

“The Pines of the Appian Way” from Respighi’s *Pines of Rome*

Ottorino Respighi was an Italian composer from the early 20th century who wrote many tone poems – works that describe a physical object, character, or scenario through music. One of his most famous tone poems is entitled *Pini di Roma*, or *Pines of Rome*. This work has four movements, each describing a pine tree in a different place in Rome, “The Pines of Villa Borghese,” “The Pines Near a Catacomb,” “The Pines of the Janiculum,” and “The Pines of the Appian Way.” The fourth movement is arguably the most well known and recognized of the work, and this is due to its long dramatic build and triumphant finale.

“The Pines of the Appian Way” describes Roman soldiers marching home back to the city across the Appian Way. As stated before, the movement features a long build throughout, starting faintly as one hears the sound of the soldiers’ marching drums, and building to a fortissimo as the army crosses over the hill and marches into the city.

The recording I will be using is performed by the Berlin Philharmonic conducted by Herbert von Karajan. Here is a link to Spotify: [Link](#)

The first half of the piece is harmonically ambiguous. This piece was composed in 1924, and by this time many composers had stopped writing completely using functional harmony, instead using harmony to create feeling and color instead. This is exactly what is happening in the first half of the movement. The movement begins very quietly with the basses alternating between a B2 (or B1, provided the basses have a lower 5th string) and F2, creating a tritone that places the music outside of a key (Figure 1). The timpani repeats 8th notes throughout the whole movement, also starting quietly at the beginning,

which represents the marching drums of the army.

56 IV.-I pini della via Appia
Tempo di Marcia ♩ = 66

The image shows a page of a musical score for the piece 'I pini della via Appia'. The score is for a full orchestra and includes parts for Clarinet in B-flat (Cl. B. Si b), Trumpet (Tp.), Trombone (T-t.), Piano (Pf.), Violin I (Vni I.), Viola (Vle.), Violoncello (Vc.), and Contrabass (Cb.). The tempo is marked 'Tempo di Marcia' with a quarter note equal to 66 (♩ = 66). The key signature has one flat (B-flat). The score is divided into two systems. The first system includes parts for Cl. B. Si b, Tp., T-t., and Pf. The second system includes parts for Vni I., Vle., Vc., and Cb. The piano part (Pf.) is marked '2. Ed. sempre tenuti' and 'Tempo di Marcia ♩ = 66'. The violin I part (Vni I.) is marked 'pppp perdendosi'. The violoncello part (Vc.) is marked 'II. METÀ UNITI' and 'PIZZ'. The contrabass part (Cb.) is marked 'ppp ARCO senza BORD.'. The score is marked with 'ppp' and 'simili' throughout.

Figure 1: First 5 measures of "Pines of the Appian Way"

It is interesting to note that this section is so quiet and faint that the individual notes, even though they are 6 half steps apart, are barely registered on the spectrogram (Figure 2). Instead, there is more of a constant stream of overtones, probably deriving from the repeated notes of the timpani and piano (marked Pf. on the score). The bass remains this way as a foundation through the first minute or so of the piece, with strings coming in to create eerie chords that serve no harmonic function, but rather serve to create a feeling of uneasiness. The texture dies down and the English horn comes in with a solo.

