

New Directions

A Level Edexcel Set Work Analysis

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Teacher's Introduction

Any new specification presents particular challenges for both teachers and students primarily as it is untried over time. The *New Directions* guide seeks to:

- ✓ provide a pathway through the set music
- ✓ suggest avenues which supplement the set works
- ✓ provide activities to encourage engagement with the music

Remember!

Always check the exam board website for new information, including changes to the specification and sample assessment material.

The core of the guide is analysis of the set works, which provides a foundation for teaching and learning at both AS and A Level.

The set works and extracts are diverse and the requirements to relate other works to them will necessarily take many listening hours. Students should be keenly aware of that from the beginning.

In addition to analyses of the set works, questions and answers based on both sections of the examination, and brief commentaries on wider listening suggestions together with information which can support the learning are also included. General summaries of each of the works are given at the end of each analysis. Although placed at the end of the analyses, the summaries may be used as starting points.

An important part of the course is to become conversant with a wide range of technical, critical and aesthetic language to discuss and evaluate the works. Technical terms are given in the glossary and attention to them is indicated by the use of bold imprint in the text. Regular opportunities for discussing the works with others is a key activity for acquiring the language of analysis, evaluation and criticism as rewarded in the examination.



For your convenience, links to the websites required for activities have been provided on ZigZag Education's website at zzed.uk/7208. Students might find this helpful for accessing the websites rather than typing in the web address each time. As customers report any broken links, we will update this page. If you find that any of the links are not working, please inform us by email to music@zigzageducation.co.uk

P Baker, July 2021

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Students' Introduction

New Directions is a guide to the music you have to listen to, understand and be able to discuss in the examination in question. For the AS exam, you have to study the extracts from the set pieces. For the complete A Level, you will also study three movements from *The Rite of Spring* by Stravinsky.

Your main tasks are:

- ✓ Know the set work very well¹
- ✓ Discuss the works using the relevant technical language
- ✓ Understand the music by analysing it and know your way around the scores
- ✓ Be able to locate particular parts of the music by hearing it often
- ✓ Become familiar with other music which has links with the set pieces
- ✓ Practise writing about the music in a critical way
- ✓ Read what other people have written about the music
- ✓ Always use the scores and recordings as your primary sources and assess for yourself about the music



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¹ That means knowing what is in the scores, understanding any technical questions and terminology, what the music sounds like, understanding the historical and cultural contexts of the works and

Petals for Violoncello and Live Electronics

Kaija Saariaho (b. 1952)

I was born in Helsinki, Finland in 1952. One of my earliest memories is listening to music 'under my pillow' as I slept; unsurprisingly, much of my music is dreamlike. I have a special interest in using colour (timbre) and texture in my music although it also has melodic and harmonic interest. I studied in Paris at IRCAM where I developed my interest in electronics and how to manipulate sounds and transform them. Among my works are *Verlaine*, *nocturne* (1984) for orchestra and taped recordings and an opera called *L'Amour de loin*. My writing for voices has included the use of electronic processing. A central interest is in the use of electronics to transform the transformational processes of acoustic instruments.



General Context and Background

The composer Kaija Saariaho was born in Helsinki, Finland in 1952. She studied at IRCAM in Paris with the *avant garde* composers Brian Ferneyhough and Klaus Huber. She learned about tape, live electronics and computer-assisted composition at the IRCAM in Paris.²

As with many works which source electronics, emphasis is often on **textural transformation** rather than the elements of melody, harmony or rhythm conceived. Before working at IRCAM, Saariaho had been influenced by a trend known as *musique concrète*. That is, the use of computer-aided devices which analyse scientifically the acoustic properties of sounds and harmonics which can then be used in compositions.³ *Petals* is a relatively short work for cello and live electronics (although the latter is marked 'optional' on the score published in 1994). Although the cello and are transformed electronically, the work belongs to the genre of electronic music. In its style, it is like *musique spectrale* or Spectralism.

Saariaho's work also includes opera such as *L'amour de loin* and *Adriana Mater* as well as a song cycle based on the Iranian (Persian) poet Rumi in 2012 in which the poems are presented on prerecorded voices and live orchestra. *True Fire* song cycle was premiered in 2015, the opera *Only the Sound of Silence* premiered in March 2016 at the Dutch National Opera and the harp concerto *Trans* in August 2016.

Since Saariaho's technique uses electronics, she shows the influence of composers such as John Cage and Pierre Boulez. Like Stravinsky, her music is eclectic, as reflected in the use of many different sound transformations.

Saariaho's use of electronic sound is also influenced by a style known as '*musique concrète*' which involves using natural sounds, or, more precisely, sounds from any source other than a musical instrument. The term was coined in 1948 by Pierre Schaeffer. As an engineer, he soon used the current techniques of tape recording (cutting and splicing) and other prototype electronic and electronic music. Schaeffer's *Étude pour un homme seul*, for example, is entirely derived from the sounds of a vacuum cleaner. *Musique concrète* had been foreshadowed previously by Edgard Varèse who used an early electronic synthesiser called a dynaphone. Varèse's *Poème électronique* was first heard through an array of 400 speakers installed for the Brussels World Fair in 1958. The architect Le Corbusier and engineer, composer and mathematician, Xenakis.

² Institut de Recherche et Coordination Acoustique/Musique (Institute for Research and Coordination in Acoustics/Music) is located in Paris near the Pompidou Centre. It was founded by Pierre Boulez (died 2016).

³ Hear, if possible, *Graal théâtre* for violin and orchestra or ensemble (1994/97).

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Given the technology of the time, the work of Varèse is a huge achievement and the composer is just one of many whose shoulders a composer such as Saariaho rests upon. By the time the 1970s arrived, the near-division which grew between those favouring concrete sounds and those favouring electronic or synthesised sounds was being resolved by the work of Jean-Claude Risset (b. 1938), who was the first computer *chef* at the newly founded IRCAM under Pierre Boulez (1925–2016). Risset researched the possibilities of uniting recorded and acoustic sounds through their manipulation electronically. The distinction between collages of ‘real sound’ in *musique concrète* and music produced in the tape studio became integral

Saariaho's music is internationally unfamiliar to most listeners. Stravinsky is not. Saariaho's music is heard through a number of recordings. Some are listed below. It is advisable to sample them simply hearing the music. The performances are of the set. The discussion of the

Risset's composition *Fall from Michelangelo's 'The Boy'*⁴ was produced after he had analysed the **overtone formations** of instrumental timbres as heard. Together with other composers developed the idea first explored by Risset and Tristan Murail (b. 1947) used computer analysis of timbre and its transformation came to be called *musique spectrale* ('spectralist music'). Spectralist music is not, although its origination was necessarily linked to computer researches. Grisey explained it as *'the natural growth of sonority'*.⁵

The compositional emphasis is shifted to timbre and the overtones generated from become the core material of interest in *musique spectrale*. Ideas of melody, melos, sidelined in favour of a concentration on the available possibilities of orchestral colour and overtones. Given the focus on timbre provides a developmental link with the early work, in particular certain pieces of Claude Debussy. Kaija Saariaho can be seen as a later

- 📄 <http://www.musicsalesclassical.com/composer/performance>
- 📄 <http://saariaho.org/gallery/performances/>
- 📄 <https://www.youtube.com/watch?v=3jcPCXQv8Jo>
- 📄 (The performance is on Albany TROY726 (2004))
- 📄 <https://vimeo.com/116689901>

Petals for Violoncello and Live Electronics

Kaija Saariaho: Complete Cello Works Track 1. Duration: 10:42
Aeon AECD 0637

The score of *Petals* includes some visually conventional staff notations, but also a number of instructions which, in this case, are for the electronic components. Using the recording system may be followed, but a different recording would not be exactly the same. Sound is pitched notes (although there are no present) as well as being a range of electronically generated sounds, as the work progresses. There is also a degree of **indeterminacy**, as the work allows for two or three different interpretations, and from the style of notations on the score.

In the composer's brief programme note for a performance, Saariaho explains the work to be complete but followed a long period of subconscious preparation. The referenced music seems to conjure dream worlds or levels of consciousness and experience. The composer explains that the work uses 'opposite elements' comprising '*fragile birth to more energetic events with clear rhythmic and melodic character. These*

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⁴ Based on the aftermath of the bombing of Hiroshima

⁵ See Taruskin *Music in the Late Twentieth Century*, page 500.

pass through different transformations and finally merge back to not the less interesting references here are to colour (timbre) which is an element that changes throughout also about the interface of timbre and textures. Although there are melodic ideas although there are sonic combinations, there is no harmony as such; although the discreet passages of 'a particular rhythm' or 'motif'. The emphasis has moved and style.

Any analysis of music such as *Petals* requires different language from that available in the eighteenth, nineteenth or parts of the twentieth centuries: here, compact terms such as 'modulation' or 'tonality', to describe processes and techniques, are not wholly adequate. A new language has to be found. With every change of aesthetic direction in the arts generally, the language of criticism has had to be renewed, and, often before that process is complete, new music or art are sometimes outdated and even outspicing. For every style, we must evaluate it: the reactions of sections of the audience at the premiere of *The Rite of Spring* the need to absorb the newness of the work which is connected with the struggle to understand the work and sensations of the composers.

Therefore, becoming familiar with *Petals*, it is recommended to hear several performances in order to acquire a wider sense of the style.

Technical

Petals has a set of performance instructions relating to both the cello and the electronics. It indicates that the electronics are 'optional', although the work would be very difficult to perform without. The electronic version uses a Max patch including reverberation and harmonisers designed to alter the sounds from the cello, which has its own microphone. A computer can be used using external reverberation and harmoniser processors (as for the original conception). By employing such technologies, it is necessary for a sound engineer with musical training to be available to adjust levels according to the instructions in the score. The nature of a musical performance changes, therefore, with works such as *Petals* since no longer is it only the soloist performing, but also a sound engineer.⁷

Part of the 'new language' referred to above is purely technical. There are concise instructions and specifications attached with the score. Written beneath the familiar musical stave are the directions for the use of a **harmoniser** and a **reverb** shown simply as **R** and **H**. The directions of each device run parallel with the music on the stave itself can be read.

The 'max' patch is a Max/MSP, which is a software work carried out in the 1980s. It is also based on a physical device devised by a physicalist, however, it can take the form as software. MAX MSP is a software for sounds of

Fold-back refers to a system of on-stage amplifiers designed to allow the performer to hear the sound of the instrument as it is heard by the audience.

It is essential for all stage musical work and, in this case, to allow the cello to be heard playing as well as the various electronic changes.

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⁶ <http://www.musicsalesclassical.com/composer/work/11107>

⁷ A performance of *...explosante fixe...* by Pierre Boulez requires several musical engineers to perform.

The effect of the **harmoniser** is to delay by milliseconds the sounds from the cello as well as raising or lowering the pitch returned to the listener. the sounds in *Petals* are transformed electronically. A harmoniser may also be used to generate several different sounds and **harmonics** derived from the **fundamental** to form chords. The **reverb** creates different **ambience**. The overall effect of sounds is a

The **HARMONISER** is a digital device which allows changes of pitch to be can be combined with (harmonise) the original acoustically produced sound

product of where it is heard so that performing in a concert hall creates different overall small concert room; performing in a large cathedral creates different overall sound living room. The difference between sound quality is the **ambience**. The part performance and Saariaho gives specific cautionary instructions relating to it. She is concerned that any changes which are engineered should be gradual not 'disrupt' in the 'sound image' (sic) and cautions also against distortion or being too loud: *'The general level should be set to be rather loud, nevertheless not painfully so!'*⁸

The instructions for the harmoniser are set out clearly for realisation by the sound engineer. The transposition of the sounds from the cello (the pitch being at about 50 cents, which equals a quarter-tone (half a semitone). However, the cello sometimes so that the result would create 1/8th tones when the harmoniser is set

The reverb time is set at 2.5" delay and the mixing levels change throughout the score. Setting the reverb times is largely a matter of making adjustments to a fader to control but depending on the ambience of the venue and the resultant sounds from each instrument indicated as percentages throughout the score and increase from nothing (*'a niente'*) 50% towards the end where the volume gradually reduces *a niente*.

Linked with the harmoniser and the reverb is a mixer desk with which the engineer's microphone, which is positioned as close to the cello as possible, *is not used to amplify* sounds through the harmoniser and reverb to the mixer. The transmission circuit is diagrammatically in the score.

In summary, the performance of *Petals* comprises four different layers of sound:

- The cello sounds (as an acoustic instrument)
- Ambient sounds (concert space)
- Reverb sounds
- 'Harmonised' sounds

As with stage performances, the cello players also have a small amplifier directed at them so they can hear the engineered sound results by way of fold-back.

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⁸ Op. cit. – from the composer's programme note

Notation

Although the score contains careful instructions for the cellist as well as the engineer, the score clarifies the use of the notation, which is partly **graphic** and partly familiar stave notation. It begins with explanations of the use of **vibrato** and **tremolo**.

Vibrato is a method of note production particular to string instruments and the violin. When learning a string instrument, the finger positions must be motionless, and concentration on note production is the priority. However, once the player is able to create the notes comfortably, they can be made warmer by gently oscillating the finger on the fingerboard to create a subtle **vibrato**.

Tremolo is produced on a string instrument by the rapid up-and-down movement of the bow, often made from the end or the point of the bow.

Reading from the top of the page, the instructions, the composer emphasises two things: first, the start of the music should be very soft, and, second, the start should appear to emerge from nothing. The terms *al niente* and *dal niente* indicate 'to nothing' and 'from nothing', respectively. They are merely technical terms, but they also indicate the idea of a sound emerging from and going towards something, which is also an aesthetic and expressive character.

Other graphic symbols are used to indicate, for example, 'highest note possible', which is indicated by a note to the highest position on the E string to a pitch not indicated as ledger lines; then notes higher or lower, for **glissandos** and for **harmonics**.

Glissando is achieved on the cello by starting from one note and sliding the finger up or down in a smooth manner. The effect is like a scale but without each degree being present.

Harmonics are pitches which are generated from any given sound and form that sound. In the score, harmonics are used and are indicated like this:

Lento

This note is where the node is pitched or lightly touched

Violoncello

This note is stopped

What is heard is the main note two octaves higher

This is the most common form of artificial harmonics but Saariaho also uses harmonic points where the finger touches the string) is a third above the fundamental. Touching the node a third above results in a pitch two octaves plus a major third higher.⁹

This note is where the node is pitched or lightly touched

Violoncello

This note is stopped

What is heard is the main note two octaves plus a major third higher

⁹ Touching the node a minor third higher produces two octaves and a fifth higher and touching the node a major third higher produces two octaves and a major third higher, but Saariaho does not use these artificial harmonics in the work.

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Harmonics are not used on their own in *Petals* but with the transformative electronic sounds.

Acoustically, harmonics form any sound that we can hear and may be compared to white light is formed from every frequency of colour. Put through a prism, white constituent colours (the rainbow). Saariaho's association with the so-called **Spectral** harmonics as the constituent 'colours' derived from a single pitch. The note C, for **fundamental** pitch; we hear the fundamental in normal circumstances but it can't harmonics.¹⁰ It is through the use of artificial harmonics on the cello that the pitch exploited in the work.

A diamond note head is used by some composers to indicate in artificial harmonics indicate where to touch the string without pressing down on the fingerboard (the single diamond note indicates a touch on the natural open string below the pitch harmonic in bar 1, indicated by a diamond on the note F, would be a touch at the Some scores show the note on the fingerboard as well as the diamond harmonic. The R strings starting on the lowest C as IV to the highest A, which is, therefore, I.

Source pitches:

Other techniques used are indicated as **sul ponticello** (S.P.) with the cautionary '**sul tasto**'. The instruction to play *sul ponticello* is to play near the bridge of the cello, which produces an ethereal sound; *sul tasto* indicates to play on, or close to, the finger board, which produces a whispery effect. Again, the use of these quite common effects in conjunction with electronic sounds completely.

Transforming the cello's timbre underlies all of the new notations and instructions. Saariaho uses **bowing notation** to indicate particular ways of using the bow. These include, for example, an indication to '*add bow pressure to produce a scratchy pitch is totally replaced by noise*'; another graphic suggests '*... a soft noise, wind-like suggest '... winds-like murmur...' (E.F. or 'estramente flautando')* through changing strings; similarly, E.F. suggests a scratching sound.

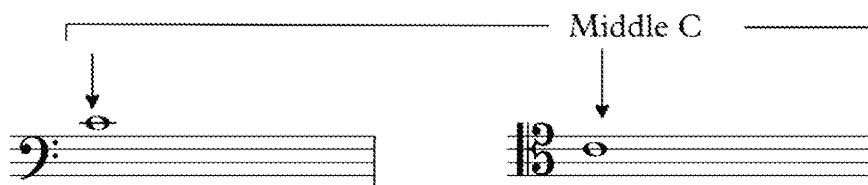
Cello music generally, and *Petals* in particular, uses three different clefs – bass, treble,

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¹⁰ Even Pythagoras had an inkling about harmonics from his experiments with the lengths of strings.

The design shown here is based on the recording on AEON/AECD0637, S performed by Alexis Descharmes. The composer requests that each section and Descharmes complies but also extends that timing.



In terms of cello technique, *Petals* explores a range of effects which transform its conjunction with the electronics, creating what can be regarded as a new instrument.

Analytical Commentary

The composer explains that the work uses 'opposite elements' comprising 'fragile birth to more energetic events with clear rhythmic and melodic character. These pass through different transformations and finally merge back to less dynamic to intensive filigration'.¹¹

TASK

Using this template, listen carefully to the recording and record the sections you hear them.

Are they the same as the one above?

A: 1–3	
B: 4–7	
C: 8–9	
D: 10–12	
E: 13–16	
F: 17–21	
G: 21–27	
H: 27–30	

As a starting point, the composer's programme note quoted above provides an overview of the work. The contrasting ideas are presented: the 'fragile coloristic passages' of 'rhythmic and melodic character'. Also, there is the idea of 'different transformations back to less dynamic but not the less intensive filigration'.¹² The ideas of musicality and being fragile and then more energetic and rhythmical provide entries into how

¹¹ Op. cit. – from the composer's programme note

¹² The composer uses this term to describe the various melodic elaborations which arise from the jewellery or lacework is a technique of decoration involving often-elaborate curves and swirls characteristic achieved through elaborated chords, variation and different forms of embellishment filigree of sound. Indeed, the term 'Baroque' originates from the Portuguese word 'pérola barba' or form. *Petals* is not, of course, Baroque, but it does have decorative features.

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In part, schematic plan of the score seems to show a design which exactly matches fragility to something more settled. The opening section 1–3 contrasts the subtle enters once more at 8–9; the more conventionally notated section 10–12 represents a rhythmic episode in a way similar to 17–21, while the remaining section is a brief *intensive filigration*¹³. The general design of the work might be pictured as follows:

The sections identified for this commentary are merely convenient divisions but not by its distinctly 'non-sectional' quality like waves of sound merging and fading in a volcano. Divisions given here for the purposes of discussion often show distinct changes at the change in bar 7 or bar 13, and should be noted when listening.

Bars 1–3 (Section A):

The music is *senza misura*¹³ ('without measure' / no time signature) and emerges from a single diamond head note indicating a natural harmonic. As the cello rises slowly to through 40% and this level is maintained throughout the first section and to the end (again out of nothing) to 50% and so changes the acoustic sound by about a quarter transformation. There are present as trills and the section where the attack and timbre increased by **R** as indicated by the thick black line notation. Towards the end of the acoustic G, still trilled, undergoes pitch changes from H gradually diminished and re

Throughout, the dynamics of the cello interact with the changing effects of **R** and timbre transformations. The section can be characterised as one of the 'fragile' of the composer's programme note. The *glissando* between the harmonic on F and transformations of the sounds used.

