Trey Spruance

Séraphîta (2016)

I. Séraphîta
II. Le Baphomet
III. Séraphîtüs

Composed for Fifty for the Future: The Kronos Learning Repertoire

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“This piece was commissioned for Fifty for the Future: The Kronos Learning Repertoire, a project of the Kronos Performing Arts Association. The score and parts are available for free online. kronosquartet.org.”

Trey Spruance’s Séraphîta was commissioned as part of the Kronos Performing Arts Association’s Fifty for the Future: The Kronos Learning Repertoire, which is made possible by a group of adventurous partners, including Carnegie Hall and many others.
Practical rationale for acquiring these tones (purely technical aspect)

Notation Anomalies

Δ = 1/3 tone (33 cents) up from a corresponding (natural) chromatic note
♭ = 1/3 tone (33 cents) up from a corresponding (flat) chromatic note.
× = foot stomp. With Ankle bells for Violin II and Viola.

Understanding the Intonation

All scales here are built from diatonic tetrachords. The intonation system is mostly familiar western tonality. When western equal temperament is departed from, which happens a little bit in Movements I and III, and quite a bit in Movement II, the system remains strictly diatonic with seven fixed notes (with a couple of exceptions). Life is made easier in practice by the fact that the two tetrachords making up the scale used here are similar, and mirror most interval relationships one fifth apart from each other. This makes hands positions and movements from string to string much simpler.

The two non-standard intervals used in this piece are obtained very easily. Since we are not engaging in “microtonality” but rather in diatonic temperament that includes the most familiar intervals (P4, P5, M2 etc), most of the mathy guesswork of applying esoteric-seeming ratios to instruments can be avoided. (We'll leave theoretical details on this aspect for another time).

In general, most non-western diatonic intervals can be found by tuning a mid-tone division of any minor third in a specific way. In this case, taking the minor third between G and Bb, with the first finger at G and third finger at Bb, put the second finger down one third of the distance between a chromatic Ab and A natural. We now have BOTH of our intervals, the "Pelog limma" between the first and second fingers, and the "Zalzalian remainder" tone between the second and third. Below you can see more details on what these intervals are, but don't needlessly confuse yourself with that. To find these intervals again just maintain your minor third, don't let anything slip, and get used to the sound of the intervals around the second note.

In the score and parts I simply wrote these accidentals as ♭ on flats or ∆ for naturals. In both cases you may simply read the associated note as up 1/3 a tone, or 33 cents. As there are only seven notes in the diatonic scale, and only three of these are altered from western chromaticism here, there is no need to feel overwhelmed by a mountain of chromatic “microtones”. With only three such "accidentals" in this otherwise familiar diatonic system, it should only seem daunting at first.

I will warn that the whole tone that happens (rarely) between the sixth and seventh degrees is probably the trickiest interval in this system to get perfect. Mercifully, it doesn't happen all that much in the piece.

Practical considerations on fingerings

In the upper tetrachord beginning on D our 6th degree E♭ is spaced exactly as our 2nd degree A♯. One fifth apart, convenient! But beware that the familiar whole tone between the 6th and 7th degrees is actually not so familiar, since it begins on a 1/3 tone-raised E♭. Going up one whole step from there produces a 1/3 raised F (Δ). To locate the precise fingering for this occasional FA it can either be learned as a whole step up from the pelog limma at E♭, or alternately, if you’d rather divide the upper tetrachord P4 between D and upper G into equal-tempered thirds that’s fine too. That could get a little tricky with the Pelog limma on the 6th degree in there too, but not too bad. Remember, if any uncertainty lingers, the FA can always be found as a mid-tone division in a minor third as we did before, i.e. coming down from the upper G to E natural and then going up one Pelog limma to find your FA between E natural and the upper G.
sul tasto  placid
(apply slowly, gently)

placid, airy drone

sul pont

fuller sul tasto
(w/bow-edge, airy)

accompaniment to V1 melody

fuller sul tasto

dramatic

Séraphîta
fuller sul tasto

resolute

confident, final

confident, final
The motif has been designed in such a way that it may be "rotated" in a technique I’ve developed called “tessellation” (this piece is based on what I call the “Third Tessellation”). It all works much the same way that tiling tessellation works. The essential method is to tie together short note patterns that can be rotated in quarter turns, giving way to larger structures that multiply perceived complexity. These kinds of constructions seem to have aesthetic rules, as with tiling, and not every simple motif will make an interesting field of patterns. In this short movement, a descending four note pattern simply repeats four descents, strictly, according to the 18-unit rhythmic ostinato. The note sequence naturally and linearly “rotates” a quarter turn once every 18 pulses. To say it another way, the 2nd bar (in 9/4), which repeats the rhythmic ostinato, begins on the fourth note of the initial four notes of the first bar (1/4 turn). The first note of the 3rd bar is the third note of the initial four notes (1/2 turn), and the first note of the second bar is the 2nd note of the first bar (3/4 turn). After the end of the 4th bar we arrive back at the top where we began.