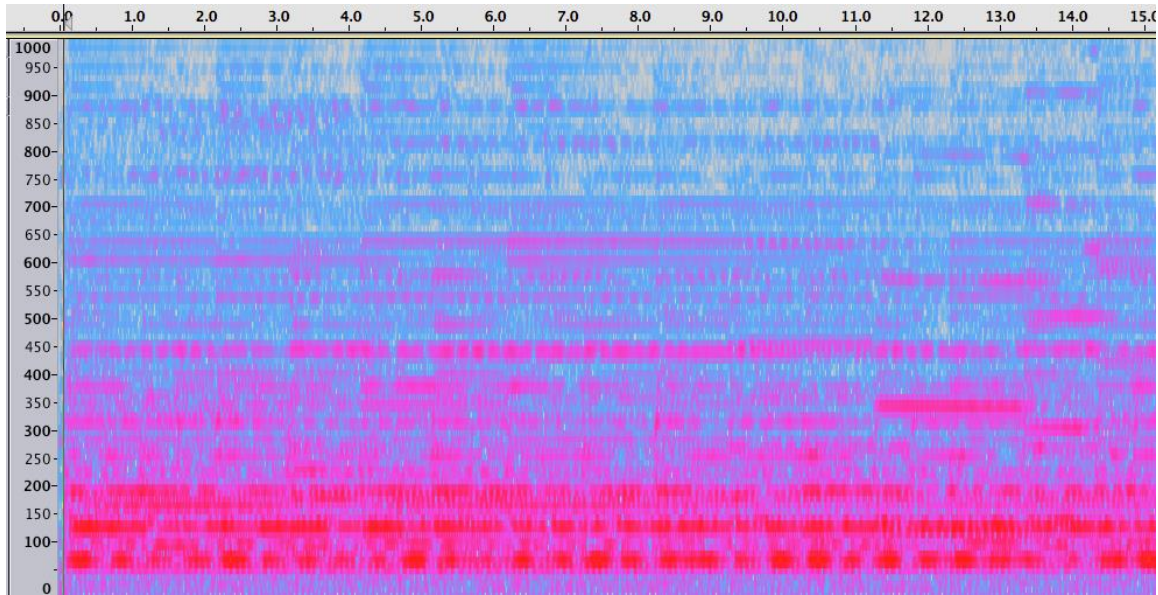


Figure 2: Spectrogram of first 8 measures of the movement

The beginning (and the rest of the piece as well) is characterized by layering of rhythms. The basses and timpani provide a steady pulse with either 8th notes or quarter notes. When the violins enter at rehearsal 18 (Figure 3), they play their eerie chords in half notes, or dotted quarter notes slurred to a 16th note, depending on the division. There are two melodic fragments in this beginning that add to the rhythmic layering as well. The first one is played by the bass clarinet in Figure 1, and also by the French horns (marked “Cor” in the score) one measure after rehearsal 18 in Figure 3. This rhythm enters on beat two, almost echoing the violins. The rhythmic displacement of the melody onto weak beats of two and four blurs the metric accents, so the listener hears just a steady pulse instead of being able to decipher that the piece is in 4/4 time, which adds to the ethereal nature of the beginning. The second melodic fragment is played by the clarinet and bass clarinet in Figure 4. This fragment is eventually to become the main

theme of the movement after the English Horn solo.

The image shows a page of a musical score for the piece 'Il METÀ' by Ottorino Respighi. The score is for a full orchestra and includes parts for Flute (Fl.), Cor Anglais (Cor.), Trumpet (Tp.), Trombone (T.t.), Percussion (Pr.), Violin II (Vni II.), Viola (Vie.), Violoncello (Vc.), and Contrabass (Cb.). The score is marked with 'ppp' (pianissimo) and 'con SORD.' (with mutes). The tempo is 'Allegretto'. The score is divided into two systems. The first system includes parts for Fl., Cor., Fl., Tp., T.t., and Pr. The second system includes parts for Vni II., Vie., Vc., and Cb. The score is marked with '18' in a box, indicating the measure number. The score is published by P.R. 439 and Am.

Figure 3: Violin entrance and melodic fragment 1

This fragment is more heroic, almost like a military call, as evidenced by the dotted 8th-16th note rhythms, as well as the triplet. All of these rhythms can be seen plotted out in Figure 5.