Bars 4–7 (Section B):

This section lasts approximately the same time as the first, providing a temporal difference from the first section and has '... clear rhythmic and melodic character' from *Lento* to crotchet=60mm which gives the passage rhythmic definition. The microtones or quarter-tones together with accents and staccato markings for each. There, the playing is more *legato* and is shaped with a pattern of dynamics rising and *f*. Generally, the passage up to about the middle of bar 7 is, in conventional notation but transformed through **R** at 40%.

With **R** time set at 2':5", the delayed overlap of the cello sounds is quite wide but of overlapping waves or like a curtain folding over itself.¹⁴

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¹³ Literally meaning 'without measure' but generally understood as meaning 'without a time signature'.
¹⁴ Cf. perhaps '... pli selon pli...' ('fold on fold') by Boulez

In the current recording, the cellist distinctly articulates each tuplet of 10, which composes the composer's own conception that the section is more clearly defined rhythmically in terms of tuplet groups as though releasing them into free musical space with a life of their own. Although nothing ever closes in the work but merges from one to another – with a *diminuendo* on A about halfway into bar 7. The notation is in a form that became standard at least 50 years before 1988 when *Petals* was composed.¹⁵

Violoncello

7 10

mf *gliss.* *gliss.*

R (40%)

Fanned beaming of notes to show accelerando

Bars 8–9 (Section C)

Just as the first section is marked by a clear and relatively untransformed G, the approach to the second acoustic B tremolo about halfway into bar 7 (above). Again, it is a semitone rise like the run of microtones¹⁶ which precede it. At the top of the section the high C is ornamented first by a natural harmonic on D (octave lower than written) and then the high C as a harmonic. The H increases by 50% so transforming the whole written section to the halfway point of bar 8, another slow *glissando* takes the sound down to a trilled B. The *diminuendo* to *ppp*. At the beginning of bar 9, the D harmonic becomes *natural* and the D harmonic to the natural sound (from the cello itself) is reflected by the change from *ppp* to *natural* A.

Bars 8–9 are a form of inversion where the D harmonic sounds first above the high register and then below. Passages such as these are technically demanding and require the cellist to have techniques which are central to the definition of the style.

Bars 10–12 (Section D):

This has the 'clear rhythmic and melodic character' identified by Saariaho, expressed in notation including trills, mordents, inverted mordents, *glissando* and *acciacciatura* found in Baroque music and later classical styles, but here they are heard within a modern context due to the transformations of electronics. Also, however, the passage is subject to small changes in the dynamics and to subtle rhythmic groupings, such as the tuplet of bar 12 as well as pressure bowing in bar 11. The R is constant 30% but rises to 13 (which marks the beginning of the next section).

Figure 1 illustrates musical notation examples used for feature analysis. The left example shows a musical staff with a bass clef, a 10-measure rest, and a trill. It includes labels for 'acciaccatura/grace note', 'trill', and 'close dynamics' (mp to mf). The right example shows a musical staff with a bass clef, a 10-measure rest, and a trill. It includes labels for 'trill', 'mordent', and 'tuplets of' (mf to mf).

The passage in the first half of bar 11 shows a typical concentration of notes, bowing, contrasting changes in dynamics, manner of attack and electronic transformation in a short space of musical time.

15 The electronic technology has also been superseded.

¹⁶ The term 'microtone' refers to any interval smaller than a semitone in equal-tempered tuning.

11 *poco agitato*

R (30%)

H

Saariaho's use of the word 'noise' suggests, perhaps, that she distinguishes between sounds or is prepared to integrate what are generally thought of as noises into a

Bars 13–16 (Section E):

The section truly begins midway into bar 13 with the *ritanto* marking.

The sound concentrates on timbre, harmonics, some *glissandos* and bow effects. It can sound like the work and is characterised by its quietness and the section before the 'filigration' is revealed largely by means of the electronic transformation on timbre. Although there are dissonances within this section arising from the reverb, the harmonics as well as the spatial distribution of the notes soften their effect. The increase of bow pressure as indicated by the black graphic notation and gentle. Pitch distribution is complemented by the frequent use of open 5^{ths} although the intervals narrow towards the end of the section in preparation for the 40% R and H 20% expanding to 50% that follows.

The chords are traced diagrammatically in the next example and show the sound harmonics, although not the true sounds resulting from the electronic transformation.

13

13

14

14

15

15

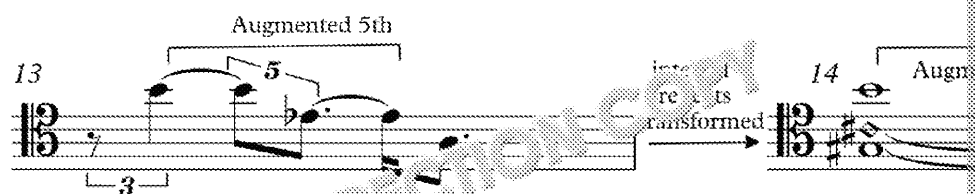
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Bars 17–21 (Section F):

The third section of relative 'clear rhythmic and melodic character' begins after the colouring at bar 17. The bar is treated only through **R**. The C string is plucked to recordings although there is no *pizzicato* marking in the scores; the harmonics also different octaves carried over from the previous sections as also is the C₄. Both the anchors and limiting markers of the freedom explored through the writing overall be recycled, although never in exactly the same way. For instance, in the previous 13, the B down to the E_b just before the *Lento* is echoed a little later together with transformations and harmonic in bar 14:



The increased frequency of repetition in this section is marked by the C and F₄ harmonies semitones of A₄ traceable from section two of the work (bar 4). The thought the initial idea and develops it, like a motif in earlier styles, but over relatively brief form of **micro-development**.¹⁷

The figure begins with the *pizzicato* open C string with **R** at 40% and is punctuated articulated by a fast *crescendo* to *mf*.



The semitone motif repeats as a different rhythm featuring dotted notes which for development includes a *crescendo*, but, more importantly, the approach to the F₄ reverb is *decreasing at the same time as the motif is extended and crescendos* from



In the third micro-development, the points of C and F₄ frame the beginning expand with reverb now at the figure includes a final trill with a *ritardando* the beginning of a trill leading to the F₄ harmonic with increasing **R** to 40% and

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¹⁷ I coin the term to contrast it with classical development processes which can take place over

The final micro-development includes more interval expansion with decorative *glissandos* up to the B and a return to the initial motif closing on the F# local gestures between bar 20 and the first part of bar 21 show the initial B/F# feature. Versions of the rising phrase, punctuated similarly with the harmonics and ending sounds on the transformed harmonic, in this short passage take on an almost vocal like the section of slow harmonic from bar 13. The passages produced from technology called 'noise' by the composer, are close to white noise¹⁸ typically electronically or white light which is refracted into its constituent frequencies as light into its constituent

Bars 21–27 (Section G – *Lento*):

In terms of the notation, this section is the most free, the melodic contours being stems without indications of time value other than to be played as fast as possible. Bow pressures and extreme dynamic contrasts are all present; harmonics, however, are present on the low B in bar 22. Features such as the open C (*arco* or *pizzicato*) and note figure (B and A#) and general shape of the figures in bars 17, 20 and 21 is marked with indeterminacy. Reverb is mostly at 20% and H follows a wave-like path of increase. At the midpoint of bar 27, the cello rises to its highest possible note, which represents the work, sounding as though the transformational repetitions have attained their destination.

*The published score (1989) has *Lento* here but the anthology has *dol. animo*.

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¹⁸ Described by Bela Bartok as 'the sound of the sea', i.e. a roar.

Bars 27–30 (Section H – *Lento*):

The music in this final section is the fourth of the movements of stasis. The low C but sounding with the high harmonic F \sharp , the focus being entirely on textures and achieved from the **R** and **H** transformations, the fluctuations of harmonics, the over harmonics and the denseness of hard bow pressures. The range of harmonics sub electronically is as follows:

n = node or where the cellist lightly touches the string which produces the lower note

h = resultant harmonic

28 h = 12th
n = perf. 5th

29 h = 2 8ves + maj. 3rd
n = maj. 3rd

h = 2 8ves
n = perf. 4th

30 h = 2 8ves + 5th
n = min. 3rd

Although it is possible to identify trace elements of a quasi-tonal scheme in *Petals* valid as a way of analysing it. The two pitches C and F \sharp might seem tempting to use tonal or pitch relationship operating.¹⁹ There are moments where distinct relations and C \flat , or F \sharp and C seem to present themselves, but *Petals* is not an unequivocal there are pitch relationships in the piece is evident but how far they are systematic interest is on the **emergent qualities** of the sounds as **sonic phenomena**, rather than relationships. Her early background with **Spectralism** awakened an interest in the can undergo processes of transformation and mainly through the means of electronic transformation, the listener's expectations are made to distance themselves from 'chords' to a world which is less familiar, dream-like, surreal, other-worldly.



Although there is a process of development in this not like classical development but **deconstruction and transformation**. The process of the emergence of sounds from extended to complete. The present work *Petals* emerged out of an earlier quartet and a series of pieces.

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¹⁹ As in *Music for Strings, Percussion and Celeste* by Bartok or *War Requiem* by Britten, for example.

General Summary

Date	<i>Petals</i> was composed in 1988
Genre	<i>Petals</i> is a relatively short work for solo cello and electronic marked 'optional' on the score published in 1989). As the cello and are transformed electronically, the work belongs to an acoustic type; in terms of its style, it is like <i>musique spectrale</i> .
Historical, social and cultural context	Culturally, the work is from a postmodernist period and, it relates to a tradition dating from some works of Edgard Varèse (<i>Electronique</i>), the radicalism of Karlheinz Stockhausen's work in the 1950s (e.g. <i>Elektronische Studio II</i> , 1954), the experiments of <i>musique concrète</i> , which had an almost scientific attitude to electronic music at IRCAM with its research by Jean-Claude Risset.
 Purpose and intention; audience, time and place	<p>The genre of <i>musique concrète</i> challenges listeners to perceive a common milieu and a real sound by transforming them, or what was perceived as 'real' is represented as something else. For Saariaho's music relates to that part of the aesthetic where every sound in <i>Petals</i> originates from the acoustic or generates its sounds directly from an electronic source as Saariaho is more a poet than a scientist but her work is, in the developments of electronic media (MIDI, significantly). So just before Saariaho utilised the inventions of science, and an objective stance to music as though composing were a scientific researches of the Spectralists represented a branch of artistic purposes and expression. Some composers, such as Babbitt, applied complex mathematical operations to composition. It is notable that the Greek composer Xenakis was first an engineer and Pierre Boulez also a student of advanced mathematics. The work such as <i>Petals</i> is a period of 'scienticism' with a characteristic affective expression and where beauty was more generally a way that $E = MC^2$ is elegant.</p>
Melody and harmony	<p>Although there are no tunes in <i>Petals</i>, the work is distinguished by what might be termed its melos. In the passages where it uses conventionally staff notation (but still with some graphic transformations), melody is more clearly exposed, such as in bars 4–6, however, is more like a melodic line comprising of notes that undergoes change with each repetition. The effects of repetition produce sometimes a textured layer of melodic strands. Such strands, although melodic in origin, generate a quasi-melody just as there are no tunes, there is also no suggestion of a melody. For Saariaho, the harmonic element derives from either the single sounds or from harmonics which are also electronic. There is no indication that any spectral analysis preceded the work, interest in the resultant timbre is more than any harmonic.</p> <p>The exploitation of harmonics in music is as old as music itself (triadic harmony, for instance) is founded on the harmonic series. <i>Petals</i> is an extension of the same phenomenon as codified in the nineteenth/eighteenth centuries.</p>
 Tempo, metre and rhythm	<p><i>Petals</i> has no time signature, no bar lines with any conventional stress, and no established pulse at all; rather, the work is written in complex ways; the changes of tempo aligned with the use of grace note groupings and ornamentations all contribute to a feeling which is unsettled and highly flexible. The electronic effect is irregular rhythmic patterns overlaying their origins.</p>

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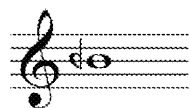


<p>Tonality, structure and form</p>	<p>Tonality and its structural role play no part in a work such as <i>Petals</i>. It is possible to recognise an outline of pitch relationships and some emphasis given to a tritone relationship. The C₄ is present at the end but it is one thing to make note of that and another to ascribe significance.</p> <p><i>Petals</i> has a straightforward design, as discussed, but its form is not easily grasped. In some ways, the form is like a series of moments which might say; or, perhaps, the form is like variations as suggested by the programme note also discussed in the analytical comment. The performance of a work such as <i>Petals</i> changes relative to the performance of the electronic manipulations, its whole will be such that formal significance becomes a relative experience rather than an objective entity.</p>
<p>Timbre</p>	<p>Timbre is central to the work and could even be the key to its structure. The few notes in the work which remain acoustically unchanged throughout so that the pitches become almost of prime importance. A new range of timbre is uncovered in the work, a genre created by means of reverb and the use of a harmoniser. The natural and artificial harmonics, while changing pitch, increase in volume since timbre itself is a function of the overtone series; timbre is extended cello techniques, such as playing with heavy pressure. Overlapping of harmonics creates a particularly ethereal sound. For example, <i>Lento</i> in bar 13–16.</p>
<p>Dynamics</p>	<p>The work begins as if from nothing and ends by disappearing. Sections are contrasted by means of extremes of dynamic range. Loudness and utter quietness in conjunction with metrical changes. Longer passages are articulated by subtle dynamic changes. The work begins at <i>mp</i>, moves through <i>mf</i> and <i>pp</i> only to rapidly ascend. Such changes, the electronics follow a difference spectrum. The harmoniser which is slowly introduced <i>da niente</i> rising and fading <i>al niente</i>.</p>
<p>Devices, notations and terminology</p>	<p>The notation of <i>Petals</i> consists of conventional staff notation and graphic notations for the soloist and graphics for the electronics. Unusual notations include normal notes coupled with harmonics, intricate rhythms with complex nesting (bars 1–3 show <i>accelerando</i> (bar 7) and exaggerated <i>vibrato</i> with <i>gl</i> (bar 29). Both flat and sharp symbols for quarter-tones are used. H and R for the harmoniser and reverb devices.</p> <p>The notations are all represented in the guide but here are some familiar types:</p> <div data-bbox="395 1624 662 2004"> </div> <p>Instructions to add bow pressure to the sound which the audible pitch is totally changed. There is no separate explanation of this symbol, presumably, it is the reverse of the first. ... this symbol is meant to instruct the performer to increase bow pressure. Instruction to decrease bow pressure marked as E.F. Abbreviation for the expression 'E.F.' is a soft wind-like murmuring sound.</p>

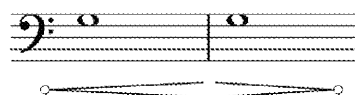
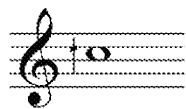
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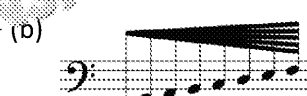
Devices, notations and terminology (cont.)



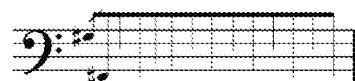
The upper notation indicates a quarter-tone lower a quarter-tone



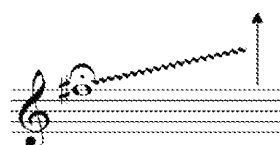
The hairpins indicate a soft then back into silence – 'd'



The upper symbol (a) indicates lower (b), an *accelerando* 'feathered' or 'fanned'.



The first two notes should be fast as possible; the absence only an indeterminate pitch more or less following the



This indicates a *glissando* possible on the instrument imprecise as indicated by

[The score should be consulted for the remainder of instructions. There is the score and the cello part as published.]

Terminology used in the score is largely conventional but for the terms used throughout:

<i>lento</i>	–	slow
<i>tr</i>	–	trill
<i>gliss.</i>	–	<i>glissando</i>
R	–	reverb
H	–	harmoniser
<i>energico</i>	–	energetically
<i>accel.</i>	–	<i>accelerando</i> becoming faster
<i>poco agitato</i>	–	little agitated
<i>a tempo</i>	–	resume the previous tempo/speed
<i>rit.</i>	–	<i>ritardando</i> – gradually slow tempo
<i>poco rubato</i>	–	a little held back and flexible with the <i>rubato</i> ('robbed time') / not strictly

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Le Sacre du Printemps – Igor Stravinsky (1882–1971)

Stravinsky The Early Ballet Scores Track 6. Duration: 03:42 **London Symphony Orchestra conducted by Gennadi Rozhdestvensky / Nimbus NIS 5000**

This drawing of me by Picasso reflects the style of Picasso's contemporary, Henri Matisse, and in a similar way, my musical style throughout my creative life, reflected a range of influences. I used Russian and Lithuanian folk melodies as well as general cultural elements from my native Russia. This can be recognised in my *Four Russian Peasant Songs* (1917) and *Les Noces* (1917) whose syllabic word setting reflects the style of Palestrina's Catholic liturgy at the same time as referencing Russian peasant folk elements are integrated into a web of modernism. My early harmony which can be described as pandiatonic was an important early works were for the Russian Ballet under the impresario Sergei Diaghilev but I later wrote works in a Neo-classical style or Neo-baroque manner such as *Dumbarton Oaks Concerto*. I also used a form of atonal serialism arising from an interest in the work of Anton von Webern. In a way, I can be described as an eclectic composer whose style changed, like Picasso's, but is always recognisably mine.

General Context and Background

Igor Stravinsky's musical life was rooted in his early experiences in his native Russia. He was born in Oranienbaum near St Petersburg. Although he studied Law (like his predecessor Rimsky-Korsakov²⁰ whose influence is evident particularly in *Firebird*, the first of the three ballets written early in the composer's career for the Ballets Russes, Rimsky's influence is also evident in the use of the octatonic scale and its tonal implications. One of the people who influenced Stravinsky in his early years was the extraordinary Alexander Scriabin whose atonality anticipate some of Stravinsky's own later practice. Stravinsky's early style for the Ballets Russes was influenced by the influences²¹ into a modernist framework expressed most significantly through his use of the piano.

The composition of *The Rite of Spring* can be traced from its inception because the show how the composer found his ideas and how he then manipulated and changed them. The details remain undiscoverable since Stravinsky generally composed with the piano and his ideas through improvisation. Some of the chords found in the score of *The Rite of Spring* are the hand which indicates their origin. Although he used the piano when composing, the process of composing – a putting together – was an intellectual question and the organisation of material which is not easily attributable to the improvisation. The particular interest and integrated.²²

Although *The Rite of Spring* is often heard as a concert work, its *raison d'être* is as a dramatic narrative. Again the genesis of the work is debatable. Stravinsky on the matter of the work in a dramatic form and on another occasion it was from his affinities with his native Russia.

²⁰ A work very recently discovered in Moscow was composed soon after the death of Rimsky and contains some instances, the musical ideas of *Firebird*.

²¹ See *Stravinsky and the Russian Tradition* by Richard Taruskin in which it is claimed that Stravinsky in *The Rite of Spring* as well as deriding Bartok for his overuse of folklore material. (Referenced in *The Rite of Spring* by Peter Hill, CUP, page 12).

²² The harmony of *The Rite of Spring* has been much discussed by musicologists and notably by the *Organisation of The Rite of Spring*, Yale U. P. ISBN 0-300-022-01-8 which, luckily, is beyond the level of students. The essential point, however, is to recognise that it can be shown that the harmonic structure is similar to other tonal music. Stravinsky himself once said, however, that 'I have no ear to guide me' (quoted in *The Rite of Spring* by Peter Hill, CUP, page 12). As with other 'quotations' well to treat such pronouncements with care and using one's ear as a guide is not unusual for a composer. The work also draws on conceptual and aesthetic judgements as well as technique.

