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Andrián Pertout

Entropia

for Symphony Orchestra

No. 441

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Composed between December, 2016 and July, 2017

Commissioned by the 14th 'Europe-Asia' International Festival of New Music
with funds provided by the Australia Council for the Arts for performance
by the Tatarstan National Symphony Orchestra

Hommage à Peter Sculthorpe (1929-2014)

Finalist in the 'Orchestral Work of the Year' category of the 2018 APRA
AMCOS/Australian Music Centre 'Art Music Awards'

World Premiere: 30 September, 2017 (Saydashev Grand Concert Hall, 14th
'Europe-Asia' International Festival of New Music, Kazan, Tatarstan, Russian Federation) –
Tatarstan National Symphony Orchestra conducted by Guerassim Voronkov

Asian Premiere: 6 November, 2018 (Grand Hall, The State Conservatory of Uzbekistan
(SCUz), V International Festival of Symphonic Music, Tashkent, Uzbekistan) –
Uzbekistan National Symphony Orchestra conducted by Alibek Kabdurakhmanov

Duration: 10'56"

PROGRAMME NOTES

entropy/'ɛntɹəpi/

1. Physics a thermodynamic quantity representing the unavailability of a system's thermal energy for conversion into mechanical work, often interpreted as the degree of disorder or randomness in the system.
2. lack of order or predictability; gradual decline into disorder.
3. (in information theory) a logarithmic measure of the rate of transfer of information in a particular message or language.
<<https://en.oxforddictionaries.com/definition/entropy>>.

'Entropia' or 'Entropy' was commissioned by the 14th 'Europe-Asia' International Festival of New Music (27-30 September, 2017, Kazan, Tatarstan, Russian Federation) with funds provided by the Australia Council for the Arts for performance by the Tatarstan National Symphony Orchestra, and represents a Hommage à Peter Sculthorpe (1929-2014). The dedication to Peter Joshua Sculthorpe AO OBE, whom is unquestionably Australia's most celebrated contemporary composer is consequential, as he was the teacher of this composer's teacher (Brenton Thomas Broadstock AM) and hence representative of a symbolic continuation of this great Australian composer's monumental musical legacy. The work explores the musical implications of combinatoriality as an organizational determinant, as well as the concept of entropy, which in physics may be defined as the "thermodynamic quantity representing the unavailability of a system's thermal energy for conversion into mechanical work, often interpreted as the degree of disorder or randomness in the system" – an alternative definition stating that entropy is essentially a "parameter representing the state of disorder of a system at the atomic, ionic, or molecular level; the greater the disorder the higher the entropy." The musical challenge being a sonic interpretation of this entropic notion of a measure of order (or disorder) and what could in effect be described as a gradual decline from order/predictability to disorder/chaos and vice versa; achieved in part by paying tribute to Peter Sculthorpe's *Sun Music* series, and particularly *Sun Music I* (1965) whereby the composer's artifice is the depiction of the Australian landscape via a utilization of both Indigenous Australian and Asian influences. The eight distinct sections of 'Entropia' fittingly travel musically between calmness and agitation, between equilibrium and perturbation, between serenity and anguish – an antithesis that functions in tandem with the Australian landscape, which is generally perceived as being harsh and unforgiving, yet beautiful and spectacular. At the end of a virtuosic marimba and xylophone solo, the bass clarinet (soon thereafter supported by the contrabassoon) even mimics the timbral nuances of an Australian didgeridoo, synonymous with indigenous Australia and the 'great' southern land. The ordered nature of the harmonic concept of 'homometry' and the serialization of the 48 all-interval tetrachords, not to mention tempo canons, magic squares, bell ringing sequences and an expanding and contracting arch-form numerical series generate a semblance of the order/disorder dichotomy, hence playing an important part in artistically defining entropy within the compositional methodology of the work.

"*Sun Music I*, completed in Sydney in August 1965, was the result of a request from Bernard Heinze. Heinze had asked Sculthorpe for an 'overture' suitable for a program to be given by the Sydney Symphony Orchestra in London during the 1965 Commonwealth Arts Festival. And indeed, when first performed there in Royal Festival Hall on 30 September 1965 by that orchestra (under John Hopkins), it was still billed, disarmingly, as an 'Overture'. Heinze, who clearly wanted something unusual to showcase in London, had said to Sculthorpe, perhaps in jest:

‘Why not write a piece without melody, rhythm or harmony?’ Sculthorpe remembers: ‘In a sense this is what I set out to do, but I approached the work in a more positive way.’ In composing the first *Sun Music*, he found new sound materials to use within organising principles (regular ostinatos and repeated cell-like structure) already established in works like *Irakanda IV*. Some of his choices were influenced by works of the new Polish School, music whose dense, percussive string sounds in particular were often imbued with an expressivity and polemic force (notably Krzysztof Penderecki’s *Threnody for the Victims of Hiroshima* (1960). Sculthorpe, however, used some of the same techniques towards a more expressively neutral portrayal of a static natural force.” Anne Boyd, “Peter Sculthorpe’s *Sun Music I*,” *Miscellanea musicologica*, Adelaide studies in musicology, vol. 3 (1968): 3-20.

‘Entropia’ adopts the novel harmonic concept of ‘homometries’ from American minimalist composer and music theorist (also former student of Morton Feldman) Tom Johnson, eloquently presented in his publication *Other Harmony: Beyond Tonal and Atonal* (2014). Johnson defines ‘homometry’ as the “phenomenon of equal intervallic content,” and considers the organization of the 48 all-interval tetrachords as a “single family”, and a “family with extraordinary properties.” This cycle essentially comprises of the twelve transpositions of (1) the inversion of Forte 4Z29 [0, 4, 6, 7] or C, E, F $\sharp$ and G; (2) Forte 4Z29 [0, 1, 3, 7] or C, F, G $\flat$ and A $\flat$ – Elliott Carter’s 4-Note Chord No. 23; (3) Forte 4Z15 [0, 1, 4, 6] or C, D $\flat$, E and F $\sharp$ – Elliott Carter’s 4-Note Chord No. 18; and (4) the inversion of Forte 4Z15 [0, 2, 5, 6] or C, D, F and G $\flat$. Allen Forte’s book *The Structure of Atonal Music* and his classification of 208 Basic Pitch-Class Sets codifies these two fundamental chords as 4Z29 and 4Z15, and utilizes the term Z-complementary to imply that the two distinct sets have equal intervallic properties. The ‘complete’ cycle of 48 all-interval tetrachords are presented in ‘Entropia,’ and as open ‘inverted’ voicings: Section (A) 1 to 5, or the subdivision 2+3; (B) 6 to 12, or 4+3; (C) 13 to 19, or 3+4; (D) 20 to 24, or 3+2; (E) 25 to 31, or 4+3; (F) 32 to 36, or 2+3; (G) 37 to 41, or 3+2; and (H) 42 to 48, or 3+4.