The English horn solo starts with a slithering descending chromatic passage (Figure 6). It is interesting to note what Respighi does here with the rhythm; as the passage goes along, the frequency of the notes increases. That is, the notes decrease in time value and increase in speed as the passage moves along: The first group of notes are 16th notes, then there is a group of 5-tuplet 16th's, played as five 16th's in the space of four, and then triplet 16th's, played as three 16th's in the space of two. These rhythms can be seen plotted out in a rhythm circle in Figure 7. This written out acceleration is also

evident in the spectrogram (Figure 8).

57

Cl. Sub
Cl. B.
Cor.
Tpt.
Tuba
Perc.
Vln
Vla
Vcl
Cb.

UNITI
ppp come un lamento

Figure 4: Melodic fragment 2 in clarinets

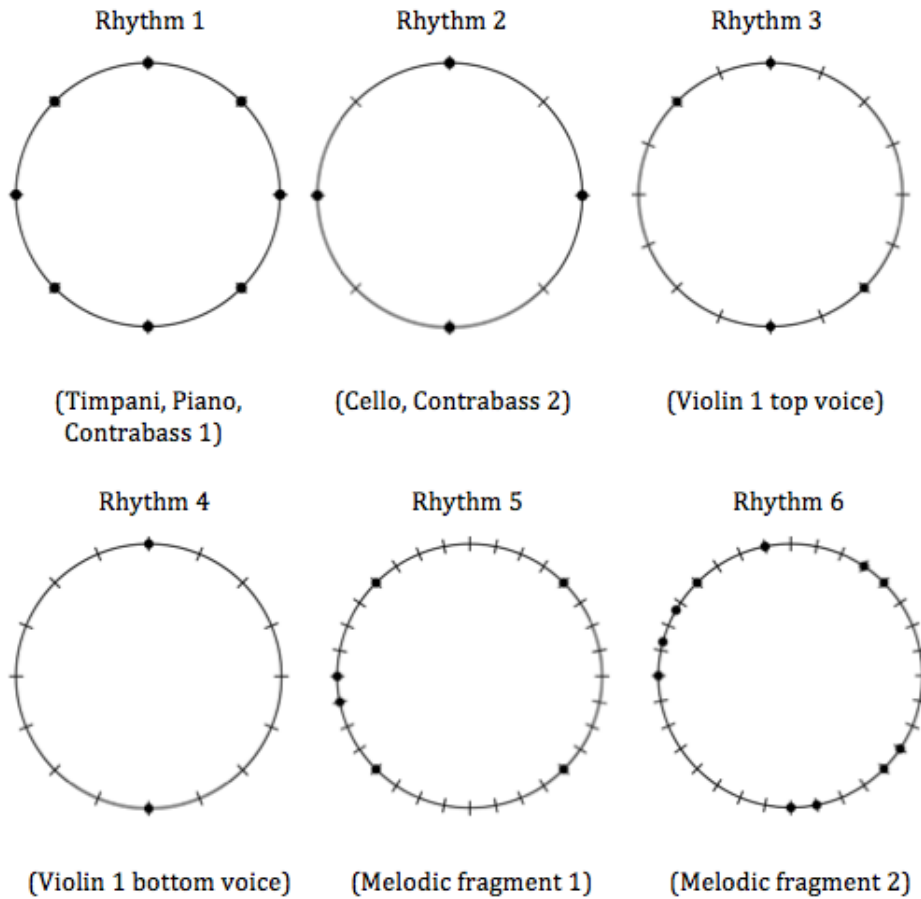


Figure 5: Rhythmic layering in the beginning of the movement

C. I.

Tp.

T-t.

Pr.

Vni. I.

Vc.

Cb.