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*A ballet unfolded, consisting of a single dance, danced to the point of exhaustion by a group of elders of fabulous age, desiccated almost to petrification*²³

An account later gives a similar story:

*I saw in imagination a solemn pagan rite: sage elders, seated in a circle, watched her death. They were sacrificing her to propitiate the god of Spring*²⁴

Dwelling on the veracity of such references is of no value other than that they reveal a story which has also deep cultural roots and even, in some interpretations, resonances which allude to the idea of the sacrifice of an individual for the survival of the community. The scenario is raw, harsh, gritty and tough, all of which adjectives can describe the music.

Dreams or no, Stravinsky was introduced to the anthropologist and artist Nicholas Roerich, who provided him with a full scenario in which the work is set as a prehistoric or pagan ritual. The original working title became *The Rite of Spring*²⁵ (*Vesna svyashchennaya* / *Весна священная*). In November 1910, Stravinsky met Roerich in the town of Talashkino, near Smolensk, and the work was to be in two parts. The first was called *The Kiss of the Earth* and was to include games associated with spring and include the sound of *dudki* or Spring pipes; ritual games ending with exhaustion; the dancing is interrupted by the entry of Wise Men to bring new life and warmth to the frozen earth.

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In the second part the maidens dance together and one is chosen 'by fate' to be sacrificed to spring, witnessed by the Wise Men. In production, the narrative is more detailed and the dance is always central.

As previously noted, Stravinsky worked at the piano when composing and, like Debussy, he prepared a short score (essentially as though for piano) before orchestrating. In 1911, for *The Rite of Spring*, Stravinsky happened to meet with Debussy and they both agreed to an arrangement with Debussy playing the lower parts.²⁶ Details in the orchestration were discussed with the conductor Pierre Monteux following an early rehearsal. The choreography was favoured by the impresario Sergei Diaghilev of the Russian Ballet, and, following its première took place at Théâtre des Champs-Élysées in Paris on 29th May 1913.

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²³ Op. cit. Hill, page 3

²⁴ Op. cit. Hill, page 3

²⁵ Some sources suggest *The Great Sacrifice*. Whatever the truth of the matter, each of the titles reflects the character and the dramatic formation of the work which eventually emerged.

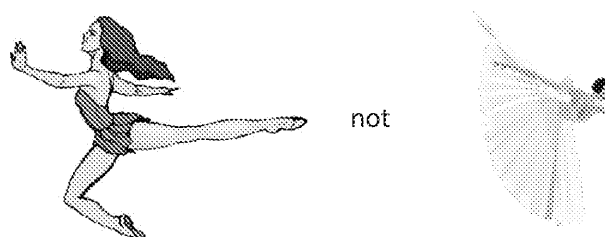
²⁶ The score is available and is a useful reference when studying the work.

However, the evening's performances began with Nijinsky and Karsavina dancing *Le Sylphides* with music by Chopin. The programme also included *La Spectre de la Polovtsian Dances*. These three additions in the programme would have appealed to patrons of the theatre who, socially or sociologically, held conservative tastes in it was formed by the more artistically conscious 'bohemian' set who were in physical contact with another in the theatre. The author, artist and film-maker Jean Cocteau was in the audience of his interpretation of the disturbance between the two factions which began as

... smart audience, in tails and tulle, diamonds and ospreys were interspersed with the aesthetic crowd. The latter would applaud novelty simply to show their own boxes... Innumerable shades of snobbery, super-snobbery and inverted snobbery, the audience played the role that was written for it²⁷

As the crowd's rowdy exchanges became more intense, Stravinsky left the auditorium to find the dancer had to shout the numbers to the dancers, who could no longer hear the music. It is unlikely that it was the music which had generated the ire of sections of the audience. The square choreography which followed the beautiful, curvaceous, traditionally balletic movements. At the same time it is also true that riots and conflict often arise from self-generated tensions. The antagonism in Paris at the time between certain strata of society that it was a 'rite' could be enacted.

Stravinsky was once asked to draw³⁰ a representation of his style, which consisted of sharp angles forming right angles, which in itself provides the contrast experienced by the audience expecting only the gentle curves of romantic ballet and ballet music.



The Rite of Spring is musically radical and almost caused social revolution albeit at the Théâtre des Champs-Élysées.

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²⁷ Op. cit. Hill, page 30. Opera still attracts different sections of society: those who go for the opera for the currency it provides (Glyndebourne, for example, where dressing up and having a nice picnic is part of the experience). To appreciate the differences in ballet styles you should view the docudrama on *The Rite of Spring* (which is slightly racy in parts). The representation of the early rehearsals is plausible and the first performance is an entertaining 'must' for any student of the work and gives a welcome change from work in historical context.

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²⁹ Op. cit. Tarushkin

³⁰ *Stravinsky in Conversation with Robert Craft*, page 121 (for the diagram), Pelican by Penguin, 1974.

The Scenario and Narrative

The narrative of the work is not complex and is told through a series of balletic tableaux in theatre, where the large gesture is often more communicative than subtleties. The

Part One

Adoration of the Earth

- **Introduction** – Orchestral introduction featuring the spring pipe sound or *dudki*

The introductory section in *The Rite of Spring* was originally entitled 'Dudki'. The name refers to folk pipes which the young Stravinsky probably would have heard during the folk celebrations in Ukraine. Made from wood or bone, *dudki* become almost synonymous with the coming of spring.

Stravinsky's music connects with the rituals of culture, whether the *Shrovetide Fair* in Petrouschka or the liturgies of the *Orthodox Church*.



A double dudki pictured in Belarus

Courtesy of <http://www.belarusguide.com/culture1/music/instruments/>

- **The Augurs of Spring / Dance of the Young Girls** – Representation of the coming of spring. An Old Woman enters and foretells the future
- **Ritual of Abduction** – The Girls group from the hills by the river and begin the dance
- **Spring Rounds** – The Girls dance the *khorovod*
- **Ritual of the Rival Tribes** – The dancers/characters divide into two rival groups, leading to a dramatic conflict³¹
- **Procession of the Sage** (sometimes Procession of the Oldest and Wisest One) – A processional appears and leading Sage blesses/kisses the earth (a reference to the resonance of Russian Orthodox ceremonial)
- **A Kiss of the Earth** (the Oldest and Wisest One / Adoration de la Terre (Le Sage))
- **Dance of the Earth (Danse de la Terre)** – A furious and passionate dance representing the earth as a holy relationship

Part Two

The Sacrifice

- **Introduction** – A slow orchestral introduction
- **Mystic Circles of the Young Girls** – Circle dances representing a mystical union
- **Glorification of the Chosen One** – The dancers rotate several times and twice singled out as though by fate; once chosen, the girl is celebrated in a martial dance
- **Evocation of the Ancestors** – The girls evoke or summon up the ancestors and their actions and those of tribal traditions as a form of vindication
- **Ritual Action of the Ancestors** – The girl chosen by the tribe is given over to the ancestors
- **Sacrificial Dance** – The chosen girl dances before the assembled tribe until she dies



Note: You should now buy a ticket to see a production of *The Rite of Spring*.

Failing that, follow this link to a performance of Nijinsky's 1913 choreography of the fuss was about!

https://www.youtube.com/watch?v=4coES_ei4PU

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³¹ Not unlike what was happening in the auditorium.

Analytical Commentary

Stravinsky The Early Ballet Scores Track 6. Duration: 03:42 Low
Orchestra conducted by Gennadi Rozhdestvensky, Nimbus NI5

Preliminary Notes on Sources:

As mentioned above, the recent research by Robert Craft, Lawrence Morton and clearly the sources from folklore absorbed into the melodic content of Stravinsky traces five melodies that Stravinsky uses taken from a collection of 1,785 Lithuanian *Juskiewicz Anthology*. Moreover, those melodies are closely linked to the kind of *Rite of Spring* celebrates and on which Roerich based his scenario. So, the influence is more general cultural influence.

However, Stravinsky's use of the past is not merely slavish but is more a quest for melodic contours and using of existing characteristic intervals within the material narrow pitch range of folk melodies.³² Importantly, the folk elements interfere of the early twentieth century.³³

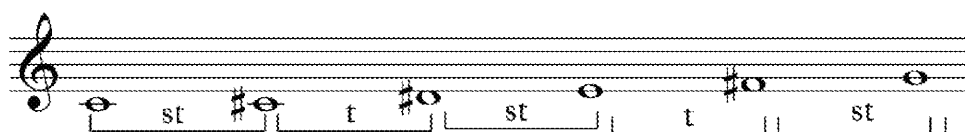
Preliminary Notes on Harmony:

Interpretations of the harmony of *The Rite of Spring* range from 'noise' (Dent, on relationship of 'pitch class sets'³⁴ (Lane) or as 'tonal chords in dissonant conjunction'. In this present guide, the approach will be more sympathetic to the latter type, which also of the octatonic scale.

Octatonic Scale:

The harmony of *The Rite of Spring* as well as Stravinsky's style generally is described. Some chord formations may be explained as **diatonic combinations**,³⁶ others as well as **pandiatonic clusters**.³⁸ However, an important link to all of these is the **octatonic** which alternates tones and semitones. That being the case, it can be understood in minor modes of the diatonic system, just as the melodic minor scale can be understood in harmonic minor scale and the Aeolian mode.

Octatonic Scale on C



³² For the complete picture see R. Craft, *Stravinsky*, pages 40–45

³³ As also in P. Morton, *Stravinsky*

³⁴ The idea of 'pitch class set' is borrowed by musical analysts from mathematics. It was discussed first by a mathematician. It is not an idea which is explored here as it is not very relevant other than a group of notes or pitches treated as a unitary musical object but not necessarily in a particular context.

³⁵ The phrase describes the use of common triadic chords which do not have a close tonal connection with a C major with an F sharp major triad. In simple terms, the scale of C has no notes in common with it, understand as being 'distant' from it, i.e. without any strong tonal relationship or attraction.

³⁶ Combinations of diatonic chords in diatonic relationships. For instance, a C major triad combined with an F major triad without chromatic or semitonal links and so is diatonic.

³⁷ The whole-tone scale consists of intervals of a tone only. Any chords created from those tones are whole-tone chords.

³⁸ The term 'pandiatonic' was coined by the musician Nicolas Slonimsky and refers to the use of chords without the traditional regard for their resolutions or doublings.

³⁹ Rimsky-Korsakoff, Stravinsky's teacher, was somewhat obsessed with the properties of the octatonic scale.

The octatonic scale can be derived in various ways. For instance, combining two scales a tritone apart produces the notes of that scale.

D of first tetrachord is a tritone distant from G#

octatonic scale

The octatonic scale may also derive from two triads separated also by a tritone. The score for Ballet Russe, *Petrouschka*, the piano has an *arpeggio* figure entirely of a C major triad overlapped with an F# major triad. Similar tritone relationships of *Spring*.

Two major triads a tritone apart

octatonic scale (incomplete)

The octatonic scale can also be derived from diminished 7th chords overlapped at

dim. 7th transposed up semitone enharmonic

octatonic scale

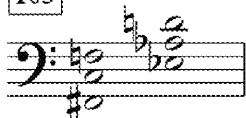
Despite the prevalence of octatonic elements in the score, Stravinsky did not employ exclusively, but musically. The form intermingled with diatonic, modal or decorative a musical ear and intention. Other diatonic formations also occur, such as quartiles much a feature of the modern period. In the 11th bar at RM 103 of the score, the quartile chord which is enharmonically a minor 3rd apart (that interval being six tritone and diminished 7th chords).⁴¹

Quartile harmony is built from superimposed 4^{ths} which may include augmented (Triadic harmony is built from 3^{rds}, as formulated by Rameau.)

⁴⁰ A tetrachord is four notes within a scale spanning the interval of a perfect 4th. In the minor scale it includes A, B, C and D, and the second E, F, G# and A even though, technically, the scale ends on the

⁴¹ A diminished triad (for example, formed from A-C-Eb) is formed from minor 3^{rds}; the outer interval diminished 7th chord continues the pattern of minor 3^{rds}.

103



Notice that the tritone appears in the lower two notes of the two of the second tri-chord forming a combination of dissonant fourths and the diminished octaves forming altogether a full octave only by the low register.

As demonstrated by the musicologist Pieter C van den Toorn,⁴² a characteristic of Stravinsky's music is the use of octatonic intervals. The melody in *The Ritual of the Rival Tribes* RM 64, for example, features. The melody is clearly from a folk source and uses only tones and semitones within a narrow tessitura of a perfect fourth, D, to G'.

64 Vln

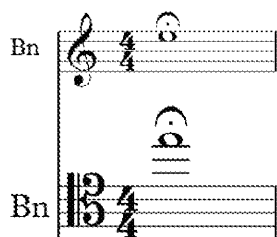


Another way of looking at this is to see the melody as a fragment of a Dorian mode, which detracts from the octatonic interval set, but reinforces the view of Stravinsky's eclecticism.

Part One: ADORATION OF THE EARTH

Introduction

Any impression that Stravinsky was concerned entirely with harmony, the octatonic corrected once the first notes of the work are heard. It begins in the high register almost unheard of in 1913 and it indicates Stravinsky's often original orchestration effects. The highest (practical) note for the bassoon is an E as shown:



Stravinsky begins his work on the C just below and also on the D above in the second bar as well as continually returning.

Lento

solo ad lib.



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⁴² Stravinsky and *The Rite of Spring*, Oxford U P, 1987.

This melody contains a number of characteristics of the composer's style through notable not only for its harmonic boldness but also for its rhythmic character, as bars, the flexibility of rhythm, changes of time signature and use of triplets within a balance of rhythmic character compared with the aggressive motor rhythms heard. The melody is decorated always between the B and the C emphasising the semitone, and on itself and the narrow tessitura are consistent features of Stravinsky's melodic leads always to the same note, A, and the melody is left to hang at the inconclusive.

Poetically, here is the *dudki* piping for the spring and an evocation of an ancient connections with nature through animalistic sounds and birdsong. Technically, the which becomes a source of a multitude of motifs from which is woven a complex woodwinds. The bassoon solo emphasises a minor triad and a semitone figure and a semitone figure heard initially in the horns from the second bar. The chromatic clarinets (in A [La], piccolo in D and bass clarinet in B \flat), the clarinet in A moving down an octave below; the B \flat instrument falls in the same interval from an A \flat to a smaller instrument in D spans a perfect 5 $^{\text{th}}$ (F \sharp down to B). The bassoon melody in the initial triplets from the first bar sustains an A from RM 2. Its rising 5 $^{\text{th}}$ becomes from RM 2 to 3, and its motif is **pentatonic** and as such also exemplifies Stravinsky's style.

cor ang. solo
p espress.

Within the first six bars different scale forms have been drawn together including scale and a pentatonic fragment often in conjunction harmonically in 4 $^{\text{th}}$. At RM remains formed from the last beat of bar 2 and the first quintuplet figure from bar of foreshortening of the principal melody. As the double bars in the score indicate completed, being further marked by the change of tempo (*Più mosso*) at RM 3+1.

In the following section, the cor anglais continues its pentatonic line accompanied distinctly different melody, it also has connections with the bassoon's by means of notes and its rotating contour. The bassoon trio is chromatic and derived from a bar 14 on the second triplet quaver on beat two, the quartile chord structure is of

cor anglais
bn trio

Chords in 4 $^{\text{th}}$ form the basis for the melodic lines.

The notes in the completion combination of score.

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Although the music feels quite static due in part to the frequent rotation of the scales and orders and the absence of strong harmonic movement, it also shows a line of development off from RM 4.

'Development' does not mean the same as in Classical works but is more about us derived from the initial bassoon melody, and forming them into new relationships. A sustained note taken from bar 3 is transformed into the monotonal figure heard in bar 4, underpinned a 4th below by the trilling A clarinet's G# and a sustained E major chord. The clarinet plays a form of the chromatic line from the first four bars and the repeated eighth notes of the violins and violas suggests an intimation of the rhythmic drive to be heard later. The melody derives from the end of the solo bassoon melody growing expansively outwards in the presence of alternating tones and semitones within the different strands and the D#s contributes to the overall octatonic harmonic field. Another figure which is heard at RM 4+1 low in the bass clarinet. At the beginning of RM 5, the chromatic line begins to be taken up in the flutes imitating by a semitone, albeit briefly.

As with the bassoon solo, the style is melodically rotational with imitation following. The content remains very limited and pentatonic save for the rising augmented 4th at the end of the Development of the solo melody is almost in reverse: each time it is interrupted by a semitone such that it seems to dissolve itself into a new set of motifs which are then structured. Unlike following the classical model, Stravinsky has reversed the process, moving from motif to melody.

Another part of the mosaic is the horn's alternating semitone figure over a major triad which derives from the very opening horn part at bar 2 as well as being an intimation of the *Dances of the Young Girls*.

The monotonal figure which entered at RM 4 occurs also one bar before RM 5, then on an F# (minor 3rds from the original entry on a D#), at RM7 as a Bb (A#), and on flute starting on Eb is overlapped by the high G#, and in both cases the rhythm has been changed. The monotonal figure derives from the same pentatonic note set as is in play in the solo bassoon and D (C) sharps. The *pizzicato* bass figure at RM 4 is also taken from the same note set.

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The pentatonic group is contradicted in the horn passage above and in the oboe beginning at RM 5 and especially by way of the E# (F in horns). At RM 6+3, flutes of chords including triads and in frequent conjunct motion, the upper part being melody and the lower parts from the chromatic complement. Both parts, typical

RM 6+3

Tonally, the passage begins in a dissonant quartile chord and thereafter combines minor ($\frac{6}{4}$) together with the open 5th E+B with an F# which appears at the over the A (dominant) pedal trill in the violins. The trilled pedal has also been heard in the clarinet. As the orchestral texture becomes busier, with each individual drawn together, the texture is interrupted as at bar RM 7+3 for a fragment on the is just enough to introduce a degree of coherence. Structural coherence is also at pedals, as at RM 8 where the solo bass has a six-bar B \flat (A#) followed by further from which is the high piccolo clarinet's rising 4ths repeated three times over several of certain expectations. The orchestration ensures that this high clarion call is fully idea in the long repeating passage from RM 11 to RM 12.

RM 9+2

solo
clar. picc.

At RM 10, which is like a mosaic of melodic ideas previously heard, is a sustained an offbeat triplet *ostinato* on *pizzicato* basses acting as another pedal point, but before. The orchestration and texture at RM 11 are reminiscent of Stravinsky's *Petrouschka*, and incorporate rapid flurries of harmonics distributed between divided 7th chord of F (C⁷).

Characteristically, the music which is in full flow suddenly ceases at RM 12. The is a semitone lower than initially. The violin is set up a three-note *ostinato* figure with pedal and figurations on clarinet and bass clarinet; a further *caesura*, or moment analysed as a type of bitonal chord such as appears in *Petrouschka*. The chord is written enharmonically as C natural) plus the major 3rd from the F# major chord (a colouristic rather than anything harmonic. The chord has a clear tritonal reflected in the subsequent bar on beat three.

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The clarinet essential chord in

RM 12+6-7

poco rall..

clarinets

poco rall..