Magic Squares of orders 4, 5 and 7 with magic constants of 34=Jupiter, 65=Mars and 175=Venus (each row, column and diagonal adding up to 34, 65 and 175 respectively) also feature in the work as tripartite rhythmic durational schemes, which are structured around tempo canons (or diminution canons, expressed as polyrhythmic ratios: 4/5/6 and 6/4/3 for the melodic elements of sections C and G respectively). Tempo canons in the proportions 4/5/6/7 and 5/6/7/8 are additionally utilized on sections B and G. These three magic squares are reduced to modulo 4, 5 and 7 respectively in 4 $\times$ 4, 5 $\times$ 5 and 7 $\times$ 7 matrices in order to accommodate the musical intentions of the compositional process. The work also employs the Plain Bob Minimus (24 cycles of the four-digit pattern) and Plain Bob Doubles (40 cycles of the five-digit pattern) bell ringing sequences to generate rhythmic material for the marimba solo in section E. Rhythmically (and structurally), the work adopts a variety of compositional techniques developed during the twentieth century by American experimentalist composer Conlon Nancarrow and documented by Kyle Gann in *The Music of Conlon Nancarrow* (1995), and namely in the form of a Nancarrow inspired rhythmic motive, or the following expanding and contracting arch-form numerical series: (A) 2343 $\times$ 2 = 6 bars, 3454 $\times$ 3 = 12 bars; (B) 4565 $\times$ 4 = 20 bars, 3454 $\times$ 3 = 12 bars; (C) 2343 $\times$ 3 = 9 bars, 3454 $\times$ 4 = 16 bars; (D) 2343 $\times$ 3 = 9 bars, 1232 $\times$ 2 = 4 bars; (E) 4565 $\times$ 4 = 20 bars, 3454 $\times$ 3 = 12 bars; (F) 2343 $\times$ 2 = 6 bars, 3454 $\times$ 3 = 12 bars; (G) 2343 $\times$ 3 = 9 bars, 1232 $\times$ 2 = 4 bars; and (H) 2343 $\times$ 3 = 9 bars, 3454 $\times$ 4 = 16 bars; which adhere to the following ratios for metric modulation that are strategically employed in the work: 1:2, 3:2, 2:3, 5:3, 3:5, 5:4, 4:5, 7:4, 4:7, and 5:7.

ПРИМЕЧАНИЯ ПРОГРАММЫ

Сочинение 'Entropia' или 'Энтропия' было заказано 14-ым Международным фестивалем Новой музыки 'Европа-Азия' (который проходил с 27-го по 30-е сентября 2017 года в г. Казань, (Татарстан, Россия)) за счёт средств, выделенных Австралийским Советом искусств для исполнения Национальным симфоническим оркестром Татарстана, и посвящено оно Питеру Скалторпу (1929-2014). Питер Джошуа Скалторп, несомненно, является самым известным современным композитором Австралии; он также является учителем моего учителя (Брентона Томаса Бродстока), то есть преемника символического монументального музыкального наследия великого австралийского композитора. Данное сочинение исследует музыкальные последствия 'комбинаторики' как организационного определения, а также понятие 'энтропии', которое в физике определено как "термодинамическая величина, представляющая недоступность тепловой энергии в системе для преобразования в механическую, часто интерпретируется как степень нарушения или случайности в системе"; альтернативное определение заключается в том, что энтропия здесь рассматривается, по существу, как "параметр, представляющий состояние расстройства системы на атомном, ионном или молекулярном уровне; чем больше беспорядок, тем выше энтропия." Музыкальный вызов является звуковой интерпретацией этого 'энтропийного' понятия меры порядка (или беспорядка) и то, что может в действительности быть описано как постепенное снижение от порядка/предсказуемости к неупорядоченности/хаосу и наоборот; это достигнуто частично в серии Sun Music Питера Скалторпа, и в частности, Sun Music I (1965), где искусность композитора заключается в изображении австралийского пейзажа с использованием коренных австралийских и азиатских влияний. Восемь разных разделов 'Энтропии' достойно путешествуют в музыке между спокойствием и тревогой, равновесием и волнением, безмятежностью и мукой – антитезами, которые функционируют в тандеме с австралийским пейзажем, который, как правило, воспринимается как суровый и неумолимый, но красивый и эффектный. В конце виртуозная партия маримбы и соло ксилофона, бас-кларнет (который вскоре поддерживается контрафаготом) имитируют тембральные нюансы австралийского диджериду, синонимичного коренной Австралии и 'большой' южной земле. Упорядоченный характер гармонического понятия 'гомометрия' и сериализация 48-интервальных тетрахордов, не говоря уже о темпе канонов, магических квадратах, колокольном звоне последовательности и расширяющейся форме, числовом ряде, порождает подобие порядка/расстройства дихотомии, следовательно, играет важную роль в художественном определении энтропии в композиционной методологии работы.

