considerable length without the need for thematic development in the traditional sense; in so doing it foregrounds other elements.

In spite of the repetition prevalent in all of the composer's works mentioned above, the basic process that comes to the fore could be described as 'additive' (without any of the shaping or intervention that might provide peaks and troughs of activity or intensity). This type of cumulative process is normally reliant upon intensification through repetition which gives way to a sense of unresolved drift when avoided. This notion of repetition in the Warhol vein of 'thirty being better than one' (which influenced Huber's *Marilyn Six Pack*) is reliant upon each moment being of equal

[37] Cross 2000: 189
[38] Ibid.

importance – a sequence of images belonging to a single work. The irrelevance of contrast in such a means of working is confirmed by Salvatore Sciarrino's point that many of his pieces consciously contradict the need to escalate "in order to hold the attention."[39] Hungarian writer Péter Esterházy has commented that the effect of repeating a word many times causes its meaning to disappear; I would like to suggest that when repeating musical objects in differing combinations, their 'significance' becomes interchangeable, causing opposites to converge. This approach renders redundant the quantifiable monitoring of constituent parts as advocated by Catherine Costello Hirata[40] when discussing 'differentiation' in Feldman's *Durations 2*. An approach akin to Sciarrino's use of "unstable balances between continuous states and their disruption"[41] seems to be a closer comparison. I find that the simplest way of providing definition while working in this way is to add or remove the number of instruments that are engaged in similar or equivalent phrases. Clarity is therefore the most reliable approach, since creating a sense of 'space' in the texture through omission is not successful if the entries are too nuanced or overlapped. A related procedure may be the binary treatment of sound versus silence and how any sense of procedure is obscured or enriched by pauses or fermate. These 'silences' behave in the same way as interpolations or the folding-in of other seemingly interruptive yet more conventional musical entities such as chorale-like homophony or crudely visceral interjections set up in opposition to the otherwise fragile or 'weak' material. This division of sound and silence is perhaps most honestly rendered in Nono's *Fragmente-Stille* which comprises of "52 numbered 'fragments', themselves divided into a multitude of individual sounds and silences."[42] This approach enhances the importance of the strictly inaudible whilst the whole process is elevated and enriched due to the sound-events almost teetering on the edge of audibility. "Differentiation is

[39] Scirarrino quoted in Hodges 1995: 23
[40] Hirata 2006: 212
[41] Hodges 1995: 22
[42] Nielinger-Vakil 2000: 251

achieved not by means of sudden contrast but by means of nuance, the result being a web of silence and diverse but quiet sounds."[43]

My use of silence is not as intense or suggestive as Nono's, in whose music there is a sense of pure standstill giving way to saturation. Nono, in conversation explained that:

> The pause in Cage originates in Asian thought – 'empty' and 'full'. For me, however, silence – the musical pause – is truly intensive. One lives in it as if at a crossing-point. One remains silent there, one realises that one needs to be alert towards all directions.[44]

This use of silence seems to provide a licence to become active listeners and to imbue the work with a complex of alternative interpretive possibilities or even identities.

Three main structural components are used to form many of my recent works. At the forefront, there is always a 'procedure' that is worked through, regardless of temporal span and dramatic impact. This method may be described as an accumulative working through of basic physical or technical approaches peculiar to the instrument. The resultant table of finger positions or non-selective use of natural phenomena (e.g. natural harmonics on string instruments) form the skeletal structure for the work, akin to the preparation of tone rows or modes. Editing of the collated material is avoided, as is harmonic manipulation of resultant pitches, distancing the procedure from any comparisons with a serial approach. These positions are linearly ordered according to pitch strata and polarities – whether it be a slow ascent or gradually dwindling alternation of 'high' and 'low' paired cells. This first structural approach represents the nucleus of the work and may not look significantly different in context within the finished piece to the initial list or table of possibilities. There is very little 'sketching' involved at the preparatory stage of this process; it would be more accurate to refer to the realisation of a procedure based on an instrument's fundamental physical attributes in relation to the human body. Any shading of this level of material in relation to dynamics (volume or expression markings) has also been eschewed in

[43] Ibid.: 253
[44] Nono quoted in Nielinger-Vakil 2000: 254

order to avoid imbuing the procedure at work with suggestive potential. The dynamics selected are normally static, one-dimensional and reliant on extremes or bland mezzo-forte. Consequently, the dynamics may come over as interchangeably broad, thus draining any resultant effect of significance or pathos. Similarly, any timbre-related 'extended' techniques are super-imposed in order to obscure, rather than enhance, the simplistic process at play. The use of *sul ponicello*, mutes and *col legno tratto* (for string material) is analogous to viewing an object through a layer of gauze, lending a sense of implicitness and a covert quality to the proceedings that becomes explicitly clear through repetition, patterning and time-scale.

Only at the second phase does any intervention occur, by way of 'grafted material' that complements or accompanies the primary 'system'. In context, snippets of this material may overshadow or dominate the more unassuming 'procedure' model that is working its way through the pre-prepared catalogue of position possibilities. This hierarchic play between the first two components shifts fluidly throughout the work, ranging from each stratum being perceived as a subsidiary drone-like ground, principal voice (or procedure) or even a more dynamic activation of a static process. My interest in making a mixed ensemble function as a sounding-board for particular strata of material was influenced by Lachenmann's exemplary manipulation of the orchestra for that purpose to expand the piano's resonance in *Ausklang*.

The third component is slightly removed from the play between the first two points and generally embodies a 'release' or 'wiping-the-slate-clean' before moving on to the next chunk of pre-prepared material. This 'relief' material may be formed out of the detritus of the coagulation between the first two components or may simply consist of base-level physical gestures or cliché histrionics relating to instrumental technique (particularly so-called 'extended' techniques). The placement of silence cutting into the seamless whole or functioning as the 'space' between paragraphs is also ideologically related to this act of 'release'. The use of silence (as opposed to organic fading-out or acoustic decay) may appear more graceful or aloofly elegant

than the use of the crudest musical object to hand but its function is reliant upon visual archetypal models such as a poetic stanza or verses separated by asterisks.

Edgar Varèse and Luigi Nono provide strong models for working with "sound layers that are independent from each other" that still seem to "attain highly differentiated internal relationships between themselves in their intensity, tone-colour, pitch and especially their rhythm".[45] This is particularly prevalent in a work such as *Hyperprism* where in the outer sections the percussion parts seem independent of the pitched instruments (despite the consistent rhythmic language and the repeated-note monodies of the woodwind parts, which resonate strongly with the percussive writing in general). Sub-sections within a work like *Hyperprism* are marked by reduction or radical changes in the instrumental forces employed. I would suggest that the connections between layers may arise less from distinct sound-objects than from the different levels of awareness of physical bodies behind the acoustic over-spill. As Lachenmann wrote about his former teacher, Nono, "the processes of structuring and differentiation were ultimately determined by their function of driving music into space".[46] I would align my work with the 1920s Russian visual art Constructivist movement, which abolished solidity in favour of more open assemblages of objects. Like later British Constructivist artists, I feel that rational structures borne of intuition suggest architectural aims without being strictly architectural. Mary Martin's reliance upon internal logic, intuition and experience with precision being a result of the hand rather than the machine informed my treatment of musical space. The implications of musical spaciousness cannot be explained in rational terms, since they are dependent upon concrete musical objects for definition. Another member of the movement, Victor Pasmore, felt that space was a function of felling rather than vision, a paraphrased notion I would extend to also include 'hearing'.

[45] Stäbler 1999: 69
[46] Lachenmann 1999: 21

Chapter 2 - Physicality versus Extended Techniques

I have chosen to focus particularly on writing for string instruments for the latter part of my portfolio (*Double Duo for Violins and Bass Drums*, *Music for Three 'Cellos and Ensemble*, *piano trio*, *piano quintet*, *pariete di vetro*, *Piece for String Quartet* and *THE RENDERER*). The examination of the corporeal nature of drawing sound from string instruments was necessarily constrained by the three main ways of setting a string into vibration: plucking, striking or bowing. The division of categories here was fundamental in informing the arrangement of resultant categories, akin to Nicolaus A. Huber's separation of more definable percussion categories such as "fur, wood and metal[47]" in *Herbstfestival*. As well as the two motions of drawing the bow (which I generally like to keep free) articulations such as *détaché*, legato, on and off-the-string staccato, repeated strokes, ricochet bowing, bowed tremolos became entities rather than inflections. It followed that the pizzicato articulations would be treated in the same all-encompassing way with differentiations between 'flesh' and 'nail', snap, left-hand pizzicato and pizzicato rolls all being used as self-contained cellular units that do not require organic preparation within a phrase structure. Variations of bow position and angle such as *col legno*, *sul ponticello* and *sul tasto* and the shifts between these positions are treated in a way analogous to a pitch portamento or glissando in that they involve sliding from one place to the next. Except for the use of bowing on the bridge, scratch-tone bowing, bowing behind the bridge, silent fingering and striking the strings with palm, most 'special effects' such as bowing of the tail-piece and tapping the body of the instrument have been excluded because they alienate the sound source.

The way in which other instrumental families interrelate with a clearly prominent string foundation shifts from clearly grafted to integral sounding-board status in that they are very frequently treated either in a more conventional manner or as empty

[47] Warnaby 2003: 30

crude outbursts. The following discussion, however, will focus primarily on my use of string instruments and on models of contemporary writing for strings.

Publications that aim to elucidate twentieth-century extended performance techniques may be responsible for the segregated treatment and extra-curricular approach to incorporating a wider sonic pallet into the music of English-speaking composers. There is often a clunky transition between the 'straight' notes and the more 'grain-conscious' material and an unbalanced relationship between the resultant 'ear candy' and the physical or tactile feel of actually producing the sound event. For me, the use of extra-musical machines (type-writers, aeroplane engines) and prepared instruments tends to reduce the ethos of the work to some form of exotica. When writing about the role of 'harmony' in his second string quartet, Lachenmann playfully poses the question "…Which is stronger: C major or *pizzicato*?..."[48], this serves to confirm many people's pre-conceived beliefs about the relative importance of line over texture in music. I aim to separate the use of extra-territorial techniques (such as bow position and pressure) from the concept of *Klangarbenmelodie* or timbre and somehow make the two things inseparable in that there is no memorable line and no isolated 'extended technique'. Schoenberg's term, used to denote a succession of tone colours that may be related in an analogous way to pitches within a melodic line is problematic for me as I cannot intuit any parallel significance with pitch or contour selection. A work that sets out to highlight timbre may do so by stripping away other layers in order to endow the tonal quality of a sound with more weight and rely on reduced pitch clusters and unisons to showcase the different 'timbres'. This approach does come closer to examining the corporeality of sound and its treatment as an end in itself rather than a suggestive or descriptive tool, and secures an integrated result: a music about itself. The idea of sounds having inherent attributes such as texture, density and weight allows the composer to build structures or objects upon a surface.

[48] Lachenmann 2004: 74

Rebecca Saunders has commented that:

> Surface, weight and feel are part of the reality of musical performance: the weight of the bow on the string; the differentiation of touch of the finger on the piano key; the expansion of muscles between the shoulder blades drawing the sound out of the accordion; the in-breath preceding the 'heard' tone.[49]

This is an appealing approach to composition as it seems to document the process of forming the sounds in real time and honours the effort required of a player in live performance whilst inevitably featuring timbre as a key concern. The aesthetic is also very hand-made, allowing a sort of intimacy and vulnerability to be communicated to the listener. Saunders continues: "being aware of the grit and noise of an instrument, or a voice, reminds us of the presence of a fallible physical body behind the sound."[50]

Lachenmann has described a portion of his output as 'instrumental musique concrete' - music as a dynamic and energetic process of sound production on 'acoustic' instruments that is misleadingly indebted to electronic music. The instruments function as the basis, not the vehicle, for musical material. Hans Werner Henze coined the phrase 'musica negativa' in describing Lachenmann's output up to the mid-1980s. He was probably referring to a series of extreme works – *temA* (1968), *Pression* (1969/70) for cello, *Dal Niente* (1970) for clarintet, *Guero* (1970, revised 1988) for piano, that culminate in *Kontrakadenz* (1970/71) for orchestra and *Gran Torso* (1971/72, revised 1976 & 1988) for string quartet. These are indeed provocative works that at first seem to alienate or distance the audience from the sound-source but they provided the composer with a "cleansing experience"[51] that led to much fecundity. These works created a positive and active approach to the problems of musical language and syntax by questioning the function and expectations put upon music while abandoning the pointillism of early Nono, with whom Lachenmann

[49] Saunders quoted in Saunders 2007/2008: 9
[50] Ibid.
[51] Pace 1998: 12

studied in 1958—60. It may be the case that in *Pression*, *Dal niente* (*Intérieur III*) and *Guero* "non-standard instrumental techniques form in part the *raison d'être* of the piece"[52]

Discussing the array of non-standard techniques in *Pression* (ranging from bowing on and below the bridge, parts of the shell, the frog, fingers rubbing against the strings), Ian Pace writes that the work is "much more than an exemplification of a concept" and that Lachenmann is able to produce "intricate and fascinating structural procedures through interplays, juxtapositions and transformations between sounds."[53] The sectional treatment of different techniques in *Gran Torso* serve to galvanize the different layers and approaches to bow pressure. Similarly, *Schwangkungen am Rand* highlights sound-surfaces: "it is a sparse work in which disembodied sounds, within a sea of silence, struggle to come together, resulting often in empty repetition."[54] This approach seems to hark back to Webern's use of silence or near silence for its own sake (especially in the first and third of the *Four Pieces for Violin and Piano*, Op.7). This approach focuses on the tapering edges of sound and the spaces between each event results in infinitely variable placement possibilities together with an exquisite sensitivity in context. It is not useful to think in terms of themes or motives when dealing with this type of music but associations and recurrences do act as a unifying agent for a symbiotic whole. Webern was already using colour rather than pitch to structure the work through transformation of compressed cells. In the third piece of Webern's Op.7, every violin note, except the first, is either played *am steg* or *col legno* and the alternation of these two techniques is the only aid in differentiating the formal sections, akin to Lachenmann's approach in *Gran Torso.* The fragility of Lachenmann's *Schwangkungen am Rand* also relates back to the third piece of Webern's Op.7 – the whole violin part is played *mit Dämpfer* and the last fragment of the work is marked 'scarcely audible' – tapering on the verge of non-existence or emptiness.

[52] Ibid.
[53] Ibid.
[54] Ibid.: 16

A study of Lachenmann's body of work reveals that for every 'negative' extinction and suppression of sound there is a 'positive' suspended reverberation. Resonance as a musical *affect* emerges as a key concern in Lachenmann's work, precluding accusations of "supposed destructive contact with our musical means".[55] This approach creates an immediately attractive halo of sound as well as displaying the "magical and the anatomical"[56] aspect of each sound in all its individuality. The concept of *Klangfarbenmelodie* is realised in a more extreme way in many of Lachenmann's work through the use of a 'structural melody' (such as in *Mouvement*). The 'melody' functions as a contoured rhythmic sequence that relates to the coordination of certain instrumental actions, serving as a trigger and moulding aid for very abstract physical gestures. The relationship between the 'structural melody' and the resulting work can be difficult to trace from time to time, due to the probable overlaying of several simultaneous action fields. The resulting hermetic status of what is on one level made explicit (having been printed in the score) serves to promote the feeling of organic movement from one technique to another as opposed to their 'displacing' each other. Lachenmann wrote, reassuringly, in a personal communication to Elke Hockings in 1994:

> Do not torment yourself too much with analyses. The question is always: which means are used and in which ways, why and to what effect, or better, inasmuch to what innovative effect. It is therefore more important to define the categories which are used, installed and stretched rather than to measure things – hence it is more important for analysis: WHAT IT IS rather than how it is made – processes which are often totally buried under later inventions.[57]

It is, however, possible to conduct an inventory of the techniques or resultant sounds that dominate the various sections of Lachenmann's work. Elke Hockings provides a simplified, itemised sectional run-down of the main components that make up *Mouvement,* from sniffing sounds, the 'door bell' passage to scraping, snapping,

[55] Ryan 1999: 21
[56] Warnaby 1995: 2
[57] Lachenmann quoted in Hockings 2005: 90

exhaling and pulsing with the suturing devices of introductions, transition passages, gaining of momentum and even climactic moments. Such broad generalisations (as opposed to Lachenmann's own categories such as *Kadenzklang*) may come up a little short in appraising the nature of Lachenmann's work but are appealing as a structural model and taxonomical approach when it comes to my work. There are, of course, possibilities for light and shade within these conveniently descriptive categories, described by Lachenmann when writing about his second string quartet: *'Reigen seliger Geister'* when referring to a predominantly "pizzicato landscape" as having a "wide spectrum of variants."[58]

The plethora of methods of producing sounds on string instruments is also beautifully explored in Nono's *Fragmente-Stille* – forty-four in total, according to Nielinger-Vakil's article. Many of these supposed 'extended techniques' for string instruments (that is, anything other than drawing the hair of the bow across the strings or perhaps plucking with the fingers) relate to physical necessities or choices that can be sub-divided into categories such as bowing, fingering, percussive actions, harmonics and tuning. Bowing contact points (*sul ponticello*, *sul tasto*, *sub ponticello* and beyond in Lachenmann) may be the most common place considerations, along with bow pressure (*flautando*, overpressure or even so-called 'sub-harmonics') but actual bow contact points have also become standardised (*col legno*, *battuto)* as have actions or figurations such as *bariolage.* On one hand, I regard with disdain this segregated approach to anything resulting in a sound other than the warm vibrato ord. bowing of romantic music, yet find it liberating to be able to treat a certain 'figuration' such as *bariolage* as a differentiated musical object if not an 'alternative technique'.

[58] Lachenmann 2004: 65

Chapter 3 - Figuration

The Grove Concise Dictionary of Music defines figuration as:

> A kind of continued, measured embellishment, accompaniment or passage-work. In principle, it is composed of 'figures' or small patterns of notes; often the term is used loosely for passage-work of other kinds.[59]

I feel that an extended, singular or patterned use of physical positions (seen as contact points) serves to gel any section into a generic and closed 'passage'. I also seek to retain the sense of 'embellishment' mentioned in the Grove entry but with the exclusion of any unifying substance that may subordinate the physical positions and their acoustic results to a decorative role akin to Baroque ornamentation. Under such circumstances, the tiresome 'aesthetic' challenge: "When does an acoustical event become a musical event"[60] is stripped of any relevance, or, those who would pose such a question would immediately dismiss such a work.

I find that such 'figuration' acknowledges and honours the physical limitations of the instrument's design and the performer's relationship to it without necessarily confronting the norms of the expected classical sound. Even in Lachenmann's string quartets, the implications of working with four open strings, regardless of any extended pitch palette (such as micro-tones) "underpin the harmonic structures…(whether detuned or not)."[61]Much of my string writing aims to veil the actual pitch structures through the use of mutes, loose bow hair and even barely articulated finger depressions without the right hand's activation. This may seem perverse but it serves to draw attention to the actions, and even results in the extraneous sounds becoming the main substance of the 'heard' work (dependent on an intimate setting, the position of the audience or close microphone amplification).

[59] Ed. Sadie 1988: 273
[60] Strange & Strange 2001: xi
[61] Alberman 2005: 41

Lachenmann makes use of many un-pitched bowed sounds in a more consciously timbral manner, "by using a light bow drawn relatively fast over the fingerboard" and secured by "using the fingers of the left hand to dampen the open strings and thus limit their vibration"[62] resulting in a literally 'fluffed', dead-on-arrival white-sound. Other means of producing un-pitched bowed sounds include bowing directly on the bridge, tailpiece, tuning pegs or the mute; these are indeed frequently used in Lachenmann's work. It is also possible to produce a number of un-pitched sounds by bowing vertically, or in a lightly continuous circular motion – an action I find delightful in that the resultant volume does not correspond to the traditional expectations relating to the intensity invested. Other more extreme actions relating in loosely un-pitched results in Lachenmann's string quartets include rolling the bow hair against the back of the instrument and bouncing the hairs on the face of the bridge. Within this continuum of un-pitched sounds, I relate heavy pressure or rattling bow sounds very closely to the lighter 'toneless' approach in that both serve to efface the 'expected' tone in extremely different ways. Lachenmann advocates a 'fist grip' for this action: "by reducing the bow speed and holding the bow in the fist of the right hand…to focus and control downward pressure, a discontinuous sound will emerge."[63] This particular action enables a microscopic examination of the mechanics of drawing the hair bow against a taut string – resulting in a single movement or crank sound. Bow speed also becomes a defining feature of Lachenmann's music, the most startling being the inversion of "the process of sharply decelerating the bow after the initial attack" and instead accelerating "sharply from a low speed to set the string ringing"[64], also referred to as the 'backward tape' in Lachnemann's work or as a 'bow-stop' by Rebecca Saunders.

With the exception, perhaps, of Lachenmann's *'pizzicato fluido'* technique, wherein "an open string is plucked by a left-hand finger…afterwards, the bow hair tension screw…is placed lightly on the still vibrating string to produce a stopped pitch that

[62] Ibid.: 42
[63] Ibid.: 43
[64] Ibid.: 44

will ring long enough to be changed either by a *glissando* or a *vibrato*"[65], I feel that the 'abnormal' playing techniques are purely freeze-framed examinations of the natural phenomena of stimulating sound from a resonating body. In a note on *Gran Torso*, Lachnemann writes that "[t]hese alienated playing techniques mark only the tip of an iceberg of profound contradictions up out of whose depth the bourgeois artist has the opportunity to pull himself by his own bootstraps."[66] I do not intuit this need for rebuke by alienating playing techniques in the three string quartets of Helmut Lachenmann or feel that it is necessary to confront traditional models in my work. I have adopted a less extreme and less kaleidoscopic approach to honouring the instrument's physicality. Morton Feldman talking to Paul Griffiths in 1972 admitted that part of his musical thinking was "to have the sound source-less."[67] He goes on to explain that his pieces fail "if one can say: 'Ah, there's a trombone, there's a horn'"[68]; he enjoyed the way instruments could become anonymous but admitted that it is difficult for a musician to realise this way of playing. He regretted that he had "yet to hear a trombone player come in without too much attack, and hold it at the same level"[69] – suggesting a striving for control that kept the instruments vital for him as a composer, "because as yet they have not served" the desired "function".[70] Indeed, any attempt to deny the string instrument of its conventional attributes or forcibly integrating it with an instrument (such as piano) through mimicking harmonics, pizzicato effects, rapping sounds (on the wood of the violin, on the metal beams of the piano) as in George Crumb's *Four Nocturnes* seems frustrating due to overly sympathetic mirroring. The string techniques in Nono's late music seemed to know no bounds or norm. Nielinger-Vakil links this pluralist approach to Ulrich-Musil's 'man without qualities' by confessing: "I suppose I would have no choice but to abolish reality" and comments that "'ordinary' string sound – the musical equivalent to

[65] Ibid.: 46
[66] Lachenmann quoted in Alberman 2005: 51
[67] Feldman quoted in Villers 2006: 48
[68] Ibid.
[69] Ibid.
[70] Ibid.

Musil's 'reality' – occurs only very occasionally."[71] Therefore, in a work such as *Fragmente-Stille, An Diotima*, with its semi-hermeneutic and fragmentary quotations from Hölderlin texts, Nono makes the process of cropping explicit while giving way to multi-layered allusions:

> In this way an open-ended system of relationships arises, in which independent meanings, such as are ascribed to actions and qualities by way of a rough first approximation in ordinary life, no longer exist at all. What is seemingly solid in this system becomes a porous pretext for many possible meanings; the event occurring becomes a symbol of something that perhaps may not be happening but makes itself felt through the symbol; and man as the quintessence of his possibilities, potential man, the unwritten poem of his existence, confronts man as recorded fact, as reality, as character.[72]

I wanted to work with a narrower selection of musical objects or figures but found it compelling to retain a sense of Nono's tapping into the transcendent potential of bare material. Much of my string writing is based upon shapes upon the fingerboard when holding the instrument in the conventional way. The preparatory material for my *piano trio, piano quintet, pariete di vetro* and *THE RENDERER* for Strings, Percussion, Celesta and Piano is based on the 'quadruple stop' position. This multi-stop shape is not always treated as a chord by means of a strum or claw-like pizzicato but is more frequently the basis for an implied harmonic four-note voicing that facilitates swift bariolage or notated vamp upon this convenient position. In order to ensure the practicality of such a rigid position I have made each successive pitch, from the bottom to the top of the shape, closer to the bridge (if only slightly) than the previously depressed string. The performer's first finger stops the lowest string (IV – always four-string instruments, even contrabass) and floats over the non-stopped lower areas of strings III, II and I. The second finger is then used to stop the next string by crossing over the non-sounding area of the higher two strings etc. The other practical consideration when pre-planning these multi-stops was that in the lower positions the performer's hand can only span a certain interval (narrower on each

[71] Nielinger-Vakil 2000: 256
[72] Musil quoted in Nielinger-Vakil 2000: 257

larger instrument), and naturally the available span expands as the hand travels up the fingerboard. The positions are normally kept very tight to take advantage of a technically possible yet challenging tension of hand shape and interval results. Finger extensions are rarely called for on the smaller instruments, despite the possibility of extending the fourth finger toward the bridge without shifting the overall position of the hand.

Within this tight framework, all available natural harmonics are used to produce timbral nuances and higher pitches in relation to the other strings within each quadruple-stop. The act of lightly touching the strings at one of the available nodes adds another tension to the carefully placed splayed shape on the fingerboard. I have not limited the positions to the most common and reliable fifth partial natural harmonic and accept the unpredictable quality of the harmonics at the seventh, eighth and ninth partials. Artificial harmonics are avoided within this context due to the impossibility of using two fingers simultaneously on a single string. Artificial harmonics do, however, feature prominently in my earlier work where a common occurrence is a droning open string held by way of a double-stop against a slithering glissando between various harmonics where the little finger is lightly touching the same string closer to the bridge. The piling up of equivalent shapes on the fingerboard of other instruments is entirely dependent on shape, with no finessing to accommodate harmonic preferences. The only overriding guiding force is provided by macro-level contour, as opposed to micro-level shape.