This chord may be understood as a combination of C and F sharp major illustrating the frequent use of the tritone relationship in the work overall

violas

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Bass clar.
8va

The low G flat is an enharmonic F sharp whose sheer distance from the sounding chord makes it non-functional harmonically even though theoretically functional

Above this, the three-note *ostinato* figure repeats, completing the transition to the

The Augurs Of Spring

Dances Of The Young Girls (representation of the coming of spring woman enters and foretells the future)

From RM 13 begins a passage from which Nijinsky must have conceived his angular which caused the stir in the theatre. The chord is highly dissonant, played with so forceful punctuations from no fewer than eight horns! Although the rhythm is in unpredictable accents which are emphasised by the horn chords. Stravinsky marks 'exactly' with no deviations. Harmonically, the chord is a composite of an $F\sharp$ major dominant seventh on $E\flat$.

RM 13

Tempo giusto

$\text{♩} = 50$

The musical score for 'The Augurs Of Spring' (Dances Of The Young Girls) begins at RM 13. The tempo is marked 'Tempo giusto' with a quarter note equal to 50 beats per minute. The score shows a highly dissonant chord in the horns (labeled 'f sempre') and a rhythmic pattern in the strings (labeled 'f'). The strings play a series of eighth notes in a descending pattern. The horns play a series of chords, with the first chord being a composite of an $F\sharp$ major dominant seventh on $E\flat$.

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Tonally, the dominant 7th is pulling towards B \flat which forms a tritonal relationship (enharmonically E major); on the other hand, the harmony may be understood as a combination with a particular tonal colour. Although largely new, similar combining piano works by Stravinsky's compatriot, Alexander Scriabin.

At RM 14, the texture changes along with the harmonies which are, however, for The chords are broken into a pattern familiar to *Symphony of Psalms* and *Petroushka* arpeggio figure on C major and E minor; in parallel, the violoncellos trace E major anglais plays the *ostinato* previously written in semiquavers (as first heard in viol quavers in the new tempo. The triads are brought into close contradiction by the bassoons against the quaver movement in the cellos which creates false relations with the dissonance arising from the contiguity of C and B \flat . However, the pitch set the same octatonic group as RM 13 but with the addition of the C which completes

RM 14

Cor ang. solo

Bns

Cellos (pizz)

The musical score for RM 14 is in 2/4 time and B-flat major. It features three staves: Cor ang. solo (top), Bns (middle), and Cellos (pizz) (bottom). The Cor ang. solo part consists of a series of eighth notes. The Bns part consists of a series of eighth notes. The Cellos (pizz) part consists of a series of eighth notes.

As the harmonic *ostinato* unrelentingly repeats, two new ideas are superimposed followed by a version of the earlier monotone idea which trails off into a version of descending figure.

RM 15

(A)

(B)

(C)

Strings

The musical score for RM 15 is in 2/4 time and B-flat major. It features four staves: (A) (top), (B) (middle), (C) (bottom), and Strings (bottom). The (A) part consists of a series of eighth notes. The (B) part consists of a series of eighth notes. The (C) part consists of a series of eighth notes. The Strings part consists of a series of eighth notes.

At figure (A), octaves combine with perfect 5ths in contrary motion and completely chords below and the subsequent G \sharp and C \sharp also dissonant against the G \flat octave

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Figure (B) is on solo trumpet and oboe (having similar timbre): the oboe is foreshortened, arrested incomplete on its G \flat ; the oboes imitate and also stop short on the G \flat unit at (D) by closing on the F \flat consonant with the lower chord and repetition of the tr

These bars provide a condensed example of Stravinsky's melodic technique showing notes in different metrical positions, drawing them together only to be dissolved

The next section to RM 18 is integrated by a pedal on C initiated by the bassoon's reiterated on the oboes. The brief motif first heard at two bars before RM 4 recurred on cellos and basses at RM 16.

The figure built on 5^{ths} is transposed at the 5th (A \flat to E \flat enharmonic) as well as being rhythmically augmented and given a new disguise



The figure is developed again on clarinets three bars after RM 16: here, the broken figure is fused in vertical formation creating a harmonic version. It is as though the music is viewed from different viewpoints simultaneously in a way which is comparable to the style of Picasso and Braque at the same time as *The Rite of Spring*.



Violin and Viola

While the figure based on fifths has come into focus, the remaining texture is defined by combinations within the mosaic including the simpler figuration in violas from RM 16

At RM 18, the driving harmonic motion resumes but this time round it is the more in bassoons. The figure is a concluding fragment derived from the folk melody with a descending briefly octatonic like the consequent phrase four bars before



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Following the pause at the double bar, tonally on D but with conflicting F# and F, of descending minor 3rds and perfect 4ths, the familiar pentatonic *ostinato* and a trill. RM 14 makes an entrance at RM 23+1 until a change in the underlying *ostinato* is shown (derived from the folk source) on solo horn. The new underlying texture is shown with one feature being the sustained C₂ in violins as a memory of the earlier oboe's C₂. The nature of the different elements Stravinsky combines within the mosaic, the use of which provide tonal coherence.

Vln soli

p subito

Alternating semitone figure derived from horn solo

Ostinato derived from RM 12+3

p subito

Ostinato pedal on C in fourths and appoggiature G rising to the A natural to form a second inversion of F major although not functionally

The close dissonance is very marked with the pedal C conflicting with the D₂ and conflicting with the D₂ at a tritone, the A₂ with the B₂ and the E₂ (also related to the trill conflicting with the B₂, also tritonally, and the underlying perfect 4th of the C₂ continues over 28 bars counted from the first violin's entry, then supports a diatonic horn marked *mais en dehors* ('prominently' / 'more open' / 'more open air') indicating prominence.

RM 25

(mais en dehors)
solo

mp

The melody has Dorian characteristics (G–F⁺ + B₂ in the third degree of the mode) in its relationship with its surroundings.

The consequent phrase is in a solo flute and also cadences to the G.

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NB The Melody moves in 4^{ths} and 5^{ths} ... and minor 3^{rds}

Fl.

Hn

... and octatonic tones and s

The image shows a musical score for two instruments, Flute (Fl.) and Horn (Hn), in 2/4 time, key of B-flat major. The Flute part is written on a treble clef staff and features a melody with intervals of 4ths and 5ths, and a minor 3rd. The Horn part is written on a treble clef staff and features octatonic tones and semitones. The score is divided into two systems. The first system contains the first two measures of the Flute part and the first measure of the Horn part. The second system contains the next two measures of the Flute part and the next two measures of the Horn part. The Flute part is marked with a 'NB' (Note Bene) and a box indicating that the melody moves in 4ths and 5ths, and a minor 3rd. The Horn part is marked with a box indicating that it features octatonic tones and semitones.

RM 26 draws together the monotone with *accacciaturas* and the chromatic tail from RM 15+1) which also has a connection with the descending chromatic line heard in the Stravinsky's technique is about joining different parts together in changing relationships in the artwork.

The undulating figure of C and A above is doubled at the 4th above by clarinets (but the melody is not supposed to start on E♭ but with rhythmic truncation). The principal busy orchestration from RM 28, the upper flutes playing the first notes of each group, emphasizes there. Combining with that repetition, the upper clarinets repeat a series that derive from the consequent of the principal melody, at least in general contour. It has a strong cadential character towards D♭ by way of the diminished 5th and the C which is not. However, as always, the surrounding tonality is not as clear-cut as it suggests as the piece is at a major 2nd with a double pedal formed from the bass clarinet's low B♭ couplet (minor 3rd, in essence).

RM 28

Tr.
Bns

mf tr

The chords have those voices move in the same direction or, in other words, with each other. The chords might be called 'parallel organum'.

The *ostinato* pattern of 5ths is given an edge by the doubling of the timpani.

Once fired up, the music drives forward propelled by the power of repetition. The repeats, rotating different motifs within it; but the most prominent new event is the melody presented in four-part parallel harmony on trumpet. The scale is octatonic

Tpts

mobile

Without completing its anticipated second repetition, the trumpet melody cuts off after two bars of a lighter timbre and texture mainly in the strings, with the remnant of the clarinets and *pizzicato* violas. The **deconstruction technique** applies throughout the movement which is now also marked by the removed E \flat key signature. The idea is that, what was first heard as a complete idea, is now being heard in term of its several explorations of Cubism seem to be reflected in Stravinsky's mannerisms.

At RM 31, the first melody is heard only with its first two bars:

RM 31
Fl. picc.
Ob.+c. ang.
solo
mf *grazioso*

The bars are separated by the ongoing *ostinato* combination and then the second

RM 31+4

Thereafter, just the opening motif is used, having been turned into an additional

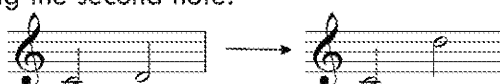
RM 32
Fl. picc.
Ob.+c. ang.
solo

The strings from RM 31 are reflecting the chording of the woodwind but in a contrapuntal way, providing another *ostinato* layer. The horns, however, play an angular version of the motif but this time with **octave displacements**.

RM 31
French horns
Bassoons
sf
8^{vb}

Octave Displacement

Suppose you have the notes C, D, E, F and G played in succession; then in the scale order but making the D and F an octave higher, they will have the same pitch but an octave higher. The technique is simple but injects a degree of variation into a melody. In RM 31, what would be a simple chromatic scale descending from the A \flat becomes a descending scale through octave displacement of G, and F \sharp . Octave displacement creates a 2nd becomes a 9th by displacing the second note.



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The horn's displaced line is taken up in the cellos at RM 32 and later reinforced by the final section is harmonically static rocking to and fro two dissonant chords given by the horns. As the horns enter the fray, an octatonic scale passage begins which later features septuplet figures originating from the chromatic descent heard in the *Introduction* reduction of the principal parts from RM 32:

RM 32

ww.

hns

vlns

vlas

vcs

The mosaic-like combination of elements already heard is very clear. The alternating harmonies primarily in the horns comprise a minor 7th (added 6th) followed by a dominant 7th (of C). The harmonies are duplicated by the upper strings as a rhythmic figure and only on the minor 7th. The violas trace a scale beginning octatonically, doubling in 3rds at the second bar, while the cellos imitate the contour of the previously angular horn melody but still with notes from the prevailing scale. Similarly, the upper melody at RM 33 is duplicated as a variant in semiquavers in the divided violins where the upper division plays harmonics while the lower violins play a simple rhythmic variation.

Activity

Using instruments, construct the layer, to hear (Improvising would be a good idea) yourself with

RM 33

Vlns

The movement closes on the minor 7th chord which just hangs unresolved but on the next movement or tableau takes over immediately.

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Ritual Of Abduction

(The Girls group together from the hills by the river and begin their dance)

The entire movement is infused with a single melodic line but the first five bars are a series of harmonic combinations. Presented by trumpets and horns, the harmonies combine the notes of the C major triad. Additionally, the sustained 3rd (A# and C#) suggests an F# major at the end of the first beat out their F#s in bars 2 and 3.

RM 37

The musical score for 'Ritual Of Abduction' (RM 37) features four staves: Violins (Vlns), Trumpets (Tpts), Violas (Vlas), and Timpani (Timps). The Vlns staff shows a melodic line with eighth notes. The Tpts staff shows a series of chords. The Vlas staff shows a series of chords. The Timps staff shows a series of chords. The score includes a watermark 'INSPECTION COPY' and a 'Zig Zag Education' logo.

The roots of the three harmonies trace a diminished triad linking the overall harmonic collection.⁴³ The timpani F#s follow a C, forming the tritone interval which outlines the diminished triad. In bar 38, the music cadences to A \flat 7 and B7 which form a similarly octatonic and symmetrical collection. The violins injects further dissonance by way of the major 7th (D#) and the C#s.

The musical notation shows two diminished triads outlined. The first triad is in the key of C major (C, E \flat , G \flat). The second triad is in the key of F# major (F#, A#, C#). The notation includes a watermark 'INSPECTION COPY' and a 'Zig Zag Education' logo.

Diminished triads outlined

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⁴³ Remember that the octatonic scale comprises alternating tones and semitones which form both a diminished triad and an augmented triad.

Interpreted with a different emphasis, the harmonies can be understood as simply producing a **pandiatonic** result. Similarly, the melody entering in bar 3 has little to do around it. However, whether by luck or design, the melody begins on A which connects $E\flat-F\sharp-A$ providing a degree of connection.

RM 37 +2 Fls+clar. picc.

ff

While having a relationship to the prevailing octatonic or diminished harmonies, the melody is in the Dorian mode on A.

Dorian Mode on A
(G do)

The music rises through G# major ($A\flat$) and descends in a flurry of chromatic tuplets, a hunting figure in 5th the underlying harmony being $E\flat^7$, as at the beginning. The melody is then taken up antiphonally by the Dorian melody which has been transposed up a semitone to B.

RM 40

Fls+ picc. 8^{va}

Hns. soli

The harmonic relationships continue through the rising sequence starting at RM 41.

RM 43 is a colossal horn call, this presentation based on the last segment of the Dorian mode around itself in the manner typical of Stravinsky's melodic style, as previously noted. The melody, although changing from 6_8 , to 7_8 , to 3_4 , 6_8 , 2_4 etc., delivers a pattern of notes. The climactic section continues up to RM 44 where the horn call repeats transposed 4th (down a 5th). Underlying it is a harmonic outline of F^7 and so in dissonant relation to the underlying $E\flat$ of dovetailed diminished 7ths is cut through with horn's final rising 5th ($E\flat-B\flat$) before the timpani. A short 3_8 bar separates the subsequent repetition of the Dorian melody.

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It is now heard in alternating metres beginning in $\frac{5}{8}$ and scored for woodwind with

RM 46

ww+trpts

Timps. *sff*

vcl. c.b. *f*

sff

From RM 47+1, the strings take up the melody but present it in the manner of the version; the $\frac{3}{8}$ caesuras in the previous section are alluded to but now as full chord quaver. A similar technique is apparent in the example above (RM 46) where, by F to B \flat , the melody is changed metrically by being 'moved' by rhythmic displacement. Violas have a sustained inner pedal on C from RM 47+1 underpinning the cellos which outline intervals of 4^{ths}; the $\frac{5}{8}$ bar is another chord form

Full chord form of the

Reduced to its component triads...

Reduced to

In the lower parts, the chord is a diminished triad and in the upper parts the chord is common to both is the viola's pedal note of C which provides an aural link to the chord further by removing the C, the harmony basically comprises two minor 3rd provides a further link with the octatonic scale. Although the chord can be reduced, actual distribution together with the orchestration are very significant factors in an analysis should not be used to overlook. Stravinsky is particularly attentive to distributed or spaced since, for example, a very wide spacing of nominally dissonant the dissonance; a dissonance orchestrated on loud brass instruments may sound in woodwinds.⁴⁴

The climactic conclusion of *Ritual of Abduction* focuses the tritonal relationship as evident throughout the first three tableaux as well as the entire work. The C major parts mainly in the strings; their trill oscillates between E and E \flat but ends on an E \flat by the E \flat on the final flute trill which is coupled with the 5th below (A \flat). The root tuba and bassoons and is tritonally conflicted by the prominent F#s on horns. The triad formed as the flutes fall to their E \flat trill which also acts as a bridge to *Spring*

The chord is this:

F# dim. + F minor⁷

C is common note

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⁴⁴ I recommend looking at the opening chord of Stravinsky's *Symphony of Psalms* where the orchestra is significant and provide an illustration of the point being made.

⁴⁵ This and the remainder of the work are not set for detailed study although it is necessary to be aware of your A Level course.

Note on Rhythm:

However Stravinsky's harmony and melody might be analysed or explained, it is the rhythm which has the most impact. While Stravinsky expanded the harmonic palette into a modernist idiom, he also innovated in terms of rhythm. Sometimes, rhythm is motoric; at other times, it is subtle, flexible and fluid. Some critics have suggested the orchestra of *The Rite of Spring* as one large percussion instrument.

The opening bars well illustrate the fluidity and flexibility of slow tempo rhythm. The first phrase forestalls the establishment of a clear pulse and the melodic phrase displaces a strong sense of bar lines as written. The second phrase of the opening the first beat with the change to triple time in the second bar but has no suggestion of a new bar; the use of a quintuplet in bar 3 and the triplet within a triplet in the fourth bar illustrates the flexibility of the melody line. Such flexibility is then contrasted by the regular triplet in bar 5 contrast the continuation of the opening phrase.

In the horizontal plane – as at the beginning – rhythmic and metrical change are often clear. In the vertical plane, the rhythm may be quite regular as in RM 6+4–9 (p. 3 of full score) where the arrangement is **homophonic** and **homorhythmic**; in other places, the vertical plane is **polyrhythmic**, as in, for example, RM 5–RM 6 and RM 11–RM 12.

RM 6

The musical score for RM 6, measures 6-9, is in 2/4 time. It features three staves: Flute (Fl.), Cor Anglais (Cor ang.), and B. Clarinet (B. clar.). The Flute part has a melodic line with triplets and a quintuplet. The Cor Anglais part has a rhythmic pattern with triplets. The B. Clarinet part has a rhythmic pattern with a quintuplet. The score illustrates complex layers of polyrhythm.

There are many passages like the above which show complex layers of polyrhythm.

Contrasting with such textures are those passages which are resolutely vertical in their motor rhythmic figures but often with accents unpredictably placed which disturb the metre. The clearest instance is the *ostinato* pattern at the start of *The Augurs of Spring*, a down bow marking and *Tempo giusto* characterised by a simple quaver figure which is repeated every second or fourth quavers or sometimes eighth notes. Wherever they occur, they are played by eight horns. Contrasting the motoric figure of such a passage is the intervening regular quaver *arpeggios* and the quaver patterns. Such passages also illustrate the use of multiple *ostinatos*.

Stravinsky's use of accents within otherwise regular rhythms disrupts the natural pulse. In places, the pulse changes frequently. In *The Ritual of Abduction* at RM 43, 6_8 gives way to 7_8 , 3_4 , 6_8 , 2_4 , 6_8 , 3_4 . Such metrical changes are often closely linked with melodic changes. From RM 25 discussed above; similarly, the moving of the stress given to particular notes is a feature of the passage which begins at RM 43. The section begins in 6_8 where the stress changes in the following 7_8 bar where the stresses are on both of those notes which had been weak within the 6_8 bars. Rhythm becomes important to the technique of the passage that does not include a wide range of pitches.

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Another example of rhythmical development of melody is in the treatment of the bars before RM 38. The pattern at the presentation is in 9_8 as follows.

The development occurs through a technique which involves the repositioning of notes. At *X*, the first statement of the rising perfect 4th begins on a weak quaver in the second half of the first stress of the 5_8 bar when it recurs at RM 46; it also recurs at *P* where the stress is on the first half of the bar. The series of five notes at *Y* firstly fits into the 9_8 configuration but then, in transposition, it fits into the 5_8 configuration of five also without the 3+2 stressing of a normal 5_8 bar. At *Z* the rising 4th is inverted, the first four notes in the 4_8 bar being equally stressed, unlike in the original presentation where the first and third beats of the 9_8 bar. By using a limited set of notes and by rotating them at different intervals, Stravinsky is able to rotate his melodies and generate new forms. This kind of rotation is reflected in the rotation of entire sections within the work as well as the more frequent rotation of individual notes. The rotation of entire sections, as in a mosaic, can be thought of as macro development, while the rotation of individual notes of motivic development can be thought of as micro.

Associated with metrical manipulation is the use of silence. As well as repositioning notes, pitches may be placed or omitted either side of a rest, but that is a feature of Stravinsky's music which is more apparent in other movements of the work such as *The Glorification of the Virgin Mary*.

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Making Comparisons

Making Comparisons (A)

There are a number of aspects of similarity, particularly in timbre and rhythm, between the two works by Stravinsky.

The following game may help you to think about the links between the two works in terms of continuity and change from a historical perspective. Use the opportunity to discuss your observations and make a conscious effort to use relevant technical terminology.

On the following three pages is a set of prompt boxes and prompt questions each with a different feature.

Each person in the group selects a card to discuss, or the cards can be allocated individually to each person.