Stepping back from the descending four note pattern, note the larger four note ascending pattern emerging at the bar lines. And that’s where the magic begins. Patterns by themselves of course are not music. So all of this is just structural support. The spine of Le Baphomet!

Just as an exercise I recommend digesting this pattern internally (not reading it). It translates very well to fixed hand-positions on stringed instruments. Doing a right hand pizz exercise with ring, middle, pointer finger and thumb on each of the 4 strings could also be very helpful. (I compose tessellation motifs on a Lyre).

It will be good to have this motif digested well, since each instrument bears its own unique set of relationships to it. As the piece progresses, even while other rhythmic superimpositions occur, the ostinato is stubbornly maintained in one form or other. There are myriad deceptive transformations. Additionally, notation often adapts to the melodic gestures going on above the pattern, while the 18-pulse ostinato remains intact as the barlines switch in various combinations of different time signatures, which accommodate both the melodies and the ostinato.

The accents, and how they play into the perception of beginnings and endings of phrases is where the real music in this piece is to be found.

II.

Le Baphomet

Ensemble notes

The Rhythm

A few insights might aid in playing this movement.
Le Baphomet is based on a rhythmic ostinato of 18 units.

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II.

Le Baphomet

Notes for Violin I

At section C there is a marking for “molto sul pont”. This section has an intermittent drone on the G string, and is meant to sound something like a kemanche, i.e. Iranian spike fiddle. Since a kemanche sits on the knee and is turned with the left hand to access the different strings, often with an open-string drone at the bottom, we are seeking a similar effect. You can bow as indicated, not taking the low G drone rhythms literally, or those notes on the low G can indicate re-bowing points.

At section H and I it’s similar to what happens at section C, only with foot stomps (*)& accentuating the indicated re-bowing points.

The polytonal duet passage with violin 2 (bars 7 & 8) is in standard 12-tone equal-temperament, as is the sul tasto duet passage with viola in bar 37.

Be advised that at section "I" the tetrachord intonations shift a bit for one bar! There is a B natural enharmonically identical with Cb of course, but it acts as a leading tone to an anomalous C natural.

In bar 40 the Eb is un-altered equal temperament!
And at bar 41 in the final cadence, for the quotation from Séraphîta/Séraphitûs, the tetrachord intonation shifts up a 4th, which ushers in the Db +33 cent Pelog limma for two bars (42,43).
Notes for Violin 2

At section C the pizz should be as sustained as possible, letting the open strings and any other notes ring out as long as possible. Recalling the Lyre to the best of ability.

By contrast, pizz in sections D, F and the first part of H, the 2nd violin acts as a punctuated rhythmic anchor, stating the ‘Tessellating’ rotations clearly while the rest of the ensemble whirls around it.

The polytonal duet passage with violin 1 (bars 7 & 8) is in standard 12-tone equal-temperament.

In section G, the flautando part is harmonically counter to the violin and viola, but the phrasing is almost unison with them. Everything is aligned so that the 4ths and 5ths that occur are “perfect”, or never off by semi-tones. The same goes for the 3rds and 6ths. To say it another way, when the notes in the part are in fact semitones, such as when you play an $A^\sharp$ Pelog limma, the corresponding interval created by the other instruments will also be a $+33$ note, such as $E^\sharp$ (P5) or $F^\Delta$ (M6). For the most part this occurs naturally in the diatonic tetrachordal structure of the piece, but note the one exception: the Cb’s in the G section have been raised 33 cents in the 2nd violin part. This is one of two adjustments that have been made outside of the dominant diatonic intonation in the piece, and this one functions simply to smooth the occurrence of a few colliding semitone 3rds and 4ths.

Be advised also that that at section "I" the tetrachord intonations shift up a 5th for one bar. In the case of the 2nd violin this only results in the appearance of an otherwise anomalous natural C. And just after this in bar 40 is our second non-tetrachordal anomaly, a single non-Pelog natural Ab.

Before this movement, don't forget to attach ankle bells for your foot stomps (✿). Or perhaps before the first movement.
Notes for Viola

Attach ankle bells before movement begins, perhaps before the beginning of the first movement.

Foot Stomps (🚫) are indicated first at C.

Also at C pizz transforms to violently flicked / strummed dead notes. This is indicated by slash notation and the usual bowing symbols for up and down strokes. The right hand should be positioned comfortably to effect flamenco-like up/down percussive impacts with two or more fingers across any and all of the strings. The left hand must deaden all strings.