Chapter 4 - *Musica povera*

My work occupies the nether region between honouring an action's pared-down, practically motivated, non-dynamic physicality and the resultant sound's materiality. I avoid manipulating the results in a way that might serve to draw more attention to the corporeal nature of their genesis. A humble, timid sort of physicality results from rejecting the notion that the veil or sound-surface is perfectible. There is an exquisite reward to be claimed having abandoned any attempt at creating a well-honed piece in that it disengages the tyranny of the habitual mind. The results may be aligned with the Stoic's rigid subduing of appetites and passions, but the process of building up stacks of un-edited material at the assembling stage may be said to function in a self-indulgent, even auto-erotic, non-dependent, yet masochistic vein. A paradox that has arisen within my work is the presentation of an 'impoverished' aesthetic through self-indulgent means.

The later discussion of the individual pieces includes groupings of adjectives that relate to the *musica povera* aesthetic, and are not intended as a form of self-deprecating deflection. The two interrelated groupings include the descriptive words: 'numbed-out', blank, 'bleached-out', erased or whitened and the seemingly judgemental words: crass, banal, gimmicky, arbitrary, crude, bland and feeble. The choice of vocabulary has not been calculated to incite any value judgements, instead it remains faithful to a purposely impoverished aesthetic.

The lack of artifice in the work of visual artists such as Richard Tuttle and Robert Ryman was a guiding force in rejecting the idea of robust, infallible work that guarantees a rapturous audience response. I admire the unassuming, concentrated quality of their work and how they present a reduced selection of elements in a way that seems un-manipulated. Making formalist, abstract claims for music that is so concretely based on physical necessities, convenient positions and stock figuration (so widely exploited that it almost solidifies into matter) may seem contradictory. However, the way in which my material plays out serves to separate it from a

treatment of physicality as a dynamic, structured ordering of categories. The significance is drained from the admittedly child-like treatment of the musical instrument through relentless repetition, re-shuffling and lack of rapport with related instruments. Due to the generosity of time-span, this focused vacuum of fairly atomic cells allows the audience, if not the players, the luxury of drifting in and out of attempting to track any 'progress' or drawing conclusions about the status of principle or subsidiary material. This approach to receptivity has little to do with 'appreciation' and is too passive to force submission yet frees the ear in the same way that Tuttle's early work "liberates the eye and mind to roam in tandem from sensation to disinterested, even disembodied thought and back again to sensation."[73]

Toiling in the *musica povera* mine also does away with a sense of musical ownership without promoting a sense that anyone can write 'music', play an instrument or analyse a piece. I have rejected the polite, 'tasteful' eschewing of gimmicky material and any ironic manipulation of such objects through a 'lightness of touch'. This avoidance of self-censorship and suspicion about having to earn the right to deal in certain territories ultimately leads to a rejection of any cultivation of canonical constituencies through musical means. When certain primitive musical objects are put into a structure they cause the form to implode; I feel that one way to break that taboo is to build a piece from predominantly 'weak' material that has a strong impact. If the whole only consists of this type of material, categories become interchangeable and the reservations one might feel upon encountering such material in isolation are obliterated. The decision to present (not work with) this type of 'degraded' material also lays waste to the transformative potential that can be achieved through musical development when it is manipulated incrementally if not subtly. Using such weak-strong material in such an insistent manner seems, retrospectively, to promote the need to expunge or hollow everything out little by little as the process elapses. From the stasis emerges a need to proceed or move on to other territories, vistas or allotments without having to engage in a concept of rejection. There is a certain

[73] Storr quoted in Grynsztejn 2005: 90

adolescent glee that could be associated with an aesthetic which is reliant upon provoking the 'refined' listener and, to a certain extent, refusing any audience's embrace. This Teflon-coated surface at once grants permission to be bored by the meanderingly slow proceedings and advocates a meditative 'rhythm'. Ultimately, this balance relates, on a superficial level, to the issue of transcendence; boredom here functions as an upward-gaze or a positing of 'otherness'. The whole process is built upon a sense of resignation that allows the audience's gaze to skim the surface, dip in, select their immersion level and sporadically disengage. The finished work is, however, reliant upon a level of concentration – albeit wavering - that would distance it from an aesthetic such as Erik Satie's concept of 'furniture music'.

The Lacanian notion of a *sinthome* (as opposed to a symbol) as a manifestation of *jouissance* (bordering on idiotic enjoyment) may apply to the way in which the 'surface' worth of certain constituent parts of the material may works against the layers that some need to project onto musical objects. This approach obscures the process at play by presenting a spectacle consisting of simultaneously elemental and scrappy material, which rejects the often biased language of musical interpretation, but which nonetheless allows tenuous symbolic meanings to emerge. There are very few symbolic vocabularies that could describe or evaluate surfaces formed through the usage of a musical instrument in its base, legitimate way. This impoverished way of treating a musical body gives deep significance to the concept of using an object in its 'intended' manner. The satisfaction that may arise from the appreciation of such music, dependent upon the rejection of goal-oriented enjoyment, stems from "the functioning of the physical or psychological apparatus associated with a drive."[74] The factor that could be said to propel the music forward is a purgatorial withholding of pleasure gained from satisfying needs in terms of tension and resolution. No musical language can fully disguise the practical and corporeal mechanics behind the execution of a phrase; I aim to elevate this fact from its residual yet fundamental status. I seek to lay bare the source of the material akin to the "'arte povera' sought

[74] Bailly 2009: 221

after in the first set of *Vexierbilder*" for piano by Gérard Pesson "from which several ostinati are built and exhausted without development".[75]

An interchangeable and non-specific presentation of objects that recur at a rate which is difficult to track, ultimately reveals clues as to the formal plan. This Buddha-like quest for openness parallels a passage from Stein's play *Photograph*. The context in which the following passage appears is one of listed names that may or not be dependent on puns, naïve family relationships and pairings – it makes no difference for an appreciation of the engulfing feel of tracking the words unfolding.

> My feeling is that one comes in more frequently than another and yet they always come together. This is not exactly so. They do come together but some come more frequently than others and we like to see them all.[76]

Trained musicians have been taught to move instinctively from one thematic object to the next searching for additional connotations, even some sort of clue as to the means of creating a certain sound. A disregard for small-scale variety and refusal to suture contrasting material through gradual progressions bolsters an existential surface erasure of 'worth'. Writing about Tuttle's many cloth pieces, in which washed sixty-inch-square pieces of canvas are cut to match pre-existing paper templates, Madeleine Grynsztejn cites Scott Burton's quote:

> The humbleness of Richard Tuttle's wrinkled, dyed, nailed-up pieces of cloth is rivalled only by their grandiosity of conception – they have no back, no front, no up or down, they may be attached to the wall or spread out on the floor. Imagine making an object which will maintain its integrity in all circumstances yet which exerts absolutely no demand on its situation.[77]

Most Post-Minimalist art was initially considered to be wound up in 'process' and explicated the means of execution in a way that was not possible to separate from the finished work. The disdain with which many of the contemporary critics in the art press wrote about this work and the infuriated public reaction was rooted in

[75] Pesson 2004: 22
[76] Stein 1920: 345
[77] Burton quoted in Grynsztejn 2005: 36

expectations of craft and technique. A sort of guilt was inflicted on those who un-did and inverted the visible results of toil and tinkering. However, the mesmeric austerity involved in the examination of how little can be presented in order to produce an effect/affect may, for many, have more kinship with craft or conceptual endeavours than art. The American sculptor Vincent Fecteau shared his unexpected conventional reaction upon being confronted with a Tuttle piece (from 1963):

> …last year I saw a piece by Richard Tuttle that consisted of a rectangular piece of plywood hung on the wall, divided in half horizontally. The upper half was painted with a thin wash of straight-from-the-tube blue, the bottom half painted with a thin wash of straight-from-the-tube green. The whole thing looked as artless as could be. I'm still shocked.[78]

This commentary hints at the obtuse quality that may be detected in mining such a narrow territory and pushing it as far as possible through boundless permutations of the slightly varied. I would argue that the quest is for intimacy and immediacy and an open quality in stating "this is it", without acknowledging antecedents, precursors or results. Onanism does not require justification or variation in order to serve its purpose. Sartre writes that the results may be intensified by shamelessly acknowledging the act in the way that Jean Genet did in his prison cell.

> The man who masturbates humbly, without saying a word or being too preoccupied with what his hand is doing, is half forgiven; his gesture fades out in the darkness. If it is named, it becomes *the* Gesture of the masturbator, a threat to everyone's memory. In order to increase his pleasure, Genet names it. To whom? To nobody and to God. For him, as for the primitives, the Word had metaphysical virtues. It is evil, it is delightful that an obscene word resound in the semi-darkness of his cell, that is emerge from the dark hole of his covers. The order of the universe is thereby upset. A word uttered is a word as *subject*; heard, it is *object*.[79]

These inverted moral codes may be behind the motivation for rescuing if not elevating rubbish as the basis for a work that would otherwise not exist. Warhol's use of icons may have been quasi-religious and inseparable from his Orthodox upbringing but

[78] Fecteau quoted in Hainley & Waters 2003: 188
[79] Sartre reproduced in Genet 1952/1990: 19

scrutiny of the selected subjects reveals a fascination with the fallibility and dinginess of humanity. Some may intuit a form of transubstantiation in the ultra-glamorous context and stature afforded to the flawed subject, but Warhol's concept of glamour was based upon the early queer ideal of fragility. Speaking in a documentary on Warhol about *Blue Liz as Cleopatra*, the poet and theorist Wayne Koestenbaum taps into the pathos surrounding Elizabeth Taylor following her illness, the scandalised response to her affair with Richard Burton and the 'flop' status unfairly attached to the epic film being released:

> The image seems to be a film-strip or just a strip of celluloid as continuous action if it was being projected but it's not being projected, so it's somehow [a] discarded image of a human being in motion – a desired, objectified, beautiful human being in motion – turned into a series of still portraits and then discarded. It is outtake footage, it's mangled and ripped. It's censored footage…the stuff on the cutting-room floor. It's literally in the dust-heap. So Warhol takes Liz and he dyes her blue, understanding that Liz is on the verge of becoming garbage. He's going to rescue her, rescue this strip and render it as a painting…and essentially his sensibility is entirely mourning and melancholy – that Liz is lost, she's already lost and she will never be found – she will never be there.[80]

Rather than plumbing the depths of cruelty and oblivion in the Genet vain, there is a certain compassion and empathy present in Warhol's treatment of his subject. That said, 'subject' may be too glorified a term for the scientific 'dung beetle' type analysis and cool rendering of the source material as exhibit. This detached presentation of icons based upon realism (from the Latin *res*: meaning 'thing') can be equally applicable to physically motivated music built from sound objects rather than developmental phrases.

Such icy un-approachability and forbidding severity in presenting brittle material with quasi-religious fervour is very prevalent in the music of Russian composer Galina Ustvolskaya. In early works such as the Concerto for Piano, String Orchestra and Timpani a "subliminal ticking of a metronomic pulse […] ensures both the unity and

[80] Koestenbaum 2006 spoken in Burns documentary

the ultimate coherence of each of her later a-metric structures."[81]Despite the universal, archetypal impact of many of her later pieces, her corpus has a fragile, brittle quality, even when resisting the chamber music label. Years of silence seemed to strengthen the composer's resolve in presenting concise sonic gestures and at the beginning of the 1970s there was a marked stylistic move away from "quasi-imitative (permutational) writing towards an ostinato development whose contrasts were eventually to depend less on motif than on instrumental texture, register, dynamics and, for the first and last time, a recognisably 'avant-garde' fragmentation of motivic rhythm and pitch."[82]

The concentration of material that makes up Ustvolskaya's Third Symphony "is achieved through the economy of resources and the rejection of everything superfluous: there are only four motifs which possess thematic meaning in the Third Symphony. They possess not only a melodic but also a rhythmic individuality, and are easily recognized even when played by the percussion alone."[83]The astringency of such a gesture seems to prevent the possibility of severity crossing over into communication or mood-setting. The singular quality of each musical cell affords a sense of immediacy that is analogous to the dialogue in Marguerite Duras' *India Song* in its struggle for permanent certainties, with the exception of any quest for narrative structure. Duras writes in the Introduction to the play, which preceded the film:

> When they speak of the story we see unfolding before us, they rediscover it at the same time we do, and are as frightened and perhaps moved by it in the same way we are.[84]

This explanation hints at a sense of struggle and fumbling for concrete certainties that are constantly denied by the ebb and flow of time and the sense of stream of consciousness woven through the text. The elegiac mood evoked by the 'dialogue' in the play simultaneously mourns the absence of any certainty while forging on in spite of futility.

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[81] Bradshaw 2000: 26
[82] Ibid.: 31
[83] Suslin, Viktor website
[84] Duras 1973/2000: 2

A surprising case of melancholia and melodrama is unveiled by Lachenmann as he draws attention to Nono's 'need for crises' late in his life.

> A crisis in this sense is not a one-off moment of violent insecurity, a shock followed by inspiration, but rather a constant potential presence. In his later years, Nono, who earlier had believed he could ignore the crisis as a bourgeois fit of self-pity, exposed himself to crisis – as an experience at the edge of the psychological abyss and as such related to death[85]

Music that offers so little in terms of sensory analogues is ripe for an ethically motivated over-interpretation of details as advocated by Freud in relation to dreams. I realise that I have a degree of separation with my material in the way that there is a 'disconnect' or inability to rationalise the connection between symptoms, reasons for the symptoms and common fears relating to these sensations upon experiencing a panic attack. This process is often referred to as a 'vicious circle' in that it feeds upon itself and is self-perpetuating in a destructive way. The very particular menace is derived from the unpredictable trigger mechanism. It does, however, offer up a sensory model for musical working procedures and the appreciation of other works.

My work, in Kant's words, acknowledges its own 'purposive purposelessness' and surrenders to mono-mania. The autistic blankness of the material selections seem to promote an inter-textual appreciation if not an interpretive (programmatic based) positing. The processes behind the actions have taken place before the collating of the piece and are systematically hollowed out as the work unfolds. The resultant mass of crudely punctuated material requires a leap of faith and surrender from the audience in order to appreciate the work in real time. This recalls the tension between expectations and that which is withheld in Warhol's silent film *Blow Job,* in that the titular promise of titillation is subsidiary to the meditative, formalist tableau of the visual projections. The naked rendering of pure elements such as light, shade, bone structure, framing and slight movement are the most rewarding features of the film. Beauty surfaces as the visage of the 'actor' eerily begins to resemble a *vanitas* at

[85] Lachenmann 1999: 27

some stages during the proceedings, resulting from the placement of the naked light bulb from above and the ecstatic tilting of the head. The repetition of one kind of process in this case allows the layers of feeling, history, tattle-tale and innuendo to play beneath the surface. The images seem to be bolstered by the regular splicing and definition provided by the inclusion of the film leader:

> Their visual instability suspends their content between presence and absence, which both re-enacts and plays into our impulse to remember the star who is no longer with us. The mobilization of a prior knowledge is thus facilitated through the image functioning as a mnemonic trace.[86]

Likewise, it is possible to torque the rules and expectations of musical form and recurrence by circumventing development and thus mesmerising the listener. Rather perversely, my take on *arte povera* is closely linked with the decadent movement as defined by the OED as "a luxurious self-indulgence". The accompanying attributes of very little action and an obsessive cataloguing of tastes is perfectly exemplified in the novel *À Rebours* (1884) by Joris-Karl Huysmans, the precursor to Oscar Wilde's *The Picture of Dorian Gray*. Curiously, Wilde's own oblique definition of decadence - "[c]lassicism is the subordination of the parts to the whole; decadence is the subordination of the whole to the parts"[87] - seems less applicable to my own narrow tastes.

A relishing of artifice over nature, at first, seems to be at conflict with my own elemental approach which is clear in the tracts of preparatory material that have hardly changed in context. However, the rigid inclusion if not incorporation of all that has been previously collated stifles any organic impression. I have filtered this approach through Richard Hawkins' homage to the decadent tradition as a reconstruction of an artificial, highly fragile world. There is strength and judgement in the severe stance of presenting one type of material and the total exclusion of others. This disregard for canonically accepted models recalls Huysmans' protagonist – Des

[86] Grundmann 2003: 53
[87] Chamberlin 1977: 95

Esseintes (who was partly based on Robert de Montesquiou who was also the basis for the Baron de Charlus in Proust's *A la recherche du temps perdu*) in his rejection of academically respectable Latin authors such as Virgil and Cicero in favour of Petronius and other 'Silver Age' writers. Des Esseintes's predisposition towards collecting and hoarding also parallels my forging of preparatory material and echoes Joseph Cornell's filing system of 160 dossiers. The process of assemblage involved in creating Cornell's found object boxes also informed my reluctance to intervene with any pre-prepared material. This approach pleasingly combines the austerity of Constructivism with the fantasy of Surrealism, tinged with a dingy Gothicism (Edgar Allen Poe was very influential on many decadent writers). I have not engaged fully with the latter two aesthetic categories or tapped into Cornell's interest in drawing out the pathos of once precious but chipped beauty. Perhaps my approach to *arte povera* has more in common with Kurt Schwitters' fascination with refuse, garbage and the discarded.

II - Portfolio

There follows a discussion of the individual pieces. They have been grouped in terms of theme or shared procedures for the purposes of this commentary. Their chronological ordering appears below:

Cleave (2007)

Kapur (2007)

Sitting on Gertrude Stein's Lap (2008)

Double Duo for Violins and Bass Drums (2008)

Music for Three Cellos and Ensemble (2008)

The sky is thin as paper here (2008)

LEADER-reel-spool-GAPE (2008)

GAPE-reel-spool-LEADER (2008)

piano trio (2009)

piano quintet (2009)

pariete di vetro (2009)

Piece for String Quartet (2009)

THE RENDERER (2010)

INVOCATION (2010)

Chapter 5 - *INVOCATION* & *The sky is thin as paper here*

INVOCATION (for solo voice)

This work was written to serve as an exemplar of my structural approach in terms of setting up a process of alternation or intermingling and seeing it through without selection or intervention. The work is built entirely on the list of demons invoked as the introduction to William S. Burroughs' *Cities of the Red Night*. I excluded the English names such as 'Great Old One', 'Star Beast', 'God of Panic' and the nameless Gods of dispersal and emptiness – although the latter have been honoured through the elliptical spacing between the different word structures and pauses. The names have been used in the same order as they are presented in the Burroughs text but rarely do they appear in their original configuration. I listed the twenty-five names separated horizontally into cells by their syllable content in the order reproduced below:

Humwawa ("whose face is a mass of entrails, whose breath is the stench of dung and the perfume of death. Dark Angel of all that is excreted and sours, Lord of Decay, Lord of the Future, who rides on a whispering south wind")

Pazuzu ("Lord of Fevers and Plagues, Dark Angel of the four winds with rotting genitals from which he howls through sharpened teeth over stricken cities")

Kutulu ("Sleeping Serpent who cannot be summoned")

Akhkhuru ("suck[s] the blood of men since they desire to become men")

Lalussu ("haunt[s] the places of men")

Gelal and Lilit ("invade the beds of men and whose children are born in secret places")

Addu ("raiser of storms who can fill the night sky with brightness")

Malah (“Lord of Courage and Bravery”)

Zahgurim (“whose number is twenty-three and who kills in an unnatural fashion”)

Zahrim (“a warrior among warriors”)

Itzamna (“Spirit of Early Mists and Showers”)

Ix Chel (“the Spider-Web-that-Catches-the-Dew-of-Mourning”)

Zuhuy Kak (“Virgin Fire”)

“Ah Dziz” (“Master of Cold”)

Kak U Pacat (“works in Fire”)

Ix Tab (“Goddess of Ropes and snares, patroness of those who hang themselves)

Schmuun (“the Silent One)

Ix Tab (“twin brother”)

Xolotl (“the Unformed Lord of Rebirth”)

Aguchi (“Master of Ejaculations”)

Osiris and Amen (“in phallic form”)

Hex Chun Chan (“the Dangerous One”)

Ah Pook (“the Destroyer”)

Pan (“God of Panic”)

Hassan I Sabbah (“Master of Assasins”)

I chose to treat the definitions and fragments of mythological background (quoted in brackets) hermeneutically and avoid giving programmatic settings to some of the musically suggestive names. I was keen to honour the ordering and gaps between words but wanted to obscure the source by subjecting the various exotic sounding syllables to every possible consecutive, systematic combination working alternately up and down the resulting grid of sixty-seven syllables and thirteen gaps. The work settled into seven sections consisting of twenty-five names, either appearing in their authentic form or spliced and sutured into new combinations. The somewhat arbitrary and basic rules of operation imposed on the proceedings involve the new combination of syllables being whispered, original orderings being screamed and any fragments of descriptive text being spoken.

The work highlights the breathing process in an impractical and forced manner – the respiratory necessities of inhaling and exhaling alternate rigidly, irrespective of the equally rigid temporal pattern. The duration of each cell is not related in any way to the shape of the particular syllable or the length of the original word but merely upholds an additive durational sequence and its retrograde. Each name is framed by two three and a half second 'empty' bars consisting of a guttural throat rattle and the gaps between words have been retained and mimicked somewhat laboriously through 'silent' breathing.

The piece was written as a companion to the earlier *The sky is thin as paper here* for solo baritone and as an example of my non-selective approach to form, relentlessness and non-selective remove from the material. The essentially non-musical, linguistic material that constitutes the work explicates the basic combination structures in a more lucid way than abstract musical objects could. As a result of this, a trained voice is not required to record (as opposed to perform) the work due to the less demanding nature of recording private takes. A complete performance would be practically impossible in its entirety without passing out from exhaustion or hyperventilation. My cold detachment from the material is also underlined by my

instruction that each of the twenty-five threads that make up each of the seven sections may be performed (or recorded) sequentially in a linear, horizontal reading or may be piled up on top of each other in multi-track style as a vertical block coagulation.

I chose to avoid the theatrical potential inherent in the original source material but I did wish to align the work with the severity of the solo Schrei-inspired recordings of Diamanda Galás. The lack of distinction between music as understood in the song-structure tradition and text or narration as filtered through the music theatre tradition in Galás' work was instructive in the genesis of my work. Susan McClary wrote of the fiercely confrontational performance art diva that her music is "constructed from the uluation of traditional Mediterranean keening ... whispers, shrieks, and moans."[88] I was keen to incorporate these sound objects into my lexicon in a way that was un-emotive due to recurrence and lack of programmatic stimulus.

The sky is thin as paper here (solo baritone, 24 minutes)

The material in this work is so self-restricting that it seemed to come with its own set of limits that suggested placement and juxtaposition possibilities. It simply consists of blankly ascending passages, drone-like sustained notes and a slow, undeveloped unveiling of the melodic pitch props revealed at the beginning. The abstract yet simplistic, montage-like approach to form prevents any sense of dramatic arch. Again, there is no one section that could be said to satisfy the audience's desire for climax, except perhaps the opening setting of two stanzas of a Denton Welch poem which outlines the pitches and contours examined within the remainder of the work, thus rendering everything in relation to it as a series of different takes on the same thing by using slightly varying proportions and a slow-motion, un-traceable repetition of what

[88] McClary 2002: 110

has already been yielded. In this light, the majority of the work could be said to inhabit a reflective, epilogue-like quality.

> The categories 'psyche' and 'voice' do not simply record what naturally happens; they persuasively prescribe what *should* happen. The most important assumption about voice is that it moves upward, hydraulically, transcendentally. Like libido, voice wants out.[89]

This epilogue may contextualise the closed-mouth slurred, scalic, ascending passages used throughout. These were conceived completely un-expressively and function as grounding and orienting pitch aids, allowing the body to act as its own tuning fork. The ascending passages represent the only truly legato material: this exclusion was influenced by A.A. Pattou who in his treatise: *The Voice as an Instrument* (1878) railed against slurring and offered 'scientific' methods to remove "the defects of an unnatural voice".[90]

> …the whole of musical pedagogy teaches not the culture of the 'grain' of the voice but the emotive modes of its delivery – the myth of respiration. How many singing teachers have we not heard prophesying that the art of vocal music rested entirely on the mastery, the correct discipline of breathing!...The lung, a stupid organ (lights for cats!), swells but gets no erection…[91]

In *The Grain of the Voice*, Barthes continues by discussing two singers: Panzera and Fischer-Dieskau:

> With FD, I seem only to hear the lungs, never the tongue, the glottis, the teeth, the mucous membranes, the nose. All of Panzera's art, on the contrary, was in the letters, not in the bellows (simple technical feature: you never heard him breathe but only divide up the phrase).[92]

In a similar way, each cell in my work is framed or book-ended by a gawkily highlighted approach to inhalation. This, again, was a practical, composed-in conceit to facilitate the replenishing of breath spent but also appealing due to the small-scale

[89] Koestenbaum 1993: 169
[90] Pattou quoted in Koestenbaum 1993: 167
[91] Barthes 1977: 183
[92] Ibid.

polarities and floating definition this mode of inhalation provided. Each inhalation bar is assigned a rigid duration (not always practical) and an accompanying sound including a grasping, loud intake of breath; a phlegmy, guttural growl; and underlying 's' or 'sh' or a soft, inverted whistle. Koestenbaum writes in his book-length essay on Opera, homosexuality and desire that:

> In its expenditures of breath, the singing body is either frugal or wasteful. Voice passes through the body as a toxin does, purgatively…Because voice is an essence, too fervid for storage, that escapes through whatever doors are open…There is something inherently suspicious about breath's movement from lungs to larynx to mask, something always digressive and errant about air's urge to exit the body…Within the logic of singing, air beguiled to a variant destination is as perverse as air that proceeds to the proper gate. Resonation *is* perversion.[93]

I, consequently, employed a reduced selection of three degenerate singing techniques:

1. Breathy (audible air sound) released through the mouth (analogous to a flute-like embouchure)

2. Breathy with a background wheeze, created at the back of the throat – with the aim being to create micro-perforations in the continuous pitch

3. Rattle – a light growling sound from the back of the throat

These act almost like sieves with increasing mesh sizes that allow the voice to escape with varying degrees of success. They are never inter-mingled or organically transformed but are kept awkwardly set apart. The only instance of a cell featuring a dual purpose sees dead-on-arrival notes groped at through brief, 'pitched' inhalations or exhalations before a 'toneless', dynamically expressive purging of the lung's remaining resources (Figure 1). These are the only portions that highlight a note's attack whereas the bulk of the work examines a note's commencement; they are, as a result, the sparest cells in terms of pitched material.