At the end of the session, the whole group should contribute to a short written summary of the game and conclude with a final discussion.

Muso Game

This game is designed to encourage discussion of the set works within a teaching session.

Since the separate subjects will inevitably recycle, the game will also require careful record keeping. Points will be in constant circulation which will aid retention of analytical points made during the game.

If possible, glue the game and counters to cardboard before playing.

The topics in starbursts are for A Level only but the rules allow them to be either used or ignored.

Rules:

1. Players take turns to throw dice and make moves through the game
2. Having landed on a topic, player must talk about it for one minute
3. The use of correct and appropriate terminology must be credited
4. After a minute, other players can add their comments
5. Responses should include references to the relevant scores
6. A Level students respond to any of the topics
7. AS students may choose to answer an A Level topic (in starburst) or to move to the next topic
8. Completing the game first does not indicate a winner
9. The role of the teacher is to assess the quality of the response and award a mark

The teacher will score responses as follows:

- Overall understanding of the question – 0–5
- Accuracy and appropriate use of terminology – 0–5
- Appropriateness of exemplification – 0–5
- Speed of response (Does it show your way round the scores?) – 0–5

Making Comparisons (B):

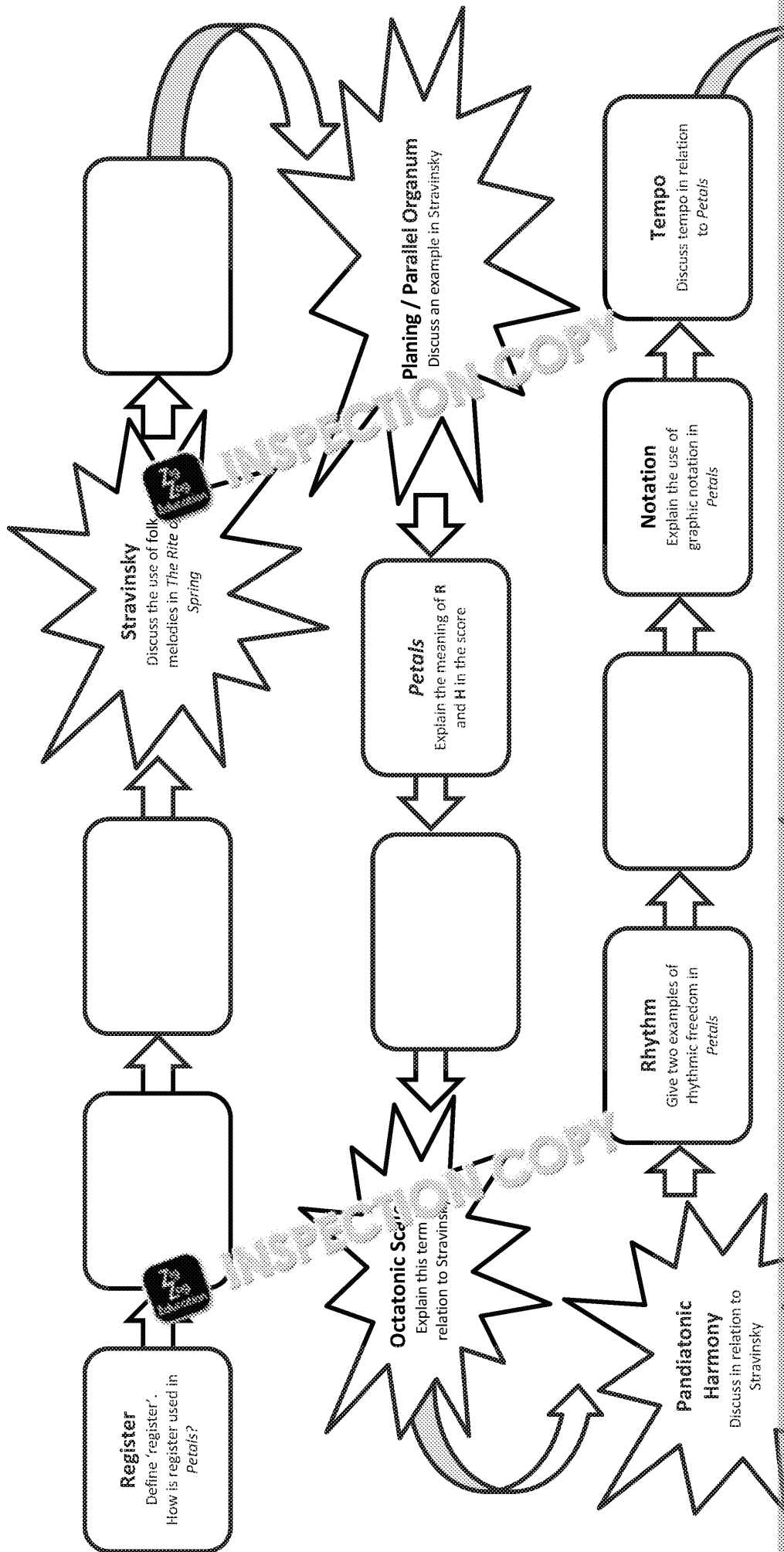
The Muso Game will help familiarisation with the various similarities and differences between the two works and their styles in general.

When asked to compare two styles or works, it can be useful to keep in mind basic elements (e.g. melody, harmony, rhythm, timbre, etc.) as main headings under which observations can be made. If you find you are struggling to find something to say, try focusing on the musical elements, which might just help you to find something by focusing on a specific element.

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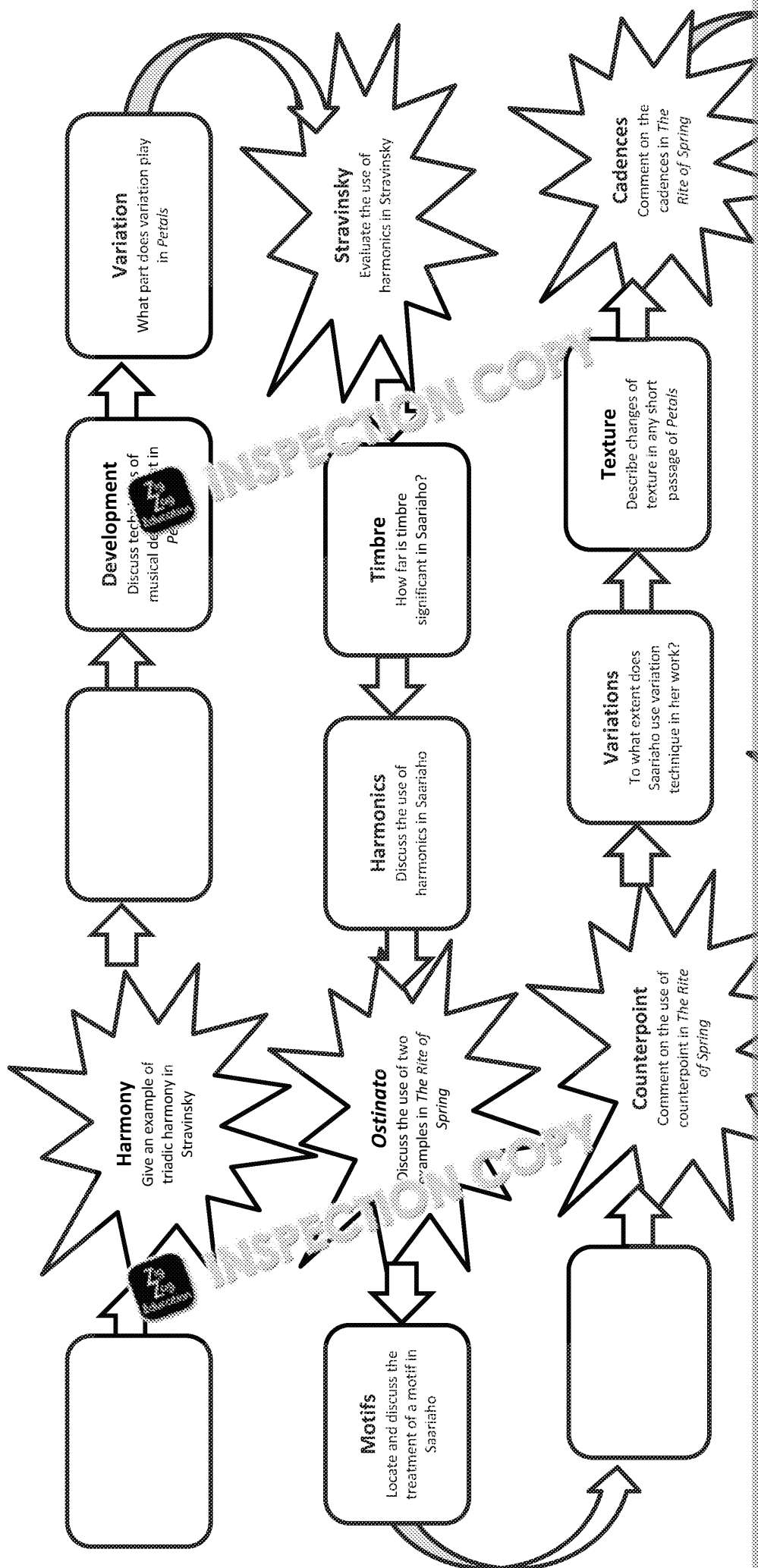




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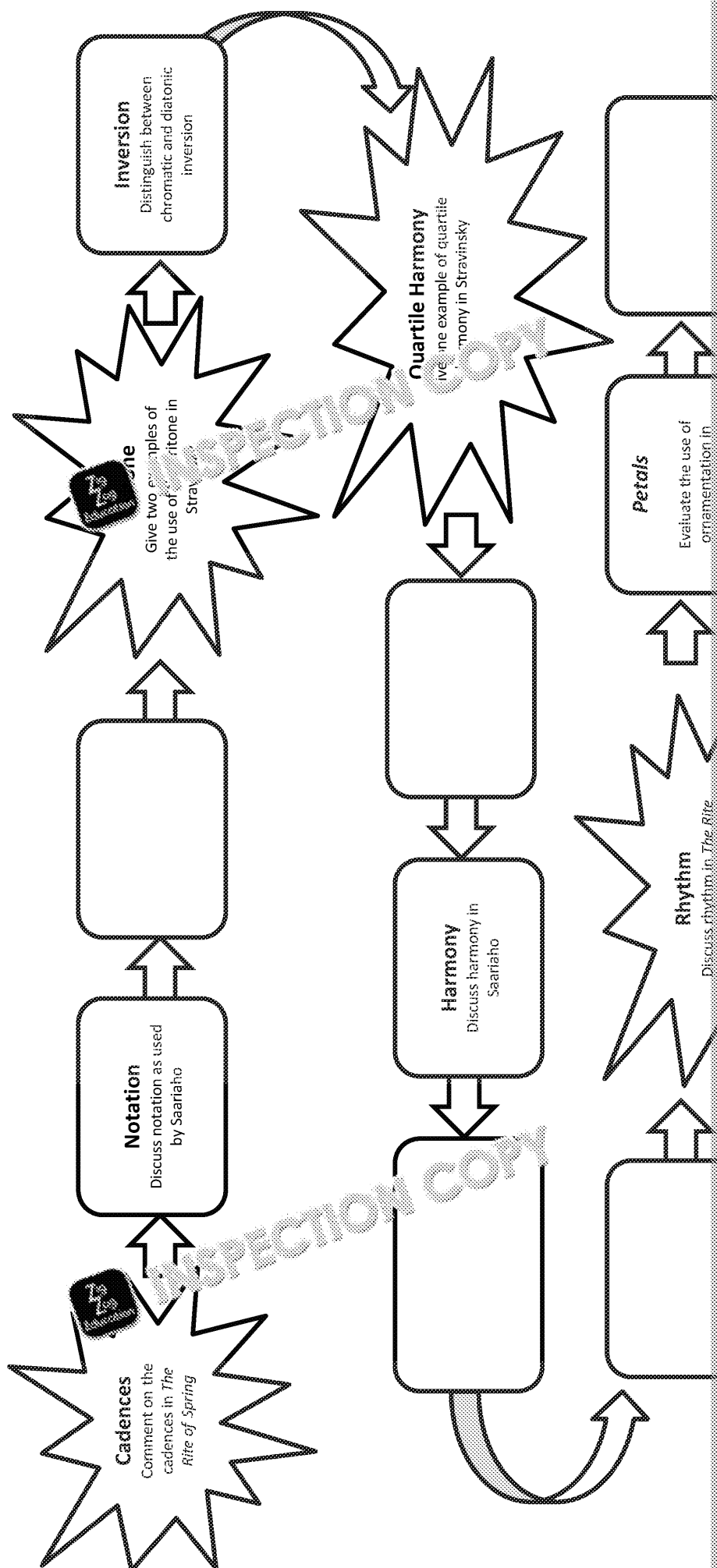




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Notes on the Examination: Set

Section A:

- **Advanced Subsidiary, Component 3: Appraising** is a written examination lasting 1 hour 15 minutes.
- You will work through a booklet known as a resource booklet.
- You will work with your individual CD player and examination CD which means many times you listen to the musical extracts relating to the questions.
- The total mark for the paper is 80.

NB Edexcel publishes its own instructions on the examination which should always be given here are based on the presentation as published by the examination board. The questions are framed to include certain 'command' terms which are key words, which will always be used.

The command words can be read in the Board's own specification documents but, for the purpose of this booklet, they are defined as follows:

- **Complete** – often relating to dictation questions which involve completion of a passage.
- **State, name and identify, list** – relating to the citation of particular points.
- **Explain** – relating often to what a particular effect of a musical event might be.
- **Compare** – relating to similarities or differences between musical passages; it relates to making 'relative judgements'.
- **Discuss** – axiomatic but be aware that mere assertions do not form a discussion.
- **Analyse** – relating to musical elements or features within a work.
- **Evaluate** – relating to judgements against specific parameters; invites drawing conclusions.

For the following questions you will need access to the relevant scores and recordings.

Each question is set out in a single page for ease of photocopying and in the current format with some significant differences due to the absence of a listening CD.

The format includes the instruction to 'listen to Track... of the CD and refer to Example... of the CD'.

As you will not have a CD for these questions, a different phrasing is used in the questions to reflect the recordings available.

The purpose of answering the questions below is partly to provide practice in making judgements either within a time limit of classroom work or as a more leisurely piece of homework. The questions are springboards for individual research and nudges towards thinking about the music in a way which can be very helpful in forming one's own judgement about the music. The questions are 'evaluate', which means not just analysing but making an informed aesthetic or critical judgement.

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Sample Exam-style Questions for

Kaija Saariaho: *Petals*
All timings refer to Aeon AECD0637

Example Question 1 (AS / A Level)

Bars 1–21, 00–2'25" (p. 1 of the score)

- (a) Identify the note in bar 8 which sounds as a natural harmonic.

.....

- (b) Identify one technique of cello playing which does not rely on electronic processing.

.....

.....

.....

.....

.....

- (c) What is the effect of reverb (R) in bars 4 to 6?

.....

.....

.....

.....

- (d) Compare the music in bars 1–3 with that in bars 4–7.

.....

.....

.....

.....

- (e) What does the **graphic notation**  near the end of bar 2 mean?

Indicate your answer with a cross in the box [X]. If you change your mind at any time, cross out your original answer and then mark your new answer with a cross [X].

A	play softly
B	play several notes together
C	add bow pressure to produce a scratching sound, in which the audible pitch is totally replaced by the noise
D	play extra loudly and <i>crescendo</i>

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Example Question 2 (AS / A Level)

Bars 10–17, 2':25"–5':19"

- (a) Identify two examples of **artificial harmonics**.

Bar:

Bar:

- (b) Explain the **type of notation** used at the beginning of bar 22 up to, but not in

.....

.....

.....

- (c) Describe how Saariaho creates **contrasts** in her score. Refer to the use of **timbre** in this section of the work.

.....

.....

.....

.....

- (d) Name two of the **ornaments** used in bar 10.

(1)

(2)

- (e) Listen to the recording from bar 17. What technique does the cellist use to p

Indicate your answer with a cross in the box [X]. If you change your mind at any time, mark your original answer through the box [~~x~~] and then mark your new answer with a cross [X].

A	<i>pizzicato</i>
B	as a natural harmonic
C	trill
D	<i>piccolissimo</i>

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Example Question 3 (AS / A Level)

Bars 4–6, 1':17"–1':37" and bars 13–16, 3':00"–5':05"

- (a) Listen to the recording from bars 4 to 6 and bars 13 to 16. Compare the two elements such as pitch, tempo, rhythm and dynamics.

.....

.....

.....

.....

.....

- (b) What does '*poco agitato*' in bar 1 mean?

.....

- (c) What is the effect of the use of **Reverb (R)** in bar 1?

.....

.....

.....

- (d) Describe the pitch change shown by the notation of the harmoniser in bar 1.

.....

.....

- (e) Write a cross (X) in the box against the statement which is **true of the music**.

Indicate your answer with a cross in the box [X]. If you change your mind at any time, mark your original answer with a cross [X] through the box [~~X~~] and then mark your new answer with a cross [X].

A	the music is very loud
B	the music consists of harmonics only
C	the music includes harmonics as well as natural notes
D	the music is in the key of C (1)

.....

.....

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.....

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Example Question 4 (AS / A Level)

Bars 18–24, 5':21–7':04"

- (a) Identify the bar which shows notes played as **artificial harmonics**, **trilled** and **simultaneously**.

Bar:

- (b) Identify the bars in this section of the work which use **fanned beaming** notation.

.....
.....
.....

- (c) Describe how the first melodic line in bar 20 is **developed** up to and including the first repeat sign.

.....
.....
.....
.....

- (d) Name any two techniques of cello playing used in the section bars 18–24 of *Petals*.

(1)

(2)

- (e) Explain the use of **tempo** and **rhythm** in bars 18–24 of *Petals*.

.....
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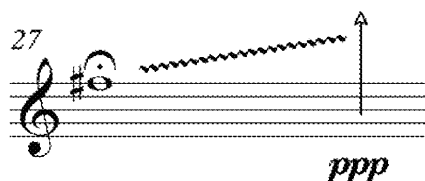
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Example Question 5 (AS / A Level)
 Timing needed Bar 27, 7':28"–7':41"

- (a) Describe what is meant by the vertical arrow below.*



- (b) Which of the notations used in bars 25–30 of *Petals* suggest that it is an example of a **trill**?

- (c) Name any two types of **ornamentation** used in bars 25–30 of *Petals*.

(1)

(2)

- (d) State two ways that the passage from bars 25–27 differs from the passage from bars 28–30 of the work.

- (e) Describe how the cellist must play the sections between broken lines in bar 27.

* The graphic is printed only in the soloist's cello part but does not appear in the score.

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Stravinsky: Excerpts from *The Rite of Spring*

All timings refer to: Stravinsky The Early Ballet Scores, Track 6. Duration: 03:47
conducted by Gennadi Rozhdestvensky.

Example Question 1 (A Level)

- (a) Explain the term '*tempo rubato*' at the beginning of *Adoration of the Earth* for the soloist.

.....

.....

- (b) Describe the texture in at RM 6+4 in the following six bars (bars 32–37, score 6).

.....

.....

.....

- (c) Explain chord formation in the example below from bar 1 of *The Augurs of Spring*.



.....

.....

.....

- (d) Compare the passage from RM 25 to the bar before RM 26 with RM 44–RM 45, which are different.

.....

.....

.....

.....

.....

- (e) Which of the terms below translate the performance direction '*crescendo agitato*'?

Indicate your answer with a cross in the box [X]. If you change your mind at any time, then mark your new answer with a cross [X].