During the section with these strokes:

Up stroke:
The index, middle and ring fingers from a fist like position open suddenly to strike the fingertips and nails percussively across all dead/muted strings. A ‘flam’-stroke effect is desirable.

Down stroke:
Same idea, raking strings while closing the fingers to a fist-like position. Since the strings are pulled ‘up’ with the pad of the finger it is a different sound. Less ‘flam’ is ok.

Accents increase the percussiveness of the sound, adding flamenco-like strumming weight to the ‘flam’.

If there are stroke combinations that feel more natural with the foot stomps than the ones written, feel free to try them. Be advised that some of your foot stomps and up/down strokes are choreographed with the cello, and unity on the direction of the strokes will need to be maintained.

There are several unison/octave duets with violin 1. (at D, F, G, H and I).

Intonation:
Throughout, you adhere to the two primary tetrachords of the movement, with the exception of the sul tasto at bar 37 (an anomalous polytonal duet with violin 1 in standard 12-tone equal-temperament), and a one bar tetrachord shift at section “I” that gives a single C natural.
Notes for Cello

This movement (Le Baphomet) uses no bow. In addition to normal pizz, Bartok pizz and left hand pizz, there are stroked/strummed notes. When up and down bow stroke markings occur in the part they are hand/wrist flicks across the string(s) with the hand positioned comfortably at the lower fingerboard.

While doing this technique of strumming, the left hand should have pressure only on the note being played (usually on the C string) and deaden all the other notes. It’s best to avoid open strings altogether in these passages.

Up stroke:
From a near fist-position, the index and middle finger tips including nails strike across the note string, but may also percussively include any nearby dead/muted strings in the stroke. A ‘flam’-stroke effect is desirable. Add ring finger for accents.

Down stroke:
Same idea here, with the fingers quickly snapping back across the string(s) to a closed fist-like position. Since the note is pulled 'in' with the pad of the finger it is a different sound. And less ‘flam’ and/or interference from other strings is ok.

In section G if there are up/down strokes in combination with the foot stomp that feel more natural to you, feel free to reverse any of them to your liking. In section C the strokes are choreographed with the viola, so any changes will have to be adopted by both players.

The essence of this part is its physicality. The fact that it stays almost entirely in one tetrachord in one hand position is almost diabolically deceptive in terms of the actual challenges playing it poses!
Score

Le Baphomet

Trey Spruance

A

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with more force

percussive strum across deadened strings
Le Baphomet
Le Baphomet

39 \[ \text{s}fz \ pp \quad \text{let ring} \]

\[ \text{mf} \quad \text{lead, accompanied by V1} \]

\[ \text{mf} \quad \text{with boldness} \]

\[ \text{G} \quad \text{molto sul pont} \quad \text{accompany viola} \]

\[ \text{lightly drone open IV and III strings when not pressing fingerboard} \]

\[ \text{percussive strum across deadened strings} \]
molto sul pont
bow with foot stomps and IV string drone
open 3rd string drone intermittently (with bowing)
with more force
Le Baphomet
Here we recall medieval dance forms without referring to any of them specifically.

The two main motifs here (section A and C and their variants) both have an interplay of "straight" duple and literal triplets, the A section being the more fluid and spirited with triplets, the C section having decidedly more pomp. Courtly restraint trading off with unshackled mania.

The movement takes a cue from Lou Harrison's "Estampie" for string quartet in the "dum"-"tek" approach to the cello. The left hand taps the body of the instrument, notated under the staff line; the right hand taps the bow col legno battuo behind the bridge, notated above the staff line.

The brackets over bars 2, 7 etc in the violin II, viola and cello parts are just reminders of how emphatically "straight" that little two beats of rhythm needs to be (in the vein of a North African Duyek). As the first bar of several sections, it stands in contrast to the more triplet-ish and cavaliersounding remainder of those phrases.
Seraphitus
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**Practical rationale for acquiring these tones (purely technical aspect)**

The "Pelog limma", first and fifth interval of our lower tetrachord (occupying the spaces from G to A\(^\flat\) and D to E\(^\#\)) is simply one unit of an equal temperament system of 9 units within an octave. Technically 133 1/3 cents. Similarly, the "Zalzalian remainder" tone, second and seventh interval of our tetrachord (occupying the spaces from A\(^\flat\) to Bb and F\(_\Delta\) to G) is simply one third of a perfect fourth (166 2/3 cents). Ibn Sena obtained his Zalzalian (neutral) third by calculating two thirds of a P4. We use the "remainder" tone here.

The upper tetrachord is in fact Ibn Sena's Perfect fourth. There is a Zalzalian (neutral) third from D to F\(_\Delta\), and our familiar remainder from F\(_\Delta\) to the upper G. It just so happens that a "Pelog limma" + a whole tone = Zalzalian third (!)