P.R. 439

Am

Figure 6: Beginning of English horn solo

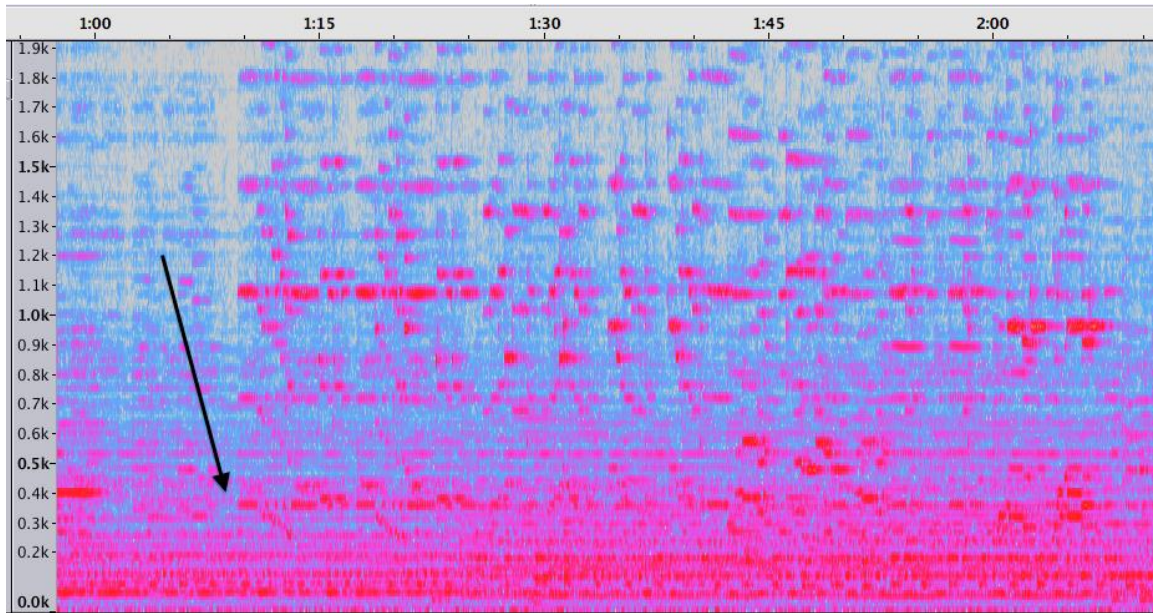


Figure 8: Spectrogram of English Horn solo

Respighi does some interesting things with the layering of rhythm in this passage. There are four different rhythms occurring simultaneously in the accompaniment to the English horn solo in Figure 3: one in the timpani, the piano, and the first voice of the contrabass, one in the cellos and the second voice of the contrabass, one in the bottom voice of the first violin, and one in the top voice of the first violin. In Figure 6 these are plotted out on 8 hour clocks, with an 8th note being the smallest value (the 16th note in the top voice of the 1st violin can function as an 8th note in this example).

The fact that all these rhythms are occurring simultaneously is interesting, as they are faint enough that it barely registers in one's ears on the recording, unless they are listening directly for it. It adds to the ethereal atmosphere that Respighi is creating in this section.