PRIMECHANIYA PROGRAMMY

Sochineniye 'Entropia' ili 'Entropiya' bylo zakazano 14-ym Mezhdunarodnym festivalem Novoy muzyki 'Yevropa-Aziya' (kotoryy prokhodil s 27-go po 30-ye sentyabrya 2017 goda v g. Kazan', (Tatarstan, Rossiya) za schot sredstv, vydelennykh Avstraliyskim Sovetom iskusstv dlya ispolneniya Natsional'nym simfonicheskim orkestrom Tatarstana, i posvyashcheno ono Piteru Skaltorpu (1929-2014). Piter Dzhoshua Skaltorp, nesomnenno, yavlyayetsya samym izvestnym sovremennym kompozitorom Avstralii; on takzhe yavlyayetsya uchitelem moyego uchitelya (Brentona Tomasa Brodstoka), to yest' preyemnika simvolicheskogo monumental'nogo muzykal'nogo naslediya velikogo avstraliyskogo kompozitora. Dannoye sochineniye issleduyet muzykal'nyye posledstviya 'kombinatoriki' kak organizatsionnogo opredeleniya, a takzhe ponyatiye 'entropii', kotoroye v fizike opredeleno kak "termodinamicheskaya velichina, predstavlyayushchaya nedostupnost' teplovoy energii v sisteme dlya preobrazovaniya v mekhanicheskuyu, chasto interpretiruyetsya kak stepen' narusheniya ili sluchaynosti v sisteme"; al'ternativnoye opredeleniye zaklyuchayetsya v tom, chto entropiya zdes' rassmatrivayetsya, po sushchestvu, kak "parametr, predstavlyayushchiy sostoyaniye rasstroystva sistemy na atomnom, ionnom ili molekulyarnom urovne; chem bol'she besporyadok, tem vyshe entropiya." Muzykal'nyy vyzov yavlyayetsya zvukovoy interpretatsiyey etogo 'entropiynogo' ponyatiya mery poryadka (ili besporyadka) i to, chto mozhet v deystvitel'nosti byt' opisano kak postepennoye snizheniye ot poryadka/predskazuyemosti k neuporyadochennosti/khaosu i naoborot; eto dostignuto chastichno v serii Sun Music Pitera Skaltorpa, i v chastnosti, Sun Music I (1965), gde iskusstvo kompozitora zaklyuchayetsya v izobrazhenii avstraliyskogo peyzazha s ispol'zovaniyem korennykh avstraliyskikh i aziatskikh vliyaniy. Vosem' raznykh razdelov 'Entropii' dostoyno puteshestvuyut v muzyke mezhdru spokoystviyem i trevogoy, ravnovesiyem i volneniyem, bezmyatezhnost'yu i mukoy – antitezami, kotoryye funktsioniruyut v tandeme s avstraliyskim peyzazhem, kotoryy, kak pravilo, vosprinimayetsya kak surovyy i neumolimyy, no krasivyy i effektnyy. V kontse virtuoznaya partiya marimby i solo ksilofona, bas-klarnet (kotoryy vskore podderzhivayetsya kontrafagotom) imitiruyut tembral'nyye nyuansy avstraliyskogo didzheridu, sinonimichnogo korennoy Avstralii i 'bol'shoy' yuzhnoy zemle. Uporyadochennyy kharakter garmonicheskogo ponyatiya 'gomometriya' i serializatsiya 48-interval'nykh tetrakhordov, ne govorya uzhe o tempe kanonov, magicheskikh kvadratakh, kolokol'nom zvone posledovatel'nosti i rasshirayushcheysya forme, chislovom ryade, porozhdayet podobiye poryadka/rasstroystva dikhotomii, sledovatel'no, igrayet vazhnuyu rol' v khudozhestvennom opredelenii entropii v kompozitsionnoy metodologii raboty.

Peter Joshua Sculthorpe AO OBE (29 April 1929 – 8 August 2014)

Peter Sculthorpe was born in Launceston, Tasmania, in 1929. He was educated at Launceston Church Grammar School, the University of Melbourne and Wadham College, Oxford.

Sculthorpe's catalogue consists of more than 350 works and, apart from juvenilia, a good part of it is regularly performed and recorded throughout the world. The composer wrote in most musical forms, and almost all his works are influenced by the social climate and physical characteristics of Australia. Furthermore, Aboriginal and Torres Strait Island music and the gamelan music of Indonesia were significant influences upon his musical language.

His most recent works included the *String Quartet No. 18* (2010), *Shining Island* (2011) for strings, and *Pastorale* (1949/2013) for orchestra. Significant, recent premieres also included the first performance, in 2013, of the cantata *The Great South Land*. The texts and musical material for the cantata were reworked from Sculthorpe's 1982 television opera *Quiros*.

Sculthorpe had a deep love for his country and for its landscape, which he regarded as sacred. Because of this, one of the most constant themes in his output was the protection of Australia's environment, as well as that of the whole planet. His preoccupation with the frailty of the human condition can be found in works such as the choral *Requiem* (2004) and *String Quartet No.16* (2006). The former grew from his concern about women and children being killed in the war in Iraq, the latter from the plight of people in detention. He was Emeritus Professor at the University of Sydney, where he began teaching in 1963. He also taught at music institutions and universities both within and outside Australia, and held honorary doctorates from Tasmania, Melbourne, Sussex, Griffith and Sydney. In 1977 he was appointed OBE and was the recipient of a Silver Jubilee Medal. He was appointed AO in 1990.

The recipient of many awards, Sculthorpe regarded the most important as being chosen as one of Australia's 100 Living National Treasures (National Trust of Australia, 1997), Distinguished Artist 2001 (International Society for the Performing Arts), Honorary Foreign Life Member (American Academy of Arts and Letters, 2003) and one of the 100 Most Influential Australians (*The Bulletin* magazine, 2006). In 2012, Sculthorpe received the Award for Distinguished Services to Australian Music as part of the yearly Art Music Awards by Australian Music Centre and APRA AMCOS.

Sculthorpe's work is discussed in books by Michael Hannan, *Peter Sculthorpe: His Music and Ideas 1929-1979* (1982), Deborah Hayes, *Peter Sculthorpe: A Bio-Bibliography* (1993), and the composer himself in his autobiography *Sun Music* (1999). The first volume of Graeme Skinner's biography, *Peter Sculthorpe: The Making of an Australian Composer*, was published in 2007, and John Peterson's *The Music of Peter Sculthorpe* in 2014.

Tom Johnson's Other Harmony
All-Interval Tetrachords and Other Homometries: The 48 All-Interval Tetrachords



The 48 All-Interval Tetrachords (Open 'Inverted' Voicings)

This image displays four staves of musical notation, each containing a sequence of 48 all-interval tetrachords in open 'inverted' voicings. The notation is written in grand staff (treble and bass clefs) with a key signature of one flat (B-flat). Each tetrachord is represented by a group of four notes, with various accidentals (sharps, flats, and naturals) indicating the specific intervals. The sequence progresses through all possible combinations of intervals, ensuring that every interval is represented in every tetrachord.