A	'become more agitated slowly'
B	'become louder little by little'
C	'slowly increase the tempo'
D	'become a little more expressive'

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Example Question 2 (A Level)

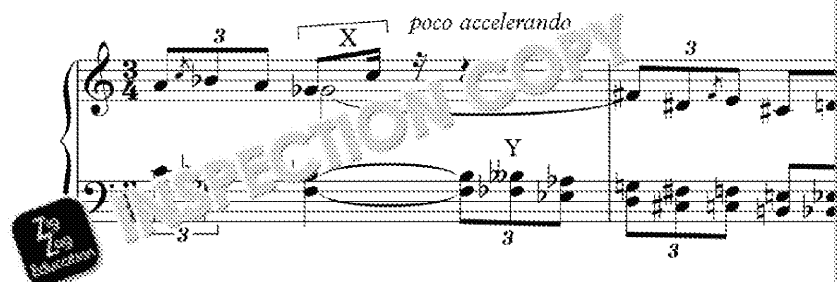
Adoration of the Earth bars 5–6; *RM 10–RM 11* and *RM 13–RM 15*; *Augurs of Spring* bars 1–2

- (a) Name the intervals between the notes marked X, Y and Z.

The interval at X is

The interval at Y is

The interval at Z is



- (b) Compare the passage at **RM 10–11** with bars **RM 13–15**, referring to timbre

.....

.....

.....

.....

.....

- (c) Which of the following terms describes the rhythmic texture at **RM 29–RM 30**?

Indicate your answer with a cross in the box [X]. If you change your mind at any time, mark your original answer with a cross [~~X~~] and then mark your new answer with a cross [X].

A	polyphonic
B	polymetric
C	layered
D	polyrhythmic

- (d) Name any two instruments which play the piccolo in **RM 43** (single bar).

(1).....

(2).....

- (e) Discuss the use of tempo in bars 1 – 14 of *Adoration of the Earth*.

.....

.....

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Adoration of the Earth bar 1 – RM 3; RM 9–RM 10, RM 13–RM 15

- (1).....
- (2).....
- (3).....

- The scale used is

- [illegible]

- [illegible]

- 
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Example Question 4 (A Level)

Adoration of the Earth RM 32+2 (a); RM 14 (b)

(a) Which two instruments double each other in **syncopation** at the third bar after the first bar?
 and

(b) Describe the harmony of the following passage (the instruments sound as well as the notes they play).

Example Question 5 (A Level)

RM 5–RM 4 71':28''–

- (a) State two ways in which the passage beginning at bar **RM 47** and ending at the bar before **RM 5** differs from the passage between **RM 5** and **RM 7** inclusive.

.....

.....

.....

.....

- (b) Describe the texture in the passage beginning at **RM 3**.

.....

.....

.....

.....

- (c) Explain features of the writing for violas from **RM 11** through to the bar before **RM 13**.

.....

.....

.....

.....

- (d) Listen to the recording from **Track 3 (Ritual of Abduction / *Jeu de rapt*)**, 00:00–00:30. Describe the design of the music in terms of contrasting sections and repetition.

.....

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- (e) Identify the chord played by the French horn, taking into account the transposition of the instrument. Give the name of the chord and its relationship to the chord played by the trumpet.

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Notes on the Examination: Section B

The questions in Section B of the paper require longer and more discursive essay answers.

Their purpose is to offer opportunities for you to show that you have heard a wide range of extracts from the three set works and that you recognise any connections which exist between the works and wider listening.

The questions given here will allow for

- writing individual answers either in class or as homework
- group discussion to facilitate forming judgements and evaluations
- a focus for a lesson
- a focus for further research (listening)

Section B comprises two questions numbered 5 and 6.

In question 5, you will listen to an audio of unfamiliar music which relates in some way to the set works. The task is to demonstrate any important musical links between the two works which provide meaningful comparisons in terms of common links.

In question 6, you are expected to evaluate one of the set works. The evaluation should cover different musical elements, such as harmony, melody, rhythm, structure or texture. A mark score is provided but there is no recording.

At AS, the questions will generally ask you to discuss two elements or features of the set works; at A Level, there will be three elements or features to discuss.

Appendix 4 offers suggested works which have significant musical links with the set works, exploring as 'wider listening'.

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Sample Exam-style Questions for

Section B Question 6

Question 6 focuses on the set works. A score (or extract) is provided but there is

The questions focus on musical elements within each of the set works.

The form of the questions will incorporate the command words (as listed previously) to evaluate the music.

As well as commenting on the score, you will have to **relate it to other works** from which you are familiar from wider listening (see below).

Four questions for each work are offered as suggestions for completing within a set period or for discussion, or by means of any combinations of the three approaches.

For the purposes of this guide, you will have to consult the scores which you have been given where appropriate.

For AS, total marks are 20 and for A Level the marks are 30.

***The Rite of Spring* (three movements) – A LEVEL**

- (1) Discuss the use of melody and rhythm in *The Adoration of the Earth* and *Dance of the Spring* from *The Rite of Spring*. Your discussion should reference other relevant works from wider listening or other music.
- (2) Evaluate the use of texture and harmony in *The Augurs of Spring* and *Dance of the Spring*. Your discussion should reference other relevant works such as set works.
- (3) Evaluate the use of texture and design in the movements of *The Rite of Spring*. Your discussion should reference other relevant works such as set works, wider listening or other music.
- (4) Evaluate Stravinsky's orchestration and use of instrumental timbre in *The Rite of Spring*. Your discussion should reference other relevant works, wider listening or other music.

***Petals* – AS and A LEVEL**

- (1) Evaluate how timbre is important in *Petals* by Saariaho. Your discussion should reference other relevant works such as set works, wider listening or other music. (A Level)
- (2) Discuss the musical organisation of *Petals* by Saariaho. Your discussion should reference other relevant works such as set works, wider listening or other music.
- (3) '... opposite elements here are fragile coloristic passages which give birth to a new rhythm and melodic character (which) pass through different transformations in the composer about *Petals*. Your discussion should reference other relevant works from wider listening or other music. (A Level)
- (4) Evaluate the treatment of rhythm, melody and timbre in *Petals*. Your discussion should reference other relevant works such as set works, wider listening or other music.

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Supplementary Dictation Exercises

One of the most challenging parts of the course is melody dictation.

The following supplementary examples provide material for practice.

For AS and A Level, extracts in transcription and 'correct the melody' questions are drawn from the set works or wider listening pieces.

For the purposes of this resource guide, for practice and to enhance familiarity, transcribed examples have been drawn from set works or related works.

The dictations may be taken with the recording or shown or teachers may use worksheets to present the material on board or on another instrument.

The mark scheme is provided for the exercises and is proportionally graded according to the number of notes.

In the AS exam, each example will include up to nine notes (this equals nine pitch changes).

In the A Level exam, each example will include up to 12 notes (this equals 12 pitch changes).

In the examples below, fewer notes have been given to allow you to build up your skills.

Supplementary dictation (1)
Recording: Track 2, 0 - 6

Allegro

Treble

Te de - cer hym nus hy- mnus, De - us in__

Supplementary dictation (2)
Recording: Track 5, 36" - 46"

Tenors/Basses

Te - ste - vid cum

3

Te - ste Da - vid cum Si - byl - la

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Supplementary dictation (3)
Recording: Track 11, 1':43" - 2':09"

Baritone *p*

May God _____ curse

4

Bar. cut thee from _____ ur soul!

Supplementary dictation (4)
Recording: Track 12, 2':01" - 2':11"

Soprano Solo

qui _____ ve - nit in _____

S. Solo

mi _____

Supplementary dictation (5)
Recording: Belshazzar's Feast, Walton,
Parlophone, CBSO, Rattle
Track 5, 1':45" - 1':57"

Soprano *pp espress.*

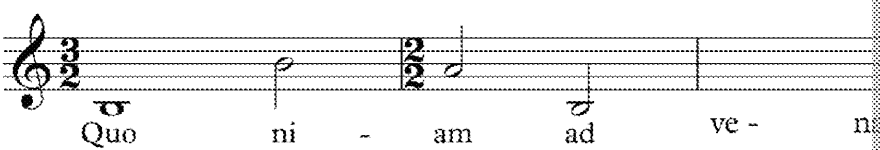
By the wa _____

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Supplementary dictation (6)
Symphony of Psalms, Stravinsky,
Track 1, 1':39" - 2':02"
Sony Classical, CBC Symphony Orchestra,
conducted by Stravinsky


Alto



Quo ni - am ad ve - na

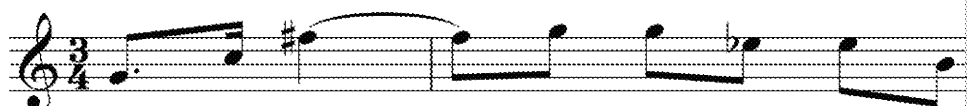
5

A.

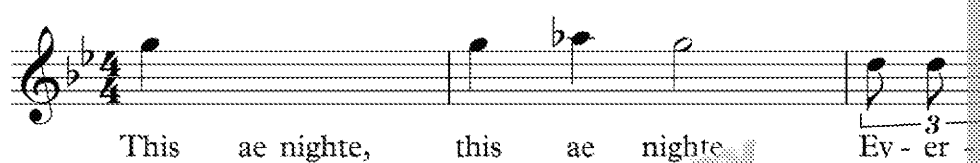


sum a pud -

Supplementary dictation (7)
Piano Sonata, Berg, played by
Gould on Sony Classical 'Sonatas
Fantasies, Variations' Disc 3 track 1

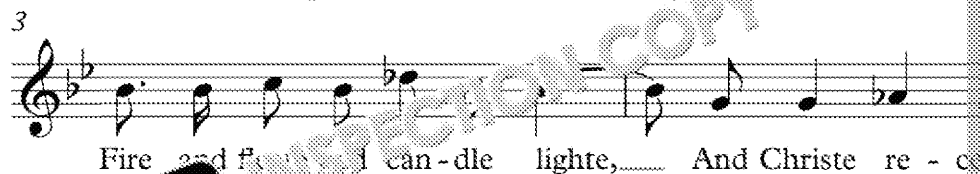


Supplementary dictation (8)
Serenade for Tenor, Horn and
Strings, Britten, on Parlophone
0724355687159 Track 5, 00 - 24"



This ae nighte, this ae nighte Ev - er

3



Fire and flame I can - dle lighte, And Christe re - ce

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Answers to Supplementary Dictation

All of the following supplementary dictations have been compiled from either the original works or recordings of those works, which serves to extend familiarity with those works. *However, dictations are not necessarily be so sourced.*

The mark scheme is proportionally graded according to the level of correct responses. Marks (up to 6 for AS and 8 for A Level) may be awarded in the exam.

Supplementary dictation (1)
Recording: Track 2, 0 - 6

Allegro

Treble

Te - cet hy-mnus, hy- mnus, De-us in

There are three notes to complete, meaning three pitches and three note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct

Supplementary dictation (2)
Recording: Track 5, 36" - 46"

Tenors/Basses

Te - ste Da - vid cum

3

Te - ste Da - vid cum Si - byl - la.

There are four notes to complete, meaning four pitches and four note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct
- 3 7-8 pitches and/or note lengths correct

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Supplementary dictation (3)
Recording: Track 11, 1':43" - 2':09"

Baritone *p*

May God _____ curse

Bar. 4

cut thee from _____ our soul!

There are three notes to complete, meaning three pitches and three note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct

Supplementary dictation (4)
Recording: 4':43" - 5':01"

Soprano Solo

qui _____ ve - nit in _____

S. Solo

There are four notes to complete, meaning four pitches and four note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct
- 3 7-8 pitches and/or note lengths correct

Supplementary dictation (5)
Recording: Belshazzar's Feast, Walton,
Parlophone, CBSO, Rattle
Track 5, 1':45" - 1':57"

Soprano *pp*

By the wa _____

There are 4 notes to complete, meaning 4 pitches and 4 note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct
- 3 7-8 pitches and/or note lengths correct

Alternative recording: Willco
<https://www.youtube.com>


Pick up the soprano entry from

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Supplementary dictation (6)
Symphony of Psalms, Stravinsky,
Track 1, 1':39" - 2':02"
Sony Classical, CBC Symphony Orchestra,
conducted by Stravinsky

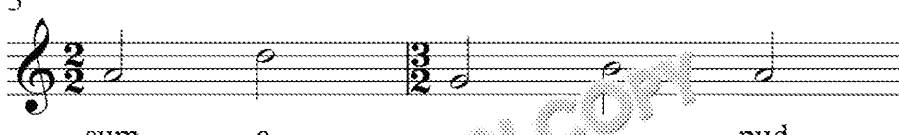
Alto



Quo ni - am ad ve - na

5

A.



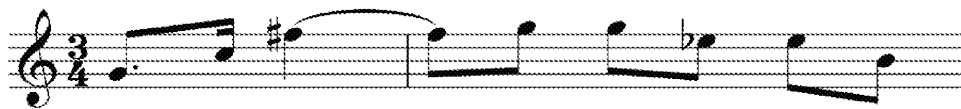
sum a _____ pud -

There are four notes to complete, meaning four pitches and four note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct
- 3 7-8 pitches and/or note lengths correct

Alternative recording: Muti/1
<https://www.youtube.com/watch?v=7Lnh-111111>

Supplementary dictation (7)
Piano Sonata, Berg, played by
Gould on Sony Classical 'Sonatas
Fantasies, Variations' Disc 3 track 1



There are three notes to complete, meaning three pitches and three note lengths.

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct

Alternative recording:

<https://www.youtube.com/watch?v=7Lnh-111111> Glenn Gould, 0-

This is with the score so show following notes at noting the melody.

Or use:

https://www.youtube.com/watch?v=QNk_A4Zol30 Gould on video
slowly looking about 19" to reach the end of the example. (No given
interval to hear and see.)

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Supplementary dictation (8)
Serenade for Tenor, Horn and
Strings, Britten, on Parlophone
0724355687159 Track 5, 00 - 24"

This ae nighte, this ae nighte, Ev-er

Fire and fleete and can-1 lighte, And Christe re-

There are three notes in each measure, meaning three pitches and three note lengths

- 0 0 pitches and/or note lengths correct
- 1 1-3 pitches and/or note lengths correct
- 2 4-6 pitches and/or note lengths correct

Alternative recording: Adrian Thomas, Tenor, Bournemouth Sinfonietta,
conducted by Davide Lloyd-Jones – 00-25"

<https://www.youtube.com/watch?v=EOAFtCQlvLw>

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Correct-the-melody Questions

In addition to dictations requiring the completion of a melody, you may also be asked to listen to the music and then correct the melody by rewriting it beneath the incorrectly written version. In an examination you will be expected to identify up to three errors. Regular training is required to achieve this goal but a programme for that is beyond the scope of this guide. The exercises may be useful as practice markers for your progress. The exercises are of variable difficulty.

Teachers should use the answer section that follows to deliver the material. (The original incorrect melody at A Level.)

One mark will be awarded for each accurately notated correction. Marks are only awarded at error points – any incorrect notation will be ignored.



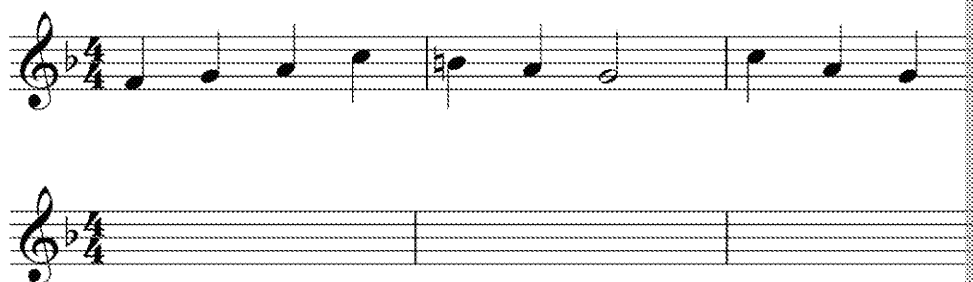
Supplementary dictation (10)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the lines below.

Moderato



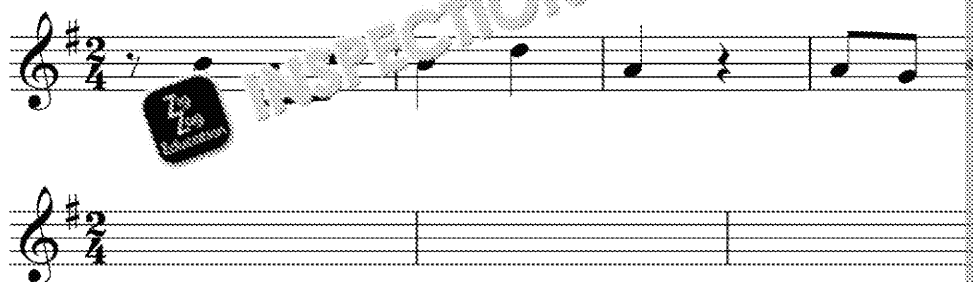
Supplementary dictation (11)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the lines below.

Moderato



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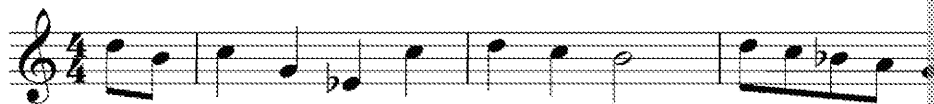
Supplementary dictation (12)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the staff.

Moderato



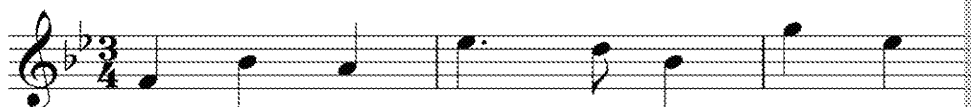
Supplementary dictation (13)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the staff.

Moderato



Supplementary dictation (14)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the staff.

Moderato



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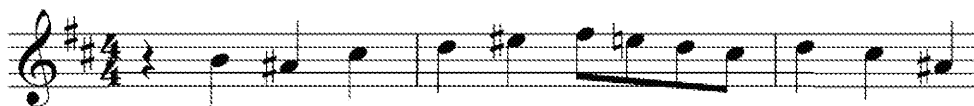
Supplementary dictation (15)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the

Moderato



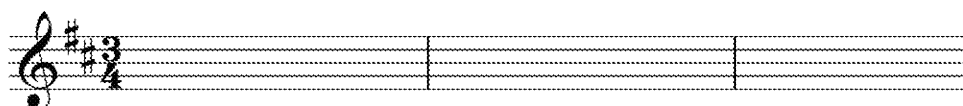
Supplementary dictation (16)
AS level

Listen to the melody.

The music below has three errors.

Identify the errors and write the correct version of the melody below

Moderato



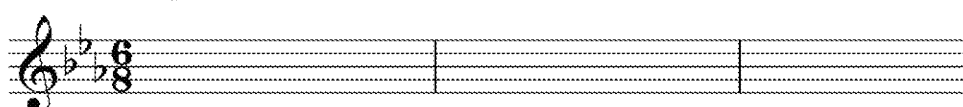
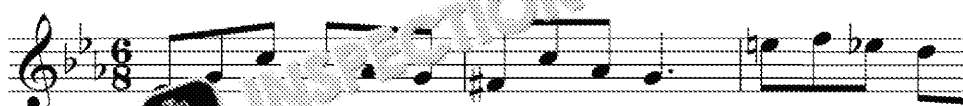
Supplementary dictation (17)
AS level

Listen to the melody.

The written music below has three errors.