[93] Koestenbaum 1993: 169

The work also excludes the exploration of consonants, settling for the seven Welsh vowel sounds in order to showcase the tone quality of a rich, trained voice. Amongst the vocal repertoire that informs this approach are Morton Feldman's wordless choruses and the way that consonants were eschewed in favour of singing a consistent open hum. Pure vowels also reinforce the abstract quality of the sound.

Even when I have sparingly employed a prolonged morphing between the vowel sounds, the blocks remain singular and stripped-down. I did not wish to employ a text in a phonetic way akin to Lachenmann's *Les Consolations* for choir and percussion by superimposing or projecting onto it a gamut of techniques, or - to quote from Luciano Berio's programme note for *Sequenza III* - "to lay waste to the text, so as to be able to recover fragments from it on different levels…to assimilate into a musical process many aspects of everyday vocal behaviour".[94] I did, however, wish to draw on Lachenmann's use of instrumental vocalisation. I feel that placing the 'ordinary' or traditional singing style at the beginning of the work serves as a back-drop for the remainder of the work and a reminder that this technique is always nearby.

Similarly, the short setting of two Denton Welch stanzas placed on the periphery of the work subordinates any expressivity and serves as a primer, draining any mood-oriented implications from the remainder of the work's longeurs. This placement is not intended to embody any play with expectations in a theatrical sense but simply provides a modest acknowledgement of the admiration Burroughs felt for Welch.

I did not wish to exploit the seemingly ethereal implications of the phrase: "The sky is thin as paper here"[95](the only instance of text-setting during the main body of the work) but was seeking to use the brief, clichéd setting of the phrase as a tracking device, drawing the listener's attention to the events that surround it (Figure 2). It is merely a means of lazily monitoring the pitch progress and hypnotic recurrence. The

[94] Berio 1965/1998: 12
[95] Burroughs 1981: 192

original duration of the work was nearly an hour long and relied more heavily on the salve-like effect of repetition and patterning. The process of charting the rate (frequency not speed) of the alternations, somewhat surprisingly, surfaces as a key element for such a static work. The crossing from one place to another becomes a hook and is legible from a distance, analogous to a poetic line-break.

The armature employed is, therefore, indebted to the grid structure, akin to that in the visual arts of the fifteenth and sixteenth centuries and the treatises on perspective and some of Cy Twobly's work from the 1970s. I share Rosalind Krauss's sentiment as reflected in her 1979 essay from 'The Originality of the Avant-garde and Other Modernist Myths' that "the grid announces, among other things, modern art's will to silence".[96]

The overall form could be described as a vessel that pitches are poured into in a patterned and sequential way (two new pitches were introduced every two pages in the original, unedited version). This results in a limbo-like state between the pitches merely feeling like props for different ways of using the voice and the form being reduced to a husk-like shell. The result is that no one of these components is 'featured' as such – rendering everything as a painterly 'ground' – a blank surface that recedes into the distance. Bruce Hainley, writing about Richard Hawkins in the introduction to *Of Two Minds Simultaneously* reflects on the decadent inspiration behind the unassuming finished art objects and concludes that he is "interested in things that include the process of their own making, to the point that they are almost not what they are but the process of what would make them into something they never quite become. Post-it Note-likeness – signifying not only provisionality, but also the flush of immediacy."[97] I share this contentment with delighting in process and a polite disregard for the impact of the results.

[96] Krauss 1986/2008 quoted in Serota: 122
[97] Hainley 2009: 17

Chapter 6 - *piano trio, piano quintet, pariete di vetro, Piece for String Quartet & THE RENDERER*

The preparatory string material for these works was all conceived concurrently before working on the individual pieces. Despite sharing a consistent process no precise positions were duplicated in any of the works listed above. However, the sense of transposition and equivalent positions being shifted slightly prevails and provides a unifying thread. The way in which this pre-prepared material was activated in each work was flexible but remained consistent and systematic in each individual case. I did not feel that this raw material suggested any individual figuration potential or possibilities, instead the blank and practical nature of conveniently conceived 'left-hand' positions and the resultant closely related implied harmonic material would highlight the disconnect between the pitch collections and the nature of the material. I have, however, exploited the strong, consistent claw-like position through sound objects such as strumming, rapid arpeggiation, finger slaps and multi-string non-arpeggiated pizzicato as well as more flowing, linearly separated possibilities all to be realised while 'holding' the close-knit positions.

All available natural harmonics through to the sixth partial have been used for all the orchestral strings (1/6, 1/5, 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6) – whether trilled between normal finger pressure and lighter, or in a more straightforward manner. Figures 3a, 3b and 3c show three random samples of the preparatory material for violin (reproduced early sketches).

The horizontal rows I prepared all consist of nine or ten positions, always following the sequential template of a quadruple-stop, a triple-stop on strings III-II-I then IV-III, a double-stop on strings II-I then IV-III, then a single-stop on string I before returning to a more contracted, close positioned quadruple-stop, the same two triple-stops and in some instances a final even more contracted quadruple-stop. The length of the finger-board was divided into three sections according to register and the resulting

finger-stretch implications. The first division [a] involves all stopped approximate quarter-tones from the first minor third of the string (natural harmonic) to a quarter-tone below the first octave, the second area [b] spans from the second octave of the instrument up to the major sixth above and the third area [c] spans from this octave and a major sixth up to the edge of the fingerboard. The scale of the instrument's body dictated the number of different transposition permutations for the conventional splayed hand position. Despite this being particularly challenging in some instances on a contrabass, even with the use of finger extensions and thumb, I have retained the resultant intervals as a revenant of a closed system. The sounding of some of the natural harmonics when low down on a thick string can be challenging or almost indistinguishable from the normal pressure when high up on the fingerboard but, again, have been retained in order to honour the process and can result in subtly fragile 'fluffed' notes that remind the audience of the performer's fallibility.

The violin finger positions are subdivided into eleven separate ways of transposing certain intervallic permutations which result in 522 positions in range [a], 702 positions in range [b] facilitated by wider intervallic stretches and 279 positions in range [c] facilitated by even wider intervallic stretches but lack of fingerboard.

The viola finger positions are similarly subdivided into nine separate ways of transposing certain intervallic permutations which result in 342 positions in range [a], 342 positions in range [b] facilitated by wider intervallic stretches and positions in range [c] facilitated by even wider intervallic stretches but lack of fingerboard.

The cello finger positions are also subdivided into six separate ways of transposing certain intervallic permutations which result in 162 positions in range [a], 342 positions in range [b] facilitated by wider intervallic stretches and 249 positions in range [c] resulting from even wider intervallic stretches despite the shortage of fingerboard area.

Finally, the contrabass finger positions are subdivided into four separate ways of transposing certain intervallic permutations which result in 162 positions in range [a], 162 positions in range [b] facilitated by wider intervallic stretches and 189 positions in range [c] facilitated by even wider intervallic stretches but lack of fingerboard.

The system for extending the range of intervals relies upon starting each new subdivision at a near *barré* position and gradually extending the stretch at an additive rate of an approximate quarter-tone stretch. The stretches for the fingers further away from the thumb are less than for the first two fingers due to the shape of most hands and its position above a fingerboard. Also, when there are fewer strings simultaneously stopped the stretches become slightly wider as it is possible to use finger extending techniques for wider intervals. It is necessary to extend the fourth finger toward the bridge without shifting the position of the hand, which allows the player to play simultaneously higher pitches in the same position. The spacing between pitches is larger on longer, lower instruments, thus there are not as many additional pitches available (this is reflected in the running tally listed above).

Having each member of the orchestral string family engaged in the same process in terms of appearances and the physicality relating to the ease or possible discomfort of a particular hand position served as a basis for this body of work. The limited means (in each individual piece) of articulating or exciting sound from the strings was also an important statement in terms of the interchangeable yet unified nature of writing for the fundamental qualities shared by any instrumental family.

piano trio (for violin, ‘cello and piano; ca. 80 minutes)

This work presents four vastly different material types assigned to different areas of the fingerboard. The material’s formal content remains consistent throughout but the temporal rather than rhythmic proportioning varies according to context in a way that is not dictated by the pre-prepared finger positions. I was interested in presenting

unedited, laborious exposures of one type of approach to the position grids then throwing it out as if wiping the slate clean and introducing another approach to a different part of the grid. The tension between the equivalence inherent in the merely transposed intervals provided by shifting similar hand positions and the wildly different realisation of that closely related material was one of the aims of the work. This frisson seemed to provide me with the licence to work with an extended time-scale and tap into the dual impression of a horrible inevitability set up and seen through and the fact that nothing could prepare the listener for the abrupt shifts introduced without any interwoven recurrence.

Naming the work after such a homogenous, conventional line up was slightly perverse; a more apt description would be 'Music for violin and cello with piano'. Long sections of the piece see the two string instruments playing independently in a mimicking and proportionally consistent (almost mirroring) manner. The piano provides a punctuating or framing function that might be described as even more subsidiary than a traditionally accompanimental role. Even when the forces converge there is more of a sense of simultaneity than co-dependent unity. It might even be possible to intuit a vexatious calculation in stacking up a continuation of what has already been presented at length as independent strands.

In terms of proportion and appraisal of the weight of each section, the shape of the work might be described as being made up of an introduction, two main sections and a coda. The introduction consists of a violin and piano solo (pp.1—3), followed by a cello and piano solo (pp.3—9). Each phrase here is made up of four 4/4 bars followed by a three-second pause bar. The bowing technique is mostly conventional yet fragile with the majority of the material consisting of double or single-stops. This first section uses the highest tessitura in the entire work. The difficulty of being able to secure some of the intervals specified at this stratospheric range near the edge of the fingerboard is mimicked by the isolated, high register, near-cluster, finger-sharing chords in the piano part. The fragility of the pitch content and the difficulty of

securing these positions accurately has been consciously reflected in the delicate nature of the material. The dynamic level for the entire section is very low and each individual stroke or contact with the string seems to be on the verge of being extinguished either through purposefully running out of bow area or through a brittle, scratched termination. The use of ricochet bowing is seen as a non-committal contact attempt, as are the weak-willed tremolandos near the tip of the bow ending in a pitiful punctuated moment when the wooden point of the bow makes contact with the string. The *flautando* shimmering in the *sul ponticello* area and the half-*col legno tratto* rapid gliding between two areas of the bow also seem to deny the pitches their right to unencumbered audibility.

The first main section (pp.10—55) is itself split into very clearly defined sub-sections, determined by the crude disposition of the meagre instrumental forces. The first sub-section (pp.10—27) sees all three instruments being used independently with the exception of the piano's resonant afterglow backdrop (caused by the violent release of the *una corda* pedal while the right pedal is still depressed and the two hands hold down a rapidly decaying chord). This is a continuation of the light pool of resonance provided by securing a silent cluster in the lower octave of the piano by using the *sostenuto* pedal and lightly exciting resonance by depressing other keys as used in the Introduction. The second sub-section (pp.28—45) uses the two string instruments continuing the sequence of material they had presented individually in a layered and superficially contrapuntal manner. The third and final sub-section (pp.46—55) involves the piano playing concurrently while seeming to hollow out the significance of this first significant tutti by playing unrelated repetitive alternations of arm and palm clusters.

Each of the three 4/4 bars that make up the short clauses of string material throughout this section are dedicated to one hand position. It follows the pattern of all four strings, top three strings, top two strings each being assigned a bar with ascending motion, mostly separate string bow contact in the cello part. The violin clauses mirror

this procedure, like the other side of a Rorschach test, by following the sequence of dealing with the top two strings, the top three strings and then all four strings in descending motion. The rules of operation employed involve sub-dividing each bar into two sections, not always equal halves (see Figure 4). The first portion of the bar presents a clear rendering of the pre-prepared grid material followed by a double-stopped artificial harmonic examination of any of the pitches that were not presented as natural harmonics within the first portion of the IV-II-II-I, III-II-I bars. The non-natural harmonic pitch could provide the top or bottom of the stable artificial harmonic pivot while the other finger moves relatively rapidly between the perfect fourth, major and minor third intervals (the perfect fifth artificial harmonic is avoided due to its problematic stretching on some positions of the cello finger-board) while filling the gaps in a quasi-glissando fashion causing unexpected leaps in pitch registers. This results in the bars being sub-divided into anything between two and five sections depending on the position and transposition of the left hand and the resultant available nodes. Within the first clear presentation of the hand position material, natural harmonics are allotted note values of twice the relative duration of regularly stopped tones, resulting in logical ratio groupings.

The pitch progress in terms of register throughout the first section sees the two string instruments climbing up the available hand positions from the lowest minor third (with a patterned use of the open strings) on each string of the instrument in a continuous ascent. Exact transpositions have not been avoided or concealed; each string instrument alternates between two areas of the fingerboard with equivalent quarter-tone rates of ascent. The book-ending definition provided by the piano is provided by harmonically and registrally unrelated sound objects. The only unifying factor between the string and keyboard writing is provided by the highlighting of physical tactility and the insistence on presenting one approach to treating a surface or physical body. The pianist alternates between a key-sharing (maximum finger usage) of a near-cluster with a chromatic arm extension, intermittently dabbing slabs of the keys and a relatively widely stretched dyad in one hand with a palm, single colour

cluster filling in the gaps in the texture. This type of seemingly arbitrary yet elemental treatment of physical potential and limitations set up by the construction of an instrument is related in its 'automatic' quality to the drones provided by the double-stopping of consecutive open strings while purging the artificial harmonic potential of previously fully stopped tones. This approach clearly honours the physical position involved in the process of sound creation over the resultant audible results. A tension is also set up between the string material being constructed to provide ease of position with a sense of naturalism and the piano's reversed palm position and carpel-tunnel inducing arm contortions.

The piano material for the final sub-section (from p.46) shifts into a pulsating and banal measuring role with the new proportional unit of two bars of playing alternating with two bars of resonance (including pause bars). This deployment of the primitive cluster material used throughout gives an arbitrary flavour to its placement at this juncture and a sense of unexplored infinite potential.

The second main section of the piece (pp.56—116) deals with the same position procedure at the higher end of the fingerboard. It was a conscious decision to explore dryer, 'wooden' sounds for this portion of the fingerboard, specifically, pizzicato-type strumming and light *col legno battuto* bow work. The position of the higher stopped strings means that they are tauter and prove more challenging to excite which makes the pizzicato and finger strums even more brittle than they would be if the stopped tones were lower on the fingerboard. Despite the vastly different sonic results introduced in this second main section, there are a number of structural parallels between this and the previous section. The piano falls back into the same framing role with the same approach to physically manufactured near-cluster slabs and the string material obliviously continues to ascend a perfect fifth apart. However, the material assigned to the two pitch categories of ascent are differentiated in this section (the lower fifth seen on p.56 uses the bow each time and the equivalent process nearer the edge of the fingerboard is purely pizzicato). The bowed natural harmonics here are

used more as timbral trills than pure pitch dislocations and the contact points relating to the col legno bowing or pizzicato (arpeggiation strum) come under closer scrutiny and are more differentiated.

There is a sense in this section of the work of a slightly more flexible rhythmic template. The duration assigned to each material type remains fairly mechanical but the reasoning behind bar length seems more physically motivated as opposed to the earlier sense of rigidly filling in a bar and even compressing the material into an allotted space. This is true of the *col legno* material to a lesser extent, despite the differentiation between three, four and five beat bars. The ordering of entries has been swapped around from the first section (now rigidly following the pattern of violin descending first following by the 'cello ascending second). There is a sense of the *col legno* and timbral trill material being a quicker way of getting through the pre-prepared grid, somehow picking up the pace of progress that is slowed down by the laborious pizzicato movement from behind the bridge to within the peg box and every discernibly differentiated area in between. Despite the physicality inherent in covering every area in front of and behind the stopped strings on the fingerboard the impact of this material remains mechanically static. The stress is clearly on the process being made explicit as opposed to the clarity of the audible results, indeed, some of the nine areas tracked in this process (Figure 5), such as plucking near the finger or near the nut, will provide very brittle sounds that are difficult to balance in context. The tablature-staff employed to define these gestures in the score also serve to highlight the genesis of the pitch material.

Having explored the excitation of all four strings almost simultaneously in the second main section, I was keen to continue this approach in the coda (p. 117 to the end) but wanted to return to bowed string action for a more violent exposure of the material. This section constitutes the most crudely compacted use of the pre-existing hand positions with both players bowing each other's instruments simultaneously, therefore, in spite of providing a recapitulation of the separate use of the two

instruments as in the introduction this section unifies the two string players in a way that was previously resisted. The rapid 'trill' approach between the by now 'familiar' way of splaying the hand on the fingerboard and fully open strings seems to make a mockery of the approach that was implemented throughout the piece and surrender to the impossibility of rapidly re-stopping precisely the same intervals. The sense of futility is soothed by the obliteration of clearly defined pitches provided by the heavy pressure scratch bowing called for throughout this final section. Theatricality seems to trump the more attuned, sensitive approach to phrase units in the previous section as we are returned to square, single 4/4 units.

For once, the status of the strings and piano material seems to be equalised in theatrical degradation, circumventing elevation through terse insistence. There is a parallel sense of imbalance between the work's duration and the progressive rate of ticking off the rows of the grid shared in the second section of the work (in terms of alternately rushing through and presenting a telescoped presentation of material). In the Coda, there is a sense of running out of piano material which sees the piano lid being slammed down to substitute the bi-partite, slightly overlapping clusters hammered out earlier in the section.

piano quintet (for violin, viola, cello, double bass and piano; ca.15 minutes)

This work seems to provide a more obvious fulfilling of the title's promise and sees the four string instruments work in a more unified, even one-dimensional way with the material. The piano material constitutes a ground that is at once less distinguished than straight-forward accompaniment but more intrinsic to the combined sonic palette than the book-ending clusters of the earlier Trio. Texture differentiation is eventually provided by the higher string instruments dropping out one by one before a brief piano solo (made up of a continuation of the same gestures at a faster tempo) and a bowed re-introduction of the instruments in a mirrored sequence of entries. The work,

therefore, can be neatly and clearly subdivided into two sections (first: bb.1—136, second: bb.137—341) without presage or fade-out – defined by the means of making contact with the strings. The bi-partite and rigid 2/4 bars prove even more mechanical than the square vessels with more malleable material poured into them as heard in the Trio. There has been no attempt to disguise the simplicity of their rhythmic content and even the sextuplet and septuplet ratios bowed in the second half of the piece align with regular crotchet beats.

The overall register contour of this work is, once again, defined by regularly ascending hand positions. I was tempted in this piece to deny any activation provided by 'right hand' excitation of the 'left hand' positions and felt that a practically 'silent' working through of the fingerboard activity was conceptually strong enough to work as a piece. Ultimately, I opted to amplify the string instruments and make the audible detritus of weak or veiled exposures of the pre-prepared material form the audible overspill. The slapped edge of the fingerboard activations of strings and flesh pizzicato of selected natural harmonics at the same positions that had previously been fully stopped, seem, respectively, to efface the 'left-hand' material or pay begrudging lip-service to the pitch results. It could be argued that the percussively deliberate securing of these pitches on the fingerboard takes precedence over any activity over the sound holes. It was, however, a conscious decision to have the more resonant, lower stopped-note material treated in this dismissive fashion whilst the higher material needed the friction between bow hair and string to make any impact.

Both sections of this work utilise the open, un-stopped strings in a non-selective, crudely slapped manner in the first half and a slightly more subsidiary exposure in the second half. The use of *con sordino* rapidly bowed patterns with very loosely wound hair for purposeful lack of definition (set off by the use of the bow hair near the frog for more awkwardly defined tremolandos) parallels the stifled piano sound of strings that have been internally muted by using blu tak and felt weighed down by lead-weight tape. The dry termination of plucked strings is also paralleled by the piano's

dead-on-arrival splayed arpeggiations. Conceptually the piano and string players seem engaged in differing yet mutually dependent processes. The strings work systematically through regularly ascending hand positions – akin to a mechanism being gradually cranked up - whereas the piano's equally consistent material seems less clearly defined and even meandering in its conception if not its placement. The piano part was less about composing musical material than seeing what audible effects physical actions at the instrument would produce. In spite of the use of diamond note-heads (which suggest literally 'silent' depressions), it is the discharged and residual 'spilt' notes squeezed out of the muted strings, weakly caught by the sustaining pedal, which provides the desired sound-surface. The nature of the material is informed by the practical impossibility of absorbing all the information provided and achieving the desired physical manoeuvre before moving on to the next gesture. This cognitive-overload scenario opens up the material to the transcendent luminosity that can result from uncertainty or any arrested state. The piano's role within this quintet operates as an effluvium that permeates the auditory space through occupation rather than domination.

The special six-component staff (Figure 6) was employed to denote the playing technique called for (using the fingers and moving out to the wrists, arms and elbows for each hand or arm). To achieve the required physical gestures, the player must have the wrists pointing outwards, in opposite directions from each other, resulting in the fingers being held in a raised and arched position, which may make securing the specified notes difficult at first. Clusters (or note-bands as close to clusters as possible in context) are to be played by the wrists (by using the flat surface of the wrist and a small amount of forearm) extending out to the arm and the elbow (by using the flat surface of the elbow bone, facilitated by the wrist's position). The arrows (placed to the left of the wrist/arm/elbow clusters) denote the direction in which the arms should move. A psychological intensity of pressing the body onto the keys in these instances is desirable. This repetitive need to touch large areas of the piano's keyboard suggests a need for reassurance and taps into the fetishistic comfort derived from recurrence.

These are not traditional arpeggio markings, where notes are released when the next one is sounded. The notated material (held by the fingers) should not be released while moving the arm, in order to constrict the action. It may not be possible to keep all the notes depressed by the arm's extension but the distribution of pressure and weight along certain points of the forearm can facilitate surprising stretches. The two arms should aim for roughly equivalent rates of movement, always filling out the duration of a crotchet beat, as instructed. The left and right hand pivots are consistently mid-register in order to accommodate spatially the extreme wrist, arm and elbow extension on both sides of the hand's nucleus. The reasoning behind this play between white, black and chromatic piano keys is more calculated than anything in the string parts, in order to create a sense of cognitive overload, but it shares a similar sense of physical dysphoria with the string imbalance between physical effort and pure audible results. The presence of the performer at the piano outweighs the significance of the actual instrument's potential in this work – thus highlighting the incongruence between the blank and repetitive actions called for and the dialectically preserved traces of the laboured 'working-out' process.

> I'm drawn to the primitive, the ritual and the fetish elements.[98]

> I just read the textures of the words. I see everything that way, the surface of things, a kind of mental Braille, I just pass my hands over the surface of things.[99]

Pattern repetition in the first section was defined by the disruption of the right hand's slapping rate as determined by the woolly plucking of available natural harmonics at the given positions. The incorporation of pauses was connected to this minimalist patterning, in that the placement of each caesura was used to mark the termination of pattern repetition in all four string players' parts. This process serves to confirm suspicions that the material exists in a vacuum and draws attention to the unexplored potential of refining the existing pattern rows into shapely musical phrases.

[98] Twombly 1952 quoted in Leeman 2005: 13
[99] Berg 1966 reproduced by Goldsmith 2004: 87-88

The dynamic marking selections, as in the previous Trio, are consistently bland, with many of the designated markings appearing in Lachenmann-style inverted commas to draw attention to the relative physical intensity of exertion involved as opposed to the resulting volume. Extremes or morphing of dynamics were avoided in this piece in order to acknowledge the impossibility of imbuing this type of material with any expressive attributes. Contrastingly, the physical intensity of the tautly dilating arm coverage of the piano keys seems cruelly denied by the *ff=pppp* marking.

pariete di vetro (for piccolo/flute, clarinet in b-flat, horn in f, percussion, violin, viola, cello and double bass; ca.7 minutes)

This work was written in response to a call for scores by the London Chamber Orchestra relating to their Music and Architecture project. I selected the Frame House, Rowe Lane in Hackney by Marcus Lee as a starting point for this work. I was drawn to the contrast between the open living area downstairs and the cellular rooms upstairs, formed within the same frame module. I aimed to capture this structure by employing a singular, integrated overall form that contains polarised yet singular material types. Leonardo Da Vinci's study of linear perspective and his use of the interposed glass pane ('pariete di vetro') was one of the conceptual starting points for arranging the material in this work.

> Perspective is nothing else than seeing a site behind a flat transparent pane on the surface of which are marked all the things which are behind that glass and which can be conducted by means of pyramids to the point of the eye and these pyramids intersect the said pane.[100]

The string material shares many features with the latter half of the *piano quintet*, with the exception that the placement is even less defined and the regular sextuplet ostinati do not treat the open strings in such a selective manner. This seemingly humble, even

[100] Leonardo ca.1492 quoted in Veltman 1992: 6

degraded, figuration, through persistence, holds a quiet confidence – akin to 'steepling' as read by body language experts. The macro-level stasis is made up of micro-level literal steeples, triangular peaks that provide a form of continuous cresting. The covert treatment of the pre-prepared hand position shapes is this time kept in check by muting the instruments throughout (as in the Quintet) and using an angled (half-*col legno tratto*) bow to play any sextuplet without natural harmonic content. Goethe's quote about architecture being 'frozen music' could well be reversed with reference to this piece. The violin and viola practically play throughout – clearly engaged in crossing each other through gradual ascending register in the violin part and gradually descending positions in the viola part. Their twin roles, typified by upward fanning-out apreggiations in the violin and downwardly fanning-out apreggiations in the viola part seem implacable. The cello and contrabass do not have as important a role in providing the ground as the two upper strings have. The diaphanous droning timpani seems more atmospheric and the skeletal fragments of wind material merely pick out resultant pitch territories rendered by the snatches of natural harmonics in the string parts.