The 48 All-Interval Tetrachords (Scalar Materials)

Inversion of Forte 4Z29 [0, 4, 6, 7]



Forte 4Z29 [0, 1, 3, 7] – Elliott Carter's 4-Note Chord No. 23



Forte 4Z15 [0, 1, 4, 6] – Elliott Carter's 4-Note Chord No. 18



Inversion of Forte 4Z15 [0, 2, 5, 6]



Structural Form

Section	Tempo (Pulse)	Metric Modulation	Part A (Durations)	Part B (Durations)
A	♩=52	N/A	$2343 \times 2 = 6$ bars	$3454 \times 3 = 12$ bars
B	♩=65	5:4	$4565 \times 4 = 20$ bars	$3454 \times 3 = 12$ bars
C	♩=52	4:5	$2343 \times 3 = 9$ bars	$3454 \times 4 = 16$ bars
D	♩=78	3:2	$2343 \times 3 = 9$ bars	$1232 \times 2 = 4$ bars
E	♩=104	4:3	$4565 \times 4 = 20$ bars	$3454 \times 3 = 12$ bars
	♩=130	5:4		
	♩=104	4:5		
	♩=156 (1 st and 3 rd time)	3:2		
	(♩=182): 2 nd and 4 th time	(7:4)		
	: ♩=130	5:7		
	♩=104	4:5		
	♩=156 (1 st and 3 rd time)	3:2		
	(♩=182) 2 nd time	7:4		
	♩=104:	2:3 (4:7)		
F	♩=52	1:2	$2343 \times 2 = 6$ bars	$3454 \times 3 = 12$ bars
G	♩=86.7	5:3	$2343 \times 3 = 9$ bars	$1232 \times 2 = 4$ bars
H	♩=52	3:5	$2343 \times 3 = 9$ bars	$3454 \times 4 = 16$ bars

Thematic 'Melodic' Materials

Melody Number 1

Musical score for Melody Number 1, measures 1 through 18. The score is written for two staves (treble and bass clef) in 4/4 time. The key signature is one flat (B-flat). The melody is characterized by a series of eighth and quarter notes, often grouped with slurs and ties. Measure numbers 4, 7, 10, 14, and 18 are indicated in boxes at the start of their respective systems.

Measures 1-3: The melody begins with a half rest on the first staff, followed by a series of eighth and quarter notes. The second staff provides a harmonic accompaniment with a half rest followed by a series of eighth and quarter notes.

Measures 4-6: The melody continues with a series of eighth and quarter notes, including a tie across measures 5 and 6. The second staff provides a harmonic accompaniment with a half rest followed by a series of eighth and quarter notes.

Measures 7-9: The melody continues with a series of eighth and quarter notes, including a tie across measures 8 and 9. The second staff provides a harmonic accompaniment with a half rest followed by a series of eighth and quarter notes.

Measures 10-13: The melody continues with a series of eighth and quarter notes, including a tie across measures 11 and 12. The second staff provides a harmonic accompaniment with a half rest followed by a series of eighth and quarter notes.

Measures 14-17: The melody continues with a series of eighth and quarter notes, including a tie across measures 15 and 16. The second staff provides a harmonic accompaniment with a half rest followed by a series of eighth and quarter notes.

Measure 18: The melody concludes with a series of eighth and quarter notes. The second staff provides a harmonic accompaniment with a half rest followed by a series of eighth and quarter notes.

22

Two staves of music. The top staff begins with a treble clef and a key signature of one flat (B-flat). It contains measures 22 and 23. The bottom staff continues the melody in the same key signature. The notation includes various note values, rests, and accidentals.

Melody Number 2

Two staves of music in 4/4 time. The top staff begins with a treble clef and a key signature of one sharp (F-sharp). It contains measures 24 and 25. The bottom staff continues the melody in the same key signature. The notation includes various note values, rests, and accidentals.

4

Two staves of music. The top staff begins with a treble clef and a key signature of one sharp (F-sharp). It contains measures 26 and 27. The bottom staff continues the melody in the same key signature. The notation includes various note values, rests, and accidentals.

7

Two staves of music. The top staff begins with a treble clef and a key signature of one sharp (F-sharp). It contains measures 28 and 29. The bottom staff continues the melody in the same key signature. The notation includes various note values, rests, and accidentals.

11

Two staves of music. The top staff begins with a treble clef and a key signature of one sharp (F-sharp). It contains measures 30 and 31. The bottom staff continues the melody in the same key signature. The notation includes various note values, rests, and accidentals.

15

Two staves of music. The top staff begins with a treble clef and a key signature of one sharp (F-sharp). It contains measures 32 and 33. The bottom staff continues the melody in the same key signature. The notation includes various note values, rests, and accidentals.

Thematic 'Rhythmic' Materials

Magic Square Number 1 (Rhythmic Materials)

Magic Square of Venus

22	47	16	41	10	35	4
5	23	48	17	42	11	29
30	6	24	49	18	36	12
13	31	7	25	43	19	37
38	14	32	1	26	44	20
21	39	8	33	2	27	45
46	15	40	9	34	3	28

7 × 7 Matrix

1	5	2	6	3	7	4
5	2	6	3	7	4	1
2	6	3	7	4	1	5
6	3	7	4	1	5	2
3	7	4	1	5	2	6
7	4	1	5	2	6	3
4	1	5	2	6	3	7

