

# Forms of motion

Sheena Phillips

Three pieces for string orchestra

(Violin I, Violin II, Violin III, Viola, Violincello I, Violincello II, Contrabass)

|          |         |
|----------|---------|
| I Birds  | c. 5:45 |
| II Bees  | c. 4:45 |
| III Fish | c. 4:00 |

Total duration c. 15:00 (including pauses between movements)

The first movement, *Birds*, is based on the climbing, wheeling, soaring and swooping flight patterns of massed starlings at dusk. The passing of motifs from one part to another echoes what we know about how these patterns emerge: individual birds follow what their near neighbours do. There are lots of fascinating videos of murmuration on the web: just google 'starling murmuration'.

*Bees* is a depiction of the foraging flight of bumblebees. Bumblebees forage individually. Initially their flight features many loops and zig-zags, but they gradually identify good feeding areas and become more efficient in travelling between them. In this piece, four soloists represent four individual bees, and the gently humming mass of non-solo strings represents the hive, always in quiet motion but also essentially stationary. An article summarising bumblebee foraging patterns is at <https://askabiologist.asu.edu/plosable/flight-bumblebees>

*Fish* evokes the movement of schools of fish, alternating between co-ordinated motion (which has parallels with murmuration) and periods of 'milling' in which the group has no particular orientation. It draws on information (and great pictures) in an academic study published by the Royal Society at <http://rsfs.royalsocietypublishing.org/content/2/6/693>

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perusal score – not for rehearsal or performance

## Forms of motion: notation and other performance information

### I Birds

This movement has three violin parts and two cello parts to help accommodate players of different abilities.

Tremolos are unmeasured.

Trills – unless otherwise marked, trills are to the next note up in the diatonic scale of D major. Where the next note up is a sharp note, I have indicated this in brackets. Please start all trills on the upper note and continue for the whole duration of the note. Trill extension lines clarify when a trill should be continued into a tied note.

### II Bees

Square noteheads : make simple repeating patterns using the two notes in the square notehead cluster. See the examples below for a few ideas. You may vary the patterns, perhaps responding to patterns of players around you – or you can stick to exactly the same pattern throughout the piece. Keep the patterns simple, using only quavers, crotchets or dotted crotchets. If you're feeling adventurous, you may cross the bar line, but keep track of where you are!

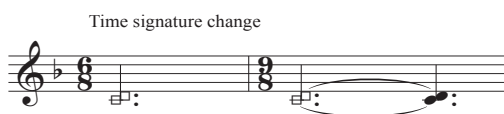
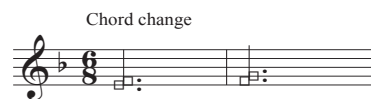
Conductor signals: the score marks the places at which notes change for one or more of the 'hive' parts. To help players keep track, it might be helpful to have a particular kind of signal for these 'note switching points' (as opposed to other conductor cues for soloists etc.)

Tremolos are unmeasured.

Trills – trills are to the next note up in the scale of F major. Please start all trills on the upper note.

Sample interpretations of square noteheads:

| Notation                                                                            | Interpretation                                                                       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
|  |  |



### III Fish

This movement has three violin parts and two cello parts to help accommodate players of different abilities.

Tremolos are unmeasured.

Trills are to the next note up in the diatonic scale of C major and begin on the lower note.

## forms of motion

## I. Birds

Sheena Phillips

with easy and unhurried motion

♩ = 76

the first ascent

Violin I

Violin II

Violin III

Viola

Cello I

Cello II

Contrabass

soaring, spacious

Vln. I

Vln. II

Vln. III

Vla.

Vc. I

Vc. II

Cb.

## A regathering

Score for Section A: regathering. The score is for a string ensemble (Violins I, II, III, Viola, Violoncello I, Violoncello II, and Contrabass) in 4/4 time, with a key signature of one sharp (F#).