**Notation Anomalies**

\[ \Delta = 1/3 \text{ tone (33 cents)} \text{ up from a corresponding (natural) chromatic note} \]
\[ \hat{\flat} = 1/3 \text{ tone (33 cents)} \text{ up from a corresponding (flat) chromatic note.} \]
\[ \times = \text{foot stomp. With Ankle bells for Violin II and Viola.} \]

**Practical considerations on fingerings**

In the upper tetrachord beginning on D our 6th degree E\(^\#\) is spaced exactly as our 2nd degree A\(^\#\). One fifth apart, convenient! But beware that the familiar whole tone between the 6th and 7th degrees is actually not so familiar, since it begins on a 1/3 tone-raised E\(^\#\). Going up one whole step from there produces a 1/3 raised F (\(\Delta\)). To locate the precise fingering for this occasional F\(_\Delta\) it can either be learned as a whole step up from the pelog limma at E\(^\flat\), or alternately, if you’d rather divide the upper tetrachord P4 between D and upper G into equal-tempered thirds that’s fine too. That could get a little tricky with the Pelog limma on the 6th degree in there too, but not too bad. Remember, if any uncertainty lingers, the F\(_\Delta\) can always be found as a mid-tone division in a minor third as we did before, i.e. coming down from the upper G to E \textit{natural} and then going up one Pelog limma to find your F\(_\Delta\) between E \textit{natural} and the upper G.
Séraphîta

Violin 1

\( \sum h = 50 \)

\[ p \text{ placid} \]

III \( \text{placid drone} \) \( \text{sul tasto} \)

ppp \( \rightarrow p \rightarrow \rightarrow p \rightarrow \rightarrow ppp \)

14 \( (\text{sul tasto}) \) \( \text{placid} \)

\( p \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow p \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow 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Notes for Violin I

At section C there is a marking for “molto sul pont”. This section has an intermittent drone on the G string, and is meant to sound something like a *kemanche*, i.e. Iranian spike fiddle. Since a kemanche sits on the knee and is turned with the left hand to access the different strings, often with an open-string drone at the bottom, we are seeking a similar effect. You can bow as indicated, not taking the low G drone rhythms literally, or those notes on the low G can indicate re-bowing points.

At section H and I it’s similar to what happens at section C, only with foot stomps (徨徨) accentuating the indicated re-bowing points.

The polytonal duet passage with violin 2 (bars 7 & 8) is in standard 12-tone equal-temperament, as is the *sul tasto* duet passage with viola in bar 37.

Be advised that at section "I" the tetrachord intonations shift a bit for one bar! There is a B natural enharmonically identical with Cb of course, but it acts as a leading tone to an anomalous C natural.

In bar 40 the Eb is un-altered equal temperament!
And at bar 41 in the final cadence, for the quotation from Séraphîta/Sèraphitûs, the tetrachord intonation shifts up a 4th, which ushers in the Db +33 cent Pelog limma for two bars (42,43).
molto sul pont
accompany viola

lightly drone open IV and III strings when not pressing fingerboard

molto sul pont
bow with foot stomps and IV string drone

31 Le Baphomet

52
Le Baphomet
Here we recall medieval dance forms without referring to any of them specifically.

The two main motifs here (section A and C and their variants) both have an interplay of "straight" duple and literal triplets, the A section being the more fluid and spirited with triplets, the C section having decidedly more pomp. Courtly restraint trading off with unshackled mania.

The movement takes a cue from Lou Harrison's "Estampie" for string quartet in the "dum"-"tek" approach to the cello. The left hand taps the body of the instrument, notated under the staff line; the right hand taps the bow col legno battuo behind the bridge, notated above the staff line.

The brackets over bars 2, 7 etc in the violin II, viola and cello parts are just reminders of how emphatically "straight" that little two beats of rhythm needs to be (in the vein of a North African Duyek). As the first bar of several sections, it stands in contrast to the more triplet-ish and cavalier-sounding remainder of those phrases.
Séraphitus

Trey Spruance

A

\( \text{mf} \) con bravura

B

pont.\( \text{pp} \)

\( \text{mp} \) sombre

\( \text{f} \) maestoso (detached)

C

\( \text{f} \) a tempo

D

\( \text{jeté} \)

\( \text{mf} \) sul tasto

\( \text{p} \) sul tasto

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Trey Spruance

Séraphîta (2016)

I. Séraphîta
II. Le Baphomet
III. Séraphîtüs

Composed for Fifty for the Future: The Kronos Learning Repertoire

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Understanding the Intonation

All scales here are built from diatonic tetrachords. The intonation system is mostly familiar western tonality. When western equal temperament is departed from, which happens a little bit in Movements I and III, and quite a bit in Movement II, the system remains strictly diatonic with seven fixed notes (with a couple of exceptions). Life is made easier in practice by the fact that the two tetrachords making up the scale used here are similar, and mirror most interval relationships one fifth apart from each other. This makes hands positions and movements from string to string much simpler.