Magic Square Number 2

Magic Square of Mars

11	24	7	20	3
4	12	25	8	16
17	5	13	21	9
10	18	1	14	22
23	6	19	2	15

5 × 5 Matrix

1	4	2	5	3
4	2	5	3	1
2	5	3	1	4
5	3	1	4	2
3	1	4	2	5

Magic Square Number 3

Magic Square of Jupiter

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

4 × 4 Matrix

4	2	3	1
1	3	2	4
1	3	2	4
4	2	3	1

Plain Bob Minimus

B 1 2 3 4
H 2 1 4 3
B 2 4 1 3
H 4 2 3 1
B 4 3 2 1
H 3 4 1 2
B 3 1 4 2
H 1 3 2 4

B 1 3 4 2
H 3 1 2 4
B 3 2 1 4
H 2 3 4 1
B 2 4 3 1
H 4 2 1 3
B 4 1 2 3
H 1 4 3 2

B 1 4 2 3
H 4 1 3 2
B 4 3 1 2
H 3 4 2 1
B 3 2 4 1
H 2 3 1 4
B 2 1 3 4
H 1 2 4 3

B 1 2 3 4

Plain Bob Doubles

B 1 2 3 4 5
H 2 1 4 3 5
B 2 4 1 5 3
H 4 2 5 1 3
B 4 5 2 3 1
H 5 4 3 2 1
B 5 3 4 1 2
H 3 5 1 4 2
B 3 1 5 2 4
H 1 3 2 5 4

B 1 3 5 2 4
H 3 1 2 5 4
B 3 2 1 4 5
H 2 3 4 1 5
B 2 4 3 5 1
H 4 2 5 3 1
B 4 5 2 1 3
H 5 4 1 2 3
B 5 1 4 3 2
H 1 5 3 4 2

B 1 5 4 3 2
H 5 1 3 4 2
B 5 3 1 2 4
H 3 5 2 1 4
B 3 2 5 4 1
H 2 3 4 5 1
B 2 4 3 1 5
H 4 2 1 3 5
B 4 1 2 5 3
H 1 4 5 2 3

B 1 4 2 5 3
H 4 1 5 2 3
B 4 5 1 3 2
H 5 4 3 1 2
B 5 3 4 2 1
H 3 5 2 4 1
B 3 2 5 1 4
H 2 3 1 5 4
B 2 1 3 4 5
H 1 2 4 3 5

B 1 2 3 4 5

INSTRUMENTATION

2 Flutes, Fl. (1 doubling on Piccolo, Picc.)
2 Oboes, Ob. (1 doubling on English Horn, E. Hn.)
2 B♭ Clarinets, B♭ Cl. (1 doubling on Bass Clarinet, Bs. Cl.)
2 Bassoons, Bsn. (1 doubling on Contrabassoon, Cbsn.)

4 F Horns, Hn.
3 B♭ Trumpets, B♭ Tpt.
2 Tenor Trombones, Trb.
Bass Trombone, Bs. Trb.
Tuba, Tba.

4 Timpani, Timp. (32", 29", 26" & 23")

Percussion 1:

Crotales, Crot.
Crash Cymbals, Cymb.
Suspended 12" Splash and 14" Crash Cymbals, Susp. Cymb.

Percussion 2:

Vibraphone, Vib.
Snare Drum, S. Dr.
Marimba, Mar.

Percussion 3:

Tam-tam, T.t.
36" Concert Bass Drum, B. Dr.
4-Octave Xylophone, Xyl. (or Marimba, Mar.)

Celesta, Cel.

Harp, Hp.

16 1st Violins, Vln. 1
14 2nd Violins, Vln. 2
12 Violas, Vla.
10 Violoncellos, Vlc.
8 Contrabasses, Cb.

Transposed score

PERFORMANCE NOTES

All instruments, with the following exceptions, sound as written in the score: the piccolo sounds an octave higher than written; the English horn sounds a fifth lower than written; the B $\flat$ clarinet sounds a major second lower than written; the bass clarinet sounds a major ninth lower than written; the contrabassoon sounds an octave lower than written; the F horns sound a fifth lower than written; the B $\flat$ trumpets sound a major second lower than written; the crotales sound two octaves higher than written; the xylophone sounds an octave higher than written; the celesta sounds an octave higher than written; the contrabasses sound an octave lower than written.

In this score, accidentals affect only those notes which they immediately precede; and accidentals are not repeated for repeated notes unless one or more different pitches intervene. If a sharp or flat is followed directly by its natural form, a natural is used. Cautionary accidentals or naturals have been used to clarify ambiguities.

The mallet solo in Part E (bars 89-116) that has been evenly distributed between two players – marimba (Percussion 2) and xylophone (Percussion 3) – could essentially be performed with the more homogeneous instrumentation of two marimbas (see ‘alternative’ Ossia staves in Percussion 2 part), although for practical reasons, the instrumentation of marimba and 4-octave xylophone has been designated as the first option.

Woodwinds

<i>wind tones</i>	alter embouchure to produce wind tones (move lips and lower jaw forward, following the embouchure hole, while keeping upper lip in high position)
	blow air through the instrument to produce air tones (white noise) in addition to the normal tone
<i>jet whistle (al clarinetto)</i>	cover embouchure hole completely with the lips then force air into the flute by exhaling with a strong air impulse – vocalize between [i] and [u]
	jet whistle (al clarinetto)
<i>flz.</i>	flutter tonguing (produced by allowing the tongue to vibrate much as a rolled ‘r’ is produced in some languages)
<i>pizz.</i>	combination of key click, diaphragm kick, and flicking of the tongue
	slap tongue (produced by repositioning the tongue against the teeth or reed to stop the air flow) – with sounding note, or with no sounding note
<i>sotto voce</i>	in an undertone
<i>breathy</i>	play with a dull, breathy tone, imitating ‘sul tasto’ string bowing technique
<i>sing and play</i>	the performer should sing the notated pitch (or an octave below) while playing with enough force to produce distortion

Brass



blow air through the instrument to produce air tones (white noise) in addition to the normal tone



action of the mute from a closed to an open position



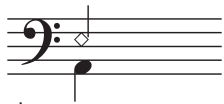
stopped horn (insert the hand fully into the bell)



open note (ord.)

cuivré (les sons)

brassed, or brassy (a strident, forced sound with a very metallic quality)



multiphonic (diamond note hummed, standard note played)



valve click (with sounding note)

fingernails on bell

tap the bell of the instrument with the fingernails



blow air through instrument and simultaneously produce an indeterminate valve tremolo (with no sounding note)

flz.

flutter tonguing (produced by allowing the tongue to vibrate much as a rolled 'r' is produced in some languages)

growl

combination of a trill with a brassy flutter tonguing

Percussion



rim shot (play on the rim)



octave harmonic (sounding an octave above the written pitch)



dead stroke (stop the stick from rebounding by holding it against the instrument's surface)