Each wind instrument is assigned an insistent yet subservient role compared with the insistence of the string material. The flute and piccolo simply alternate between fragile, barely audible, high frequency whistle tones and alternately fingered shadings around naked fifth intervals. The clarinet, although sharing the intervallic simplicity, is contrastingly allocated mid-register pitches with a very clipped and retrained type of figuration – akin to soft 'tongue stopped' short bursts (as suggested by the precise rest instructions). The horn shares the muffled qualities of the other two winds in an even more literal fashion – being muted by a practice mute throughout. The horn material simply consists of ascending harmonic series pitches resulting from a single fingering each time on a particular side of the instrument. The frequently low starting notes in this instance are purposefully flabby-sounding and difficult to secure at a soft dynamic. Once all the instruments are playing together the timpani material shifts from the two types of drone (brushed or lightly trilling snare drum sticks near the

edge of the surface skin area on de-tuned instruments for loose lack of definition) to a hollow punctuating role. The use of the large yarn beater and *secco* termination of each crotchet-spaced glissando adds a deceptive sense of significance to the resulting portioned-off cells. Once again, the physicality and resulting textural implications are clearly the only motive for such vague pitch material as assigned the timpanist. The actual timpani requested are merely the largest and smallest available with pedals to adjust the points through glissandi between three approximate areas. The beaters called for and the actual contact points varying between the dead centre, the resonant middle, the edge of the skin and directly on the metal rim seem to take precedence over the precise pitches. This abandon in terms of pitch specifics may also be applicable to the core of string material – in that the precise near-quarter-tonal intervals called upon in certain positions may be challenging to realise but the sense of attempting the position and continuing the repetitive bowed articulations regardless of accuracy takes precedence.

Once the horn has finished winding its way through the banal and lazily ascending scales there is nothing new introduced in the piece (with the exception of a dry switch or hot-rod trill on the rim of the smallest timpani). The remaining wind instruments and lower strings drop out in the reverse order of their entries. This crude approach to texture distribution lends the work a diamond shape, appropriate given the triangular shape of the house assigned to me in the LCO brief.

In Leonardo's CA 1 bis va (1480—1482) the 'pariete di vetro' device is pictorially presented but is more fully described verbally around ten years later on MsA 104 r (1492) with the following instructions:

> Have a piece of glass as large as half a royal folio paper and set this firmly in front of your eye and the things you wish to draw; then place yourself at a distance of 2/3 of a braccio from the glass, fixing your head with a device in such a way that you cannot move it at all. Then shut or cover one eye and with a brush or drawing chalk draw upon the glass that you see beyond it; then trace it on

> paper from the glass. Afterwards transfer it onto good paper and paint it if you like, using aerial perspective carefully.[101]

Flipping through the pages of the score clearly reveals the singular structure in an analogous way to the description above. The bare bones of the material presented seem to suggest a preparatory exercise for a more fully developed or richly textured work – something waiting to be transferred onto "good paper".

Piece for String Quartet (ca. 8 minutes)

> At first every small apprehension is magnified, every anxiety a pounding terror. Then the pain comes, and I concentrate only on that. Right there is the usefulness of migraine, there in that imposed yoga, the concentration on the pain. For when the pain recedes, ten or twelve hours later, everything goes with it, all the hidden resentments, all the vain anxieties. The migraine has acted as a circuit breaker, and the fuses have emerged intact. There is a pleasant convalescent euphoria.[102]

All the dynamics in this work are kept very restrained with narrow yet undeniably *subito* shifts. Once again, the dynamics in inverted commas denote the relative intensity of the gesture, not the resultant volume. The work inhabits mid-to-high-register positions and the lower octave of the cello is not explored at all. This was consciously excluded in order to unify the four instruments that make up the line-up of the most conventional of chamber music combinations.

The finger-position series was used selectively for this work in a more freeze-framed approach. In this instance, the refracted approach to the finger-board hand positions for four, three, two and one strings shatters the logic behind such physically conceived sound objects, thus making the proceedings seem interchangeable. A limited number of playing techniques were superimposed on the bare pitches as if

[101] Leonardo ca.1492 quoted in Veltman 1982: 4
[102] Didion 1979/2006: 305

angled to conceal feebly their genesis. Among these are: vertical and circular swishing motion between sul tasto and sul ponitcello positions, tremolando (in this instance, a very gently scrubbed repeated fast gesture), half-*col legno tratto* of some of the wood of the bow along the string. The instruction 'frog' above the stave requires a short up-bow directed motion *near* the frog of the bow, ending practically tonelessly with the wood of the frog ('wd' in context) making contact with the string. Likewise, the instruction 'tip' above the stave requires a short down-bow directed motion *near* the tip of the bow, ending practically tonelessly with the wood of the tip making contact with the string. These stifled 'up-beat' appendages to the suspended double-stopped quivering operate in a conceptually and physically peripheral way (by employing the bow's extremities) and always last the duration of a mere dotted-quaver beat. Ensuring the arrival point of tip-point or frog for these terminations of a dwindling tone was the reason for specifying the bow direction, as well as stressing the perilously slow rate of bow motion advised for each fragile double-stop. The instruction 'quiver' in conjunction with a projected single up-bow or down-bow motion attributed to a long note calls for very slow, almost faltering *flautando* bowing. Tensing the fingers that hold the bow while only drawing the bow along the strings with light, floating pressure ensures a fragile, slightly quivering double-stop. Concessions have been made to the necessity to bow more freely near the end of some long notes. As with *pariete di vetro*, ordinary bowing is only used for double-stops that involve natural harmonics, whereas all other suspended double-stops involve an even more fragile quivering bow drawn at an angle (half-*col legno tratto*).

This work is organised into nine equivalently constructed sections (working out as a page of score each), divided by a silence, and a more continuous, tripartite final (tenth) section. For the first nine sections the viola plays continuously while the two violins play parallel chords; the cello enters last and works through its material first, forming a top-heavy diamond shape. The rests on either side of the violin and cello material were calculated to be proportionally symmetrical in relation to the viola's 'subject'. The tenth and final section (bb.73ff) sees the cello take over the continuum

role previously held by the viola, with merely decorative high-wire battuto bounces alternating with deceptively expressive molto vibrato intensity in both violin parts and nuanced shadings in the viola part. Despite previous overlapping of parts, the only instance of a dual 'subject' in terms of continuity takes place from bb.79—84 (Figure 7) wherein the viola resumes its previous role part-way through the cellos longer theme, which consists of a suturing of everything assigned to the instrument up to that point.

Each of the first nine sections consists of nine viola cells, five violin cells and two cello cells. These in turn are constructed from weakly stifled 'up-beats' and longer, more sustained double-stops of diminishing note values depending on the number of strings engaged within each cell. If all four strings are involved, the nucleus (II & III) consistently lasts eight quaver beats; when three strings are concerned the arrival point of either double-stop lasts seven quaver beats, and if only two strings are played the obscured vertically bowed double-stop lasts six quaver beats. The singularly tremolando, single-stopped top string, whenever played in isolation, is assigned seven semi-quaver beats in *sul tasto* position. These rules apply throughout but can be read most clearly in the viola part due to its squarer bar structure that the other instruments are made to grapple with. A curious tension, therefore, arises in relation to the status of each instrument. Indeed, it could be surmised that the length, not the nature, of the material assigned each instrument is the only distinguishing factor. The material as it stands seems to operate in absentia due to its shadow-like or accompanimental character, drawing attention to the lack of dominant motives or even recognisable stock 'figuration'. The leanness of each cell's content and the coldly implacable placement of each strand approach a form of artistic meanness made bearable by the resulting stupefaction. Such a nihilist outlook may not be entirely appropriate when evaluating such infinitely inter-connected, guilelessly direct material types.

The same sense of running out of consistent and specific material as in the coda of the earlier *piano trio* pervades the final and longest section of *Piece for String Quartet*.

The stratospheric yet somehow purely atmospheric use of the top string stopped near the edge of the finger-board seems to confirm the subsidiary role assigned to the outer strings throughout the work. This represents a sort of death due to general inactivity borne from cleft bodies not wanting to do anything independently, like those described in Aristophanes' speech in Plato's *Symposium.*

THE RENDERER (ca. 22 minutes)

> It is then, during an impressively staged ceremony, that its confusion with water takes place, and the disappearance of its form into memory. (At the same time, all memory of dirtiness dissolves). As for the water, it remains deeply troubled, moved. An enormous amount of it has, as I've said, lost face. It finds itself seriously punished for it. It will not succeed in ridding itself of the soap, and of the traces of its crime, except by a considerable afflux of reinforcements brought up en masse, and by an agitation very significant of the emotion, the remorse it feels; except, finally, by quantity. Only by calling on its quantity. It is quantity, here, that drowns quality, makes it indistinct, proportionately (or relatively) indifferent or insignificant. Insignificant, one was already too quick to say…[103]

> …Meanwhile, abruptly dispersing its smoky origins, the candle-light flickering on the book encourages the reader – then, bending over its plate, it drowns in its own nutrients.[104]

> Even when I surrender, if I do, or say I lay down my life for him and let him render me into fine perfumed soap for him to wash his hands with and maybe his rectum, it won't be enough.[105]

The rendering process of converting animal waste into stable materials provided the impetus for the working procedure behind this piece. The idea of carrying out a continuous process at a steady 'temperature' (below boiling point for edible rendering) and finely chopping fat material before carrying out two or more stages of

[103] Ponge 1969: 72
[104] Ponge 1942/1994: 19
[105] Purdy 1978/1985: 118

centrifugal separation seemed analogous to my treatment of the string finger-board based material. The stages of first separating liquid from solids and secondly the fat from the water seemed to parallel my layered approach to building a texture through different categories of material types and the stimuli-dependent placement.

This work could be described as sectional 'Music for Strings, Percussion, Celesta, Harp and Piano'. The percussion, celesta, harp and piano provide a sounding board for the segregated string rock bed. Following the introductory eight bars, the eight sections sub-divided into their respective three or four parts are separated by the piano's scalic, high register summation of the resultant pitches provided by the string's natural harmonics within the preceding sub-section, accompanied by a mock-parallel scalic flourish played by a plectrum behind the pegs of the harp. This functions as the solids which are removed and dried by pressing and steam-drying following the 'tanking' rendering method. Each of the sub-sections, which are defined by the segregated disposition of the four groups of string instruments (always moving up in terms of instrument size), are separated by a 'wiping of the slate clean' provided by percussive, freeze-frame, low register chords from the piano and scraping on the percussive instruments followed by non-pitch specific *col legno* bursts from each family of string instruments engaged in that section. This is analogous to the running off of free fat within the 'tanking' rendering method before running the remaining water into a separate vat.

The rules of operation set in place for the string activation of finger-position grid material are more conventional in this work. The ordering of pitches is always successive in terms of string number, and the rows with most natural harmonics within the pre-prepared table were favoured. The three strata of finger-board area (low-medium-high) were used to further define the material – the highest violin material (which is worked through at double speed) is often so stratospherically high that the precise pitches and actual finger pressure differentiation (and even timbral

nuances) for the natural harmonics just beyond the finger-board are somewhat hypothetical.

The rhythmic assignment for each component of the projected quadruple, triple, or double-stop area was rigidly preconceived. Any non-harmonic notes are covered within the space of a quaver, whereas the required sustained, glassy, *flautando* held natural harmonic is assigned eight beats (for a quadruple-stop area), six beats (for a triple-stopped area) and four beats (for a double-stop area). If there are two parallel natural harmonics they are combined as a simultaneously sounded double-stop, and in order to honour the durational rules of operation they are also doubled in length.

Each sustained, natural harmonic stopped tone, which could be typified as a continuous 'hair' sound, is punctuated by a clipped strumming (for quadruple or triple-stops) or ricocheting bow drop (for parallel double-stops) by the other string groupings. The primary 'sustained' string material operates metaphorically as a scrim, in that it is at the foreground but its translucence is revealed when other musical objects rub up against it. The secondary 'punctuating' string material has been assigned in equal proportions according to register strata and could, in turn, be typified as a 'wood' sound to mark the beginning and end of each suspended tone. Each quaver-long purging of the remaining non-natural harmonic stopped tones within each hand position on the finger-board is defined, or possibly effaced depending upon context, by a sharp snare drum rim-shot accompanied by either a whip, a metal rod on a grid, flicked ratchet, or scraped knife by the first percussionist and piano chromatic cluster punctuation (constituting another pocket of the 'secondary punctuating' material) of the registral extremes covered by the non-harmonic tones. Satisfyingly, the 'secondary' material functions as the tallow; the hard fatty substance resulting from the rendering process, and thus operates as the prominent 'effect' resulting from the 'primary' material's 'cause'.

The string's natural harmonic overlaps are similarly reinforced or possibly effaced by the second percussionist's droning wire brush circular motion on the skin surface of the bass drum in various combinations with a softly and slowly pulled lion's roar, soft brush circular motions on a de-tuned timpani, a circular wire brush motion on the rough inside of a large tam-tam, and poly-block rubbing. These drones, in turn, are consistently shadowed by the harp's narrow pitch-band with octave displacement alternation between half-pedalled harp *murmurandos* drawn from one of the string's pitch strands. This gauze-like droning might be said to occupy the third rung down the material caste system and share in the tallow's lubricating quality for compression of materials. The celesta's dabbing, quaver-long summation of the hypothetically blurred, if not combined, resultant pitches from the strings' natural harmonics always occur directly after the percussive punctuation of the similarly quaver-long fully-stopped positions in the string material. This material operates simultaneously as purely ornamental as well as a sparing summation of auditory results.

Following the opening the eight main sections are sub-divided according to the primary material (the intervallic itemisation that follows refers to the first quadruple-stop of each row of finger-board material for the 'sustained' material only). The numbers (e.g. 332) refer to the relative number of quarter-tones that separate each of the four strings while the letters a, b and c refer to the area of the fingerboard covered ranging from lowest [a] to highest [c]):

I

		bb.9—20	bb.26—35	bb.41—48	bb.56—68	
Violins	a				332 low selection	Brief violin artificial harmonic purging
	b				443	
	c				110	
Violas	a					
	b			221 & 110 high selection		
	c					
Cellos	a					
	b		221 high selection			
	c		110			
Double Basses	a	110 high selection				
	b					
	c	221				

II

		bb.80—87	bb.93—105	bb.110—125
Violins	a			221 low selection
	b			332
	c			221
Violas	a			
	b		332 low selection	
	c			
Cellos	a	110 high selection		
	b			
	c			

III

		bb.132—139	bb.147—163	bb.170—177	
Violins	a			110 high selection	Brief violin artificial harmonic purging
	b			221	
	c			332	
Violas	a		221 low selection		
	b				
	c		110		
Double Basses	a				
	b	110 low selection			
	c	110			

IV

		bb.187 –194	bb.203—217	bb.225—232
Violins	a			
	b			110 low selection
	c			
Violas	a		110 low selection	
	b			
	c		221	
Cellos	a			
	b	221 low selection		
	c	110		

V

		bb.239—248	bb.254—261	bb.269—283	
Violins	a			110 low selection	Brief violin artificial harmonic purging
	b			221	
	c			332	
Violas	a				
	b		221 & 110 low selection		
	c				
Double Basses	a				
	b	110 high selection			
	c	110			

VI

		bb.292—303	bb.309—321	bb.328—235
Violins	a			
	b			110 high selection
	c			
Violas	a		221 high selection	
	b			
	c		110	
Cellos	a			
	b	110 high selection		
	c	221		

VII

		bb.242—256	bb.364—376	bb.383—392	bb.397—409	
Violins	a				221 high selection	Brief violin artificial harmonic purging
	b				332	
	c				221	
Violas	a					
	b			332 high selection		
	c					
Cellos	a		110 low selection			
	b					
	c		221			
Double Basses	a	221 low selection				
	b					
	c	332				

VIII

		bb.419—433	bb.439—450	bb.456—468	
Violins	a			332 high selection	Brief violin artificial harmonic purging
	b			443	
	c			110	
Violas	a		110 high selection		
	b				
	c		221		
Cellos	a	110 low selection			
	b				
	c				

The brief violin-only exploration of artificial harmonic portamenti with open parallel string self-accompanying drones highlights the purposefully narrow territory that has been mined within this work. This glimpse of what could have been seems to operate similarly to the evaporation process resulting from a variation on the ‘dry’ rendering method.

Chapter 7 - *Music for Three Cellos and Ensemble, Kapur, LEADER-reel-spool-GAPE & GAPE-spool-reel-LEADER*

Music for Three Cellos and Ensemble (for three solo cellos, oboe, bass clarinet in b-flat, two percussionists, harp, piano and steel-string acoustic guitar; ca.13 minutes)

The three cellists have been assigned a scordatura which involves playing the same exact finger-board positions in order to provide fluidly parallel motion clusters. This surpasses the sense of mirror geography evoked within the work for four violins and sets up an in-built tension relating to the physical scale and impossibility of equalising the temperament of all the parallel intervals. All three cellists play more or less continuously throughout with a preponderance of double-stopping – thus providing a six stranded coagulated monody that serves as both ground and solo 'line'. The guitar material used within the ensemble mostly makes use of barré six-string articulations to mirror the six strands of the frequently double-stopped cellos. The cello material separates the work into six clearly defined sections. The first section, which itself is sub-divided into six clear sections marked by the introductory bow scrubbing directly on the bridge, (bb.1—60) concentrates on various different ways of drawing the bow hair along the top three strings of the instruments. This section seems to operate cyclically with the recurring 'signal' of the physically marked and memorable first gesture which seems to suggest recurrence, repetition as well as a sense of starting from zero. Polarities are already introduced within the opposition of delicately *flautando*, glassy natural harmonic sustained trills and heavy, even scratched bowing. The extremes continue in terms of alternation between a very narrow, tautly constructed pitch band and unspecified high register glissando swoops down to the same tight cluster area. The only limited sense of abandon within this first section is provided by the increasingly distorted rapid three string vamps at bb.17—19, bb.38—40 and bb.57—59 (Figure 8).

The second section (bb.61ff) presents a vastly different palette of entirely strummed or plucked gestures with separate use of the three cellos for the first time in order to allow for finger resting time and to avoid repetitive strain injuries. The third section (bb.96ff) sees the first use of floating, suspended chords and returns to the solo-tutti model set up in the opening section. This section also sees the first, drone-like exploration of the bottom, un-tampered with, string. The triple-stopped bowed material here (requiring loose bow hair and carefully angled bow for a fragile result, at best) seems to suggest that the 'cellists are resting into an accompanimental role for the first time in the work. The opening material is reprised in a brief, diptych constructed, slightly varied recapitulation at b.150 before moving into a series of alternating solos and intensely bowed three-strong high register double-stops (from bb.163). Finally, the material seems to evaporate into delicate and fractured lightly *col legno battuto* dabbing of the upper strings (bb.191ff - see Figure 9) before joining forces for the last moments of mechanical repetition.

The ensemble's material was designed to be complementary in nature if not in disposition or placement. The other seven players work through an independent temporal structure which sees them united in their shadowing role for the first half of the first section. Each instrument gradually breaks free of the rigid block treatment until each accompanimental strand is independently treated with fragments of melodies and snippets of shapely chords emerging elusively. The oboe breaks free from b.32, the bass clarinet from b.59, the acoustic steel-string guitar from b.88, the harp from b.117, the piano from b.144 and the first percussionist from b.173. Despite this ordered emancipation of the ensemble's forces the material each instrument is assigned remains consistently complementary to each cello-defined section. This gives a sense of impartiality with regard to the placement of accompanimental strands, thus rejecting the need to cultivate a sense of dynamic tension and resolution. The visual model for this way of working would be a palimpsest, particularly in terms of overlaying onto eroded surfaces. The abrupt start-stop nature of the ensemble

material gives a sense of in-depth textural working by incision or even effacement and complementary relief through resounding resonances and dryly terminated sound objects. The pitch content for the ensemble material is constructed around doublings, cluster doodling and simple floating intervals above or below the cello tripartite monody. The nature of the material hung upon these pitch props could be described as crass in its abrupt, un-nuanced granular simplicity, particularly when undeveloped mimicry occurs.

Frank O'Hara, writing about Cy Twombly's early monochromatic, scribbled paintings, manages to encapsulate the approach towards the ensemble's role in terms of physicality:

> His new paintings are drawn, scratched and crayoned over and under the surface with as much attention to esthetic tremors as to artistic excitement. Though they are all white and black and grey scoring, the range is far from a whisper, and this new development makes the painting itself the form. A bird seems to have passed through the impasto with cream-colored screams and bitter claw-marks. His admirably esoteric information, every wash or line struggling for survival, particularizes the sentiment. If drawing is as vital to painting as color, Twombly has an ever ready resource for his remarkable feelings.[106]

The combination of the three sonorous solo instruments coupled with physically motivated yet sonically singular melodramatic outbursts from the ensemble players seems to point towards a numbed-out homage to Expressionism. It is the on/off, start/stop utilization as opposed to activation of the accompanying strands that distances the work's mood from any sense of deeply-felt intensity. The component parts of the ensemble writing which complements each cello-defined section could be itemised and explained away in terms of descriptive archetypes such as percussive, shadow-like, drone-like, tintinnabulating or as scraped, clashed, rubbed, plucked without depending on contour for definition. Examples of ensemble mimicry of the three-strong cello solo line include the alternation of oboe sucking and white air

[106] O'Hara 1955 quoted in Del Roscio 2002: 102

sound to reinforce the strings low pitch content due to scrubbing directly on the bridge and scratching the strings nearby just behind the bridge. Any heavy, forceful bowing from the cellos is accompanied by raucous multiphonics (either complex composite type or fanning versions out from a loud, low flutter-tongue fundamental tone). The harp plectrum strumming and guitar snap pizzicato activation of individual strings seems to be an imitation of the cello dry 'wood' sounds throughout the second section. Likewise, the percussion and piano high key vamping seem to be subsidiary in status if not in resultant volume in terms of simply providing a sense of propelling momentum. Similarly, the woodwind toneless blowing with key flapping against a backdrop of high frequency whistle and whirling lasso-style guitar strings seem to highlight the delicately scratchy, intermittent high frequency over-spill as a result of circular/vertical bowing of lightly muted 'cello strings which starts each sub-section of the third chapter of the piece.

These, along with the closely related harp bowed battuto, piano stand plucking and oboe intervallic mirroring, as seen within the last section, seem to contrast with the more randomly selected piano chords and woodwind lines that break in the work's latter third. These stock instrumental gestures are used to unite the more explicitly physically motivated sound objects with the more decorative moments within the cello's melody.

Kapur (double bass and ensemble; 11 minutes)

This work is technically a concerto for double bass soloist (as stipulated by the commission from the Royal Philharmonic Society); however, this label, although superficially reassuring, does not offer any aid towards an understanding of the work's aims. There are few moments of concertante frisson between the soloist and ensemble; they seem to be at one in their quest for protraction and drone-like after-

effects. This strongly distances the work from the traditional concept of two forces at odds and the Romantic models where the soloist has a purposefully virtuosic role.

The choice of title (meaning 'camphor') which relates to *nitrate* – an earlier, incomplete work structured around the chemical properties of nitrate – a polyatomic ion, consisting of a central nitrogen atom surrounded by three oxygen atoms provided the blue-print for the work's overall shape. This resulted in three equivalently proportioned grounds (or sound-surfaces) for each of the instruments and some recurring, unrelated, more explosive material which united and fused the timbre of all three instruments. With *Kapur* there is no such literal model and the choice of title is not meant to be pictorially suggestive. If my piece *nitrate* signifies presence, *Kapur* signifies absence. The players participate in an obsessive, shadow-like and bleached-out rite.

Malay traders called camphor 'kapur' (chalk) due to its white colour. I was drawn to the waxy quality of this transparent solid with a strong odour. Camphor is used as a plasticizer for cellulose nitrate. Its visual equivalent in this context could be the 'leader': blank white, unexposed film at the beginning and end of each reel, used to facilitate threading a projector. I often feel like a film editor at the cutting room table; making incisions into blocks of material that I have previously composed and splicing them together. This compositional process is primarily about placing cells next to each other.

In this work I am using two planes or grounds as surfaces upon which objects that are figuratively scored (like a series of incisions or notches) are subject to systematic diminution. The principal musical material types employed consist of blank grounds, 21 Interruptions (studded at regular and gradually expanding time intervals) and whitened erasures. The sum of the parts has been split into six symmetrical sections: two groups of three parallel types.

The whitened erasures function as written-out sound-shadows. Acoustic resonance may be achieved by another body that vibrates at the same rate as the original in reinforcement. I am seeking to work in a very elemental way with this fact – using other instruments to pick up on and suspend each other's sounds.

The ensemble's blank ground (first introduced in the second section) is always constructed in the same fashion and is intended to provide a relatively warm cushion of sound for the double bass's jittery interruptions. The fact that there are so many consonant intervals employed in the construction of these ensemble chords is irrelevant in terms of traditional harmony, since they are to be experienced as a single complex sonority without filtering out the additional component notes used within the chord (Figure 10). It is more constructive to view these added-note chords not so much as a sub-group of a panoply of pitch-collections and itemised gestures as part of the gamut of tricks used to produce the desired effect of *sostenuto*. The 'closed' rhythms of regular quaver-rate undulations, for example, have to coexist with highly abstract 'open' sounds, such as the smacking of the bass neck from above.

The idea of other forces extending, expanding or transmogrifying each other's material is one of the work's key conceits. This is achieved by passing pitches around – such as the 'D'-centred drones and the wind instruments prolonging the bell-like piano chord pitch content. In contrast, during the double bass's ground the piano's uppermost range is exploited; the glassy, brittle quality, like ice splintering, has more significance as pure sonority and does not seek to enrich the over-all pitch content. The ensemble's extension of such pitches is mostly achieved with 'toneless' sonorities, and as the piano's material descends into the more easily discernible pitch realm, unsullied pitches infiltrate the canvas of 'white noise'.

The abstract and simplistic approach to form, whereby the double bass ground is alternated with that of the ensemble three times precludes any sense of dramatic arch. There is no one section that could be said to satisfy a demand for climax, except perhaps for the first section which creates a climate of constant reorientation,

rendering everything in relation to it as a series of different takes on the same by using varied proportion. In this light, the majority of the work could be said to inhabit a reflective and epilogue-like mood.

The micro-doodlings of intervals and drones seem intentionally interchangeable and blank, thus rendering everything a related add-on, whilst avoiding exact repetitions. Titian's late paintings – such as the *San Salvador Annunciation* where he had to sign the canvas *fecit fecit* in the awareness that he had not 'made' these works as much as he had really 'unmade' them - proved informative.