The score begins with a 4-measure rest for all instruments. At measure 5, the Violins I and II enter with a *p* (piano) dynamic, playing a series of eighth notes. The Violins III and Viola enter at measure 6 with a *p* dynamic, playing a series of eighth notes. The Violoncello I and II enter at measure 7 with a *p* dynamic, playing a series of eighth notes. The Contrabass enters at measure 8 with a *p* dynamic, playing a series of eighth notes. The score continues with various dynamics and articulations, including *f* (forte), *mf* (mezzo-forte), and *p* (piano), and includes trills (*tr*) and accents.

Score for Section B: more muscular. The score is for a string ensemble (Violins I, II, III, Viola, Violoncello I, Violoncello II, and Contrabass) in 4/4 time, with a key signature of one sharp (F#).

The score begins with a 4-measure rest for all instruments. At measure 5, the Violins I and II enter with a *p* (piano) dynamic, playing a series of eighth notes. The Violins III and Viola enter at measure 6 with a *p* dynamic, playing a series of eighth notes. The Violoncello I and II enter at measure 7 with a *p* dynamic, playing a series of eighth notes. The Contrabass enters at measure 8 with a *p* dynamic, playing a series of eighth notes. The score continues with various dynamics and articulations, including *f* (forte), *mf* (mezzo-forte), and *p* (piano), and includes trills (*tr*) and accents. The section is marked "more muscular" at measure 10.

A musical score page for measures 26 through 30. The staves are arranged vertically from top to bottom: Vln. I, Vln. II, Vln. III, Vla., Vc. I, Vc. II, and Cb. The key signature has two sharps (F# and C#), and the time signature changes from 4/4 to 3/4 at measure 28. Dynamics include piano (*p*), mezzo-forte (*mf*), and forte (*f*). Trills (*tr*) are indicated above notes in measures 27, 29, and 30. A large diagonal watermark "©" is visible across the lower right portion of the score.

## swoops and turns

[illegible]

**C** ♩ = 108 in the distance

Vln. I *pp* *p*

Vln. II *pp* *p*

Vln. III *pp* *p* *pp*

Vla. *pp* *p*

Vc. I *pp* *p* *pp* *p*

Vc. II *pp* *p* *mp* *pp* *p* *mp* *pp* *p*

Cb. *pp* *p* *mp* *p*

50 regathering

Vln. I *mp* *pp* *p* *mf* *p* *mf* *p*

Vln. II *mp* *pp* *p* *mf* *p* *mf* *p*

Vln. III *mp* *pp* *p* *mf* *p* *mf* *p*

Vla. *mp* *pp* *p* *mf* *p* *mf* *p*

Vc. I *mp* *pp* *p* *mf* *p* *mf* *p*

Vc. II *mp* *pp* *p* *mf* *p* *mf* *p*

Cb. *mp* *pp* *p* *mf* *p* *mf* *p*

59

Vln. I *tr* *mf*

Vln. II *mf*

Vln. III *mf*

Vla. *tr* *mf*

Vc. I *tr* *mf*

Vc. II *mf*

Cb. *p* *mf*

**D** soaring high

Vln. I *tr* *f*

Vln. II *f*

Vln. III *f*

Vla. *tr* *f*

Vc. I *tr* *f*

Vc. II *f*

Cb. *f* *arco* *p*

74

Vln. I

Vln. II

Vln. III

Vla.

Vc. I

Vc. II

Cb.

81

E distant swoops and turns

Vln. I

Vln. II

Vln. III

Vla.

Vc. I

Vc. II

Cb.

*f*

*p*

*pp*

*mf*

*p*

*tr*

*pp*

*tr*

92

Vln. I *pp* *mp* *p*

Vln. II *pp* *mp* *p*

Vln. III *p* *p*

Vla. *p* *mf* *p* *mp*

Vc. I *p* *mf* *p*

Vc. II *p*

Cb. *p*

**F** regathering accel. poco a poco

Vln. I *p*

Vln. II *mp*

Vln. III *p*

Vla. *cantabile*

Vc. I *p*

Vc. II *p*

Cb. *p*

113

Vln. I

Vln. II

Vln. III

Vla.