The two non-standard intervals used in this piece are obtained very easily. Since we are not engaging in “microtonality” but rather in diatonic temperament that includes the most familiar intervals (P4, P5, M2 etc), most of the mathy guesswork of applying esoteric-seeming ratios to instruments can be avoided. (We’ll leave theoretical details on this aspect for another time).

In general, most non-western diatonic intervals can be found by tuning a mid-tone division of any minor third in a specific way. In this case, taking the minor third between G and Bb, with the first finger at G and third finger at Bb, put the second finger down one third of the distance between a chromatic Ab and A natural. We now have BOTH of our intervals, the "Pelog limma" between the first and second fingers, and the "Zalzalian remainder" tone between the second and third. Below you can see more details on what these intervals are, but don't needlessly confuse yourself with that. To find these intervals again just maintain your minor third, don't let anything slip, and get used to the sound of the intervals around the second note.

In the score and parts I simply wrote these accidentals as ♭ on flats or for naturals. In both cases you may simply read the associated note as up 1/3 a tone, or 33 cents. As there are only seven notes in the diatonic scale, and only three of these are altered from western chromaticism here, there is no need to feel overwhelmed by a mountain of chromatic “microtones”. With only three such “accidentals” in this otherwise familiar diatonic system, it should only seem daunting at first.

I will warn that the whole tone that happens (rarely) between the sixth and seventh degrees is probably the trickiest interval in this system to get perfect. Mercifully, it doesn’t happen all that much in the piece.

Practical rationale for acquiring these tones (purely technical aspect)

The the "Pelog limma", first and fifth interval of our lower tetrachord (occupying the spaces from G to A♭ and D to E♭ ) is simply one unit of an equal temperament system of 9 units within an octave. Technically 133 1/3 cents. Similarly, the “Zalzalian remainder” tone, second and seventh interval of our tetrachord (occupying the spaces from A♭ to Bb and F♮ to G) is simply one third of a perfect fourth (166 2/3 cents). Ibn Sena obtained his Zalzalian (neutral) third by calculating two thirds of a P4. We use the “remainder” tone here.

The upper tetrachord is in fact Ibn Sena’s Perfect fourth. There is a Zalzalian (neutral) third from D to F♮, and our familiar remainder from F♭ to the upper G. It just so happens that a "Pelog limma" + a whole tone = Zalzalian third (!)

Practical considerations on fingerings

In the upper tetrachord beginning on D our 6th degree E♭ is spaced exactly as our 2nd degree A♭. One fifth apart, convenient! But beware that the familiar whole tone between the 6th and 7th degrees is actually not so familiar, since it begins on a 1/3 tone-raised E♭. Going up one whole step from there produces a 1/3 raised F♮ (♭). To locate the precise fingering for this occasional F♮ it can either be learned as a whole step up from the pelog limma at E♭, or alternately, if you’d rather divide the upper tetrachord P4 between D and upper G into equal-tempered thirds that’s fine too. That could get a little tricky with the Pelog limma on the 6th degree in there too, but not too bad. Remember, if any uncertainty lingers, the F♮ can always be found as a mid-tone division in a minor third as we did before, i.e. coming down from the upper G to E natural and then going up one Pelog limma to find your F♮ between E natural and the upper G.
The motif has been designed in such a way that it may be "rotated" in a technique I’ve developed called “tessellation” (this piece is based on what I call the “Third Tessellation”). It all works much the same way that tiling tessellation works. The essential method is to tie together short note patterns that can be rotated in quarter turns, giving way to larger structures that multiply perceived complexity. These kinds of constructions seem to have aesthetic rules, as with tiling, and not every simple motif will make an interesting field of patterns. In this short movement, a descending four note pattern simply repeats four descents, strictly, according to the 18-unit rhythmic ostinato. The note sequence naturally and linearly “rotates” a quarter turn once every 18 pulses. To say it another way, the 2nd bar (in 9/4), which repeats the rhythmic ostinato, begins on the fourth note of the initial four notes of the first bar (1/4 turn). The first note of the 3rd bar is the third note of the initial four notes (1/2 turn), and the first note of the second bar is the 2nd note of the first bar (3/4 turn). After the end of the 4th bar we arrive back at the top where we began.

Stepping back from the descending four note pattern, note the larger four note ascending pattern emerging at the bar lines. And that’s where the magic begins. Patterns by themselves of course are not music. So all of this is just structural support. The spine of Le Baphomet!