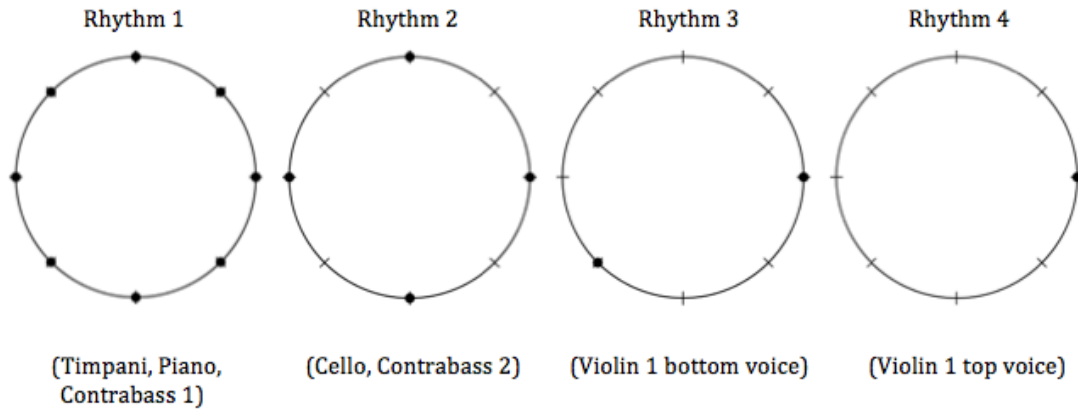


Figure 9: Rhythmic layering over English horn solo

The end of the movement is drastically different from the beginning. It uses more functional harmony (which can be analyzed from the piano part), is much louder dynamically, and uses many more instruments, as the Roman army breaks across the horizon and marches home in full force. A score excerpt towards the end of the movement can be seen in Figures 6 and 7. Respighi uses an interesting sequence here in the trombones and French horns. Over an Eb major chord pedal, the trombones and horns play Bb – C – Eb – F, in half notes, for two measures, and then repeat the same sequence for another two measures. This line, although simple, creates anticipation in a couple different ways: one being that the line ascends in pitch, creating more energy in frequency, and the other being in the pitch content. Each measure starts on a consonant note with the underlying harmony (Bb, Eb), and then proceeds to a dissonant note (C, F). The second dissonant note of the measure is resolved by the next measure's consonant note. Therefore anticipation is achieved within each measure harmonically, and across the phrase through the shape of the line, which is evident in the spectrogram in Figure 8.

The image shows a page of a musical score for a symphony orchestra. The instruments listed on the left are: Ob. (Oboe), Cl. (Clarinet), Cl. Sib. (Clarinet in B-flat), Cl. B. Sib. (Clarinet in B-flat), Fg. (Flute), C. Fg. (C-Flute), Fu. (Fagotto), Cor. (Corni), Fa. (Fagotto), Sib. (Tromba), Trb. (Tromba), Sib. (Tromba), Trbn. (Tromboni), Tp. (Tromba), P. (Percussion), G.C. (Grande Cassa), and Pf. (Pianoforte). The score is written in a key signature of one flat and a 4/4 time signature. The French Horns (Fa.) and Trombones (Trbn.) parts are highlighted with arrows pointing to specific sequences of notes. The French Horns part shows a sequence of notes in the first and second staves, and the Trombones part shows a sequence of notes in the first and second staves. The score is written in a standard musical notation with various dynamics and articulations.

Figure 10: Sequence in French Horns and Trombones, marked by arrows

The image displays a page of a musical score for a symphony orchestra. The score is arranged in a standard format with multiple staves for different instruments. The instruments listed on the left side of the page are: Fl. (Flute), Ob. (Oboe), Cl. (Clarinet), Cl. Sib (Clarinet in B-flat), Cl.B. Sib (Clarinet in B-flat), Fg. (Bassoon), C.Fg. (Bassoon), Fa (French Horn), Cor. (French Horn), Fa (French Horn), Sib (Trumpet in B-flat), Trb. (Trumpet), Sib (Trumpet in B-flat), Trbn. (Trombone), Tp. (Tuba), T-t. (Tuba), G.C. (Tuba), and Pf. (Piano). The score is written in a key signature of two flats (B-flat and E-flat) and a common time signature (C). The music is organized into measures, with some measures containing multiple notes and rests. There are two black arrows pointing to the beginning of the Horn and Trombone parts. The Horn part (Fa) and Trombone part (Trbn.) both start with a measure containing a whole note chord. The Horn part has a 'a 2' marking above the first measure, and the Trombone part has a '2' marking above the first measure. The rest of the score continues with various rhythmic patterns and dynamics across the different instrument groups.