Vc. I

Vc. II

Cb.

*mf*

*f*

*tr*

**G** **Faster** (♩ = c. 120)  
**vigorous, intense**

First system of musical notation (measures 1-128). The score is for a string ensemble with parts for Violin I, Violin II, Violin III, Viola, Violoncello I, Violoncello II, and Contrabass. The key signature is two sharps (F# and C#). The tempo is marked 'Faster' (♩ = c. 120) and the character is 'vigorous, intense'. The music features various dynamics including *f* (forte), *mf* (mezzo-forte), and *p* (piano), along with trills (*tr*) and slurs. The time signature changes from 3/4 to 4/4 and back to 3/4.

Second system of musical notation (measures 129-156). The score continues with the same instruments and key signature. It includes measures 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, and 156. The dynamics range from *mf* to *f*, with some measures marked *p*. Trills and slurs are used throughout. The time signature changes from 3/4 to 4/4 and back to 3/4.

H

135

Vln. I *f* *ff* *p*

Vln. II *f* *ff* *p*

Vln. III *f* *ff* *p*

Vla. *ff* *p*

Vc. I *f* *ff* *p*

Vc. II *f* *ff* *p*

Cb. *f* *ff* *mf*

rit. I a tempo (♩ = c. 120) a final ascent

142

Vln. I *p* *tr*

Vln. II *pp* *tr* *p*

Vln. III *p* *tr*

Vla. *pp* *tr* *p*

Vc. I

Vc. II

Cb. *p*

149

Vln. I *f* *p* *mf*

Vln. II *f* *p* *mf*

Vln. III *f* *p* *mf*

Vla. *p*

Vc. I *p*

Vc. II *p*

Cb. *pizz.* *p*

and disappearance below the horizon

157

Vln. I *p* *pp*

Vln. II *p* *pp*

Vln. III *p* *pp*

Vla. *pp*

Vc. I *pp*

Vc. II *pp*

Cb. *pp*



## A

**the first bee sets out**

Violin I

Violin II

Viola

Violoncello

Contrabasso

mp dolce

mf

pizz.

p

20 (at the first flower)

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*p* *mf* *p*

The image shows a musical score for a string ensemble. The top system includes staves for Violin I, Violin II, Viola, and Violoncello. The bottom system includes staves for Violin I, Violin II, Viola, Violoncello, and Contrabass. The Violin I staff has a melodic line starting at measure 20, marked '(at the first flower)'. It features dynamic markings of *p* (piano), *mf* (mezzo-forte), and *p* again. The other string parts provide harmonic support with sustained notes and some movement in the lower systems. A large, diagonal watermark reading 'Sample' is overlaid across the center of the page.

Signal 1 (vlnc.)

30

Vln. I *mf* *mp*

Vln. II *mp dolce*

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

**B** the second bee gets going

Signal 2 (vln. 2, vla., vlnc.)

(second flower)

The musical score is divided into two systems. The first system includes staves for Vln. I, Vln. II, Vla., and Vlnc. Vln. I begins with a half note G4 (mf), followed by a half note A4, then a series of eighth notes (B4, C5, D5, E5, F5, G5) beamed together, and finally a half note G5 (p). Vln. II plays a half note G4, followed by a half note A4, then a half note B4, and finally a half note C5 (mf). Vla. and Vlnc. have whole rests. The second system includes staves for Vln. I, Vln. II, Vla., Vlnc., and Cb. All string parts (Vln. I, Vln. II, Vla., Vlnc.) play a series of eighth notes (G4, A4, B4, C5, D5, E5, F5, G5) beamed together. Cb. plays a half note G2, followed by a half note A2, then a half note B2, and finally a half note C3. Dynamics include mf, p, and mf.

