Rotations and Resonances

[Part One – Acoustic]

For string quartet

Ian Percy

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Commissioned by the Rodewald Concert Society

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Violin 1
Violin 2
Viola
Violoncello

Duration: ca. 14 minutes

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This is a single movement composition for string quartet composed during 2012. It is the first part of a triptych of pieces sharing the same name and materials: Part One – Acoustic, Part Two – Electroacoustic and Part Three – Acousmatic.

During a period of lectures taught on twentieth century American classical music: specifically, the music of Elliott Carter and Steve Reich, the composer noticed how Reich's music often influenced his own in many subtle ways, mostly on a subliminal level and seemingly only ever recognised in retrospect. This quartet consciously refers to the music of gradual process from Reich's early years within a passage of rotation and repetition where the rhythm gradually alters to create a stream of pulsing melodic fragments, shifting-beats, contrapuntal rhythms and displaced accents.

Whilst the rhythmic structure refers to the phasing music of Reich, the pitch content and organisation refers to the work of Elliott Carter and specifically his All-Triad Hexachord (ATH): 012478. The hexachord (C – $C^{\#}$ – D – E – G – $G^{\#}$) can be heard in various guises throughout the piece and became the primary pitch material for the string quartet parts.

Carter's All-Triad Hexachord (ATH): Carter Hexachord 35, Forte 6-17 [6-z17b]

0	1	2	4	7	8
C	$C^{\#}$	D	E	G	$G^{\#}$

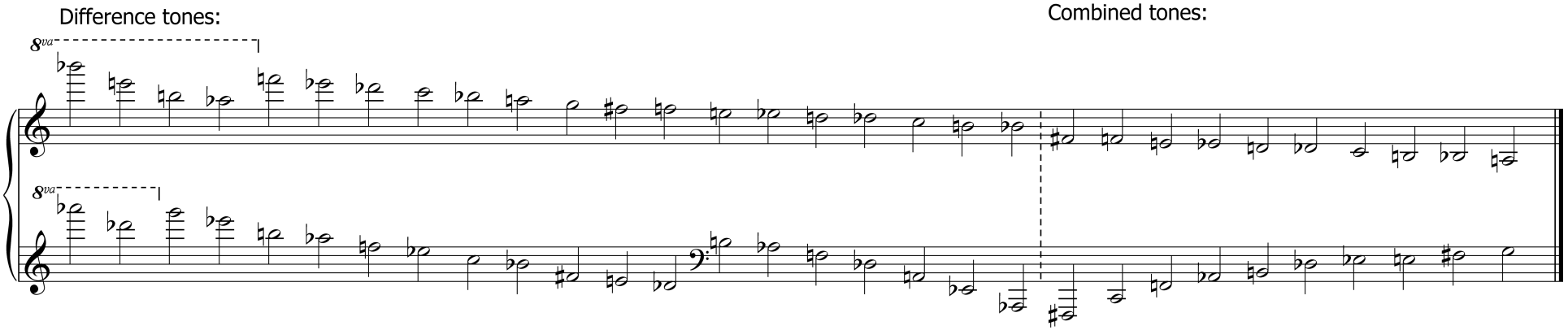
A hexachord is any sequence of six notes laid out in a scalic pattern. This hexachord takes its name from the fact it contains all twelve of the prime-form triads only once (within the octave):

012	013	014	015	016
024	025	026	027	
036	037			
048				

Alongside these two referential characteristics, this quartet also continues the composer's own practical research using heterodyning frequencies to shape contrapuntal textures and resonant vertical harmony. These theories are used to colour, dilute, and abandon the pitch-content of the All-Triad Hexachord (ATH) and help to establish a coherent form within the movement.