Identify the errors and write the correct version of the melody on the

Moderato



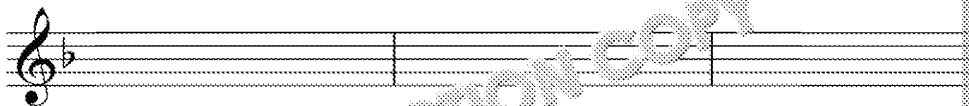
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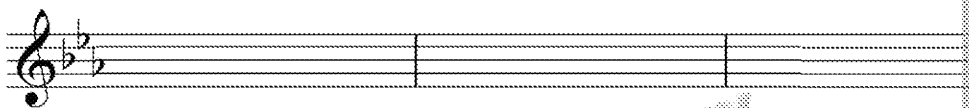
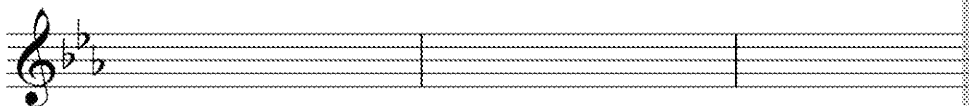
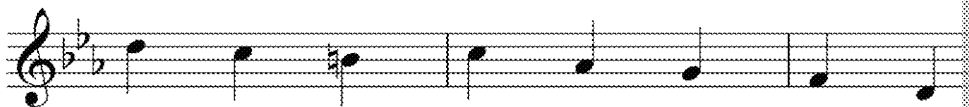
The melody has three errors.

Moderato



The melody has three errors.

Moderato



Listen to the melody.
The melody has three errors.
Identify the errors and write the correct version of the melody below.

Moderato



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Answers to Correct-the-melody Questions (AS)

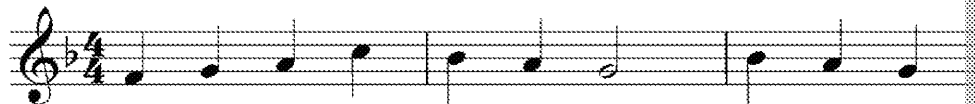
Use these for the dictations.

Supplementary dictation (10)

AS level

Answer

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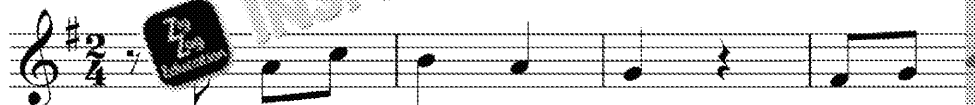


Supplementary dictation (11)

AS level

Answer

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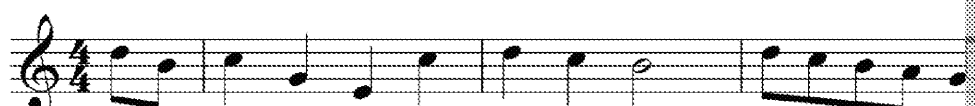


Supplementary dictation (12)

AS level

Answer

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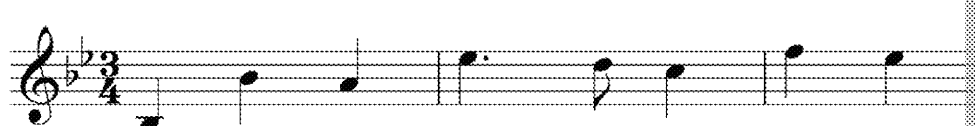


Supplementary dictation (13)

AS level

Answer

Moderato



Supplementary dictation (14)

AS

Answer

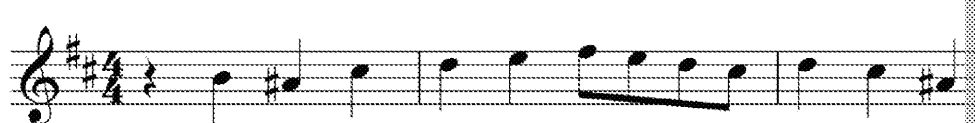


Supplementary dictation (15)

AS level

Answer

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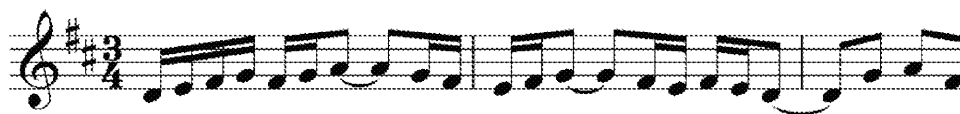
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Supplementary dictation (16)
AS level
Answer

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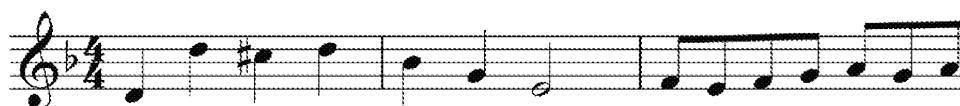
Supplementary dictation (17)
AS level
Answer

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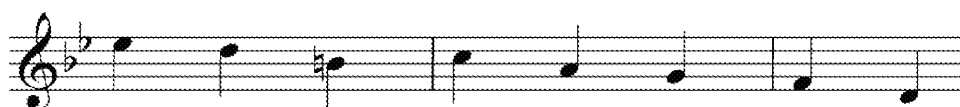
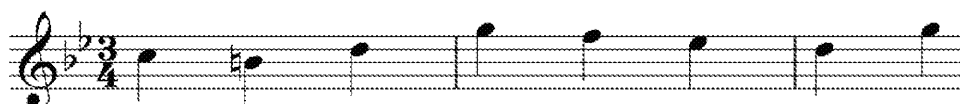


Supplementary dictation (18)
AS level
Answer

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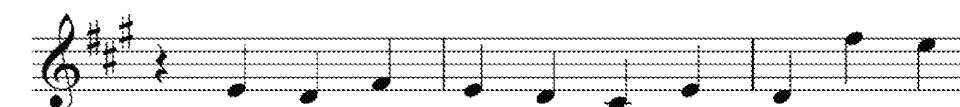


Supplementary dictation (19)
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Answer



Supplementary dictation (20)
AS level
Answer

Moderato



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Appendix 1

Responses to Questions in Section A

Petals

Question 1

- (a) The low D \flat below middle C as marked by the circle harmonic sign. = 2
- (b) The sounds are mostly transformed electronically but they originate from the natural sounds of the instrument, such as using extra bow pressure, artificial and natural harmonics, *glissando* and the use of microtones (quarter tones) also change the sounds before they enter the reverb. = 3
- (c) Reverb transforms the sounds from the echo by enlarging its amplitude and creating a delayed echo effect. The sounds of the *glissando*, together with quarter-tones, generate a complex, rapidly layered texture. = 3
- (d) Bars 1–4: This section begins '*da niente*' (out of nothing) on a high artificial harmonic modified with trills and a *crescendo* through to a 40% change in the reverb at bar 5. The section *crescendos* to *fortissimo* and a rapid *decrescendo* to *mezzo-forte*. The sound is again transformed by increasing the pressure of the bow which produces a scratching sound 'in which the audible sound is replaced by noise', as the notation indicates. Bars 4–7: This section contrasts with bars 1–4 as being more rhythmical. It uses quarter notes which are heavily accented and *fortissimo*. Reverb is set at 40% and the dynamic is *pp*. The tempo and dynamic increase together coupled with a *glissando* effect in bar 6. The simultaneous *accelerando* is indicated by the use of feathered beams. = 4
- (e) C – add bow pressure to produce a scratching sound in which the audible pitch is replaced by noise. = 1

Question 2

- (a) Bars: 13, 14, 15, 16, 17 (any two) = 2
- (b) The first two notes are to be played quickly, like grace notes as shown by the beaming. The notes are indeterminate as shown by the lack of noteheads so the cellist has to follow the line only. At the same time, a *glissando* has to be achieved from the G# to the D. = 2
- (c) Contrasts of timbre are achieved partly through the use of extended techniques which include applying pressure on the bow (as shown by the graphic notation), *arco* and *pizzicato* playing (not always shown in the score). Textural contrast is achieved through changes in bow pressure which both changes the timbre and the texture, the reverb changes from a simple delayed echo effect overlapping with the original notes to a complex, layered texture. Texture is also created by the use of stopped notes although they are mainly harmonics. Mostly, the texture is created by a hybrid polyphony by means of electronic transformations. = 4
- (d) Any two ornaments from the following: *accacciatura* – trill – mordent – inverted mordent. = 2
- (e) (A) – *pizzicato* (not shown in the score) = 4

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Question 3

- (a) The first section is characterised by the microtones, the brevity of each state notes appear to rise rapidly and a rapid rhythmical drive, although there is no rhythmic pattern. The register is relatively low but quickly rises through the The initial dynamic is very loud (**ff**) but there is a degree of diminishing volume the section ends on a very quiet **ppp**. By contrast, the second section is rhythmic harmonics of both kinds as well as natural notes and has a soft dynamic curve suggestion of an upper melody produced from the harmonics at c. 4':38. = 4
- (b) Literally – 'a little agitated' = 1
- (c) Reverb enters very slowly out of silence (*da niente*) rising to a mixed level of which represents the delay time of the 'echo' so that the sounds in bar 1 are specified delay timing. = 3
- (d) H 50% indicates a pitch increase of a quarter-tone where 100 cents is equal temperament. = 2
- (e) C – the C is in the harmonics as well as natural notes. = 2

Question 4

- (a) Bars 21 to 24 each contain such notes. = 1
- (b) Bars 23 and 24. = 1
- (c) The motif can be said to be developed by means of repetitions of the initial figure further each time, by **rhythmic variation**, with **harmonics**, by changes of tempo **electronically**, by **trill ornamentation**, and transformations by means of **R** and
- (d) Cello techniques used in *Petals* include natural and artificial **harmonics**, **gliss** variable **bow pressures** for special effects and **double stops**. = 2
- (e) Discuss the use of tempo and rhythm in *Petals*.

Points to discuss should include:

- the absence of a fixed time signature
- the use of *tempo rubato* and variable tempos
- detailed tempo indications
- the use of fast gruppettos which contrast with moments of stillness and slow rhythmical moments
- some complex groupings with some degree of repetition but mostly varied
- use of a degree of indeterminacy associated with particular forms of notation beaming or headless notes as groups of grace notes (e.g. bar 22).

Overall, the rhythmic character of the writing is very variable with contrasting rhythmic figures often at extremes; no sense of extreme business contrast with (Rhythm is not just about quarter and semiquavers but can also be in the form of a passage at 26 to the 32nd bar = 1)

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Question 5

- (a) The highest pitch possible at the extremity of the A string. = 2
- (b) *Petals* was not written as a result of precompositional analysis of the pitches. Spectralism in its frequent use of harmonics. Sounds made by the cello begin transformed through the spectrum of their harmonics by means of the harmonic series.
- (c) Ornaments used include: trills and an *accacciatura* (grace note) in bar 27. = 2
- (d) Elements include microtones, frequent tempo changes, a dynamic range from *ppp* to *ffff*, frequent use of *tremolos* and *glissandos*. The section from bar 21 to the end is less animated, has contrasting dynamics such as from *ppp* to *ffff*, transformations of variables on both R and H, frequent use of *tremolo*, includes *glissando* (persistent pedal C (open string)). The section from bar 21 to the end is less animated, of both R maintains a constant 30% setting until the end where it rises to 50% nothing rising to 30% and then rising again and the reverberation changes to the end also includes the bow pressure changes as indicated by the black lines.
- (e) Bar 30 shows several ways of playing as in the piece as a whole. The cellist uses harmonics, using *glissandi* and trills, while holding the open C string. At the end (detailed in the score notes) indicates several changes of bow pressure. The line coupled with the *glissando* indicates extreme *vibrato* or '*glissando...*' in which the pitch is constantly moving and thus creating a rich sound with vividly varying pitches.

Metre and rhythm are affected by the **absence of any time signature** but the sections of the work introduces a degree of **indeterminacy**; rhythmic figures are transformed in a form of canonic imitation by **the delay levels on the reverberation**, another indeterminate element affecting the nature of rhythm and metre in some complex rhythms written, their context indicates that they may not be. There are numerous changes of tempo indicated, such as *ritardando* and *tempo*.

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to the bar before RM 26: The principal feature is the *tremolo* and *ostinato* figures in the strings; double bass has a *tremolo* with answering phrase from the solo. With the phonic, supporting theme play.

-RM 46: Horn 3 re-enters also a dominant solo horn part; horns fare in 5^{ths}; trumpets play the same four-part harmony; strings have a steady eighth-note figure divided figure outlining an F⁷ chord; the

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Question 3

- (a) Solo bassoon
French horns / horns in F
Clarinet in A
Bass clarinet in B \flat
Piccolo clarinet in D (high clarinet)
Solo cor anglais = 3
- (b) The fragment of the melody is on a pentatonic scale (la-pentatonic, i.e. D \sharp –F \sharp –G \sharp –B \flat –D \sharp) = 3
- (c) Points to be made:
- The notes of the solo bassoon melody repeat in a kind of circular motion
 - The melody unfold and circulate back and forth on one another
 - The grace note embellishment repeats always associated with the same
 - The single grace notes are associated with B \flat
 - The interval of a semitone, first heard in the counter-melody of the horns, semitonal movement in the bassoon is repeated 4th beginning at bar 4
 - The final two bars of the passage show Stravinsky's propensity to construct notes which are repeated in different orders = 3
- (d) Points to be made:
- RM 9–RM 12:**
- The rhythms are decorative filigrees
 - The melody lines are in tuplets of tens, 5s, 6s
 - Tuplets play against other tuplets such as the triplet subdivided in the of [RM 9+1]
 - The combinations of quite complex rhythmic figures create a delicate pattern
 - The rhythms combine in a two-part, then three-part and finally a four-part continuous = 3
- RM 13–RM 15:**
- Rhythms are motoric and *ostinato* and vertical
 - Accents offbeats
 - The motoric quaver pattern follows at RM 14 but combined with a semi-motoric manner
 - A change occurs as RM 15 begins where triplets sound against the regular chords with *acciacatura* = 2

Question 4

- (a) Bassoon and cellos = 2
- (b) The harmony is formed from a combination of two main diatonic triads. The which combines with a C major *arpeggio* in the wind instruments. The roots and, combined with the cor anglais *ostinato*, form a diminished 7th chord complex which is pandiatonic or a hybrid from two different keys or scales. It can also be said that bitonality is actually established. = 4
- (c) *Colla parte* is translated as 'with the solo part' and indicates for other instruments playing of either a singer or another solo part. In this instance, the solo bassoon is metronomic and quite free so that the other instruments (horns, clarinets) have to be correct and cued by the soloist, not the written music itself.
- Un peu en l'air* suggests that the player gives a little more emphasis or prominence. So, in this context, the solo piccolo clarinet has to play more prominently than the other instruments. = 3
- (d) Minor 3rd (D \flat to B \flat) and a perfect 4th (E \flat to B \flat) = 2
- (e) [B] pedal point / pedal = 1

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Question 5

(a) Some points to be made:

RM 47 – double bar

- Strings most prominent
- Brass and woodwinds punctuate with chords
- Variable time signatures changing with chord interjections
- Inner pedal on C in violas
- Contrast in the horizontal/melodic movement and the vertical movement

RM 7 –

- More melodic and semi-polyphonic
- Horn has its semitone figure from the opening of the work
- Homophonic passage of parallel chords
- Trill on A in violas
- The chromatic figure under C is a E-extension/development
- Cor anglais has a prominent melodic entry = 2

(b) The texture is consistently **homophonic** consisting of fast-moving parts some

(c) The violas play a form of **glissando** on **natural harmonics** outlining *arpeggios* semiquaver groupings. = 2

(d) The design or structure is **sectional** or **episodic**, beginning with the continual different melody strands in glittering orchestral colour. The brass sustain a line, the trumpets play a fast version of a melody derived from the bassoon opening, the woodwinds play a double-tonguing effect. The horns sound a hunting call featuring a 5th which is a marker for one of the episodes. The principle motif is modified at the end of the changes of time signature. As with much of Stravinsky, the structure reflects a move from one idea to the next without very much development in the track.

(e) The French horns play a C major triad but the trumpets play the chord of dominant dissonance. The horns transpose at the 5th but the trumpets are 'in do' and so

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Appendix 2

Glossary of Key Terms Used in the Text and Used

NOTE: The glossary of terms is included for two reasons: firstly, to explain terms which might not already have been encountered or understood; secondly, to provide a kind of language which is needed to discuss the works in New Directions so that students will be able to discuss them correctly. One of the perceived changes in the new curriculum is the expectation that students should make informed judgements on the music, not just listen to music and to demonstrate understanding of the music technically as well as aesthetically and critically. It is, therefore, important that students acquire and are able to use the language and others which are also relevant but not listed. The role of discussion in the new curriculum and other music can be a vital way of facilitating language acquisition when moving on to New Directions.

Anacrusis	An upbeat which starts a melody or phrase often on the last beat of the previous measure or strong beat. The terms can also apply to sections of music which are not the most significant section.
Antiphonal	Antiphonal imitations occur where one phrase is either repeated (in a different instance) or is answered with a different response. Antiphonal is sometimes called 'responsorial'. (In the context of the works discussed here, do not confuse it with 'antiphonal' though it means the same as antiphonal.)
Appoggiatura	An <i>appoggiatura</i> is a dissonant grace note or ornament (embellishment) which is approached by a leap but is then resolved by its following harmony. In tonal music, an <i>appoggiatura</i> is most commonly down to the consonance or semitone. In atonal serialism, it is difficult to avoid the sense of a series of dissonances. The word is derived from the Italian for 'leaning' so there is the indication of a leaning towards resolution.
Atonality	Music which is not in a key and has no clear tonal function.
Binary	The term describing music which has the basic design in two sections.
Bitonal	Music is in two keys at once. The composer Darius Milhaud, for example, often wrote bitonal music. There are passages in Britten which may be so described. In reality, the two keys simultaneously appear to be unconvincing.
Bridging episode	The term refers to a short passage of music which links one important section to another. The term 'bridge' is synonymous but best reserved for discussion of chamber or symphonic music.
Cadence ('cadential role')	A cadence is a clear moment in a piece of music when it either concludes or prepares to move further on. A cadence in tonal music is of four types: Perfect (I–V), Plagal (IV–I) or Interrupted (V–VI, etc.). Characterising cadences are only part of the explanation of the approach to and the final resolution of a piece. Also, there are other types such as the 'half cadence'. The idea of a 'cadential role' broadens the idea of cadence to include moments which are important divisions within a work. Cadence generally refers to a situation in music separating ideas but joining them together.
Cantus	A melody embedded into a contrapuntal texture which does not stand out but is for counterpoint woven around it.