48

Vln. I

Vln. II

(at the first flower)

*p* *mf*

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

**C** Signal 3 (vln. 1, vla., vlnc.) Signal 4 (vln. 1)

(third flower)

(second flower)

*mp* *p* *mf* *p* *mp*

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

**D** enter the third bee  
Signal 5 (vlnc.)

66 (fourth flower)

Vln. I *mf* *p* *mf*

Vln. II (third flower) *mf* *p* *mf* *p* *mf*

Vla. *mf dolce*

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

perusal score - not for rehearsal or performance

Musical score for "The Rose Tree" in G major, 3/4 time. The score is for a piano and voice. The piano part consists of a single melodic line on a grand staff. The voice part consists of a single melodic line on a single staff. The score is divided into measures by vertical bar lines. The key signature has one sharp (F#). The time signature is 3/4. The score includes dynamic markings: *p* (piano) and *mf* (mezzo-forte). The tempo marking is "Allegretto". The score includes the instruction "(at the first flower)". The score is for a piano and voice. The score is divided into measures by vertical bar lines. The key signature has one sharp (F#). The time signature is 3/4. The score includes dynamic markings: *p* (piano) and *mf* (mezzo-forte). The tempo marking is "Allegretto". The score includes the instruction "(at the first flower)".

83

Vln. I

(and home again)

*mf*

*p*

*mf*

Vln. II

*p*

*mp*

(second journey out)

Vla.

*mf*

*p*

*mp*

(second flower)

*mf*

*p*

Vlnc.

Signal 8 (vlnc.)

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

The image shows a musical score for a piece titled "forms of motion II: bees". The score is written for a string ensemble consisting of Violin I, Violin II, Viola, Violoncello, and Contrabass. The first system of music (measures 83-87) features a melodic line in Violin I with dynamic markings of *mf*, *p*, and *mf*. Violin II and Viola have accompaniment with dynamics *p* and *mp*. A "Signal 8 (vlnc.)" is indicated above the Violoncello staff. The second system (measures 88-92) shows a more active role for the Violoncello and Contrabass, with the Violins and Viola playing sustained chords. A large, diagonal watermark reading "SAMPLE" is overlaid across the entire score.

**E** the fourth bee  
Signal 9 (all)

92

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*mf*

*mf*

*mf*

*mf* dolce

*p*

*mp*

*p*

*mp*

*p*

*mp*

(first flower again)

perusal score - not for rehearsal or performance

101

F

Vln. I

Vln. II

Vla.

Vlnc.

(second flower)

(at the first flower)

*mf* *p* *p* *mf* *p* *f* *p* *f*

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*mf* *p*

The image shows a musical score for a string ensemble. The first system (measures 101-108) features five staves: Violin I, Violin II, Viola, Violoncello, and Contrabass. The Violin I part has a melodic line with various dynamics including *mf* and *p*. The Violoncello part has a melodic line with dynamics *mf*, *p*, and *f*. The Viola part has a melodic line with dynamics *p* and *mf*. The Violin II part has a melodic line with dynamics *p* and *mf*. The Contrabass part has a melodic line with dynamics *f* and *p*. The second system (measures 109-116) features five staves: Violin I, Violin II, Viola, Violoncello, and Contrabass. The Violin I and Violoncello parts have a melodic line with dynamics *mf* and *p*. The Violin II part has a melodic line with dynamics *p* and *mf*. The Viola part has a melodic line with dynamics *p* and *mf*. The Violoncello part has a melodic line with dynamics *p* and *mf*. The Contrabass part has a melodic line with dynamics *mf* and *p*. The score is marked with a large 'F' in a box at the top right of the first system. The score is marked with a large 'F' in a box at the top right of the first system. The score is marked with a large 'F' in a box at the top right of the first system.

Signal 10 (vln.1, vln.2, vlnc.)

109

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*p* *mf* *p* *mp*

*p* *mf* *p* *mp*

*tr* (first flower again)

*mf* *p* *mf*

*f cantando* *p* *mf* *p*

*tr* (second flower)

*mf* *p* *mf* *p*

*mf* *p* *mf* *p*

*mf* *p* *mf* *p*

**G** (fourth flower)

117

Vln. I

Vln. II

Vla.