Much of my material could be seen as a written-out tracing of a sound's life-line, progressing from a tentative surfacing or bursting forth to a swaggering insistence until it ceases, smothered and suppressed. The use of 'empty figuration' and husks of familiar forms such as fragmented arabesques, bell-like piano chords and flamenco-style strumming in what may seem like a hostile environment for such sound events feels delightfully perverse. The remnants of past musical shapes and gestures from the familiar lexicon seem exotic when set against more primitive, elemental eruptions of sound, thus highlighting the material properties of each sound event.

Single pitches become evolving events, akin to a traditional musical phrase. The metamorphosis from flutter-tongued woodwind rasps to breathy or cracked sounds (Figure 11); from measured pulsating vibrato to wildly out of control rasps; varied bow positions and pressure; strums and scratches provide the syntax. The use of 'alternative fingerings', *murmurandos*, *bisbigliando* and varied fingerings for artificial harmonics of equivalent pitches all encourage a pulsing effect between different instruments and manifestations of the same pitch band, providing a pulsing quality. Most of the material hangs on clusters and brittle extreme-register displacements of a reduced selection of lean clusters. This lends each single pitch a sculpted intensity and significance until it becomes a toneless remnant or a de-contextualised sound for its own sake – removed from where it surfaced.

Extremes prevail, manifested in choice of register, as in the gawky coupling of piccolo, high piano and harp against the tremulous low growl of the bass. This is also reflected in the string material, appearing from descending, violent jolts of scratched glissandi from the riskiest extreme high register of a string (Figure 12). The woodwind notes are systematically stifled, strings are rendered comparatively toneless, the horn produces phlegmy hisses sounded through the mouth-piece, while the piano and harp are exploited for their obvious percussive properties.

Upon reflection, following a workshop rehearsal of the piece with the Philharmonia orchestra, I was satisfied by the overall intimacy and immediacy of the material. There was a tangible sense of objects having been arranged (two types of grounds, a gradually diminishing set of interruptions and a set of parallel whitened erasures). Hearing the piece and tracking it in real time was revelatory – it felt very naked and exposed, almost uncomfortable. The piece becomes more spacious as it progresses and I had hoped that the gradual unveiling of what was always there would provide some sense of purpose but there was an overwhelming sense of gaping inactivity. In revision, I sought to frame or book-end each whitened erasure – striving for small scale polarities and floating definition. I finally settled on padding out some of the harmonic implications from earlier in the work during the penultimate section, which lacked the interruption-tracking opportunities.

> The story in a Stein text…is the way a word, or set of words, permutates, the way a word, like a re-useable train ticket, is used (or stamped, or perforated by the various sentences and fragments it passes through). What the word means is none of your business, but it is indubitably your business where the word travels…These are the significant players, whose movements the reader must monitor. Or simply observe their progress, lazily noting their recurrence. Be surprised by their absence and then relieved by their sudden reappearance.[107]

[107] Koestenbaum 2000: 315

LEADER-reel-spool-GAPE (for flute, oboe, clarinet in b-flat, bassoon, horn in f, percussion, piano, two violins, viola, cello and double bass; ca.7 minutes)

> …the rolls were unedited and then spliced together, back to back, including the so-called leader – the blank white unexposed film at the beginnings and ends of reels…its whiteness…begins to overtake the image and eventually whites it out altogether. Strips of leader reinstate [Warhol's] ghost-pale presence; they appear, revenants, at that last moment when soporific whiteness triumphs…Thus at the end of each segment the viewers experience a miniature, spunk-white death, a blotto orgasm, a swooning obliteration of consciousness…[108]

Categories, couplings and repetitions play a key role within this work. The structure could be described as a table of contents. The actual instrumental ensemble is sub-divided into paired relationships. The flute and contrabass, clarinet and viola, oboe and cello, bassoon and second violin always play as one. These are, in turn, assigned one of the other four instruments to reinforce the gradually and systematically contracting overlaps resulting from the placement of entries. The percussion is consistently used with the flute and contrabass, the horn with the clarinet and viola, the first – always pizzicato - violin with the oboe and cello and the piano with the bassoon and second violin.

The work is subdivided into four similarly constructed but progressively compressed sections (bb.1—40, bb.42—78, bb.80—114 and bb.116 to the end) which are themselves subdivided into four sections marked by the absence of overlapping. The four main sections are all separated by a pause bar for structural clarity. Each strand of material is made up of 16 beats and the rate of overlapping gradually increases from 1 beat up to the full 16 beats – which sees the final sub-section of the fourth and final section consist of the only truly tutti material.

[108] Koestenbaum 2001: 61

Each of the 16 beat phrases are themselves sub-divided in terms of material type categories into three different functions. The ‘stable’ (or at least consistent) material is book-ended on either side by both ‘toneless’ and ‘interruption’ type material which function as the leader promised in the title. The ideology behind these extreme ‘leader’ musical objects – one delicate, the other explosive - acknowledges the equality and equivalent function served by polar opposites, in that both types efface the ‘stable’ material. As each main section progresses, this ‘leader’ material dilates and steadily comes to dominate the ‘stable’ material. The first section sees each 16 beat phrase framed by 1 explosive beat and 3 ‘toneless’ (leaving 12 beats of ‘stable’ material), the second section sees 2 explosive beats and 5 ‘toneless’ (9 beats of ‘stable’ material), the third section has 3 explosive beats and 7 ‘toneless’ (6 beats of ‘stable’ material) and the final section has 4 explosive beats and 9 ‘toneless’ (3 beats of ‘stable’ material). This imbalance of ‘present’ material is referred to as ‘GAPE’ (defined by the OED as to “be or become wide open”) in the work’s title. The proportions that result from these shifts for the four sections are reflected in the table below:

Explosive	Stable	‘Toneless'
Explosive	Stable	‘Toneless’
Explosive	Stable	‘Toneless’
Explosive	Stable	‘Toneless’

Each instrument also has four variants of the ‘explosive’ or ‘toneless’ categories. The string ‘toneless’ material consists of literally toneless fingering, *flautando* undefined and floating glissandi, *col legno tratto* bowing and bowing directly on the wood of the bridge to efface the sound. The four ‘explosive’ leader components for the string instruments include scratched, heavy-pressure bowing, scratched descending and undefined glissandi, *battuto* and scratched bowing behind the bridge (where the precise pitches are unpredictable). The woodwind equivalents vary for each instrument due to the physical construction of each individual mechanism (with the possible exception of the oboe and bassoon). The flute’s ‘toneless’ material consists

of half-breathy air tone with and without flutter-tonguing, dominating the fingered tone with a sibilant ‘s’ sound blown through the embouchure hole and key-slaps. The ‘explosive’ material for the flute consists of a harmonic rip up the spectrum with and without flutter-tonguing, tongue-ramming and lip smacking. The equivalent ‘toneless’ material on the clarinet consists of half breathy air sound with and without flutter-tonguing again, reed sucking and key-slaps. The clarinet’s ‘explosive’ material is made up of over-blown cracked tones, slap-tongues, lip-smacking and high, teeth-on-reed tones. The oboe and bassoon ‘toneless’ material consists of breathy, undefined blowing of fingered tones with and without flutter-tonguing, reed sucking and key-slapping. The ‘explosive’ category for the oboe and bassoon involves cracked tone overblown fingered pitches, teeth on reed high tones, and banal ascending key-order rapid scalic gestures.

The paradoxical factor is that the so-called ‘stable’ material is itself seemingly in the process of being effaced. This is particularly true of the constant alternations between slow-moving vertical and circular shifts in bowed area for the string instruments (Figure 13) and the reed instrument’s ‘perforation tremolos’ between two pitch strata in order to create slight, fleeting perforation holes in the continuous sound (Figure 14).

The percussion, horn, first violin and piano complimentary suturing material is separated into the three ‘toneless’, ‘stable’ and ‘explosive’ categories with equivalently assigned four variations each.

The Percussion ‘toneless’ gestures involve using the hands, rubber thimble stroking of skins or soft brushes on the surface of each drum. The ‘toneless’ material is sub-divided in terms of instrumental combinations:

1) Snare Drum and Timpani I
2) Timpani I and Bass Drum
3) Snare Drum only
4) Bass Drum only

The Percussion's 'stable' material is sub-divided into:

1) Timpani I with constant trilling near the edge of the skin
2) Timpani I and Snare Drum played with hot-rods near the rim and centre with ever-shifting pedal positions
3) Timpani I and Bass Drum played in the same way
4) Timpani I only played near the centre with yarn

The Percussion's 'explosive' material is sub-divided (with the snare always on) into:

1) Timpani II
2) Timpani II and Snare Drum rim-shot
3) Timpani II and Bass Drum
4) Timpani II and Timpani I

The Horn's 'toneless' material is sub-divided into:

1) Toneless blowing with half-valved prescribed rapid key movement with constantly shifting changes in the air column and extraneous key sound with 'f' spoken into the mouthpiece
2) The same with 'f' and guttural 'x' morphs through the mouthpiece
3) The same with 'f', 'x' and 'sh' morphs through the mouthpiece
4) The same with 'f', 'x', 'sh' and 's' morphs through the mouthpiece

The Horn's 'stable' material is sub-divided into:

1) Unstopped to stopped moving up a semi-tone
2) Half-stopped held pitches alternating fingerings
3) Stopped to unstopped equivalent pitches with compensated fingering shift
4) Lipped up major second intervals (always unstopped)

The Horn's 'explosive' material is sub-divided into:

1) Fall down the harmonic series
2) A short 'wha' shouted through the instrument
3) A flabby, low flutter-tonguing
4) Lip-smack or popping

The always plucked first Violin's 'toneless' is sub-divided into:

1) A single natural harmonic plucked with the nail
2) An un-articulated movement on the finger-board with the left hand
3) A 'dead', un-resonant quadruple-stop strum
4) The same as (3) with tremolando strumming

The first Violin's 'stable' material is sub-divided into:

1) Quadruple-stop
2) Quadruple-stop with only strings IV and II depressed
3) Quadruple-stop with only strings III and I depressed
4) All four strings depressed

The first Violin's 'explosive' material is sub-divided into:

1) Bartok/snap pizzicato with a glissando up the length of the string

2) Slapping the fingerboard with the palm from above
3) Strumming violently with nails or a plectrum
4) Tremolando violent strumming

The Piano's 'toneless' material is sub-divided into:

1) Internally stopped strings
2) Guiro on keys
3) Pedal trill
4) Plucking of the stand runners

The Piano's 'stable' material is sub-divided in terms of clusters around fourths and tri-tones:

1) Both left-hand and right-hand
2) Left-hand and arm with right-hand
3) Left-hand with right-hand and arm
4) Both left-hand and arm with right-hand and arm

The Piano's 'explosive' material is sub-divided into:

1) Low cluster
2) Mid-register clang
3) Highest octave cluster vamping
4) Right pedal mechanism snap-back

GAPE-spool-reel-LEADER

This is a truncated re-imagining of the previous piece for smaller ensemble, with the opposite book-ending order – the 'leader' taking the central role this time. The material is even more skeletal - simply consisting of suspended single tones, oscillations, scalic runs and angular intervallic relationships. The fact that more time is devoted to the 'toneless' or crudely 'explosive' material creates an internal tension with the 'stable' material. The proportions in this work, however, are calculated so that each successive section devotes more time to the 'stable' material thus engaging in the opposite process to its mother work by allowing the substance to gradually come into focus.

Chapter 8 - *cleave, Double Duo for Violins and Bass Drums & Sitting on Gertrude Stein's Lap*

cleave (string quartet, 13 minutes)

> - a body split down the middle like sunlight and shadow -[109]

The work is shaped in binary form (as suggested by the accompanying quotation) with the addition of an Introduction and Coda.

The use of scordatura provides a harmonic language that is inherently linearly conceived, underlining the polyphonic nature of the piece, which is far more vital than the misleading first impression of its antiphonal attributes. The overlapping of micro-tonal adjustments of the same open strings and the preponderance of double-stopping could also be viewed as a sort of harmonic counterpoint.

Three types of material were written before collating the first section of the piece. Each consists of sixteen purposefully isolated moments of varied duration and proportion, constructed of 1, 3, 5 and 7 semi-quaver beats. Each time-signature group is subdivided into segments of 1, 3, 5, and 7 bar durations. The first type comprises of contrary-motion glissando movement within the cluster g-quarter-sharp and b-quarter-sharp and its surrounding fifths (mostly diminished), with the cello playing a ground under the strings in order to facilitate the simultaneous playing of the two outer strings (Figure 15). The second material type is made up of open string drones around 'a' and octave displacements of the pitch material from the first material type, double-stopped and made possible by artificial harmonics, with the viola playing a ground under the strings (Figure 16). The third type is built from violently strummed, glissando four-note chords, snap pizzicato, dry wood sounds of the neck being slapped with the palm from above and octave displacements of released open strings (Figure 17). These material types were written separately with the intention of later splicing them

[109] Burroughs 1962: 92

together – forcing the bleeding chunks to hang together with only the crudest suturing material. Freeze-frame chords or three second rest-bars (facilitating the picking up of bows etc.) are the only transitions between the varied blocks.

The nature of the material within each of the three distinct groups is purposefully interchangeable in the sense that any four note glissando chord or swooping scratched string will tend to sound roughly the same. The sense of 'more of the same' in this context was desirable, as I seek to foreground the playing techniques as opposed to the progression of pitches. The pitch props are never subject to exact repetitions as I required a sense of slightly undulating wallpaper music with occasional punctuations to cut up the indistinguishable mass. The act of making incisions into tracts of pre-existing material prevents developmental flow and sequential patterns.

The highly economic and list-like presentation of material in the first section was inspired by a quote from Woolf's diary from the year that she completed *The Waves*:

> …a saturated, un-chopped completeness: changes of scene, of mood, of person, done without spilling a drop…so as to make the blood run like a torrent from end to end.[110]

The skeletal fragments of this section (pillaged from the previously discussed longer stretches of the same material 'type') were then placed against and next to each other for such a concentrated amount of time that one may also be able to imagine them being placed over and under each other in a densely overlapping fashion that approaches a stylised 'stretto'. The almost unavoidable arch-shape phrase is also circumvented by using this 'cut-up' or 'fold-in' method, as practiced in the Nova Trilogy of William Burroughs:

> Remember that you can separate yourself from the "Other Half" from the word. The word is spliced in with the sound of your intestines and breathing with the beating of your heart. The first

[110] Woolf 1930: reproduced on website

> step is to record the sounds of your body and start splicing them in yourself.[111]

I was concerned with exploring the extent to which I could present the cells without any dramatic development in the traditional sense. The gestures could potentially be presented in a different order and the duration of the piece could be infinite; although the numbers 1, 3, 5 and 7 were employed as structural aids for the sum of segments in each block. Structurally, my only other aim was for the figures to be framed by relative 'silence'. It was important that the gestures were allowed to stand for themselves without any attempt to link them organically. In fact, the gestures do not so much appear from 'silence' as cut into it, and sometimes prevent it. Duration in seconds was consciously employed for the intervening bars instead of the equivalent metrical value as I was anxious to cut into the material.

Again, the position and pressure of the bow was the deciding factor in forging most of this material. The performance notes detail the varied positions required, some of which provide faint overtones only. Extreme *sul tasto* playing was used to describe the position of bowing directly in front of the fingers when the fingers of the left hand are depressing high up on a string, in order to vary the degree of player control. Gradual changes of position and 'swishing', brushing motions in conjunction with various positions produces a constantly shifting point of contact. Attack was also given careful consideration: scratch-bow strokes, using very heavy pressure resulting in little pitch; ricochet bow drops which cause the bow to bounce; *battuto* percussive actions with the bow hair while ensuring that the wood of the bow makes contact with the instrument (while experimenting with a sort of half-*col legno tratto* angle) all serve to disorient the resulting sound.

Polarities figure strongly within the work. Even the disposition of the four instruments in the second section, which is constructed from solos, duos and trios against the remainder of the instruments and not as a homogenous quartet, was favoured because of the potential for opposition, interplay and explicit layers. The continuum could be

[111] Burroughs 1962: 50

seen as a *cantus firmus*, although, ironically, it does not conform to the Latin for 'fixed' given its relatively free notation. The use of relatively long and approximately equal note values, which is used in a very elemental way as the basis for the polyphonic layering, could also be seen as being in a state of loose counterpoint with itself; and subjects all other material to a 'free-fall' type of automatic polyphony. Each of the second section's segments begins with a statement of the continuum alone; thus it could be seen to function as an ever-evolving and renewing 'subject' in a varied number of layers providing its own simultaneous and self-sufficient 'answer'.

The page layout of the free continuum does not represent duration or hierarchy of material. The player should use their discretion to determine the duration of specific sound events. The free material should be executed once in its entirety before the measured material commences. The strings are to be played 'tonelessly' by lightly covering them and moving the fingers up and down the neck to reveal slight shifts in timbre and brief snatches of harmonics. The indication 'toneless' should not be taken literally, however, as the strings should never be fully muted; the resultant shift between a high whistling and dry brushing sound is encouraged. It is advisable to experiment with different 'muting' finger pressures for a varied timbral palette. The overall effect of this material should be that of 'white sound'. The work can be performed on amplified quartet in order to draw out these effects. The use of four Sennheiser MKE2 clip microphones (or similar) is recommended.

Some of the seven material types set up in the opening section are self-sufficiently polyphonic, such as the snaky, taut glissando pulsing pull of clusters and the wild twang and smarting overlapping snippets of swooping punctuated glissando trills overlaid with the physicality of staccato battuto attacks of two-note chords. Even the more homophonic moments are rendered polyphonic due to their context of timbral detail. The whole work is an exponent of timbral polyphony in which contrasting textures and *Klangfarbe* are thrown together and blended in a swirling

mass. Achieving maximum contrast of tone-colour from the potentially grey ensemble was of paramount importance, as is reflected in the performance notes. The timbral component of each sound-event gives it an anatomical, dynamic and tangible quality that enriches the otherwise elemental pitch progress. Again, the starting point for this approach was bourn from Bernard's soliloquy near the end of Virginia Woolf's *The Waves*:

> There should be cries, cracks, fissures, whiteness passing over chintz covers, interference with the sense of time, of space, the sense also of extreme fixity in passing objects; and sounds very remote then very close…beneath all of which appears something very important, yet very remote, to be just held in solitude.[112]

Double Duo for Violins and Bass Drums (for four violins, large bass drum and pedal kick bass drum; ca. 20 minutes)

The process behind this work was one of simply collating equal length cells for a single violin before stacking them together. Each individual strip consists of three alternating 6/8 and 7/8 bars with an ever-shifting placement of a 1/8 rest bar. These six and seven quaver length bars were treated as rigid vessels for predestined material types to be poured into – this often results in simple yet deceiving play between 6:7 and 7:6 ratios as well as more straightforward two, three and four-part portioning of the six or seven beat bar. The quaver rest bar was used as a hinging device to connect the two respective violin duos, resulting in ever-varying overlaps and slightly varied clause lengths of the overlaid equal length phrases. The resulting formal process is very akin to a visual montage style with the only aim being to cover every combination possibility of the various singular material types shared by each unified duo of violins. There is a sense that the work could be for any even number of violins – it could be doubled in length and less texturally dense if arranged for a single violin duo yet equally could be further layered and compressed in terms of duration. The

[112] Woolf 1931/2000: 176

important factor is that the work is for multiples of the same instrument; this may provide a closer investigation of that instrument's physicality. A sense of mirror geography pervades every strata of the combination of instruments, small and large scale structure and even the scordatura tuning (see performance notes).

Categories prevail in terms of defining each seven bar segment. The violins alternate between twelve distinct material types that are always varied in presentation for each subsequent entry but could be described as recognisably 'more of the same'. These categories could be listed thus, in the order that they first appear in the piece:

1) Rapid *bariolage*-type, displaced arpeggio ostinati (Figure 18)
2) Bow-tip articulated single string detached bowing with tremolando glissandi (Figure 19)
3) Double-stopped chords consisting of artificial harmonics with parallel open strings (Figure 20)
4) Scratched high finger-board bowing alternating with snap pizzicato glissandi (Figure 21)
5) Palm-slapped finger-board over glissandi fingerboard quadruple-stops (Figure 22)
6) Held bowed double-stops with resounding left-hand pizzicato quavers (Figure 23)
7) Strummed quadruple-stopped glissandi (Figure 24)
8) Suspended triple-stopped chords reliant upon carefully nuanced bow angle and pressure (Figure 25)
9) Slithering contrary motion chromatic bowed double-stops with *battuto* interjections (Figure 26)
10) Slithering artificial harmonic positions held against a droning open string (Figure 27)
11) Held double-stopped natural harmonic micro trills (Figure 28)

12) Instrument body flicks and nail trills alternating with fragile natural harmonic nail pizzicato (Figure 29)

The material was either totally physically conceived or hung on a limited pitch-band cluster with 'E' as its nucleus with perfect fifth, tritone or perfect fourth intervallic approaches on either side (as seen with category [9]). The segregated (pre/post pause) linking suturing material makes consistent use of circular bowing motions within the more spacious 7/4 freeze-frame cell in order to obscure the resultant pitches along with bass drum rim doodling using light snare sticks. The bass drum categories are obviously subsidiary in terms of status to the string material and function as continuous drones or shaded backdrop for the overlaid violin material. This primer material consists of consistently low-level dynamic alternations between:

1) Dowel and snare stick trill on the surface of the large bass drum skin
2) Large yarn beater continuous roll
3) Circular motions on the surface of the skin with both soft and wire brushes
4) Rapid and continuous finger rapping
5) A battery operated vibrator held securely and allowed to rattle freely against the drum
6) Triangle beater trill near the edge of the skin surface

These droning techniques are never inter-mingled and always enter with the 'overlapping' violin duo and continue for the duration of that duet's seven bar phrase. The percussionist also provides a crudely punctuating function by loudly beating the Bass pedal-operated kick drum to mark the significant 1/8 hinging or on a lower-level by using the plastic of the wire brushes against the rim or knocking a knuckle on the side of the drum for intermediary clauses. The only other percussion sound object takes the shape of a primitive and visceral pounding of both bass drums to mark the end of each increasingly shorter section (b.210 and b.355 of percussion part) – separating the work into three highly sub-divided sections.

Sitting on Gertrude Stein's Lap (solo piano; 10mins)

> No one understands this but I do and if I do then why do they need to agree to arrange it as if every time before there was as much and many many meaning white and four. Four makes four and four if there had been four then three would have sat together four would have sat together one would have sat together and really and really as much. As usual. Sitting still.[113]

The work is made up of four highly varied ways of treating the piano, forming a square or rectangle. The syntax in Stein can be tough and gaunt. I felt that Stein, the grand-dame of early twentieth-century experimental letters, lettering and lay-out gave me the license to go on and on – to choose a form and stick to it – without worrying about the possibility of losing an audience's attention.

Technically, resonance means a sound's reinforcement or increase when it comes into conjunction with other vibrating bodies that will enrich and prolong it. It is worth holding onto the fact that a musical instrument has been constructed specifically to achieve optimal sympathetic vibration. Murray Campbell and Clive Greated in *The Musician's Guide to Acoustics* point out that an instrument's sound generator can be excited in a number of varied ways.[114] Most of my 'extended techniques' cloak the manipulation of the instrument's nucleus – the resonator (which radiates and amplifies the waves from the generator). The piano is conventionally an instrument that makes the inevitability of damping explicit. 'Damping' is the process whereby vibrations from the resonator die away because of inevitable loss in sound energy. A piano's resonator (the soundboard) has been designed to ensure many overlapping resonances while excluding the overtly dominant ones, resulting in a stable response across the range. This constancy allows the composer to play with gravitational equilibrium – one can throw sounds into the air with the intention of preventing them from descending.

[113] Stein 1958/1994: 52
[114] Campbell & Greated 1988: 188

This halo or afterglow (resonance) can reveal something about the components of the ignition. Most people have difficulty recognising or appreciating the fullness of a musical sound-event: there are so many fleeting moments that the ears gloss over. With piano writing that takes a telescoped approach to controlled use of overtone fields and painstaking pedal manipulation one can force the listener to absorb the sound in its entirety.

Sitting on Gertrude Stein's Lap is divided into four continuous sections (and an ultra static freeze-frame introduction which draws on the harmonic material from later in the piece). The sections are differentiated by angular material-block juxtaposition, density, timing of successive events, articulations and dynamics. The principal unifying factor is that the piano strings seem to be in a state of relentless vibration, illuminating the fact that the "air around" the strings "is already vibrating at the same pace as that which they themselves cause it to vibrate".[115] The physical presence of the piano is highlighted through a series of techniques that continue to be simultaneously finely honed and thrown out in some sort of scurry, preventing any engagement with the advanced physics of the over-tone series. The 'smoke and mirrors' approach of pooling resources of silently depressed keys, virtuosic use of all three pedals (particularly the 'sostenuto' pedal), cluster chords, harp-like flourishes, glissandi insistent repetitions are used to keep the piano sound very present. I was aiming to present a wide palette of sustained sounds without using too many 'inside-piano' effects or complex preparation procedures.

Considering the fact that the piece foregrounds a sound's continuation rather than the piano's natural inclination to highlight sounds at their commencement (attack), it seemed necessary that a note or a chord's progress (including its release) come under scrutiny. The notated taking-over of certain resonating notes (denoted by diamond-shaped note heads) is a way of defining the selective residue of a rich chord or cluster,

[115] Benade 1976: 57

a precise echo-selection device which can aid the filtering-out process of monolithic slabs of sound and focus the ear on implied harmonies and overtones.

In contrast to the larger clusters, semi-consonant (almost jazzy bi-tonal) chords play a key role in the third section of the work, but due to their independence of context, they have little to do with tonality. Instead, their presence could be read as a state of being in accidental dialogue with the harmonic series. Similarly, the distribution of dynamic markings for mixture effects could be likened to the genetic modification of a chord's presentation so as to bring out artificial likenesses of harmonic overtones. This is illustrated by the bottom-heavy dotted crotchet bell-like chords that introduce each of the mechanistic second section's four segments.