Just as an exercise I recommend digesting this pattern internally (not reading it). It translates very well to fixed hand-positions on stringed instruments. Doing a right hand pizz exercise with ring, middle, pointer finger and thumb on each of the 4 strings could also be very helpful. (I compose tessellation motifs on a Lyre).

It will be good to have this motif digested well, since each instrument bears its own unique set of relationships to it. As the piece progresses, even while other rhythmic superimpositions occur, the ostinato is stubbornly maintained in one form or other. There are myriad deceptive transformations. Additionally, notation often adapts to the melodic gestures going on above the pattern, while the 18-pulse ostinato remains intact as the barlines switch in various combinations of different time signatures, which accommodate both the melodies and the ostinato.

The accents, and how they play into the perception of beginnings and endings of phrases is where the real music in this piece is to be found.
Notes for Violin 2

At section C the pizz should be as sustained as possible, letting the open strings and any other notes ring out as long as possible. Recalling the Lyre to the best of ability.

By contrast, pizz in sections D, F and the first part of H, the 2nd violin acts as a punctuated rhythmic anchor, stating the ‘Tessellating’ rotations clearly while the rest of the ensemble whirls around it.

The polytonal duet passage with violin 1 (bars 7 & 8) is in standard 12-tone equal-temperament.

In section G, the flautando part is harmonically counter to the violin and viola, but the phrasing is almost unison with them. Everything is aligned so that the 4ths and 5ths that occur are “perfect”, or never off by semi-tones. The same goes for the 3rds and 6ths. To say it another way, when the notes in the part are in fact semitones, such as when you play an $A\flat$ Pelog limma, the corresponding interval created by the other instruments will also be a $+33$ note, such as $E\flat$ (P5) or $F\natural$ (M6). For the most part this occurs naturally in the diatonic tetrachordal structure of the piece, but note the one exception: the Cb’s in the G section have been raised 33 cents in the 2nd violin part. This is one of two adjustments that have been made outside of the dominant diatonic intonation in the piece, and this one functions simply to smooth the occurrence of a few colliding semitone 3rds and 4ths.

Be advised also that at section "I" the tetrachord intonations shift up a 5th for one bar. In the case of the 2nd violin this only results in the appearance of an otherwise anomalous natural C. And just after this in bar 40 is our second non-tetrachordal anomaly, a single non-Pelog natural Ab.

Before this movement, don't forget to attach ankle bells for your foot stomps (☝️). Or perhaps before the first movement.
percussive strum across deadened strings
Here we recall medieval dance forms without referring to any of them specifically.

The two main motifs here (section A and C and their variants) both have an interplay of "straight" duple and literal triplets, the A section being the more fluid and spirited with triplets, the C section having decidedly more pomp. Courtly restraint trading off with unshackled mania.

The movement takes a cue from Lou Harrison's "Estampie" for string quartet in the "dum"-"tek" approach to the cello. The left hand taps the body of the instrument, notated under the staff line; the right hand taps the bow col legno battuo behind the bridge, notated above the staff line.

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Notation Anomalies

Δ = 1/3 tone (33 cents) up from a corresponding (natural) chromatic note
\(^\flat\) = 1/3 tone (33 cents) up from a corresponding (flat) chromatic note.
\(\#\) = foot stomp. With Ankle bells for Violin II and Viola.

Understanding the Intonation

All scales here are built from diatonic tetrachords. The intonation system is mostly familiar western tonality. When western equal temperament is depatured from, which happens a little bit in Movements I and III, and quite a bit in Movement II, the system remains strictly diatonic with seven fixed notes (with a couple of exceptions). Life is made easier in practice by the fact that the two tetrachords making up the scale used here are similar, and mirror most interval relationships one fifth apart from each other. This makes hands positions and movements from string to string much simpler.

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Practical considerations on fingerings

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Viola

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The accents, and how they play into the perception of beginnings and endings of phrases is where the real music in this piece is to be found.
Notes for Viola

Attach ankle bells before movement begins, perhaps before the beginning of the first movement.

Foot Stomps (\#) are indicated first at C.

Also at C pizz transforms to violently flicked / strummed dead notes. This is indicated by slash notation and the usual bowing symbols for up and down strokes. The right hand should be positioned comfortably to effect flamenco-like up/down percussive impacts with two or more fingers across any and all of the strings. The left hand must deaden all strings.

During the section with these strokes:

Up stroke:
The index, middle and ring fingers from a fist like position open suddenly to strike the fingertips and nails percussively across all dead/muted strings. A ‘flam’-stroke effect is desirable.

Down stroke:
Same idea, raking strings while closing the fingers to a fist-like position. Since the strings are pulled ‘up’ with the pad of the finger it is a different sound. Less ‘flam’ is ok.