Vlnc.

(third flower)

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*mf* *p* *mf* *p* *mf*

*p* *mf* *p* *mf* *p*

*p* *mf*

*mf* *p*

*mp*

The musical score is for measures 117-122. The woodwind section (Vln. I, Vln. II, Vla., Vlnc., Cb.) and the string section (Vln. I, Vln. II, Vla., Vlnc., Cb.) are shown. The woodwind parts are more active, with various dynamics and articulations. The string parts are mostly sustained notes. A large 'SAMPLE' watermark is overlaid on the score.

124 (and home again) [H] Signal 11 (vln.2, vlnc.)

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*f* *p* *mf* *p* *mf*

*mf* *p* *mf* *p* *mf*

(third journey)

(fourth flower)

The image shows a musical score for a piece titled 'forms of motion II: bees'. The score is written for a string ensemble consisting of Violins I and II, Violas, Violoncellos, and a Contrabass. The music is in 2/4 time and features a key signature of one flat (B-flat). The score is divided into two systems. The first system begins at measure 124 and includes performance markings such as 'p' (piano), 'mf' (mezzo-forte), and 'f' (forte). It also contains descriptive text in parentheses: '(and home again)', '(third journey)', and '(fourth flower)'. A rehearsal mark 'H' is placed above the first violin staff. A vertical dashed line indicates 'Signal 11 (vln.2, vlnc.)'. The second system continues the musical material. A large, diagonal watermark reading 'SAMPLE' is overlaid across the center of the page.

133 (third journey)

Vln. I *mp* *mf* *p* *mf* *p*

Vln. II *mf* *p*

Vla. (second journey out) *tr* *mf* *p* *mf* *p* (and home again)

Vlnc. *p* *mf* *p* *mf* *p*

Vln. I

Vln. II

Vla.

Vlnc.

Cb. *mf* *p* *mf* *p*

I

Signal 12 (vlnc.)

142

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*mf*

*mf cantando*

*mf*

*p*

*mf*

*mf*

*p*

*mf*

*p*

*mf*

*p*

*mf cantando*

(second journey out)

(at the first flower)

*mf*

*f*

*f*

*f*

*f*

*p*

151

**J** Signal 13 (vln.1, vln.2)

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*mf* *p* *mf* *p*

*mf* *p* *mf* *p* *mf* *p* *mf*

*f* *mf* *f* *p*

*p* *f* *p*

(second flower)

*mf* *p*

*mf* *p*

The musical score is divided into two main sections. The first section, titled "The Third Flower", is a piano solo. It begins with a treble clef and a key signature of one flat (B-flat). The tempo is marked "Allegretto" and the time signature is 3/4. The piano part features a melodic line with various dynamics: *f* (forte), *p* (piano), *mf* (mezzo-forte), and *tr* (trill). The melody is accompanied by a bass line. The second section is a jazz ensemble arrangement. It features a piano solo with a melodic line and a bass line. The piano part is marked with dynamics *f* and *p*. The jazz ensemble consists of a saxophone section (Sax 1, Sax 2, Sax 3), a trumpet section (Trumpet 1, Trumpet 2, Trumpet 3), a trombone section (Trombone 1, Trombone 2, Trombone 3), a tuba, and a double bass. The jazz section includes a "jazz" section with a melodic line and a bass line. The piano part is marked with dynamics *f* and *p*. The jazz ensemble is marked with dynamics *f* and *p*. The score is a full orchestration of the piano solo and the jazz ensemble.

167

Vln. I

Vln. II

Vla.

Vlnc.

Vln. I

Vln. II

Vla.

Vlnc.

Cb.

*mp* *p* *p* *pp* *mp* *p* *pp* *mf* *p* *mp* *p* *p* *pp* *pp*

**strong, smooth, supple** ♩ = 120

[illegible]

[illegible]

22

Vln. I

*f* *mf* *p* *mp*

Vln. II

*f* *mf* *p* *mp*

Vln. III

*mf* *p* *mp* *p*

Vla.