The combined and difference tones for all registers (frequencies) of A^{b} (chosen as the 'prime' pitch within the hexachord) were calculated and used to produce the many variables explored within the textures of the string quartet. The following example can be transposed by the octave for all registers of A^{b}. In theory and although never physically present, A^{b}4 (middle A^{b}) is an omnipresent 'invisible' pitch sympathetically produced by each of the heterodyning pitch-pairs:

Heterodyning frequencies (pairs) of Ab4 [415.30]:



Brief Synopsis:

Rotations and Resonances [Part One – Acoustic] is a serious piece exploring a highly dissonant and (at times) quite aggressive soundworld. The part-writing focusses upon intricate micro units of pitch rotations, rhythmic process, repetition and phasing, which combine across the textures of the quartet to produce close-interval vertical harmony and linear counterpoint. The serious and aggressive soundworld is certainly not catering to popularist tastes, but the moments of release grow more influential as the piece progresses and (of course) the composer remembers to 'let the instruments sing' in lyrical linear counterpoint and interact with more consonant heterodyning harmonies in the latter stages of the work. The movement closes in a near modal pitch language with a texture reminiscent of a retrospective plainchant SATB setting.

Acknowledgements:

Thanks go to the Rodewald Concert Society and the Arts Council England for commissioning this work. Further thanks go to violinist-musicologist (and friend) Dr Alberto Sanna for recording the primary sound material from which the concrete parts were composed for Part Two – Electroacoustic and Part Three – Acousmatic of this triptych. Final thanks go to fellow composer James Wishart for initially proposing this project.

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♩ = 60 **... and so the journey begins ... in tranquility ...**

A **... an instinctive direction ...**

Vln.

Vln.

Vla.

Vc.

17

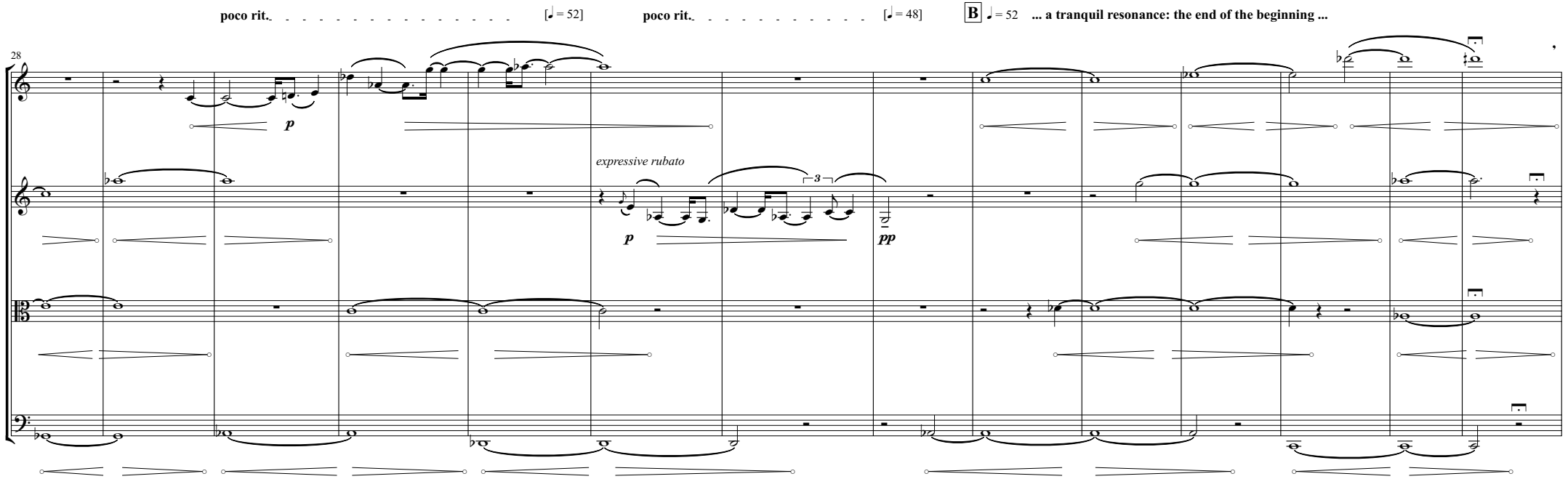
rubato

[variable speed tone trill]

[variable speed tone trill]

approx.