Figure 11: Next page of sequence, parts marked by arrows

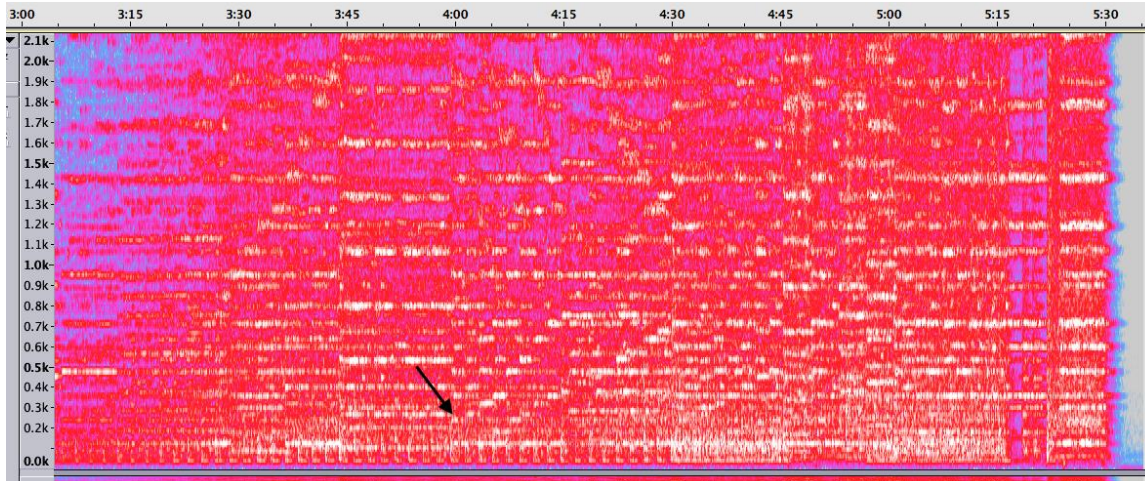


Figure 12: Spectrogram of the end of the movement, the sequence from Figures 6 and 7 marked by an arrow

Another layer of analysis that proves interesting, especially with a non-diatonic piece like this, is through dissonance curves. Dissonance curves are measured through a computer program that computes dissonance based on a recording. The program creates spikes according to the level of dissonance it hears. This paper will focus on three excerpts from the score, two already discussed in other areas to see if the spikes analyzed correspond to points in the score.

The first excerpt is taken from the English horn solo in Figure 6. The dissonance curve can be seen in Figure 13. An analysis of the curve to the score proves quite accurate. The large spikes usually correspond to the more dissonant passages of the English horn solo. The large spike at 20 seconds in the curve corresponds to beats three and four of the first measure of Figure 14 below, where the English horn has the notes E, F, Gb, and Ab. The accented notes in this passage are E and Gb, which are a semitone away from F (a perfect fifth above the underlying harmony) in either direction. These notes are, from a harmonic standpoint, more dissonant notes, so it makes sense that the spikes would be higher in those parts. Comparably, troughs correspond to more consonant notes, or, more often, rest, such as the trough at 22 seconds, which corresponds

to the 8th note rest at rehearsal 19 in Figure 14.