Harp



octave harmonic (sounding an octave above the written pitch)



damp specific strings



damp all strings



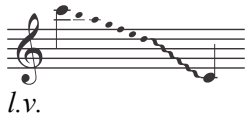
upward arpeggiation



downward arpeggiation



measured glissando



unmeasured glissando

laissez vibrer (leave all strings to ring on)

l.v. sempre

no damping – leave all strings to ring on, unless otherwise indicated



tap the soundboard with the fingers



tap the soundboard with the fingernails



knock the soundboard with the knuckles



slap the soundboard with the open hand

Strings



upward arpeggiation



downward arpeggiation



portamento (a smooth and rapid 'sliding' between two pitches, executed continuously)



glissando (a smooth and rapid 'sliding' over the keys or strings (so that every individual note is articulated, no matter how rapid the 'sliding'))



snap pizzicato (Bartók pizzicato)



natural harmonic (notation showing only the pitch produced)



node to be touched to produce artificial harmonic



actual pitch (artificial harmonic) produced

flautando

'flute-like' – a fast and lightly drawn bow to produce a transparent or flute-like sound

Entropia

for Symphony Orchestra

2016-2017

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[illegible]

[illegible]

B $\text{♩} = 65$

19 *[Piccolo]*

Picc. *mp* *ord.*

Fl. 2 *cresc. poco a poco* *flc.*

Ob. 1

E. Hn. *[English Horn]* *mp* *p* *decresc. poco a poco*

B♭ Cl. 1

B♭ Cl. *[Bass Clarinet]* *mp* *ppp* *cresc. poco a poco* *flc.*

Bsn. 1

Chon. *[Contrabassoon]* *mp* *p* *decresc. poco a poco* *flc.* *pp*

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3 *con sordina (harmon mute, stem one-half out)* *pp* *ord.*

Tbn. 1-2

B♭ Tbn. *con sordina (cup)* *pp* *ord.* *ppp*

Tba. *ppp* *ppp* *ppp*

Timp. *mp* *muffle*

Perc. 1 *mp*

Perc. 2

Perc. 3 *scrape with triangle beater* *mp* *decresc. poco a poco* *strike with triangle beater*

Cel.

Hp.

Vln. 1 *p* *(ish.)* *decresc. poco a poco* *divisi* *pp* *cresc. poco a poco* *col legno battuto* *arco* *antifona (arco)*

Vln. 2 *cresc. poco a poco* *[Violin 2]* *pp* *decresc. poco a poco* *divisi* *col legno battuto* *[Violoncello 2]* *ppp* *cresc. poco a poco* *pizz.* *pp* *ppp*

Vla.

Vlc. *ppp* *cresc. poco a poco* *pizz.* *pp* *ppp*

Cb. *ppp* *ppp* *ppp*

24

Picc.

Fl. 2
p decresc. poco a poco *ppp*

Ob. 1
p *pp*

E. Hn.
pppp cresc. poco a poco *p*

B♭ Cl. 1

B♭ Cl.
p decresc. poco a poco *ppp* *p* decresc. poco a poco

Bsn. 1
ppp

Chn.
pppp cresc. poco a poco *p*

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1
con sordina (harmon)
p *pp*

B♭ Tpt. 2-3
p *pp*

Tib. 1-2

B♭ Tbn.
pp

Tbn.
pp

Timp.

Perc. 1

Perc. 2

Perc. 3
muffle

Cel.

Hp.

Vln. 1
pppp cresc. poco a poco *p*

Vln. 2
p decresc. poco a poco *ppp*

[Violin 2]
p decresc. poco a poco *ppp*

Vla. 1
pppp cresc. poco a poco *p*

Vla. 2
pppp cresc. poco a poco *p*

Vlc. 1
p decresc. poco a poco *pp*

Vlc. 2
p decresc. poco a poco *pp*

Cb.
pp

[illegible]

36

Picc.

Fl. 2

Ob. 1

E. Ha.

B♭ Cl. 1

Bs. Cl.

Bsn. 1

Cbsn.

Ha. 1-2

Ha. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Trb. 1-2

Bs. Trb.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

Vln. 1

Vln. 2

Vla. 1

Vla. 2

Vlc.

Cb.

ppp cresc. poco a poco

p decresc. poco a poco

ppp

p decresc. poco a poco

ppp (sub.)

strike edge of tam-tam

scrape with triangle beater

strike with triangle beater

p decresc. poco a poco

pizz.

arco

col legno battuto

arco

unisono (arco)

ppp (sub.)

42

42

43

44

45

46

47

48

pizz. (combination of key click, diaphragm lick, and flicking of the tongue)

slap tongue (with sounding note)

strike with triangle beater

sul tasto (flautando)

divisi

[Violin 1] sul tasto (flautando)

pizz. (ord.)

col legno battuto

sul A

sul D

[Solo Violin 1]

[Bb, Gb, Ab]

[Solo Violoncello]

arco

mp cresc. poco a poco (espressivo)

gli altri

arco

ppp cresc. poco a poco

ppp cresc. poco a poco

54

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Chn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tbn. 1-2

B♭ Tbn.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

S. Vln. 1

Vln. 1

Vln. 2

Vla.

S. Vlc.

Vlc.

Cb.

soffo voce
ppp cresc. poco a poco

[Solo Viola]
p cresc. poco a poco (espressivo)
gli altri

60

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Cln.

Hn. 1-2

Hn. 3-4

B♭ Trpt. 1

B♭ Trpt. 2-3

Trbn. 1-2

Bs. Trbn.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hr.

S. Vln. 1

Vln. 1

Vln. 2

S. Vla.

Vla.

S. Vlc.

Vlc.

Ch.

ppp cresc. poco a poco

pp cresc. poco a poco

breathe

mf cresc. poco a poco

pp cresc. poco a poco

66

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Chn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tib. 1-2

B♭ Trb.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

S. Vln. 1

Vln. 1

Vln. 2

S. Vla.

Vla.

S. Vlc.

Vlc.