[tone trill]


poco rit.
[♩ = 52]
poco rit.
[♩ = 48]
B ♩ = 52
... a tranquil resonance: the end of the beginning ...
28
p
expressive rubato
3
p
pp

... an interlude: places and faces within cluttered surroundings ...

C ♩ = 60 **rit.** [♩ = 48] **accel.**

42

8va

mf *f* *mp* *mf*

mf *mp* *mf* *mp* *mf*

mf *p* *mf*

mf *p* *mp*

♩ = 60 **rit.** [♩ = 40]

47

mp *mf* *f* *pp*

p *mf* *mp* *pp*

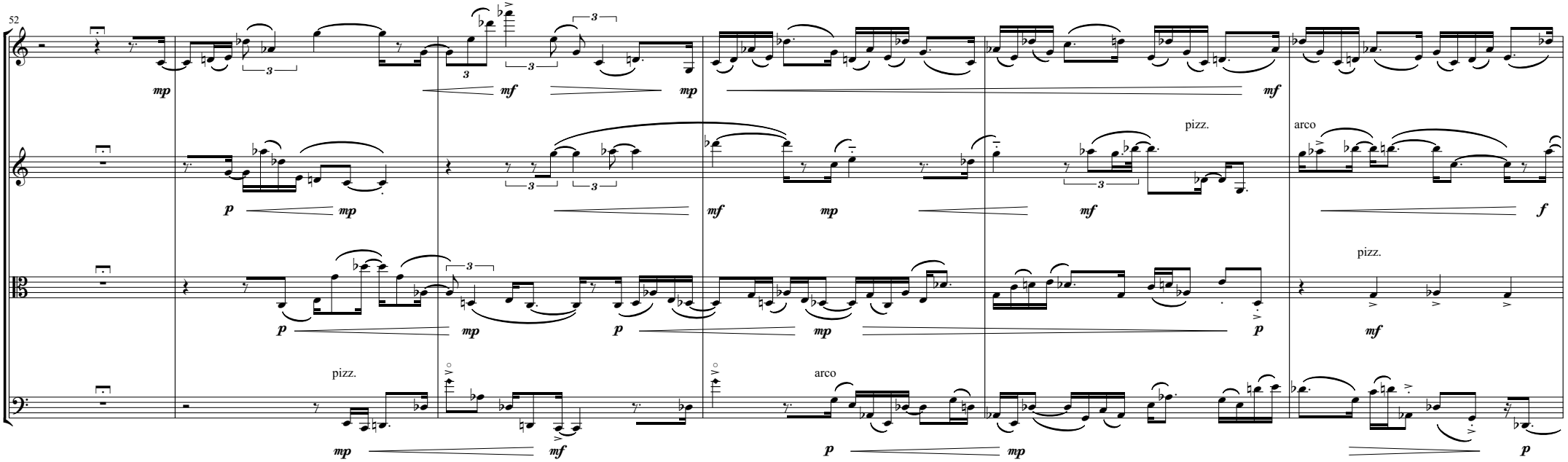
p *mf* *p* *pp* *ppp*

p *mp* *pp* *ppp*

... the initial euphoria of new experiences ...