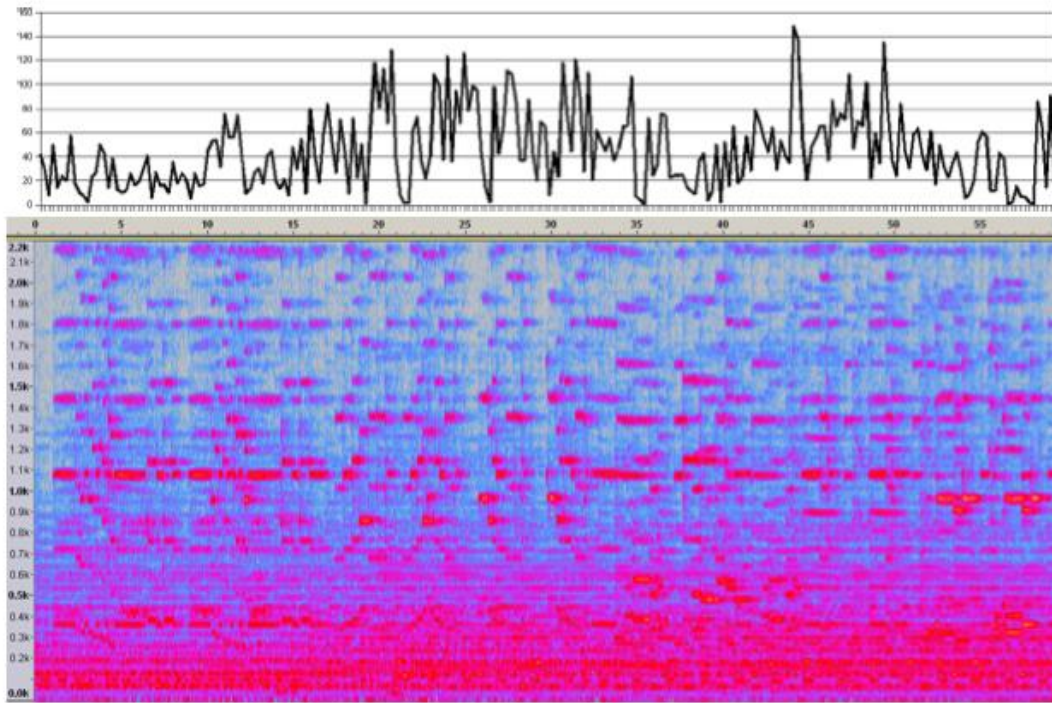


Figure 13: Auditory dissonance and spectrogram for English horn solo (roughness taken every quarter-second)

Figure 14: Continuation of English horn solo

The next excerpt is taken from the ascending trombone line discussed in Figures 10 and 11. This curve did not provide as accurate results as the previous one. The dissonant passing tones in the last measure of Figure 10 and the first measure of Figure 11 correspond to peaks in the dissonance curve in Figure C at 2 and 6 seconds, however the next two measures of Figure 11 are not measured as well on the curve, even though the same thing is going on as in the previous two measures. This may be because the loudness of the other instruments covers it up. The largest spike in this excerpt comes at 13 seconds, and would most likely be explained by the Ab on the second half of beat one in the last measure of Figure 11 in the flute, oboe, and clarinet (this line is also doubled in the piccolo, violins, and violas in the full score).