Cb.

pp cresc. poco a poco

mp cresc. poco a poco

mp cresc. poco a poco

This is a page from a musical score, numbered 72. It features multiple staves for different instruments and voices. At the top right, there is a rehearsal mark [D] followed by a treble clef and a tempo marking of quarter note = 78. The instruments listed on the left include Picc., Fl. 2, Ob. 1, E. Hn., B♭ Cl. 1, Bs. Cl., Ban. 1, Chan., Hn. 1-2, Hn. 3-4, B♭ Tpt. 1, B♭ Tpt. 2, B♭ Tpt. 3, Trb. 1, Trb. 2, Bs. Trb., Tba., Timp., Perc. 1, Perc. 2, Perc. 3, Cel., Hp., S. Vln. 1, Vln. 1, Vln. 2, S. Vla., Vla., S. Vlc., Vlc., and Cb. The score contains various musical notations such as notes, rests, slurs, and dynamic markings (pp, p, mf, f). There are also performance instructions like "breathily", "cresc. poco a poco", "mf (rub.)", "senza sordino", and "con forza". A harp part (Hp.) has specific chordal indications: [Bb, F#, G#, Ab], [G], and Gbm. The bottom of the page shows the continuation of the orchestral parts.

77

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

Bs. Cl.

Hrn. 1

Cbsn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2

B♭ Tpt. 3

Tbn. 1

Tbn. 2

Bs. Tbn.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

and.

sfz con forza

mf

cresce (for song)

[Cymbals]

[Snare Drum]

p

[Cx. Gl.]

foco

(mf) con forza

mf

81

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

Bs. Cl.

Bsn. 1

Cbn.

Hr. 1-2

Hr. 3-4

B♭ Tpt. 1

B♭ Tpt. 2

B♭ Tpt. 3

Trb. 1

Trb. 2

Bs. Trb.

Tba.

[32", 29" and 26" Timp. in F, A and D]

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

[C], [B], [F], [G]

Hrp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

85

Picc. *f*

Fl. 2 *f*

Ob. 1 *f*

E. Hn. *mf*

B♭ Cl. 1 *f*

Bs. Cl. *clap langue* *f* *ord.*

Bsn. 1 *mf*

Chn. *mf*

Hn. 1-2 *couvert (les sons)* *f* *ord.* *mf*

Hn. 3-4 *couvert (les sons)* *f* *ord.* *mf*

B♭ Tpt. 1 *f*

B♭ Tpt. 2 *f*

B♭ Tpt. 3 *f*

Trb. 1 *f*

Trb. 2 *f*

Bs. Trb. *f*

Tba. *f*

Timp. *mf* [32", 29", 26" and 23" Timp. in G, B, E and F] *mf* [26" and 23" Timp. in C and F]

Perc. 1 *p* *mf* *muffle*

Perc. 2 *p* *mf*

Perc. 3 *mf*

Col. *f*

Hp. *[D, B, F, A]* *[D, C, F, A]* *[D, C, B, E, F, G, A]*

Vln. 1 *lento* *mf* *f*

Vln. 2 *mf* *f*

Vla. *mf* *f*

Vlc. *mf* *f*

Cb. *mf* *f* *divisi*

89

E = 104

$\text{♩} = 130$

$\text{♩} = 104$

$\text{♩} = 156$

$\text{♩} = 104$

$\text{♩} = 104$

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Cbn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2

B♭ Tpt. 3

Trb. 1-2

Bs. Trb.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hrp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

94 $\text{♩} = 130$ $\text{♩} = 104$ $\text{♩} = 182$ $\text{♩} = 104$ $\text{♩} = 130$

Picc. $\text{♩} = 130$ $\text{♩} = 104$ $\text{♩} = 182$ $\text{♩} = 104$ $\text{♩} = 130$

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Chn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tbn. 1-2

B♭ Tbn.

Tba.

Timp. [29" and 23" Timp. in A and D] *pp cresc. poco a poco*

Perc. 1

Perc. 2 *p* *cresc. poco a poco*

Perc. 3 *p* *cresc. poco a poco*

Cel.

Hp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

99 $\text{♩} = 104$ $\text{♩} = 156$ $\text{♩} = 104$ $\text{♩} = 130$ $\text{♩} = 104$ $\text{♩} = 104$

Picc. $\text{♩} = 104$

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Chsn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tbn. 1-2

Bs. Tbn.

Tba. *blow air through instrument and simultaneously produce an indeterminate valve tremolo (with no sounding note)* *p* *mp*

Timp. [29" and 23" Timp. in A[♯] and E[♯]]

Perc. 1

Perc. 2 *mp* *cresc. poco a poco*

Perc. 3 *mp*

Cel.

Hp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

[illegible]

The image displays a page from a musical score, likely for a symphony. The score is written for a large ensemble, including the following instruments: Piccolo, Flute 2, Oboe 1, English Horn, Bassoon 1, Clarinet in B-flat 1, Bassoon 2, Horns 1-2, Horns 3-4, Trumpet 1, Trumpets 2-3, Trombone 1-2, Bass Trombone, Tuba, Timpani, Percussion 1, Percussion 2, Percussion 3, Cello, Harp, Violin 1, Violin 2, Viola, Violoncello, and Double Bass. The score is divided into measures, with some measures containing specific tempo markings such as "Allegretto" and "Andante". Dynamic markings like "mf" (mezzo-forte) and "f" (forte) are used throughout. The score also includes various musical notations, including notes, rests, slurs, and articulation marks. Some measures are marked with "mf" and "cresc. poco a poco" (crescendo poco a poco). The score is written in a standard musical notation style, with staves for each instrument and a common key signature and time signature.

114 $\text{♩} = 104$ $\text{♩} = 156$ $\text{♩} = 104$ $\text{♩} = 52$ (F)

Picc. f

Fl. 2 f

Ob. 1

E. Hn.

B♭-Cl. 1

Bs. Cl.

Bsn. 1 f

Chn.

Hn. 1-2

Hn. 3-4

B♭-Tpt. 1

B♭-Tpt. 2-3

Tbn. 1-2 mp *cresc. poco a poco*

Bs. Tbn. mf *gravel*

Tba. *fingernails on the bell (indeterminant)* mf *gravel* *ord.* mf *gravel*

Timp. $[12", 29", 26" \text{ and } 23" \text{ Timp. in B♭, C, G and F}]$ mp

Perc. 1

Perc. 2 f [Snare Drum]

Perc. 3 f

Cel.