*f* *mf* *p* *mp*

Vc. I

*mf* *p* *mp* *p*

Vc. II

*p* *mp* *p*

Cb.

**A** rising and plunging

Score for measures 32-35, featuring Vln. I, Vln. II, Vln. III, Vla., Vc. I, Vc. II, and Cb.

Measures 32-35 show a rising and plunging motion. Vln. I and Vln. II play a melodic line with triplets and accents, marked *f*. Vln. III plays a sustained chord, marked *mf*, with the instruction "Senza sord.". Vla. plays a melodic line with triplets and accents, marked *f*. Vc. I and Vc. II play a sustained chord, marked *mf*, with the instruction "Senza sord.". Cb. plays a melodic line with triplets and accents, marked *mf*.

Score for measures 36-39, featuring Vln. I, Vln. II, Vln. III, Vla., Vc. I, Vc. II, and Cb.

Measures 36-39 show a rising and plunging motion. Vln. I and Vln. II play a melodic line with triplets and accents, marked *p*, *mf*, *mp*, and *mf*. Vln. III plays a sustained chord, marked *p*, *mp*, and *mf*. Vla. plays a melodic line with triplets and accents, marked *p*, *mf*, *mp*, and *mf*. Vc. I and Vc. II play a sustained chord, marked *p*, *mf*, *mp*, and *mf*. Cb. plays a melodic line with triplets and accents, marked *mf*.

43

Vln. I *f* *p* *mp*

Vln. II *f* *p* *mp*

Vln. III *f* *p*

Vla. *f* *p* *mp*

Vc. I *f* *p*

Vc. II *mf* *p*

Cb. *mf* *p*

49

Vln. I *mf* *p*

Vln. II *mf* *p*

Vln. III *mf*

Vla. *mf* *p*

Vc. I *arco*

Vc. II *mf*

Cb. *mf*

**B** milling

Violin I (Vln. I): *pp*

Violin II (Vln. II): *pp*

Violin III (Vln. III): *p*

Viola (Vla.): *p*

Violoncello I (Vc. I): *mf dolce*

Violoncello II (Vc. II): *p*

Contrabass (Cb.): *p*

Measures 63-64: *mp dolce*

Measures 65-66: *p*

70

Vln. I *mp* *pp* *p*

Vln. II *mp* *pp* *p*

Vln. III *mf* *p*

Vla. *pp*

Vc. I *mp* *mf*

Vc. II *mf*

Cb. *pp*

77

Vln. I *mp* *p* *mp* *p* *mp*

Vln. II *mp* *p* *mp* *p* *mp*

Vln. III *mp* *mf*

Vla. *mf*

Vc. I *mp*

Vc. II *mp*

Cb. *mp*



98

Vln. I

Vln. II

Vln. III

Vla.

Vc. I

Vc. II

Cb.

*p* *mf* *p* *mf* *p*

*p* *mf* *p* *mf* *p*

*mf*

*p* *mf* *p* *mf* *p*

*p* *mf* *mf* *mf*

*p* *mf* *p* *mf* *p*

*p* *mf* *mf* *mf*

105

Vln. I

Vln. II

Vln. III

Vla.

Vc. I

Vc. II

Cb.

*mf*

*mf*

*mf*

*mf*

*p* *mf* *mp* *p*

*mf* *mp* *p*

*p* *p*

**D** receding

Vln. I *mp*  
 Vln. II *mp*  
 Vln. III *mp*  
 Vla. *mp*  
 Vc. I *mf* *dolce*  
 Vc. II *mf* *dolce*  
 Cb. *mf*

Vln. I *p*  
 Vln. II *p*  
 Vln. III *p*  
 Vla. *p*  
 Vc. I *p*  
 Vc. II *p*  
 Cb. *mp*

[illegible]

**FF**  
perusal score - not for rehearsal or performance