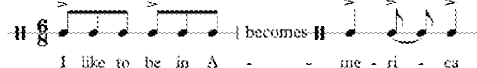
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Chromatic	Chromatic refers to the frequent use of semitones. The chromatic semitones encompassing 12 notes from which the 'twelve-note' also be used to suggest colouring as where a diatonic melody (which contains a few semitones not in the scale but added for coloristic effect).
Cluster	A set of notes (often chromatically close) which does not have a specific function.
Combinatoriality	A mathematical term applied to a technique used by Schoenberg in <i>Orchestra</i> and <i>Opus 33a</i> . It describes a technique whereby two rows are combined without pitch repetition as in P-0 + I-5 in <i>Opus 33a</i> .
Continuous variation	The idea of continuous variation was a phrase used by Schoenberg to describe the circulation of forms of a note row within a piece of serially composed music. It describes what might be called the background rather than the foreground variations of themes but of basic building material.
Contrapuntal	Contrapuntal describes a musical texture comprising two or more independent melodic lines. The simplest contrapuntal texture is the round in which a tune is repeated in unison and at the octave, the first phrase; then, a development of the tune begins at the octave beginning at any interval and before the first phrase where a melodic idea is combined with itself but with independent melodic and tonal development. In the fugue, the idea of a 'counterpoint' (<i>contra-punctum</i>) is most clearly evident.
Contrapuntal motif	A short musical idea or motif which is used constantly within a piece.
Crotchet triplet	A rhythm pattern where three crotchets are played in the time of two. It indicates similar patterns such as 'sextuplet', 'quintuplet'.
Design	Design is a part of the concept of musical form and relates to the sections within a piece. Typical designs are unitary (a single phrase), episodic/rondo. Design is shown by allocating a letter to each section, e.g. ABACCA, etc. The term is not synonymous with form per se although it is related.
Diatonic cluster	Diatonic refers to the system of major and minor scales and the chromatic scale. A cluster is a set of notes formed from close intervals such as CDEFG all of which are diatonic since all of its notes come from the same scale. If the cluster is sharp, the cluster would become chromatic -- CDEF#G and more distinguished from, for example, triads or dominant 7 th s or any other chord.
Diminished triad	Typically, the triad on the 7 th of the scale is a diminished triad. Analysed, the triad comprises two minor 3 rd s and the outer interval is a diminished 5 th . For example, B--D--F or D--F--Ab.
Dissonance	The word 'discord' may be used synonymously. In general, musical dissonance is a relative concept. If two or more different sounds are perceived as a resolution, the first sounds are dissonant. The sounds of resolution would then be described as consonant. Intervals of minor and major 2 ^{nds} , a perfect and augmented 4 th are dissonances. The remaining intervals are consonances which become dissonances so that, for instance, a 4 th may resolve to a 3 rd or a 5 th . In some medieval music, the perfect 4 th was not managed as a dissonance in some cases. In a more modern context, dissonance and consonance are relative. Schoenberg was said to have wanted to 'emancipate the dissonance'. The augmented 4 th (diminished 5 th /tritone) was considered highly dissonant but it became a commonplace eventually, almost not requiring resolution.
Dodecaphony	Dodecaphony is synonymous with 'twelve-note music'. It should be avoided as it is hard to say.
Dominant 7th (V7)	The dominant 7 th is the four-note chord built on the dominant (the 5 th of the scale) and comprises the root (the dominant of the scale), the 3 rd above the root, the 5 th above that which is the 7 th from the root. In the key of D, the chord is, therefore, A--C#--E--G; in the key of C, the interval formed by the first and the fourth notes is a dissonant interval. The second and fourth notes is a very dissonant diminished 5 th . The resolution of the second and fourth notes is especially in a securely tonal context requires resolution to the tonic. This is important for establishing a key.

Dyad	A term synonymous with 'interval' between two notes or, to put it another way, two notes sounding at the same time.
Enharmonic	This term refers to different denotations of pitches such as calli examples are enharmonic equivalents, viz. the same sound written differently. An enharmonic change is necessary in modulation between keys which share no common tones; therefore, be written differently and occur in more chromatic modulations than diatonic changes.
Exclamatory recitative	Characters in opera or oratorios or other similar dramatic forms often speak in connecting dialogue as recitative or a recitation. The music is not composed of a complete melody as such and the accompaniment is simple and unobtrusive, distinguished by its forcefulness in expression.
Exposition	The exposition is the first part in the design of sonata form. In general, it describes any part of a work where initial ideas are presented for consideration. Words, the ideas are 'exposed' or 'laid out'.
Expressionism	Expressionism is a term given to a particular type of fine art and music. The Expressionist style in art begins with artists such as van Gogh and Munch, painting to express not just the external world but the internal emotional world as well. Munch's <i>The Scream</i> will give you the idea as will the famous bridge known as Die Brücke (The Bridge) which included artists such as Karl Schmidt-Rottluff. Schoenberg himself was a painter and his paintings are an example of Expressionism. The playwrights August Strindberg and Henrik Ibsen wrote about people's private lives and inner emotions and thoughts with reference to approach to art. The composer Alban Berg adapted two of Wedekind's plays for his opera <i>Lulu</i> which also exemplifies some of the intentions of Expressionism. The term is often linked to twelve-tone music and with Schoenberg in mind, one can be disturbed, changeable in mood, troubled even, and unsettled. Schoenberg's twelve-tone style is, however, not strictly Expressionist. Examples include Verklärte Nacht, Op. 4 and Fünf Orchesterstücke, Op. 16 are more typical of the style.
Figuration	Use of different figures or melodic ideas. A single chord, for example, can be broken down as figuration: a simple arpeggio is a form of figural music.
Form	Commonly, this term refers to how a piece of music is seen to be organized. Common forms are cited as binary (represented as having A + B sections), ternary (A-B-A) and rondo (A-B-A-CC-A or in some other variant). However, the term form relates more to the general design of a work. In sonata form, the design is evident; but, to describe its form, reference has to be made to how it is expressed in its tonal relationships through which a more subtle design is revealed. So, form can be understood on different levels: its surface design and its deeper structural design.
Functional harmony	Common triadic tonal harmony is functional in the sense that each chord functions one to another; they function together to establish a key, for example. When trying to distinguish secure tonal harmony from music in which the key is so much it no longer has an unambivalent tonal direction. These chords relate functionally to establish a key, for instance. Chordal harmonies rather than harmonies in the functional sense. Non-functional harmonies are difficult to establish in a piece of music.
Graphic notation	Graphic notation (and graphic scores) are pictorial representations of musical ideas, the more precise form of staff notation which developed from the early 20th century associated with the drama. Graphic scores were adopted particularly by composers, others, including Saariaho, have used this link to see some examples: https://www.youtube.com/watch?v=ZjUwXv8eXc&list=PL4F8JmLqKdY9gZjUwXv8eXc&list=PL4F8JmLqKdY9gZjUwXv8eXc&list=PL4F8JmLqKdY9gZjUwXv8eXc
Harmonic interval	Two notes sounding at the same time rather than in succession.
Harmonization	The rate of harmonic change or modulation.
Harmonics	Notes which are generated from a fundamental. Similarly, extra notes played on some organs are almost physically sensed rather heard. The body shakes rather the ears hear. The note C as a fundamental, for instance, generates the octave C, the major 3rd, the major 2nd and the minor 2nd. Further harmonics called upper partials. The presence of harmonics varies between instruments and contributes to the timbre of an instrument.

Hemiola	A rhythm pattern in the ratio 3:2 or 2:3. For instance, a rhythm in triple time by shifting the accents. This is what happens in the <i>Side Story</i> , e.g. 
Homophonically supported melody	A melody in an upper voice which is harmonised or in another the form of chords. Hymns are generally melodies with homophony.
Heterophony	A musical texture and device which develops from a single melody by means of, different rhythms or arrangements of the same melody include varied elements.
Hexachord	A set of six notes. In twelve-note music, hexachords are used as aggregates.
Indeterminacy	Indeterminacy can be thought of as a principle of musical construction where notes are not precisely written down by the composer and so are, to some extent, and unpredictable.
Inversion	Chromatic inversion is achieved by counting the same number of notes in the opposite direction: e.g. C–D when chromatically inverted becomes D–C. Diatonic inversion displaces the second note of the interval to a starting point, e.g. C inverted diatonically gives the D below and 7 th . The technique is common in different musical styles and in different musical forms.
Melisma	A sung phrase on a single syllable but using a series of notes. The singing is one note for each syllable.
Melodic interval	Two notes played in succession (as in a melody).
Motivic	The term describes music which is composed from brief melodic motifs/motiv is a small singular idea, usually melodic. Think Beethoven's opening four-note motif.
Modulation	Modulation is the process whereby a new key is established in a sudden change. (Sudden key change is common and can have a modulated key change is achieved by the use of harmonies which and the key being moved towards; by that means, the process is a modulation.)
Metrical modulation	This refers to change in time signature or a dominant rhythm pattern achieved – or modulated. For instance, a 4/4 pattern might modulate to 3/4.
Note row	Literally, a row of notes used as the basis for a serial composition simply 'series'.
Octave displacement	A melody which moves by step (conjunctly) can be transformed to an octave higher or lower and so changing the contour of the melody can be played C–D'–E where the D has been displaced an octave.
Organum	Parts moving in parallel and often on 4 th or 5 th form a basic type as 'parallel organum'; if there are small melodic inflections added it is called 'free organum'.
Ostinato	A short musical idea – often melodic – which is repeated several times as accompaniment to other layers.
Overtones	Any pitch generates a number of further pitches above the main pitch; 'other pitches' are ignored when we refer to music as we conceive of a 'fundamental'. The notes generated above or from the fundamental first harmonic is the second harmonic as an overtone. Unless you are a physicist, the terms can be – and are – ultimately used synonymously. Overtones are also called harmonics. Stravinsky uses harmonics (natural and artificial).
Palindrome	A melody or entire piece of music in which the second part is the reverse of the first. A palindrome is, for example, ABBA since it is the same in reverse.

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Pandiatonic	The use of diatonic chord and harmonies but in unconventional of harmonic progression which could be anticipated. Stravinsky places.
Parallel organum	Where two parts move together and maintain the same interval parallel organum. Common in some medieval music, parallel or 4 ^{ths} or 5 ^{ths} ; where it appears in parallel 3 ^{rds} , it is called <i>gimel</i> . It can be used.
Pedal point	A sustained single note (more often than not in the bass, but not moving parts which are dissonant against it. Pedal points or similar dominant of the prevailing key and create dissonant tension before resolution.
Pentatonic	The term describes music based on one of the pentatonic scales depending on whether starting in do, re, mi, so or la. Pentatonic although, in some contexts, they may be decorated with other notes themselves do not alter, however.
Pivot chord	A chord common to a key as well as to the one being approached. For example, II in C major can appear during a modulation to A minor where the chord functions as a bridge between the two keys and smoothly leads to the new key.
Pitch relation	<p>No single note is relatable to anything but the silence it precedes. If another note (pitch) is heard after the first, a relationship is then established. In the scale of C, a C followed by a G can be heard as a tonic/dominant or subdominant relationship. In other styles, such as atonal serialism, notes are heard in those ways but simply as consonant or dissonant interval relationships. In another sense, a series of pitches may be in a specific relationship; similarly, the pitches (intervals) may be played in a specific relationship.</p> <p>The term describes perceived connections between different pitches to point to any formal links that are, therefore, generated.</p>
Pitch modulation	Modulation is usually used to describe the measured process of changing which is sudden. The phrase 'pitch modulation' derives from this like an analogy. Where, in a serial work, there is a distinct change of different forms of a row, pitch modulation can be identified. In the field of electronics but that is not relevant in the context here.
Pre-echo	When setting a text, composers sometimes like to express an idea in a musical figure. Sometimes the musical expression and its poetic meaning afterwards, like an echo. Sometimes, the musical expression can then be said to 'pre-echo'.
Principle of non-repetition	The principle of non-repetition relates to Schoenberg's twelve-tone system of non-repetition of the twelve notes within any row and by only using each note once before revisiting the row (perhaps in a transposition or some other way). Certain notes to begin to sound as though they have tonal functions altogether. Schoenberg's pupil, Anton von Webern, adopted this principle from his teacher.
Quartile harmony	Harmony which is formed from superimposed 4 ^{ths} . It is distinct from parallelism built in 3 ^{rds} .
Register	The term describes whether a note is in a low, middle or high register. A note in a relatively lower register than one two octaves above middle C is important in a composition.
Registral displacement	If one note follows another in its strict order, such as if you play C, D, E, F, G, A, B, C in succession; if, however, the D and the E were played two octaves higher, they would be displaced. Octave displacement is sometimes a technique of melodic development.
Retrograde	Any idea, but usually melodic, played in reverse.
Retrograde inversion	Any idea, but usually melodic, played in reverse and in inversion.
Rhythmic augmentation	A melody whose notes have been lengthened is said to be rhythmically augmented. The progression could also be rhythmically augmented.
Root movement	The term applies to diatonic harmony in which chords are the same as the note it has been built on, e.g. C–E–G. Whether in inversion, or not, the root is still C. In diatonic harmony, the progressions are made secure by the bass notes alone.

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Saturated chromaticism (see Chromatic)	Music which is very chromatic making it lack a secure tonal centre. Chromatically saturated, meaning the music has soaked up so much more. That is why Schoenberg devised his new system to include it.
Serialism	The idea of ordering notes in a particular way which can be used in composition.
Series	A row of notes. Later, in total serialism or integral serialism, a series can include dynamics or registers.
Sequence	A sequence occurs when a melodic line repeats a few times, maintaining its intervals intact.
Sonority	A quality of a sound, often a chord, describing something about it like its timbre. A sonority may be a chord but not all chords are sonorities.
Sprechgesang	<i>Sprechgesang</i> is a German word which first came into use around 1900. It is a vocal technique involving the singer immediately falling away from it. Sometimes, the pitch is merely suggested, creating a sense of remoteness.
Stretto	Where two or more ideas are drawn together, e.g. in a fugue, the entries of a subject are drawn together within a very short time frame.
Strophic	The term strophe has its origins in Greek drama but now refers to a stanza. By extension, the term is used sometimes to refer to a particular word. (See Strophic)
Strophic	A song or vocal music which divides into a verse and chorus and where the verse and chorus are the same or where all verses are the same music.
Structure	Musical structure relates to the idea of musical form and it is synonymous. Structure concentrates not on the broad design but on the details that exist within a composition, such as its key relationships or its use of other ideas. The background analogy is of a building. The structure might be used as the foundations; the web of contrapuntal ideas as the various parts of the building in the foreground. The terms 'design' and 'structure' are nuanced in their meanings but often used interchangeably. It is a complex of meanings.
Syllabic	Words are set to music either with one note for each syllable or more. The first way of setting is called 'syllabic', the second is called 'melismatic'.
Symmetry	Symmetry in music describes the balance of phrases, e.g. ABA, or sonata form ABA.
Temporal	Simply means time or concerning the time element in music – rhythm.
Ternary	A design in three parts where the first is the same (or nearly the same) as the third.
Tessitura	The range of an instrument or voice as written in a piece of music. 'The tessitura for me being from middle C to the G two octaves above!'
Through-composed	A song which uses different music for each verse or chorus or both. The term is, in its usual application, the opposite of strophic. Music may be so described if there are no clearly delineated sections.
Tetrachord	The term does not refer to a chord but to a set of four notes (tetra = four) in the range of a perfect 4 th , e.g. C–F.
Thematicism	The term refers to the use of themes, comprising distinct melodic ideas, used in conjunction to create a coherent piece of music. Themes can be used in several ways. A piece could show some themes used across different sections, therefore a device of structural unity.
Timbre	Timbre is a 'tone quality' or colour of a sound or instrument. It is the particular set of harmonics produced when played. Timbre is distinct from pitch or intensity and is what makes a violin sound like a violin.

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Tonality	In the diatonic system, tonality refers to the quality which makes a key major or minor. In the modal system, the modes may also be described in terms of major or minor. For instance, a Dorian mode has a minor tonic; the Lydian mode is major since its first 3 rd is a major 3 rd . Schoenberg provides ambiguity when ascribing definite tonality.
Tonic minor	The first note and triad of a major scale is called the tonic; if the first note is a minor 3 rd below the tonic, it is called the tonic minor. A piece in D major which then appears in D minor. Tonic minor is distinguished from the relative minor (in this case, B minor).
Triadic	The term describes musical ideas, which are usually melodic, such as triads. Melodies formed from rising 3 ^{rds} or inversion of a triad.
Trichord	Surprisingly, the term has nothing to do with chords. A trichord is a group of three notes.
Tritone	A tritone is an interval comprising three tones and as such forms a tritone. It can be written as an augmented 4 th or as a diminished 5 th . It is the only interval which is neither a 2 nd nor a 3 rd .
Tone row	A series of 12 notes (tones) used in serial music.
Total serialism	Also called 'integral serialism', the term denotes a system in which not just the pitches but also the dynamics, attack, register, timbre and manipulated as such.
Transposition	Music changed from one pitch to another is said to be transposed. Similarly, a passage of music originally in one key but then placed in another key is said to be transposed. Several instruments (trumpet, clarinet, double bass and many others) are transposed instruments since their written music will sound at a different pitch than it is written. A trumpet part is described as being 'in B \flat ' meaning that its written notes sound a whole tone lower than they are written.
Twelve-note (tone) serialism	The system developed by Schoenberg whereby all the 12 notes of the chromatic scale form a note row or series from which music can be formed.
Vertical rhythm	Rhythms are commonly perceived horizontally but in music which is written vertically they are perceived as vertically perceived.
Voices	The use here is not to denote soprano, alto, tenor and bass singing voices but to denote the four parts of a string quartet or a woodwind quartet. The parts correspond to those vocal registers even in instrumental music.
Whole tone	A scale which includes only intervals of a whole tone is a whole tone scale.
Word-painting	A technique used in setting texts in which images in the text are reflected in the music, serving to express something of the meaning of a word or an image.

NB Not every term in the catalogue here is relevant to the set works. However, some are relevant to the twentieth century in general.

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Appendix 3

YouTube-ography:

Stravinsky

- 🔗 If you lack enough scores at the moment, try this performance which shows <https://www.youtube.com/watch?v=FFPjFjUonX8>
- 🔗 For a tele-documentary reconstruction of the first performance: <https://www.youtube.com/watch?v=JcZ7IfdhVQw>
- 🔗 Follow this link to see the original choreography by Nijinsky recreated by Ballet designs. (Compare with the classical ballet which preceded the *Rite* in the pre-war period – the sensational contrast). This video is highly recommended for its evocation of the original production which seemed to have caused more trouble than did Stravinsky's music (which was clearly due to the film). Viewers should preview the production for sensitive content. <https://www.youtube.com/watch?v=jF1OQkHybEQ>

Saariaho

- 🔗 For a concert performance of *Petals* follow this link: <https://www.youtube.com/watch?v=wkmzXHTrixI>
- 🔗 To hear a discussion on extended techniques with Saariaho and others follow <https://www.youtube.com/watch?v=T32QIOAxrlo>

Appendix 4

Wider Listening

New Directions – some further avenues

Below are a few suggested works for wider listening.

Section B Question 5

Petals

- *Répons* (1981) for chamber ensemble and live electronics – Pierre Boulez (1925–2016)
- *...explosante –fixe...* [A work written by Boulez in memoriam of Stravinsky in 1982] for solo flutes, ensemble & electronics
- *Anthèmes 2* for violin and electronics (1997)
- *Elektronische Studie II* (1954) – Karlheinz Stockhausen (1928–2007)
- *Gesang der Jünglinge* (1956)
- *Kontakte* (1960)
- *Hymnen* (1967)
- *Désert* (1954) – Edgar Varèse (1883–1965)
- *Poème électronique* (1958)
- *Les espaces acoustiques* (five pieces from between 1976–1985) – Gérard Grisey (1945–1999)

The Rite of Spring

- *Scheherazade* (1888) – Rimsky-Korsakov (1844–1908)
- *Prélude à l'après-midi d'un faune* (1894) Claude Debussy (1862–1918)
- *La mer* (1903–1905)
- *Jeux* (1912)
- *Concerto for Orchestra* (1943) – Bela Bartok (1881–1945)
- *The Wooden Prince* (1914–1916)
- *Dance Suite* (1923)

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Bibliography

The analytical discussions of the three set works and sections of works are the analysis of some significant texts which have been referred to and which have provided clarification of cases. The listed bibliography is intended for those who like to read around their analysis and check details cited here. The primary sources for the examination are always the texts that goes with them. Analysis of works is usually more revealing and enlightening than the thoughts, but the texts listed may help.

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- <http://rogerharmar.net>
- <https://rogerharmar.bandcamp.com>

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