Hp. *finger tap* *fingernail tap* *wristle tap* *open hand slap* mp $[C, F, G]$

S. Vln. 1 mf

Vln. 1 mf f

S. Vln. 2 mf

Vln. 2 mf f

S. Vla. mf

Vla. mf f

S. Vlc. mf

Vlc. mf mp (sub.)

Cb. mf f mp (sub.)

119

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

Bs. Cl.

Bsn. 1

Chon.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tbn. 1-2

Bs. Tbn.

Tba.

Temp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

[29' Temp. in A]

[26' Temp. in B]

[Cymbals]

[Concert Bass Drum]

[Dx, Cx, Gx, Ax]

[Dx]

[illegible]

129

Picc.

Fl. 2

Ob. 1

E. Hn.

B♭ Cl. 1

Bs. Cl.

Bsn. 1

Chan.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tbn. 1-2

Bs. Tbn.

Tba.

Temp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

[26\" Temp. in D]

and - - - - - sul pont. - - - - - and

136

Pico

Fl. 2

Ob. 1

E. Hrn.

B♭ Cl. 1

B♭ Cl.

Bsn. 1

Cbss.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

B♭ Tpt. 1

B♭ Tpt. 2

B♭ Tpt. 3

Trb. 1

Trb. 2

B♭ Trb.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Hrp.

Vln. 1

Vln. 2

Vla. 1

Vla. 2

Vlc.

Cb.

mf

ff

mp *cresc. poco a poco*

f *decresc. poco a poco*

arco

sordino (straigh)

[Ds Cl]

140

Picc. *f* *mf* decresc. poco a poco *p*

Fl. 2 *f* *mf* decresc. poco a poco *p*

Ob. 1 *mp* *p* cresc. poco a poco *mf*

E. Hn. *mp* *p* cresc. poco a poco *mf*

Bs. Cl. 1 *f* *mf* decresc. poco a poco *p*

Bs. Cl. *f* *p* cresc. poco a poco *mf*

Bsn. 1 *mp* *p* cresc. poco a poco *mf*

Chn. *mp* *mf* decresc. poco a poco *p*

Hn. 1 *mp*

Hn. 2 *f*

Hn. 3 *f*

Hn. 4 *mp*

B. Tpt. 1 *f*

B. Tpt. 2 *mp*

B. Tpt. 3 *mp*

Trb. 1 *f*

Trb. 2 *f*

Bs. Trb. *mp*

Tba. *mp*

Timp.

Perc. 1 arco *mp* *p* *arco*

Perc. 2

Perc. 3

[D]

Hp.

Vln. 1 *f* *mf* decresc. poco a poco *p*

Vln. 1 *f* *mf* decresc. poco a poco *p*

Vln. 2 *mp* *p* cresc. poco a poco *mf*

Vln. 2 *mp* *p* cresc. poco a poco *mf*

Vla. 1 *f* *mf* decresc. poco a poco *p*

Vla. 2 *f* *mf* decresc. poco a poco *p*

Vlc. *mp* *p* cresc. poco a poco *mf*

Cb. *mp* *p* cresc. poco a poco *mf*

144

Picc. *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

Fl. 2 *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

Ob. 1 *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

E. Hn. *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

B♭ Cl. 1 *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

B♭ Cl. *pp* cresc. poco a poco *mp* *ppp* cresc. poco a poco *p* *ppp*

Bsn. 1 *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

Chn. *mp* decresc. poco a poco *pp* *p* decresc. poco a poco *ppp*

Hn. 1-2

Hn. 3-4

B♭ Trpt. 1 *pp* cresc. poco a poco *mp*

B♭ Trpt. 2 *mp* decresc. poco a poco *pp*

B♭ Trpt. 3 *mp* decresc. poco a poco *pp*

Trb. 1 *pp* cresc. poco a poco *mp*

Trb. 2 *pp* cresc. poco a poco *mp*

B♭ Trb. *mp* decresc. poco a poco *pp*

Tba. *mp* decresc. poco a poco *pp*

Timp.

Perc. 1 *pp* *arco* *ppp*

Perc. 2 *ppp*

Perc. 3

Cel.

Hp. *[D]* *[B, F]* *ppp*

Vln. 1 *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

Vln. 1 *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

Vln. 2 *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

Vln. 2 *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

Vla. 1 *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

Vla. 2 *pp* cresc. poco a poco *mp* *p* decresc. poco a poco *ppp*

Vlc. *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

Cb. *mp* decresc. poco a poco *pp* *ppp* cresc. poco a poco *p* *ppp*

148 **H** ♩ = 52

Picc. *to Flute*

Fl. 2 *ppp*

Obo. 1

E. Hn. *to Oboe*

B♭ Cl. 1

B♭ Cl. *to B♭ Clarinet*

Bsn. 1

Cbsn.

Hn. 1-2

Hn. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tbn. 1-2

Bs. Tbn.

Tba.

Timp.

Perc. 1 *[Crotales] mallet and bow*

Perc. 2 *p*

Perc. 3

Cel.

Harp *[B♭, F♯, A]* *mp (sub.)* *pp* *[C, F, G]* *mp* *pp*

Vln. 1 *ppp* *pp* *ppp* *pp* *ppp*

Vln. 2 *ppp* *pp* *ppp*

Vla.

Vlc.

Ch.

154

for whistle (ad clarinetto)

Fl. 1

Fl. 2

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Chsn.

Hn. 1-2

Hn. 3-4

B. Tpt. 1

B. Tpt. 2-3

Tbn. 1-2

Bs. Tbn.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hrp.

Vln. 1

Vln. 2

Vla.

Vcl.

Db.

[illegible]

166

Fl. 1

Fl. 2

Ob. 1

Ob. 2

B♭ Cl. 1

B♭ Cl. 2

Bsn. 1

Chsn.

Hr. 1-2

Hr. 3-4

B♭ Tpt. 1

B♭ Tpt. 2-3

Tub. 1-2

Bs. Tub.

Tba.

Timp.

Perc. 1

Perc. 2

Perc. 3

Cel.

Hp.

Vln. 1

Vln. 2

Vla.

Vlc.

Cb.

pp

ppp

standing note

and

and A

[C, B, F]

[D]

[E]

[C]