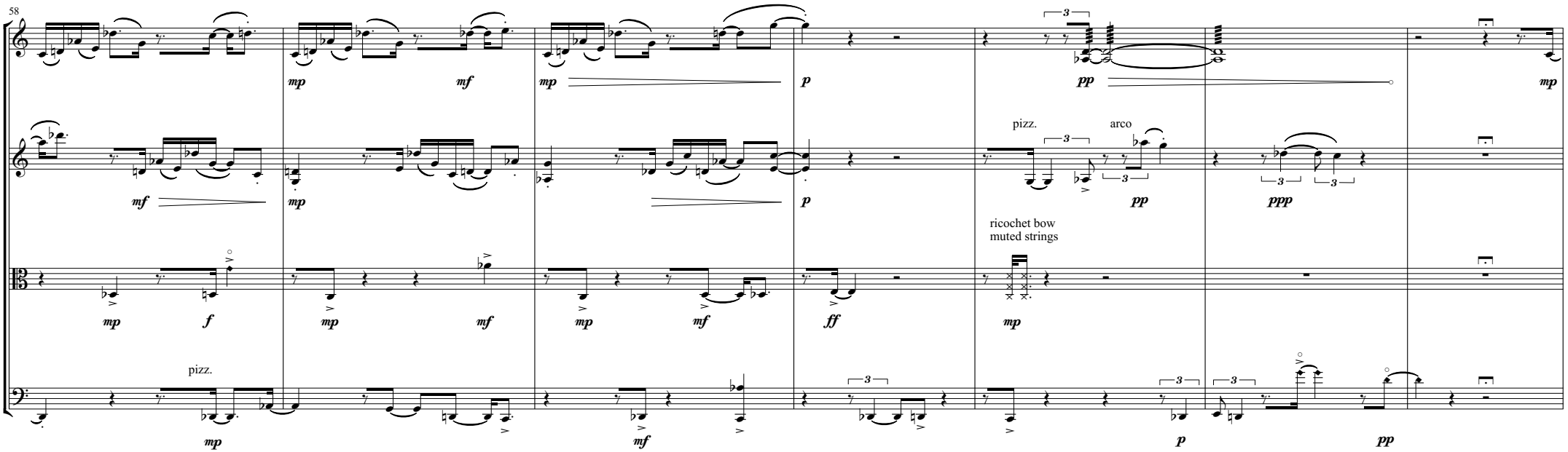
D [♩ = 40] **accel.** ♩ = 60

52



E **accel.** [♩ = 76] **rit.** ♩ = 40 **poco rit.** [♪ = 72]

58



F ♩ = 40 **... a lyrical diversion: fluid and expressive ...**

65

rubato

rubato

arco

rubato

arco

poco rit. [♪ = 72]

72

G ♩ = 40 **... a passage of transition ...**

H **accel.** ♩ = 60

80

rubato

pizz.

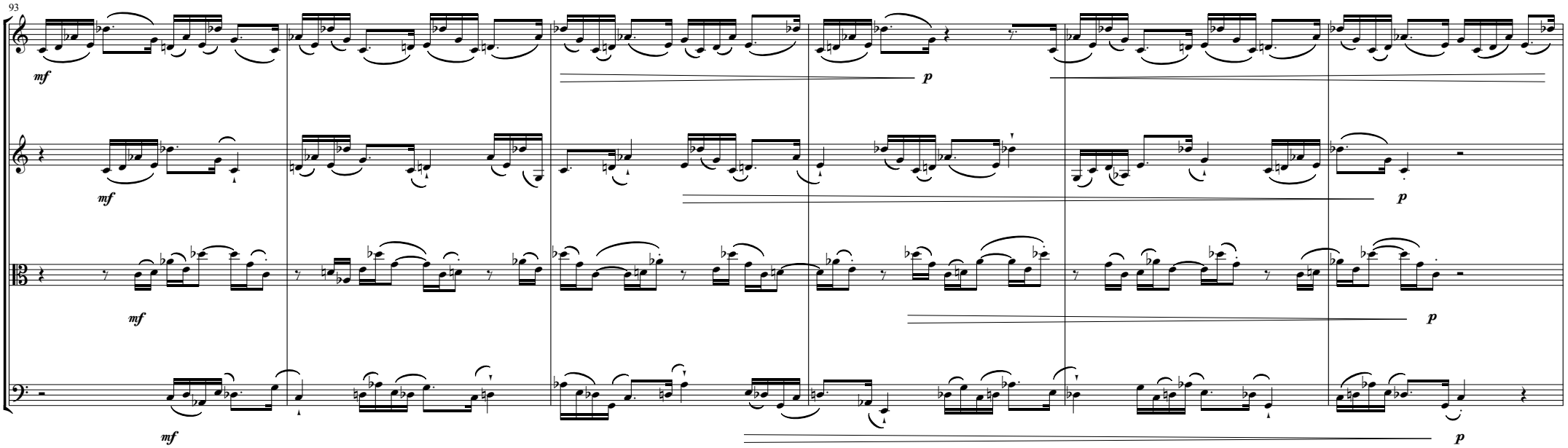
I ♩ = 60 **... fluid and positive: skippin' cycles ...**