The placement of musical objects, although seemingly rigid, has been conceived practically (e.g. 'commodo' free bars for dealing with props). However, the notion of silently depressed material being interpreted theatrically and choreographed, so that the depression takes place at a specific juncture, is appealing. This aspect of the material is not systematised purely in a mathematical fashion but used to guarantee maximum sonorous impact. Many of the preparatory chords can be 'set up' as early as the performer wishes within relatively long 'rest' bars. The motives for the use of these silent chords shift throughout the work; sometimes their implications (overtones, resonance) are made explicit, and at other times the didactic and dramatic act of placing them at a specific juncture, thus realising a sort of written-in tension, is intended. Earlier, more finely-tuned models for this approach can be found in Ferneyhough and even in Lachenmann's *Wiegenmusik* (1963) where one senses a tension "between the performer's gestures and our acoustic perception, and between sonic delay and silence".[116]

The moments of sparse gestural material within the piece's first section seem to magnify the roles of resonance and 'silence', whether it be a pause that waits to move on, or a moment of stasis full of charged energy. The sounding pitches in this section

[116] Lesser 2004: 111

are so sparse that the two outer pedals are given a playful trill motif which foreshadows the more mechanistic treatment of both pedals in the second section. The exploration of the piano's vertical, chordal potential (including arm clusters) as flashes with shadows of silently depressed material, rapid runs and even snippets of hammered-out repeated chords, provide a microcosm of the work's shape-shifting character. This reading, however, is potentially misleading since the development consists of extending the means of exciting resonance itself, not the fragmentary cells. In light of the self-contained nature of the first section, it may be more appropriate to recognise a facet of variation form in the piece, but only in the sense of varying, refining and building upon techniques involved in achieving its singular aim. This is an experience akin to that of viewing the same object from a number of different perspectives. The second section also employs accented pedal releases (produced by the foot abruptly releasing the pedal, allowing the mechanism to snap back audibly) creating pools of resonance.

The use of the folk music reel shape to define the final section and the pre-echo in the second section functions as a husk-like framework. The minimal identifiable characteristics preserved of the reel character do not permit modernist abstraction or post-modernist play with the original's archetype. Similarly, the pitch material for the first two sections of the piece is based on twelve twelve-tone rows wherein the inner eight intervals dilate and the outer four intervals contract in accordance with the piano's range. These systems are almost never aurally present as they are either used as goal-posts and triggers for other activity or overshadowed by the physical effort involved in executing the gestures. Despite the work being based upon these concrete foundations, the blue-print is always removed and its role becomes hermeneutic.

The complexes of repeated notes in the third and fourth sections are a conscious homage to the minimalist music of Charlemagne Palestine and Steve Reich, though filtered through Ligeti and Lachenmann. The only common thread between the minimalist approach and mine is a preoccupation with the invisible. That is, the notes

on the page (e.g. the repeated groups) do not represent the overall aural effect in performance. In his tripartite piano piece *Descending/Ascending* Palestine would hammer alternately at the keys for almost an hour until a mass of sound builds up shaking the floor and walls, bolstered by cognac and cigarettes to dull the pain in his fingers. The rhythmic precision was also spurred on by Palestine's *Strumming Music*, with its rapidly repeated groups of notes combined with intricate rhythms creating bizarre harmonic effects.

Conclusion

The most useful analogy with regard to the aesthetic of these works relates to a physicality conceived whilst in a convalescent state. I have presented a reclining invalid's projection of physicality, imbued with a sense of almost amateur plotting for the sake of therapeutic benefits whilst embracing the salve-like effect of repetition. I invoke the convalescent metaphor for the sense of arrested development it suggests rather than with an implication of Romantic suffering as suggested by Susan Sontag in *Illness as Metaphor*:

> The melancholy character – or the tubercular – was a superior one: sensitive, creative, a being apart.[117]

I sense an increasing struggle within myself against cultivating certain audible results and have given my self the freedom and licence to block out aural repercussions and to deal with music as ether, or as a scent with top and base notes. I regard sound as something that environmentally engulfs rather than affects the listener.

The 'degraded' fragments of skeletal material are endowed with the status of an 'affirmation' through the process of recurrence rather than progression. The solo cello work written for the Bach-Bogen curved bow capable of simultaneously playing all four strings (reproduced in Appendix I) is an example of a somewhat impractical hypothetical positing of physicality. The work was written before having first-hand experience of the bow, and placed too many demands on the loosely wound hairs, but the process of exposing imaginary possibilities in time reflects my approach in an unencumbered way.

My work pays tribute to corporeality despite partly rejecting the limitations and even pleasures of conventional configurations, reliant as it is upon exhaustive over-

[117] Sontag 1978/2002: 33

exposure rather than intervention. The vehicles I have selected for this process are consciously severe and reductive, dependent upon extreme polarities and segregation, in a way similar to that suggested by Walter Benjamin in his *Outline of the Psychophysical Problem*:

> For all living reactivity is bound to differentiation, whose pre-eminent instrument is the body.[118]

Benjamin goes on to discuss the sometimes interchangeable relationship between nearness and distance in the life of eros and sexuality. It is assumed that the erotic life is ignited by distance in spite of the equal affinity between nearness and sensuality. The following passage serves to elucidate my reasoning for such an insistent rendering of a limited number of physically motivated ideas:

> …there is a precise relation between stupidity and nearness: stupidity stems ultimately from too close a scrutiny of ideas (the cow staring at a new gate). But this all-too-close (mindless) examination of ideas is the source of an enduring (non-intermittent) beauty. Thus transpires the relation of beauty and stupidity.[119]

I accept that my efforts reflect more of a fixation upon rather than an exploration (as can be found in Lachenman's work) of physicality of sound production on acoustic instruments. The formal approach I have adopted represents a system that denies access to anything beyond its peripheral boundaries and is thus too closed to give way to anything but a circular process. This results in a promenade-level physicality that is not at one with its physical space or surroundings in terms of outward projection. The results are less disembodied than simultaneously absented and attentive. The actual material I have presented is self-consciously based upon positions or base concepts and worked through systematically with no regard for sensuality in spite of certain 'atmospheric' concessions which often result in a sort of physical/aural dysphasia.

[118] Benjamin 1996: 398
[119] Ibid.: 397

Figure 1 Alternation between inhaling and exhaling with 'dead on arrival' notes from *The sky is thin as paper here*, b.16

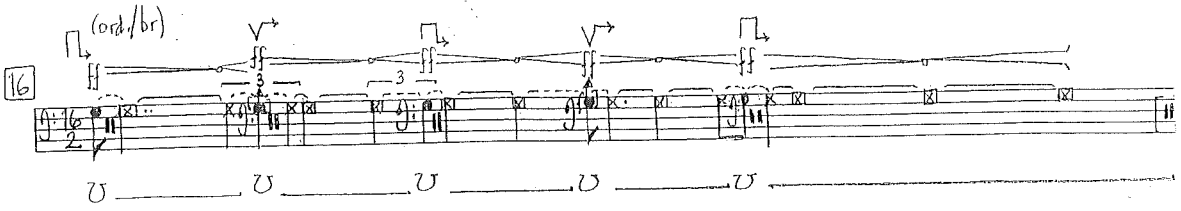


Figure 2 Recurring word-setting of the Burroughs phrase from *The sky is thin as paper here*

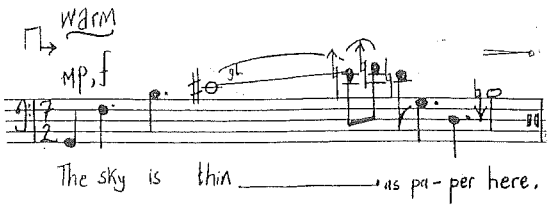


Figure 3a One page of preparatory hand shape material for violin with close finger positions

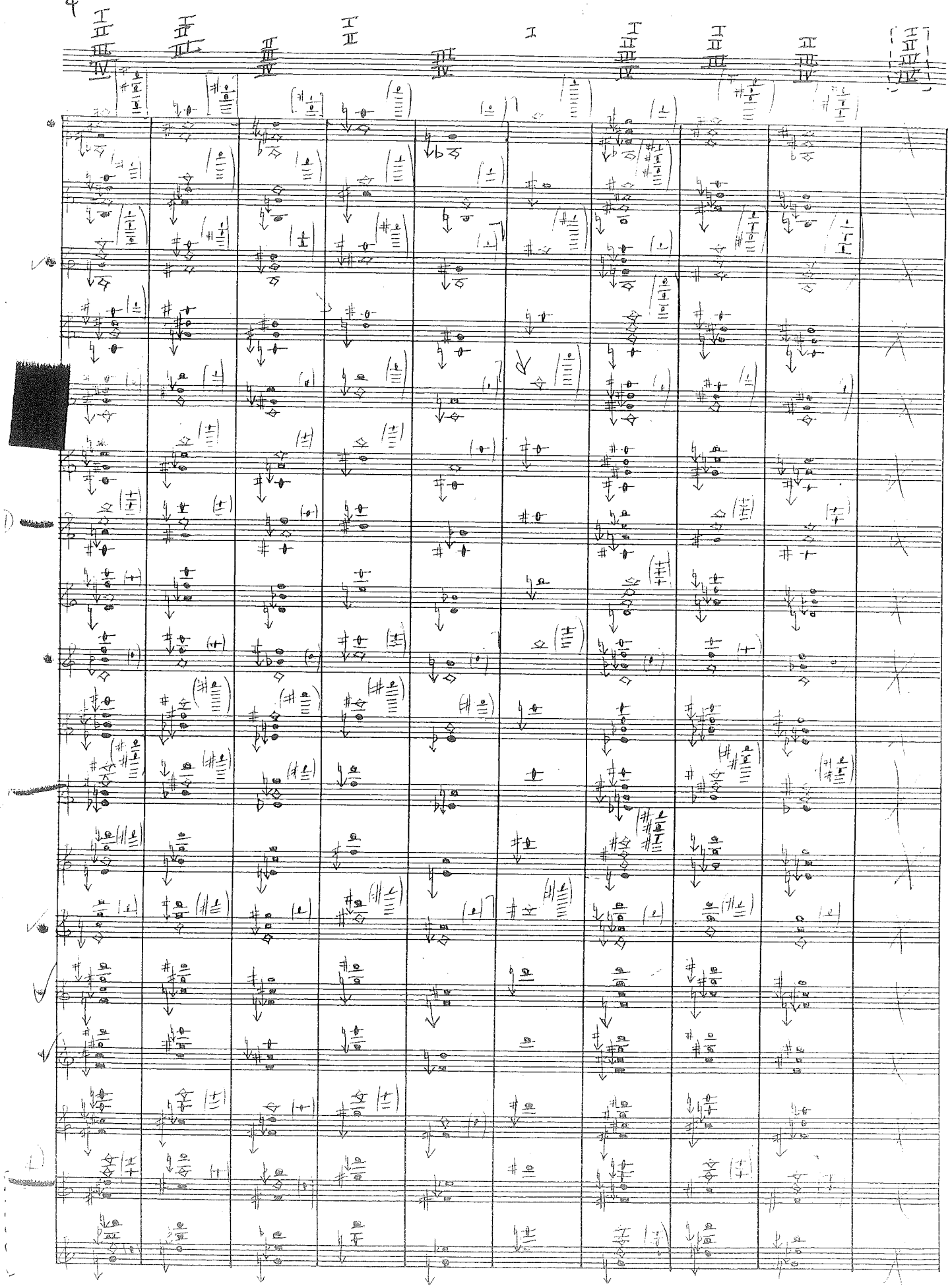
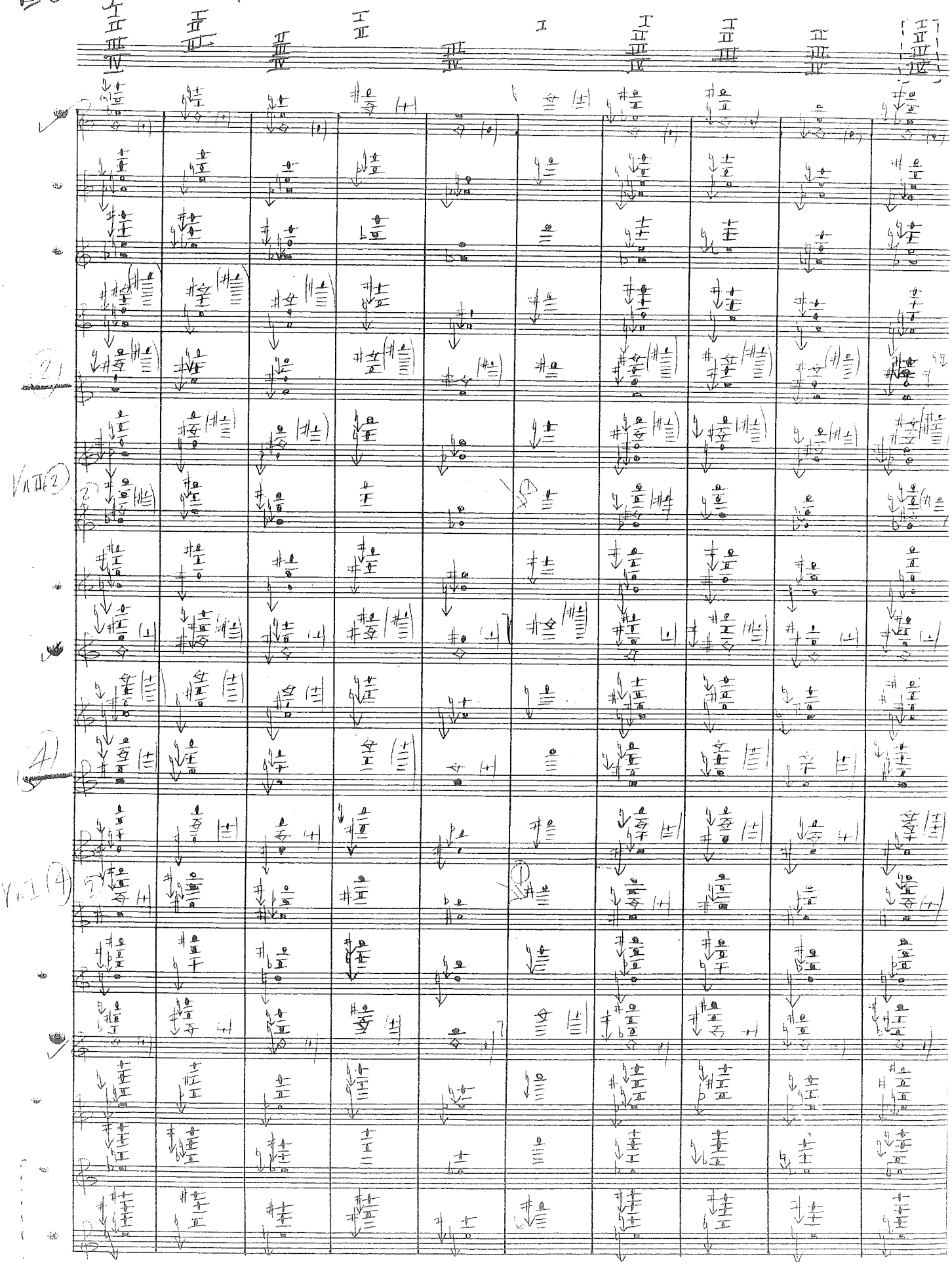


Figure 3b



Another page of preparatory hand shape material for violin with slightly wider finger positions upon the fingerboard

Figure 3c

The highest pitch preparatory hand shape material for violin with wider finger positions upon the fingerboard

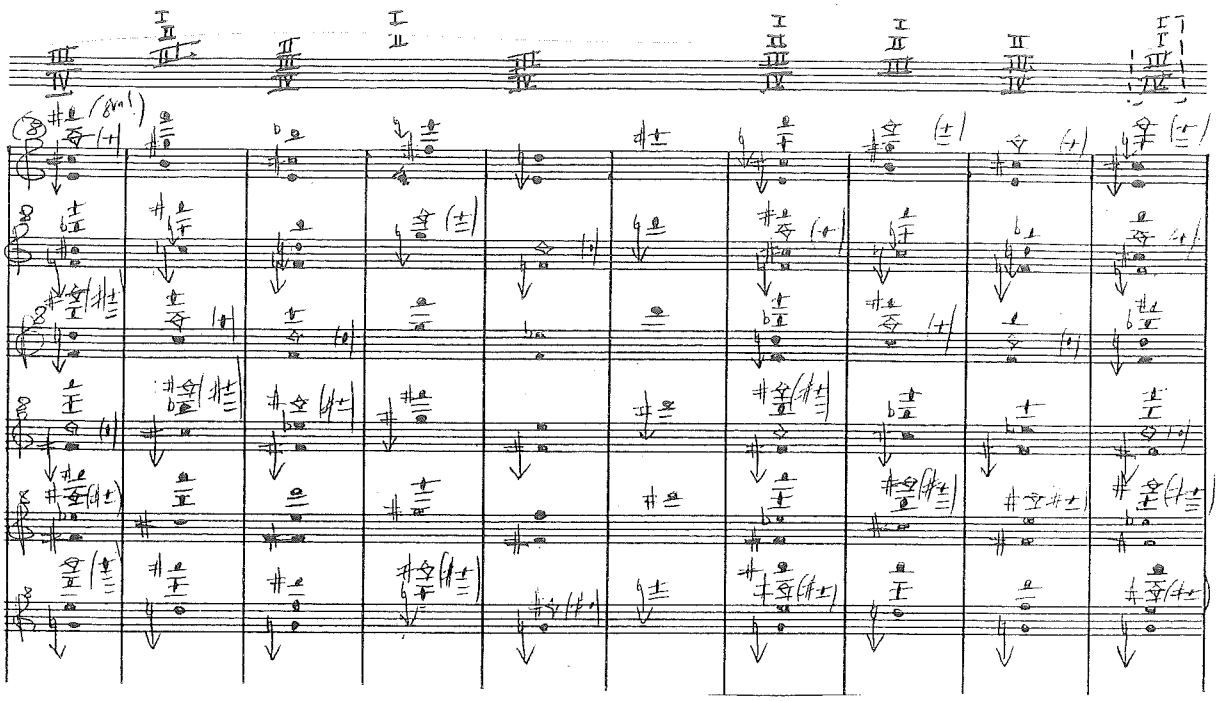
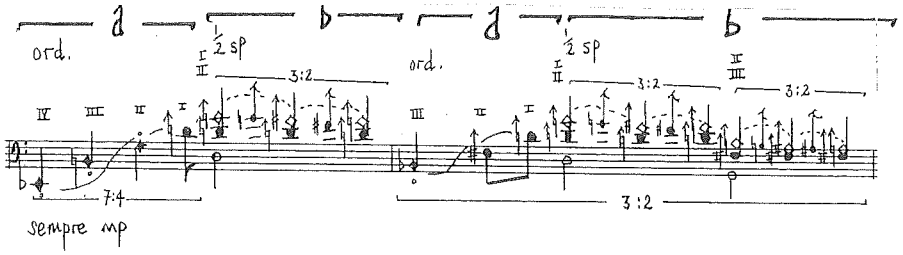


Figure 4 Bar sub-divisions from *piano trio*, b.132, cello part



Plucking and strumming contact points from *piano trio*, b.515, violin part

Figure 5

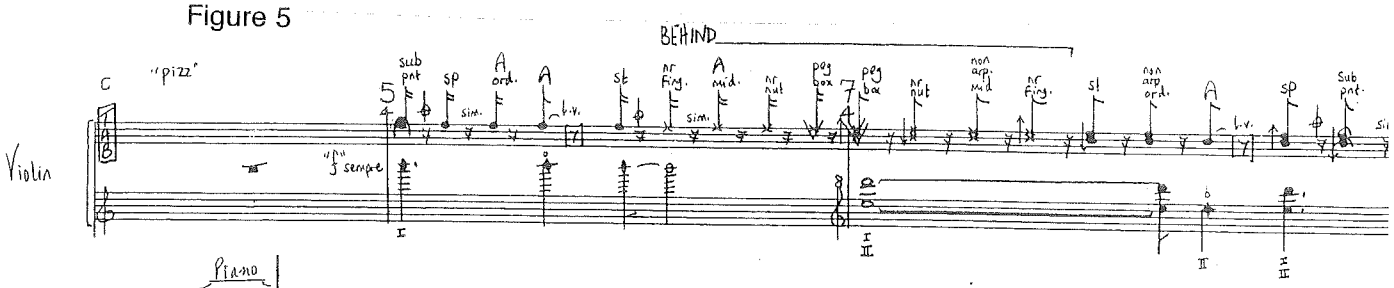
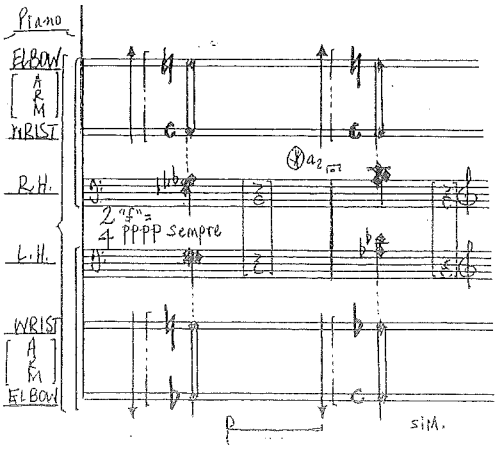


Figure 6



Hand and arm manoeuvres from *piano quintet*, bb.1-2, piano part

Figure 7 bb.79-85 *Piece for String Quartet*

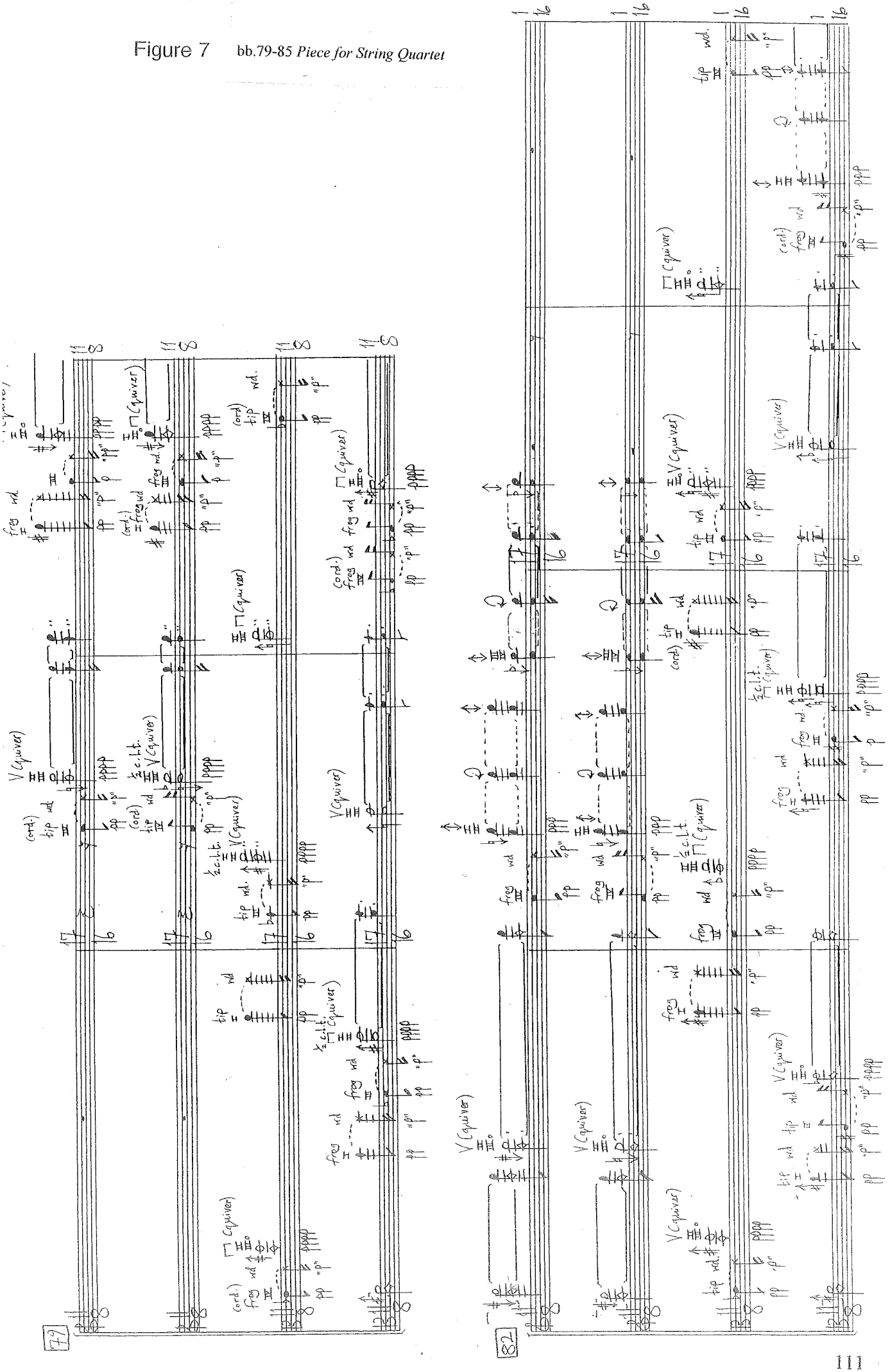


Figure 8 Repeating accelerating cell from *Music for Three Cellos and Ensemble*, bb.17-19, solo cello parts