Accents increase the percussiveness of the sound, adding flamenco-like strumming weight to the ‘flam’.

If there are stroke combinations that feel more natural with the foot stomps than the ones written, feel free to try them. Be advised that some of your foot stomps and up/down strokes are choreographed with the cello, and unity on the direction of the strokes will need to be maintained.

There are several unison/octave duets with violin 1. (at D, F, G, H and I).

Intonation:
Throughout, you adhere to the two primary tetrachords of the movement, with the exception of the \textit{sul tasto} at bar 37 (an anomalous polytonal duet with violin 1 in standard 12-tone equal-temperament), and a one bar tetrachord shift at section “I” that gives a single C natural.
open 3rd string drone intermittently (with bowing)
Here we recall medieval dance forms without referring to any of them specifically.

The two main motifs here (section A and C and their variants) both have an interplay of "straight" duple and literal triplets, the A section being the more fluid and spirited with triplets, the C section having decidedly more pomp. Courtly restraint trading off with unshackled mania.

The movement takes a cue from Lou Harrison's "Estampie" for string quartet in the "dum"-"tek" approach to the cello. The left hand taps the body of the instrument, notated under the staff line; the right hand taps the bow col legno battuo behind the bridge, notated above the staff line.

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Viola

Séraphitus

Trey Spruance

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**Seraphitus**

- **E:** Maestoso (detached)

- **F:** Gallop

- **G:** Con bravura

- **H:** Gallop

- **I:** Gallop
**Trey Spruance**

Séraphîta (2016)

I. Séraphîta  
II. Le Baphomet  
III. Séraphîtûs

Composed for *Fifty for the Future: The Kronos Learning Repertoire*

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Practical rationale for acquiring these tones (purely technical aspect)

Notation Anomalies

\[ \Delta = 1/3 \text{ tone (33 cents)} \text{ up from a corresponding (natural) chromatic note} \]

\[ \hat{\flat} = 1/3 \text{ tone (33 cents)} \text{ up from a corresponding (flat) chromatic note.} \]

\[ \times \text{ = foot stomp. With Ankle bells for Violin II and Viola.} \]

Understanding the Intonation

All scales here are built from diatonic tetrachords. The intonation system is mostly familiar western tonality. When western equal temperament is departed from, which happens a little bit in Movements I and III, and quite a bit in Movement II, the system remains strictly diatonic with seven fixed notes (with a couple of exceptions). Life is made easier in practice by the fact that the two tetrachords making up the scale used here are similar, and mirror most interval relationships one fifth apart from each other. This makes hands positions and movements from string to string much simpler.

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In the score and parts I simply wrote these accidentals as \( \hat{\flat} \) on flats or for naturals. In both cases you may simply read the associated note as up 1/3 a tone, or 33 cents. As there are only seven notes in the diatonic scale, and only three of these are altered from western chromaticism here, there is no need to feel overwhelmed by a mountain of chromatic “microtones”. With only three such "accidentals" in this otherwise familiar diatonic system, it should only seem daunting at first.

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The upper tetrachord is in fact Ibn Sena's Perfect fourth. There is a Zalzalian (neutral) third from D to F\( \Delta \), and our familiar remainder from F\( \Delta \) to the upper G. It just so happens that a "Pelog limma" + a whole tone = Zalzalian third (!)

Practical considerations on fingerings

In the upper tetrachord beginning on D our 6th degree E\( \hat{\flat} \) is spaced exactly as our 2nd degree A\( \hat{\flat} \). One fifth apart, convenient! But beware that the familiar whole tone between the 6th and 7th degrees is actually not so familiar, since it begins on a 1/3 tone-raised E\( \hat{\flat} \). Going up one whole step from there produces a 1/3 raised F (\( \Delta \)). To locate the precise fingering for this occasional F\( \Delta \) it can either be learned as a whole step up from the pelog limma at E\( \hat{\flat} \), or alternately, if you’d rather divide the upper tetrachord P4 between D and upper G into equal-tempered thirds that’s fine too. That could get a little tricky with the Pelog limma on the 6th degree in there too, but not too bad. Remember, if any uncertainty lingers, the F\( \Delta \) can always be found as a mid-tone division in a minor third as we did before, i.e. coming down from the upper G to E natural and then going up one Pelog limma to find your F\( \Delta \) between E natural and the upper G.
Cello