87

arco

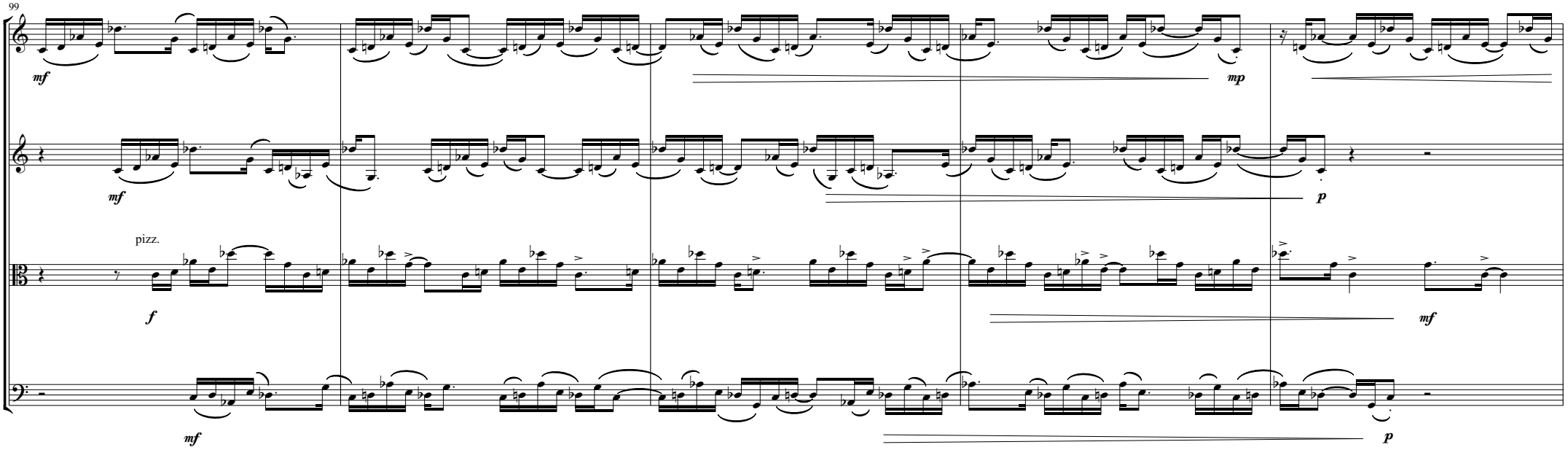
J **... evolving natural cycles, not synthetic repetition ...**