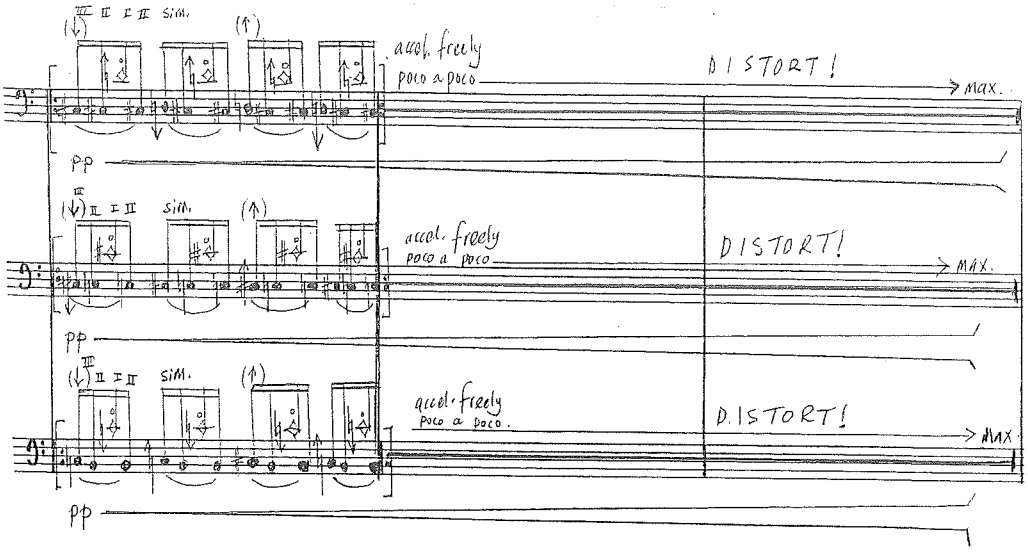


Figure 9

Distribution of high cello writing from *Music for Three Cellos and Ensemble*, bb.191-198, solo cello parts

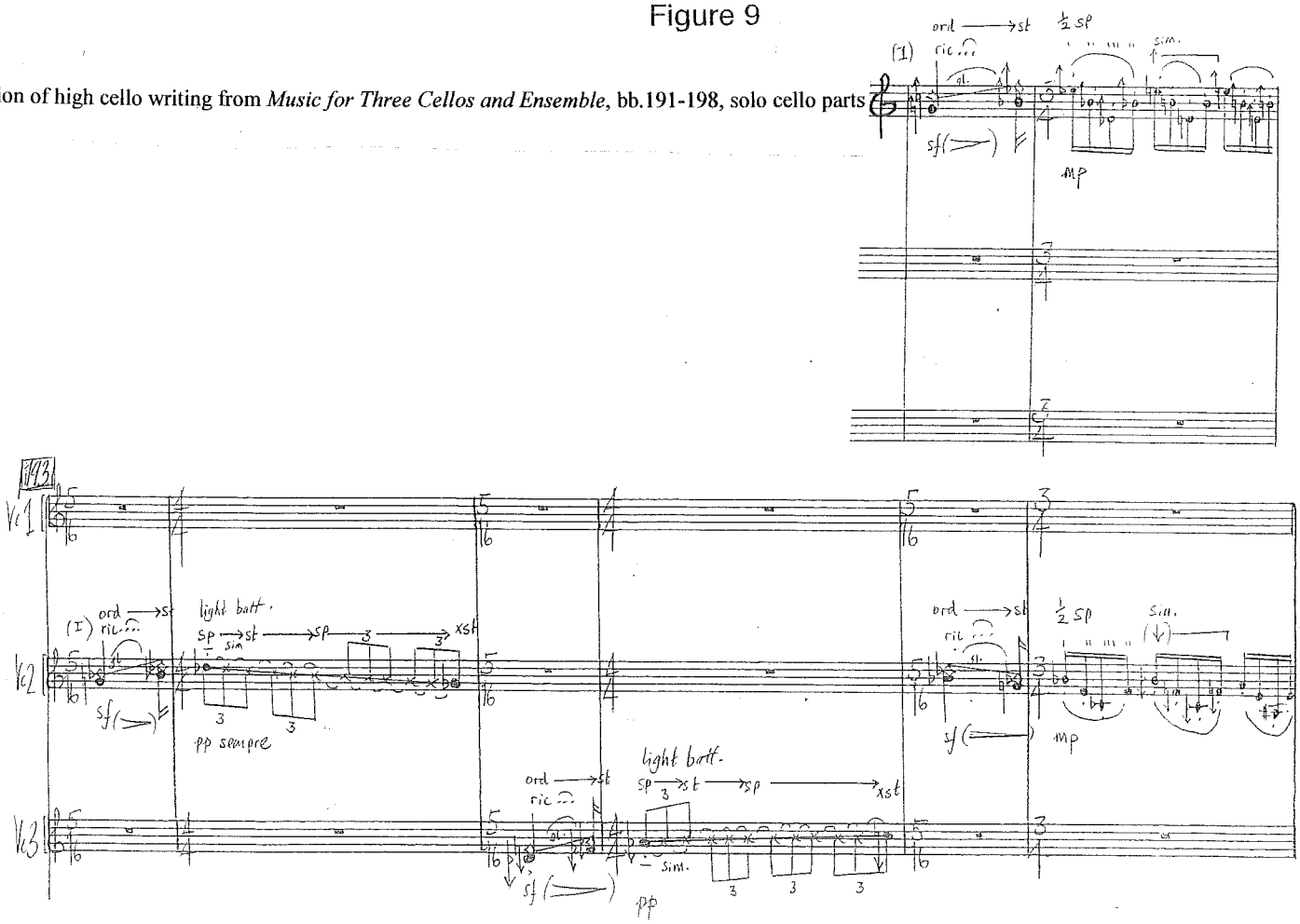


Figure 10

Swoop down from highest position of finger-board to 'D' drone on strings from *Kapur*, bb.51-54, harp, piano, violin and cello parts

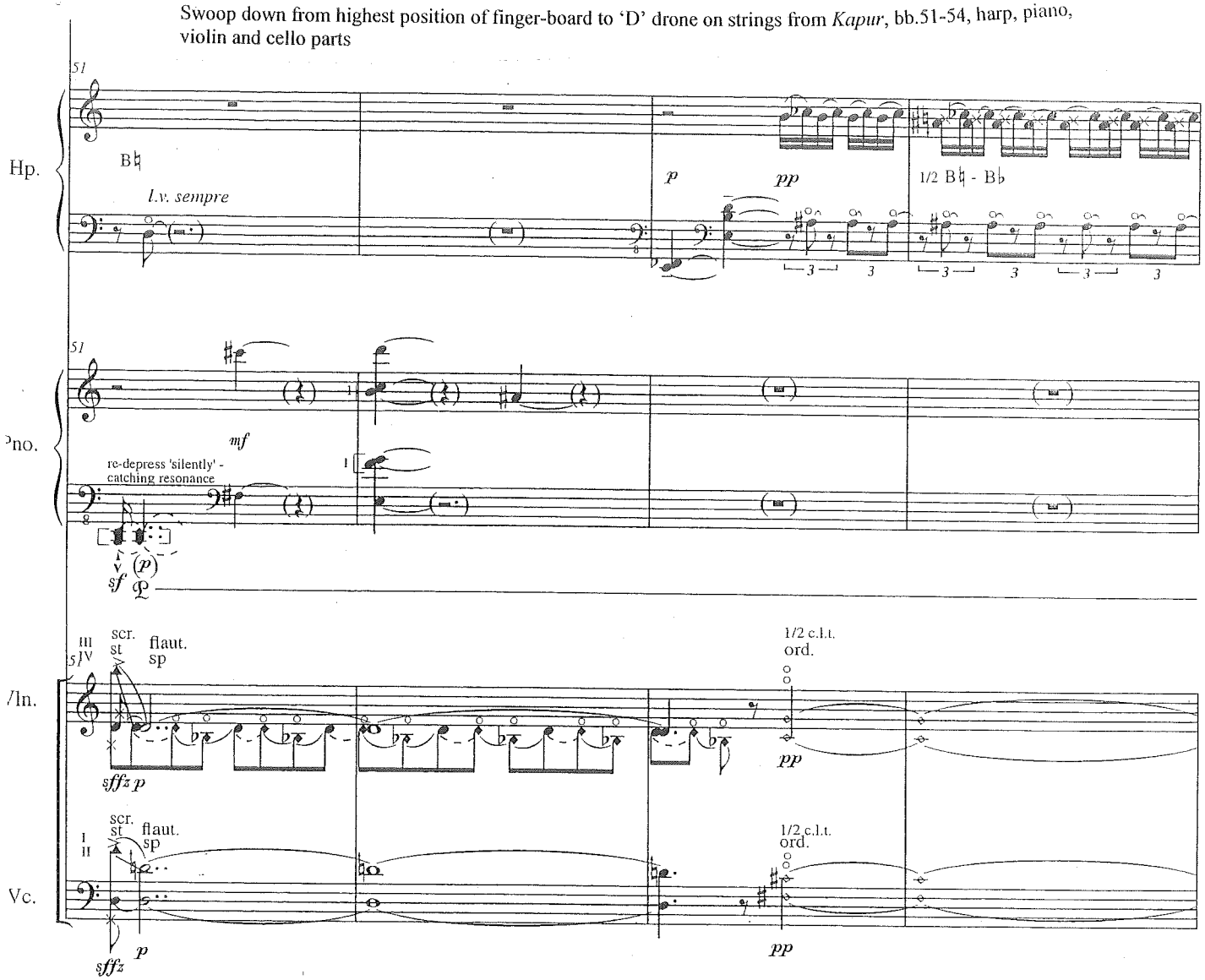


Figure 11 Progression from air to full tone from *Kapur*, bb.32-33, clarinet part

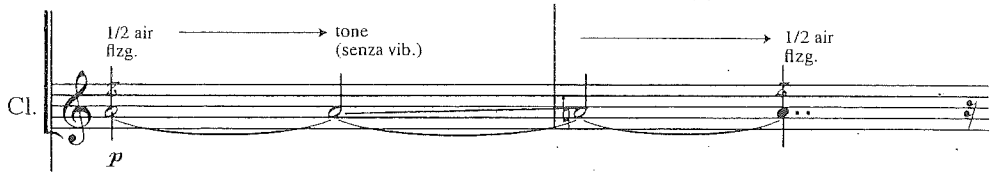


Figure 12 Glissando swoop down from highest extreme to sustained harmonic trimbral trill from *Kapur*, bb.30-31, violin and cello parts

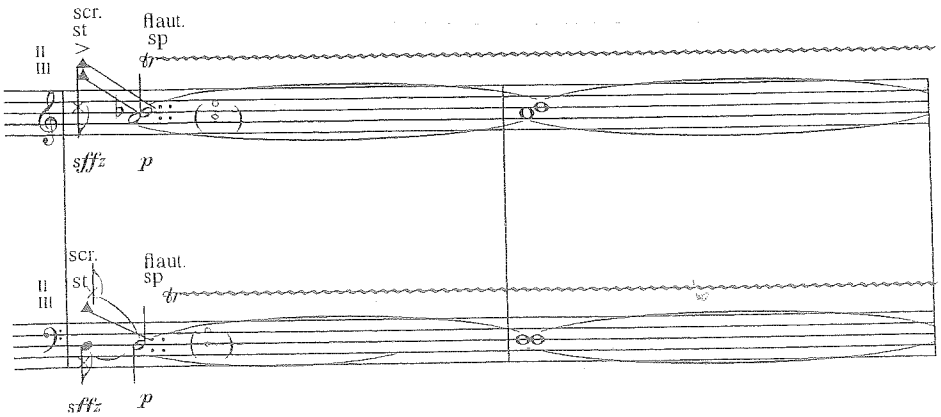


Figure 13 Alternation between vertical and circular bowing motions between st and sp position from *LEADER-reel-spool-GAPE*, bb.1-4, double bass part

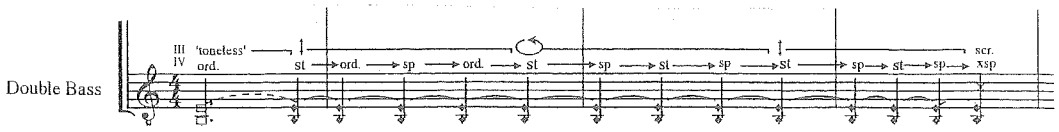


Figure 14 Perforation tremolo (gradually slowing down) from *LEADER-reel-spool-GAPE*, bb.21-23, oboe part

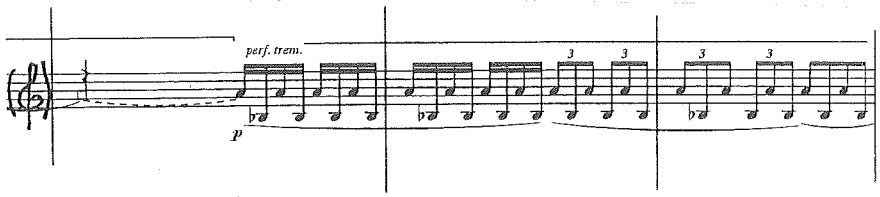


Figure 15 Densely double-stopped string writing in *cleave*, bb.34-38, for string quartet

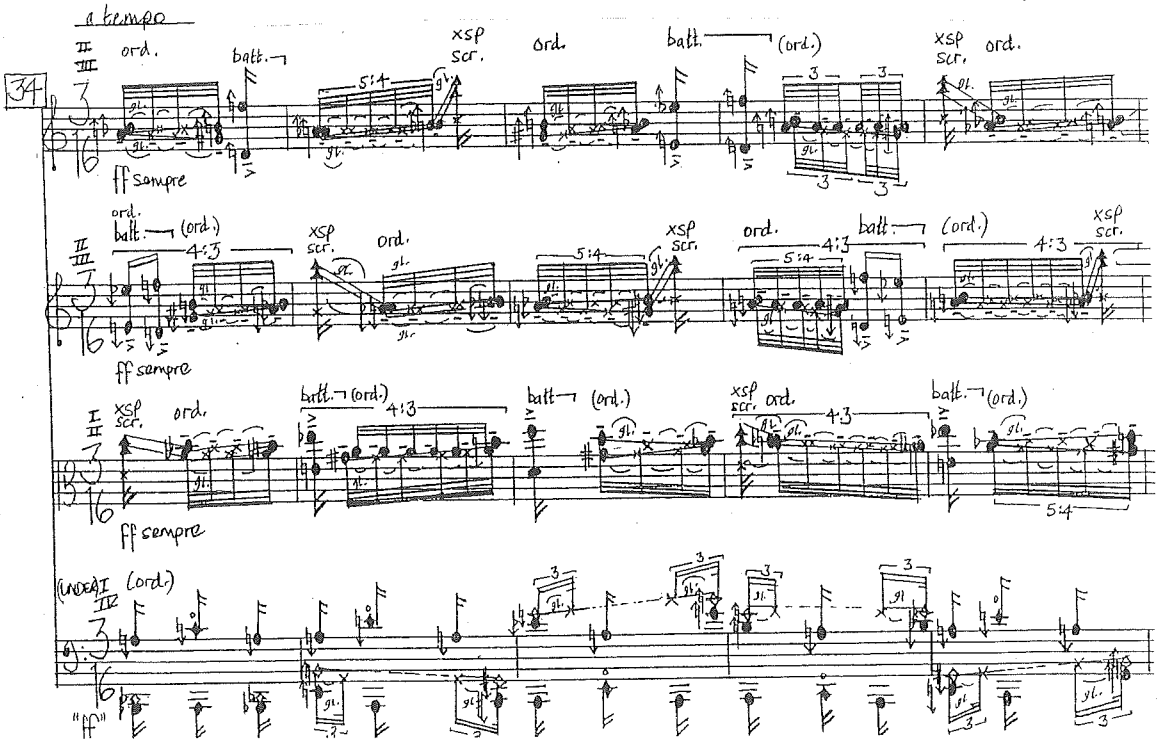


Figure 16 Sliding glissandos against open strings from *cleave*, bb.46-49, for string quartet

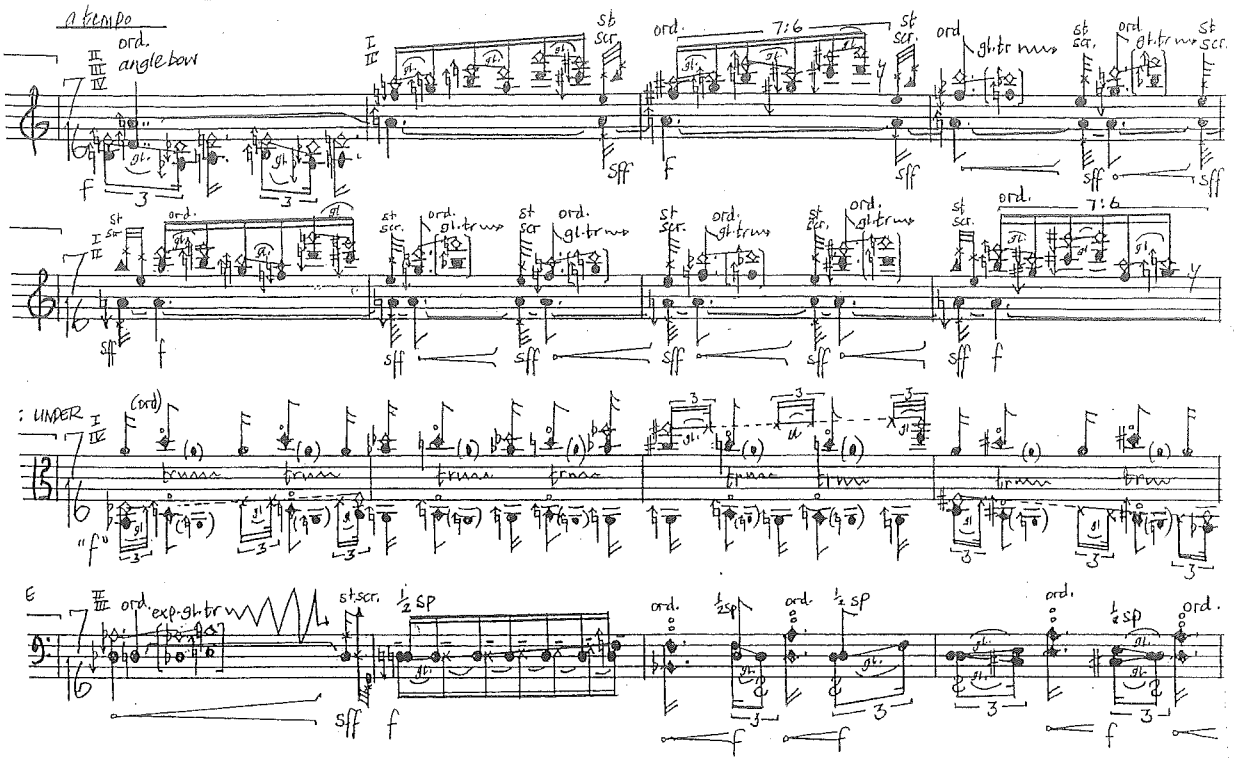


Figure 17 Alternation between glissandoing snap pizzicato attacks, quadruple-stop strumming and striking the finger-board from above from cleave, bb.28-31, for string quartet

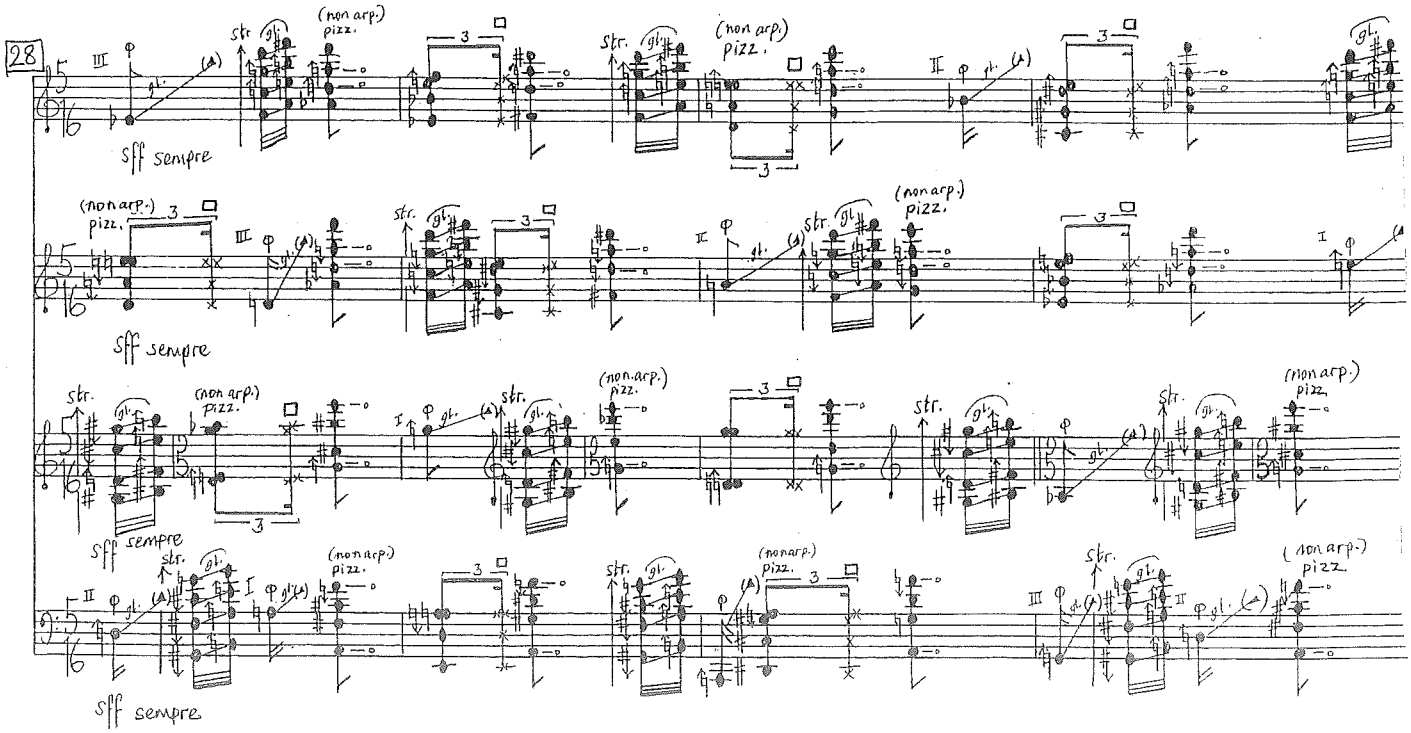


Figure 18 Repetitive figure from *Double Duo for Violins and Bass Drums*, bb.1-2, first violin duo

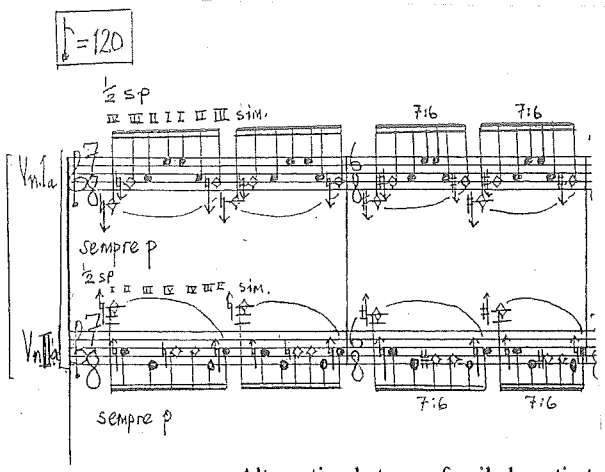


Figure 19 Alternation between fragile bow tip tremolos and dabbing from *Double Duo for Violins and Bass Drums*, bb.6-10, second violin duo

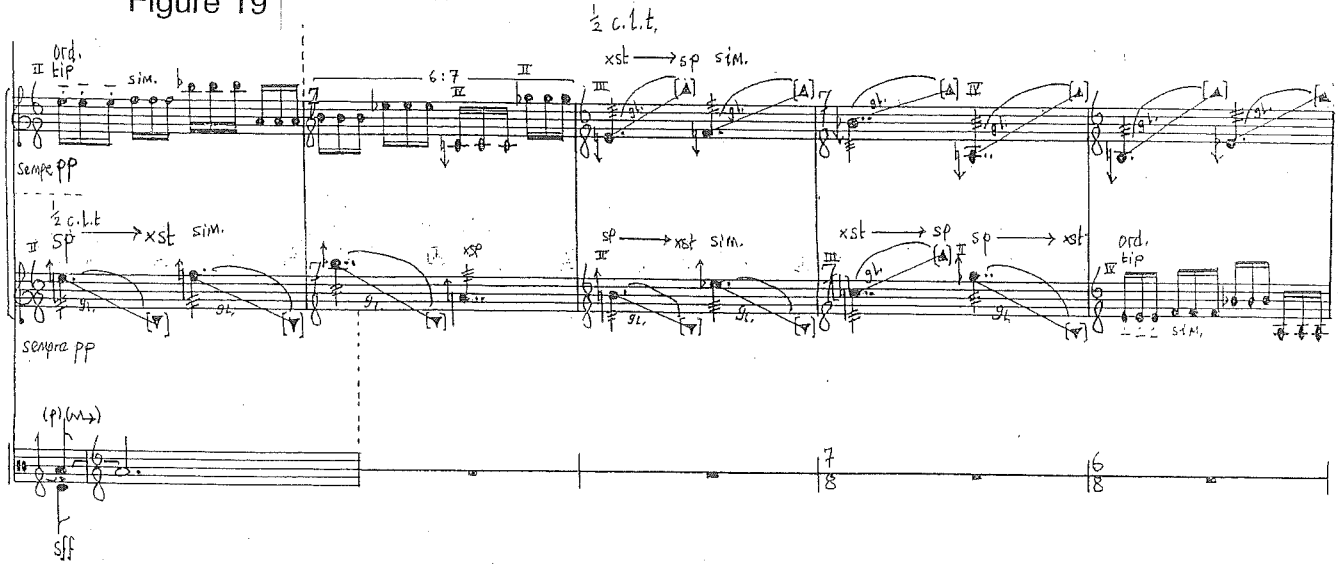


Figure 20 Artificial harmonic and open-string double-stopped repeated chords from *Double Duo for Violins and Bass Drums*, bb.11-14, first violin duo

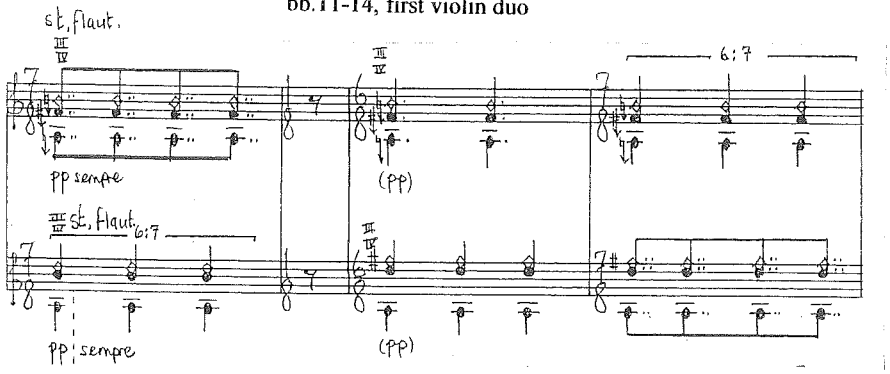


Figure 21 Alternation between snap pizzicato ascending glissandos and high-wire scratch bow pressure from *Double Duo for Violins and Bass Drums*, bb.17-20, second violin duo