Séraphîta

Trey Spruance

\[ \frac{1}{4} \]

\[ \text{d} = 50 \]

\[ \text{drone} \]

\[ \text{pppp} < \text{pp} \]

\[ \text{espress.} \]

\[ \text{a bit airy} \]

\[ \text{let ring} \]

\[ \text{solo (espress.)} \]

\[ \text{drone} \text{placid} \]

\[ \text{pp} < \text{mp} \]

\[ \text{mf} \]

\[ \text{mp} > \text{pp} \]

\[ \text{sul pont} \]

\[ \text{III} \text{(normal) placid} \]

\[ \text{dramatic} \]

\[ \text{f} \]

\[ \text{mp} \]

\[ \text{f} \]

\[ \text{mp} \]

\[ \text{solo (espress.)} \]

\[ \text{mf} < \text{f} \]

\[ \text{ff} > \text{mp} \]

\[ \text{confident, final} \]

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The motif has been designed in such a way that it may be "rotated" in a technique I’ve developed called “tessellation” (this piece is based on what I call the “Third Tessellation”). It all works much the same way that tiling tessellation works. The essential method is to tie together short note patterns that can be rotated in quarter turns, giving way to larger structures that multiply perceived complexity. These kinds of constructions seem to have aesthetic rules, as with tiling, and not every simple motif will make an interesting field of patterns. In this short movement, a descending four note pattern simply repeats four descents, strictly, according to the 18-unit rhythmic ostinato. The note sequence naturally and linearly “rotates” a quarter turn once every 18 pulses. To say it another way, the 2nd bar (in 9/4), which repeats the rhythmic ostinato, begins on the fourth note of the initial four notes of the first bar (1/4 turn). The first note of the 3rd bar is the third note of the initial four notes (1/2 turn), and the first note of the second bar is the 2nd note of the first bar (3/4 turn). After the end of the 4th bar we arrive back at the top where we began.

Stepping back from the descending four note pattern, note the larger four note ascending pattern emerging at the bar lines. And that’s where the magic begins. Patterns by themselves of course are not music. So all of this is just structural support. The spine of Le Baphomet!

Just as an exercise I recommend digesting this pattern internally (not reading it). It translates very well to fixed hand-positions on stringed instruments. Doing a right hand pizz exercise with ring, middle, pointer finger and thumb on each of the 4 strings could also be very helpful. (I compose tessellation motifs on a Lyre).

It will be good to have this motif digested well, since each instrument bears its own unique set of relationships to it. As the piece progresses, even while other rhythmic superimpositions occur, the ostinato is stubbornly maintained in one form or other. There are myriad deceptive transformations. Additionally, notation often adapts to the melodic gestures going on above the pattern, while the 18-pulse ostinato remains intact as the barlines switch in various combinations of different time signatures, which accommodate both the melodies and the ostinato.

The accents, and how they play into the perception of beginnings and endings of phrases is where the real music in this piece is to be found.
Notes for Cello

This movement (Le Baphomet) uses no bow. In addition to normal pizz, Bartok pizz and left hand pizz, there are stroked/strummed notes. When up and down bow stroke markings occur in the part they are hand/wrist flicks across the string(s) with the hand positioned comfortably at the lower fingerboard.

While doing this technique of strumming, the left hand should have pressure only on the note being played (usually on the C string) and deaden all the other notes. It’s best to avoid open strings altogether in these passages.

Up stroke:
From a near fist-position, the index and middle finger tips including nails strike across the note string, but may also percussively include any nearby dead/muted strings in the stroke. A ‘flam’-stroke effect is desirable. Add ring finger for accents.

Down stroke:
Same idea here, with the fingers quickly snapping back across the string(s) to a closed fist-like position. Since the note is pulled 'in' with the pad of the finger it is a different sound. And less ‘flam’ and/or interference from other strings is ok.

In section G if there are up/down strokes in combination with the foot stomp that feel more natural to you, feel free to reverse any of them to your liking. In section C the strokes are choreographed with the viola, so any changes will have to be adopted by both players.

The essence of this part is its physicality. The fact that it stays almost entirely in one tetrachord in one hand position is almost diabolically deceptive in terms of the actual challenges playing it poses!
Le Baphomet

Trey Spruance

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Here we recall medieval dance forms without referring to any of them specifically.

The two main motifs here (section A and C and their variants) both have an interplay of "straight" duple and literal triplets, the A section being the more fluid and spirited with triplets, the C section having decidedly more pomp. Courtly restraint trading off with unshackled mania.

The movement takes a cue from Lou Harrison's "Estampie" for string quartet in the "dum"-"tek" approach to the cello. The left hand taps the body of the instrument, notated under the staff line; the right hand taps the bow col legno battuo behind the bridge, notated above the staff line.

The brackets over bars 2, 7 etc in the violin II, viola and cello parts are just reminders of how emphatically "straight" that little two beats of rhythm needs to be (in the vein of a North African Duyek). As the first bar of several sections, it stands in contrast to the more triplet-ish and cavaliersounding remainder of those phrases.
Cello

Séraphitūs

Trey Spruance

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Seraphitus

33

40

45

F

G

H

gallop

f

sombre