93



K **... changing landscapes and rejuvenating resources ...**

99



L **... as smooth as glass ...**

104

mf *mp*

mf *mp*

arco

mf *mp*

M

110

mf *mp*

mf *p*

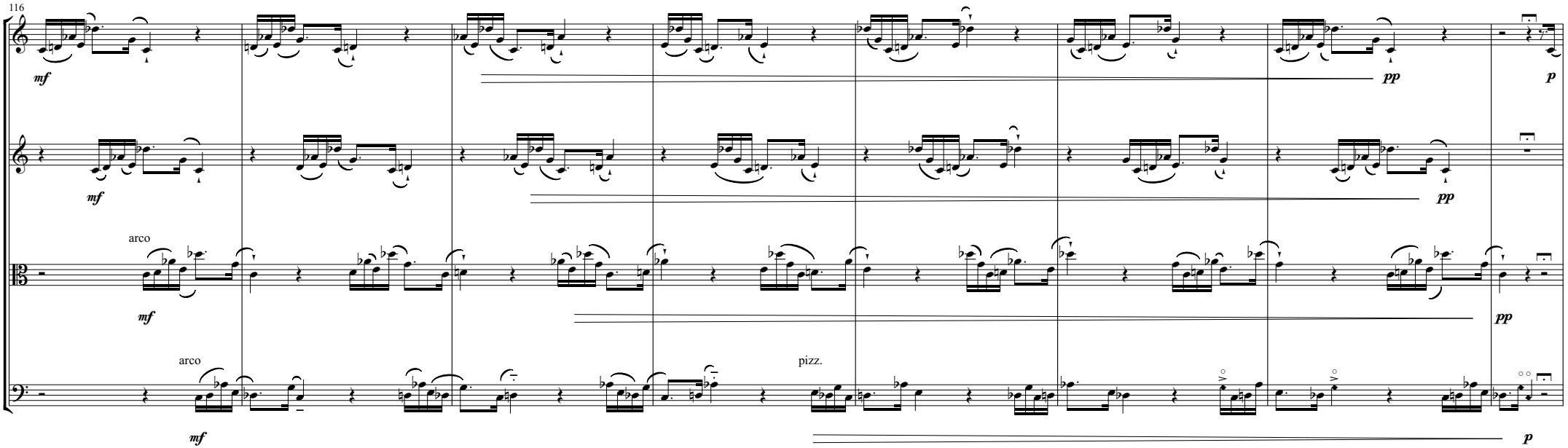
pizz.

f *mf* *mp*

pizz.

mf *mp*

N **... a continuous rhythmic stream trickles to a halt ...** **poco rit.** [♩ = 40]



O ♩ = 40 **... a thematic interlude and transition ...** **P** **accel.** [♩ = 52]

124

[pizz.] pizz. arco pizz.

Q ♩ = 60 **... a scurry of activity: the beginning of the end ...** **rit.** [♩ = 40] **poco rit.** [♪ = 72]

132

pizz. arco [variable speed trill] arco pizz.

R ♩ = 60 **... a poignant reflection upon a sonic journey: heterodyning emotions ...**

140

pp *p* *mp* *p*

arco

p

arco

p

poco rit. [♩ = 52] **S** [♩ = 52] **poco accel.** ♩ = 60 **poco rit.** [♩ = 40]