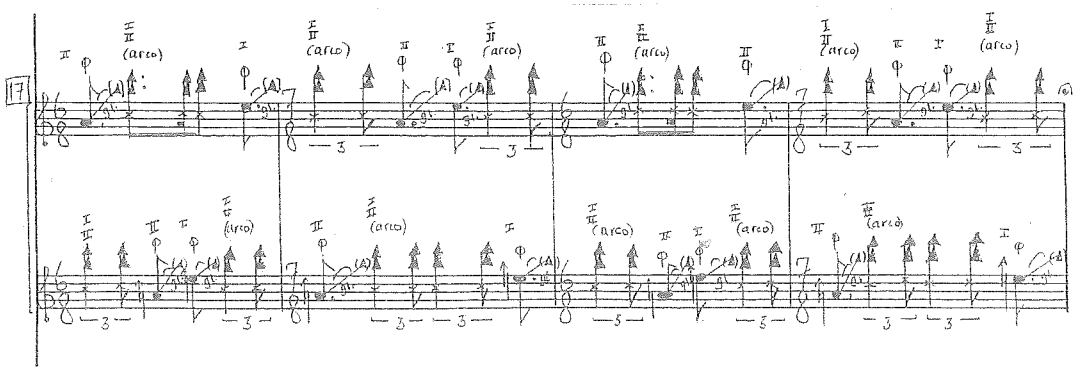


Figure 22 Slapping fingerboard from above with palm from *Double Duo for Violins and Bass Drums*, bb.31-34, first violin duo

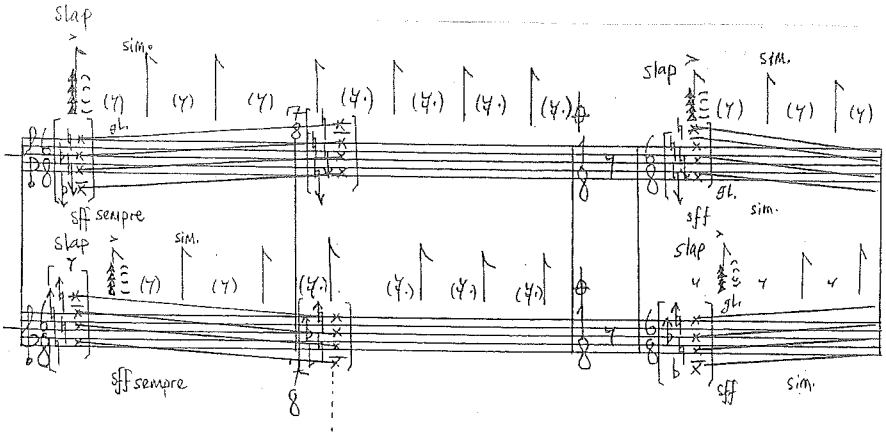


Figure 23 Held double-stopped bowed chords with open-string left-hand pizzicato decoration from *Double Duo for Violins and Bass Drums*, bb.41-43, first violin duo

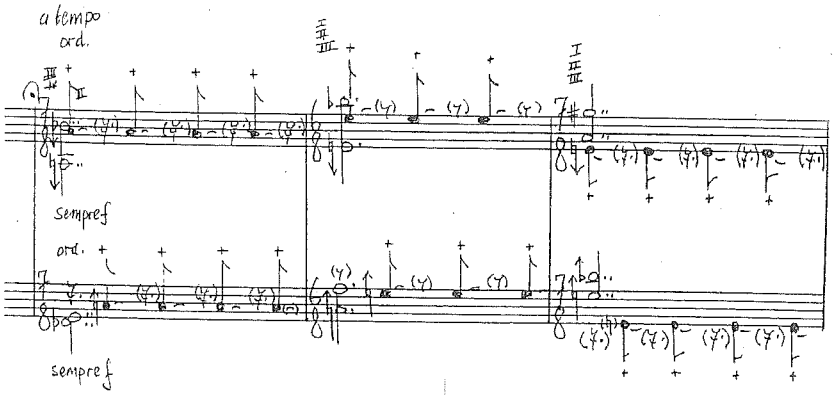


Figure 24 Strummed quadruple-stop sliding chords from *Double Duo for Violins and Bass Drums*, bb.45-48

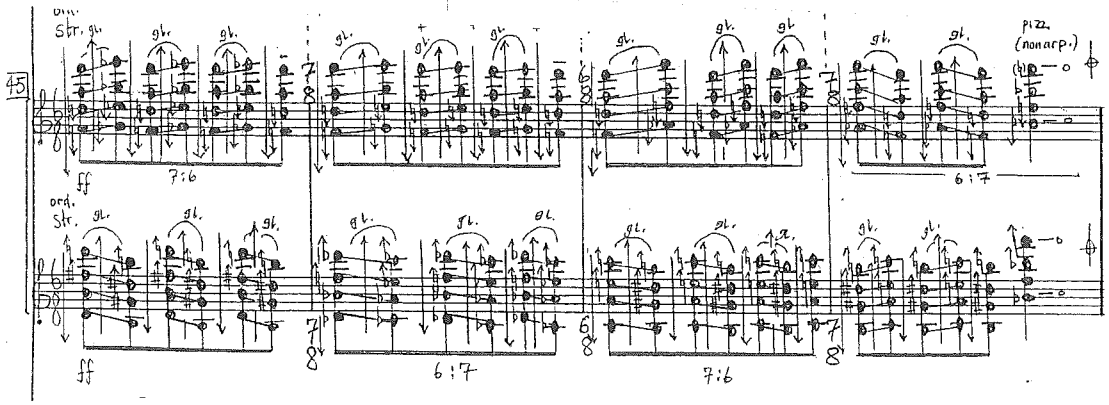


Figure 25 Triple-stopped bowed, slowly modulating held chords with loose bow hair from *Double Duo for Violins and Bass Drums*, bb.63-65, second violin duo

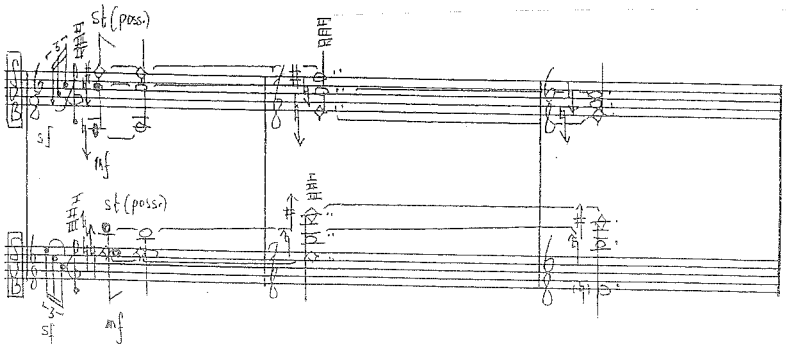
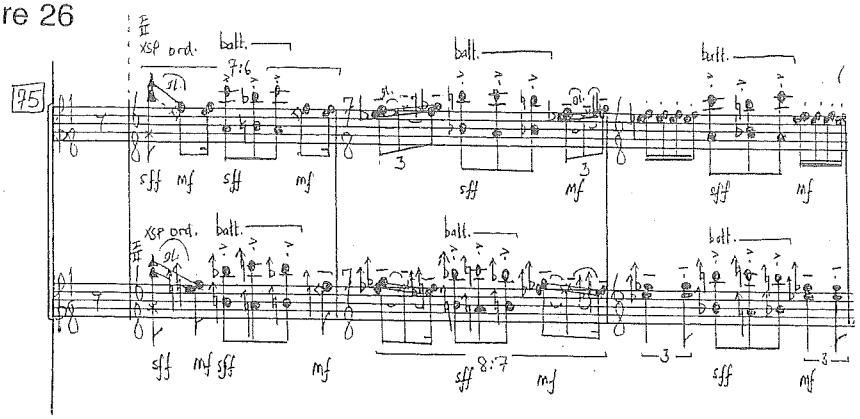
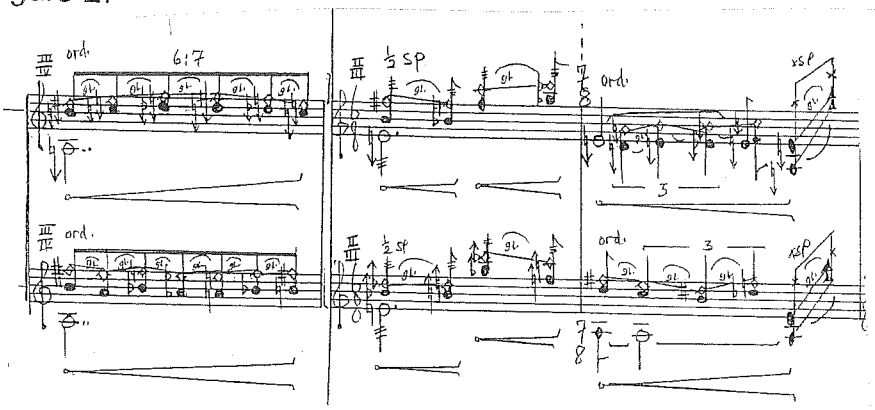


Figure 26



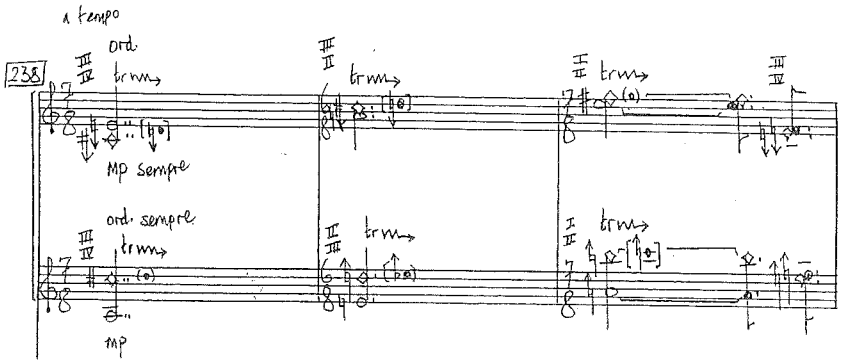
Alternation between sliding, close interval double-stops and wider interval *battuto* attacks from *Double Duo for Violins and Bass Drums*, bb.75-78, second violin duo

Figure 27



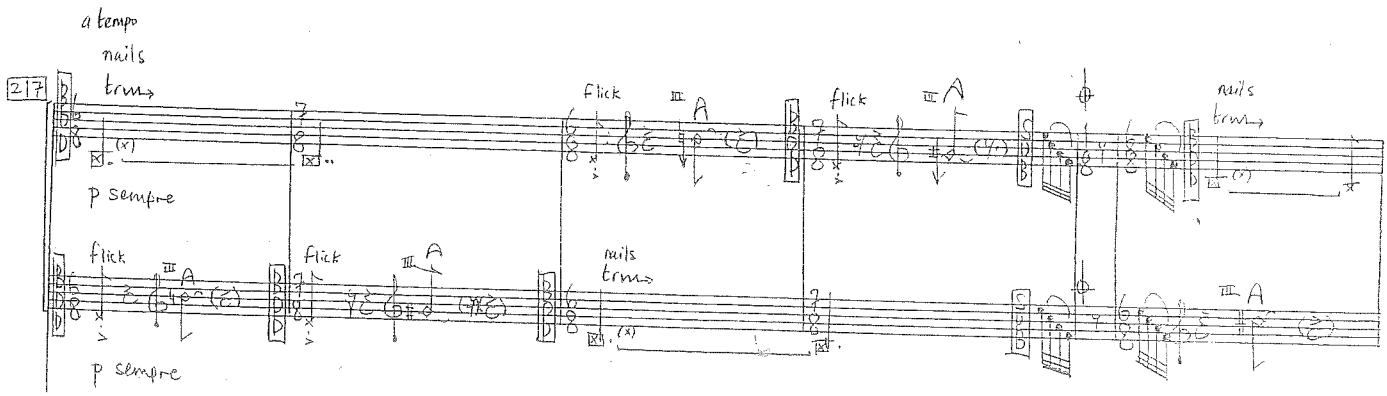
Sliding artificial harmonics against open strings from *Double Duo for Violins and Bass Drums*, bb.84-86, second violin duo

Figure 28



Trills between natural harmonic finger stopping and close, quarter-tonal interval from *Double Duo for Violins and Bass Drums*, bb.238-240, first violin duo

Figure 29

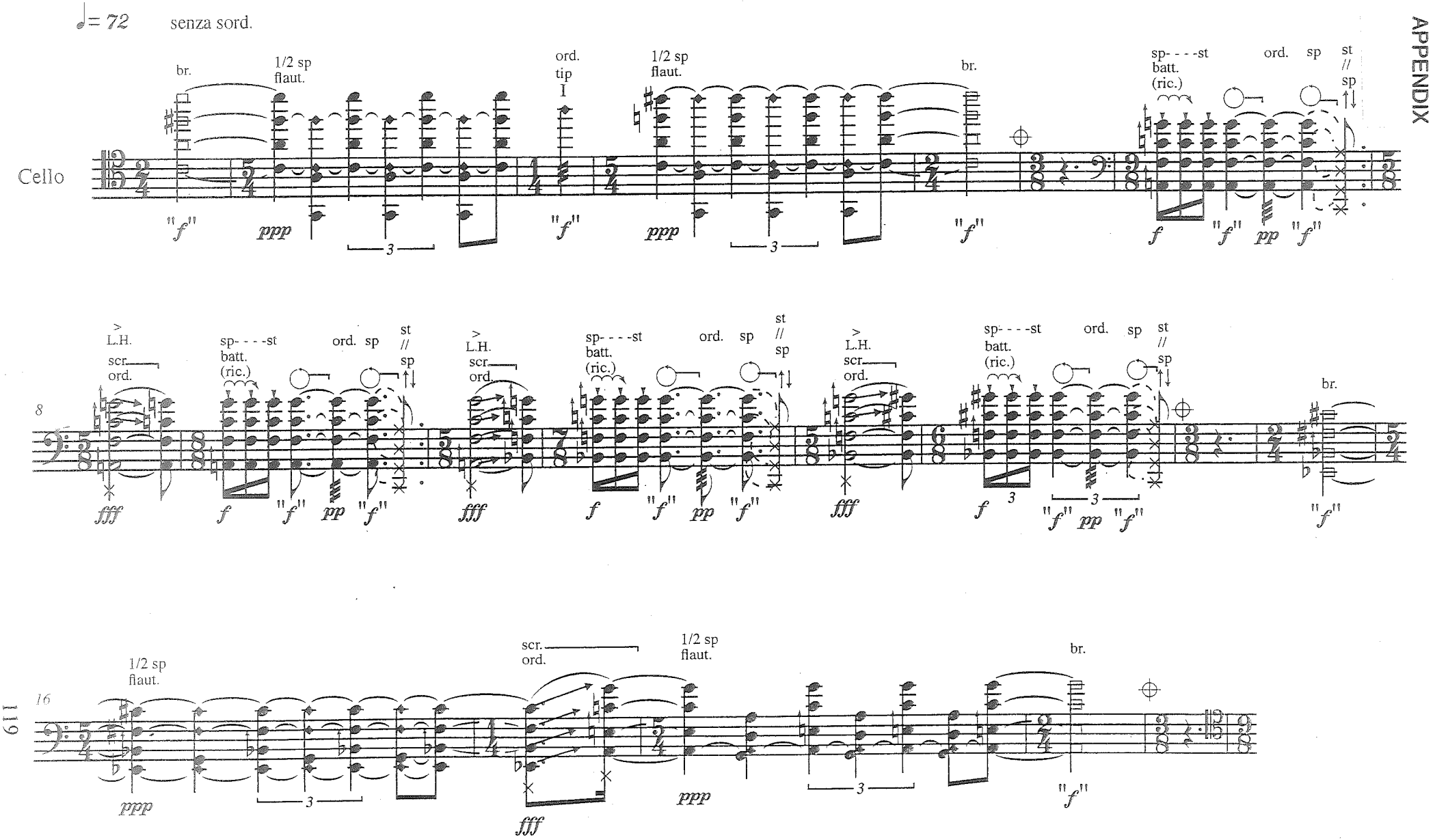


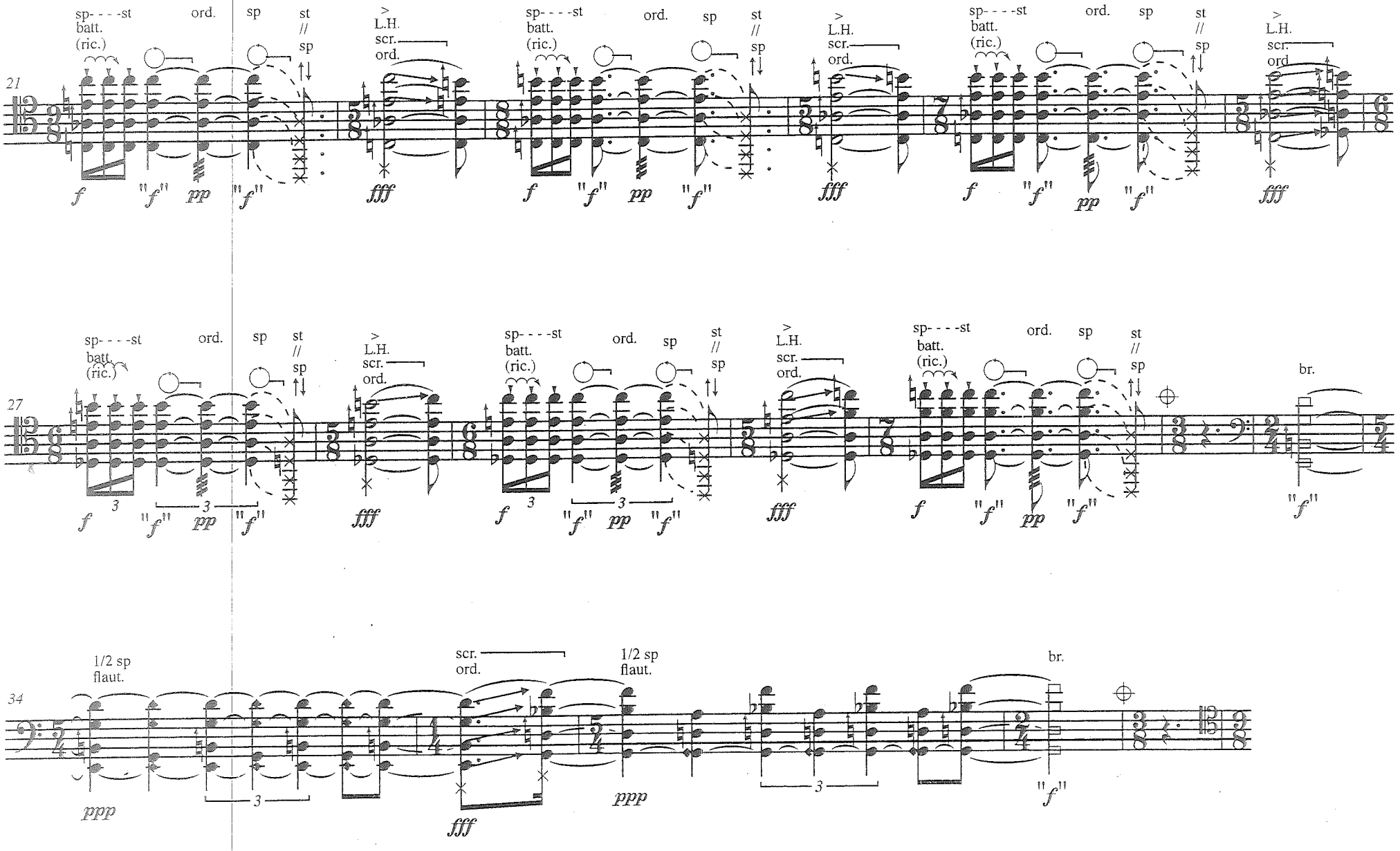
Nail instrument body trills and flicks with fragile natural harmonic fingernail plucking from *Double Duo for Violins and Bass Drums*, bb.217-222, first violin duo

To be played with Bach.Bogen curved bow

RENDER

Tristan Rhys Williams

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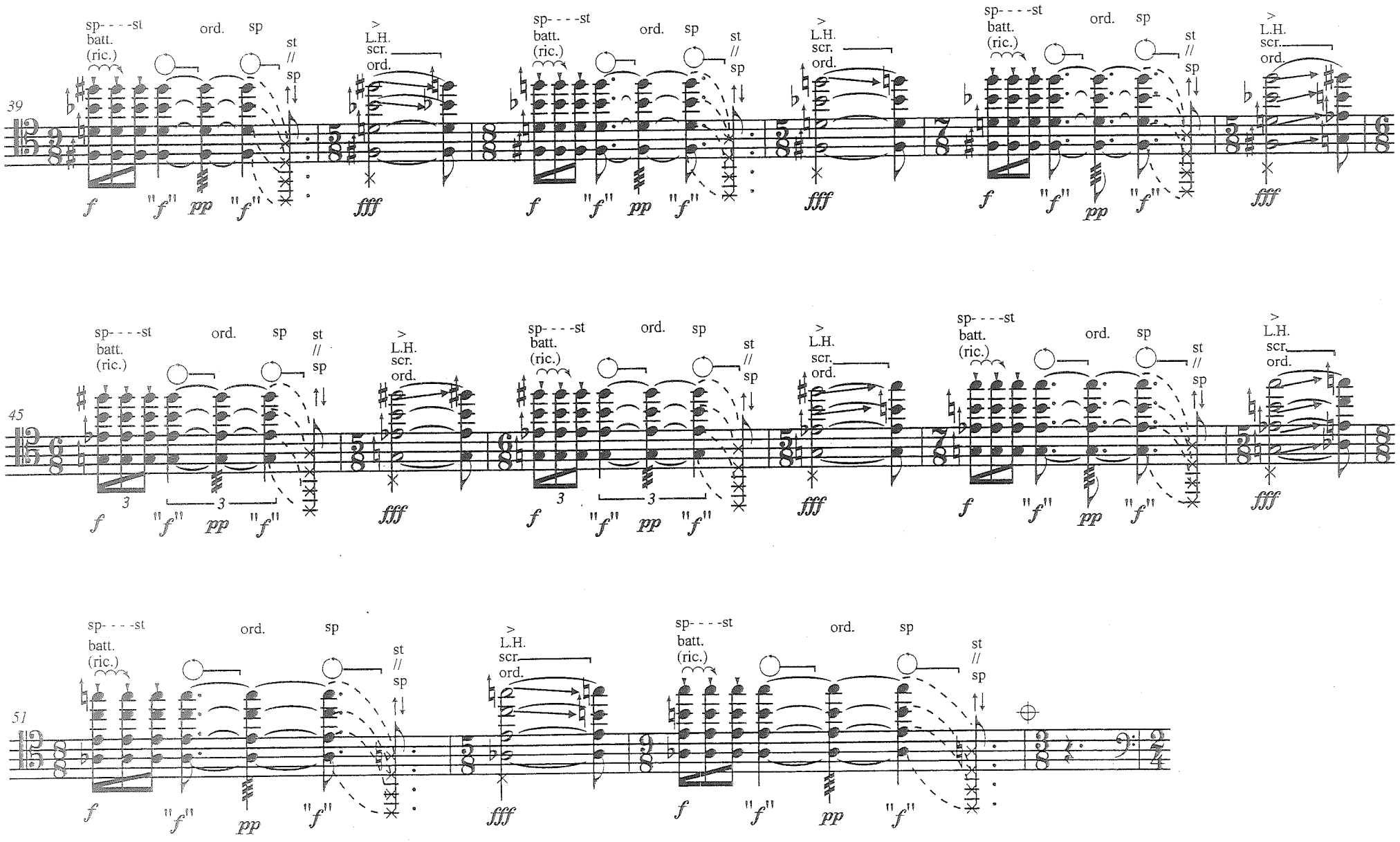
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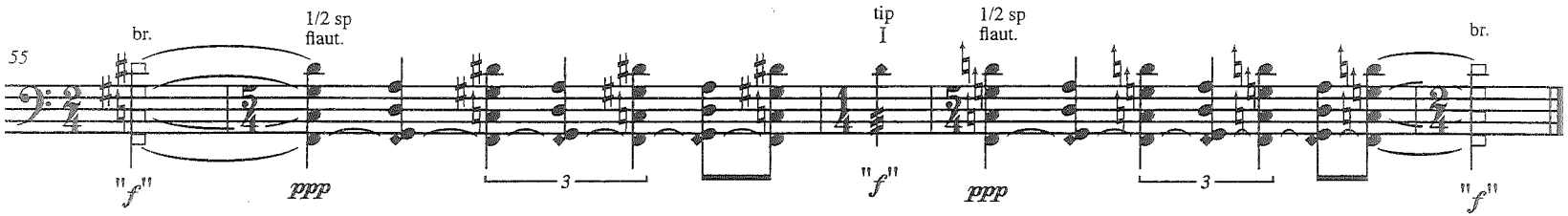

Instructions:

br.	bow directly on the wood of bridge
1/2 sp, flaut.	Light, floating bow pressure halfway between sul ponticello and ord. - shimmer but with discernible pitches
tip tremolo	Fragile scrubbing gesture with area of bow near the tip
	Mute all strings (prevent from resounding)
batt (ric)	Forced bounce-type ricochet contact with the strings
	Continuous circular motion starting in vertical position (very little definition due to loose bow hairs)
	Vertical gliding bow rapidly moving from high on fingerboard down to near the bridge and back up again - as fast as possible in context
	Equally distributed glissando
	Natural harmonic
	Scratchy, heavy bow pressure

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