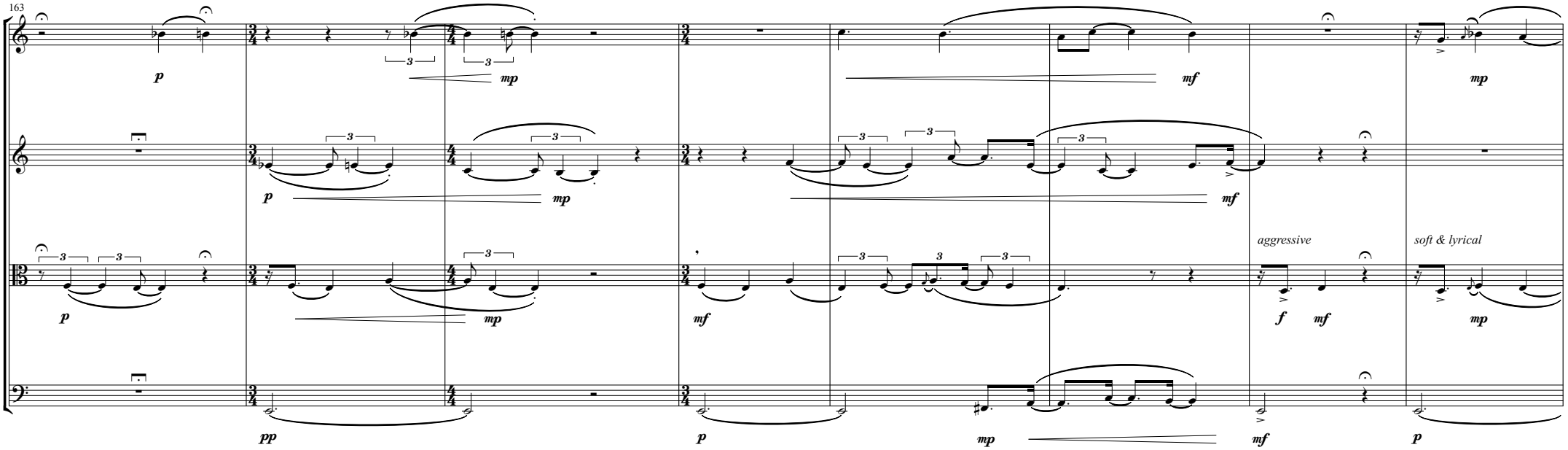
150

8va

p *mp* *pp* *pp* *ppp*

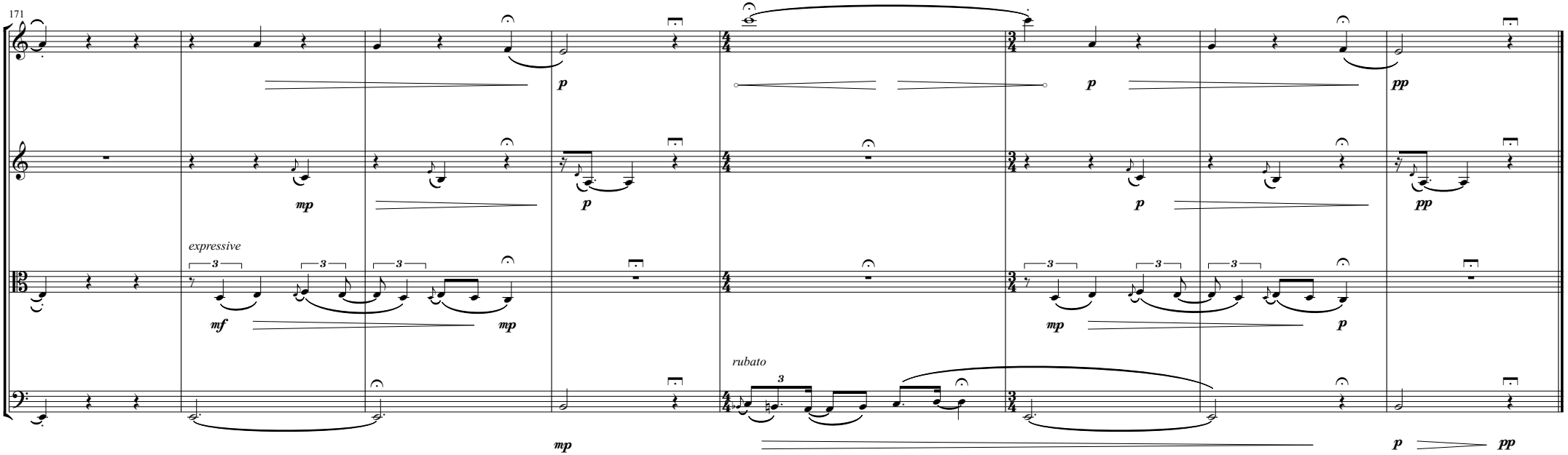
T [♩ = 40] **poco accel.** [♩ = 52] **poco accel.** ♩ = 60

163



poco rit. [♩ = 52] **rit.** U [♩ = 44] **poco rit.** [♩ = 40]

171



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iancarlpercy@gmail.com
www.ianpercy.me.uk