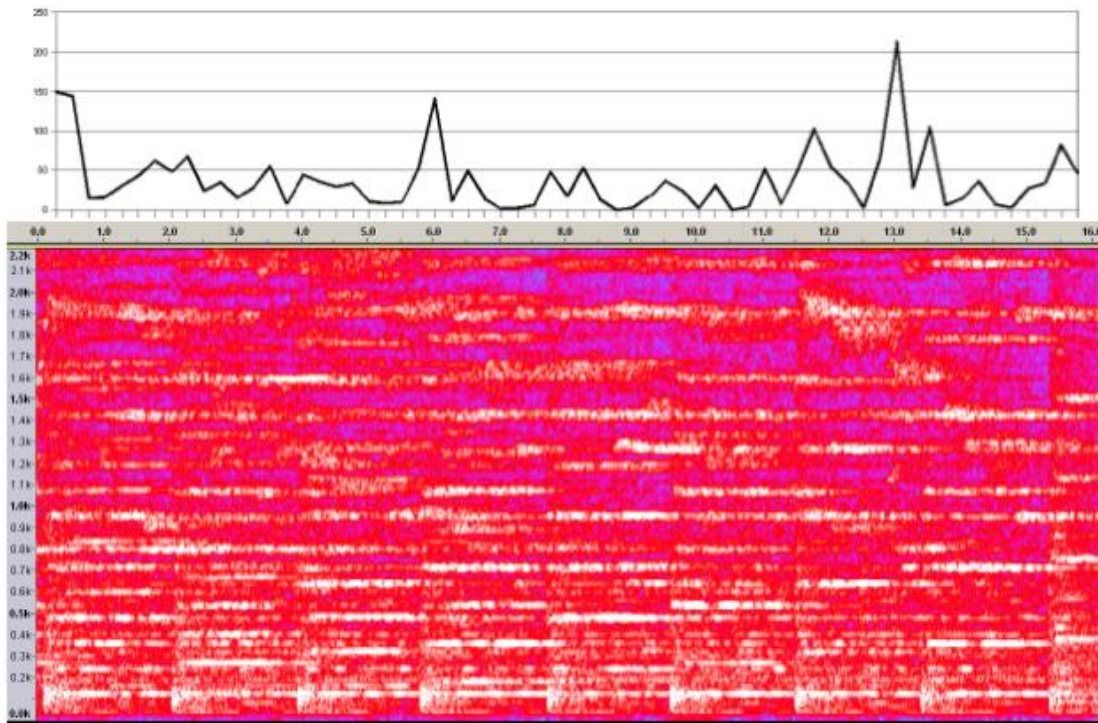


Figure 15: Auditory dissonance and spectrogram for ascending trombone line (roughness taken every quarter-second)

The last excerpt analyzed by dissonance curves is the last ten measures of the piece. The score can be seen in Figures D and F while the curve can be seen in Figure E. This passage, which the full orchestra plays, alternates between dissonant chords and consonant chords every measure. The chords are as follows (starting in the second measure to the last measure of Figure D): A major/Bb, Bb major, D major/Bb, E major/Bb, Bb major. The chords with a slash indicate that those chords are played over a Bb pedal tone. The pedal tone is what makes these chords dissonant, as they are usually not in the harmony of the regular major chords. These chords are reflected in the curve, the A major/Bb chord in the spikes from 1- 4 seconds, and the D major/Bb and E major/Bb in the spikes from 8 - 14 seconds. The 14 – 29 second lull on the curve corresponds to a Bb major chord being held out for four bars (starting the last measure of Figure D). The largest spike in this excerpt is at 38 seconds, which corresponds with the loud downbeat in the very last measure of the piece in Figure F. While the harmony of this is not dissonant (it is a Bb unison note), the large spike probably is because of the wash of overtones created by the tam tam (a large gong-like instrument). As expected, the last 9 seconds after the spike at 38 seconds shows little dissonance, as the orchestra is playing a Bb major chord. In short, the dissonance curves provide useful analysis, though not always explainable, but this could be attributed to many different things, such as the quality of the recording.

This musical score page contains the final ten measures of a piece. The instruments are arranged in the following order from top to bottom: Oboe (Ott.), Flute (Fl.), Oboe (Ob.), Clarinet in C (Cl.), Clarinet in Bb (Cl. Bb), Bassoon (Fg.), Contrabassoon (C.Fg.), Trumpet in A (Tr.), Trumpet in C (Tr.), Trombone (Trbn.), Trombone (Trbn.), Trumpet (Tp.), Trombone (Trbn.), Percussion (P.), Organ (G.C.), Piano (Pr.), Harp (Xp.), Pedal (Ped.), Saxophone (Sop.), Saxophone (Alto), Saxophone (Tenor), Violin (Vnl.), Viola (Vle.), Violoncello (Vc.), and Double Bass (Cb.). The score includes various musical notations such as notes, rests, and dynamic markings like *mf* and *ff*. There are also performance instructions: "UNITE" above the Viola staff and "DIV" above the Violoncello staff. The page is numbered "P.R. 439" at the bottom center and "40" at the bottom right.

Figure 16: Last 10 measures of piece

This musical score page, numbered 67, contains the continuation of the last 10 measures of a piece. The instruments listed on the left are: Flute (Fl.), Oboe (Ob.), Clarinet in C (C.I.), Clarinet in B-flat (Cl. Sib), Bassoon (Fg.), Contrabassoon (C.Fg.), French Horn (Fa), Cor Anglais (Cor.), Trumpet (Trbn.), Trombone (Trbn.), Tuba (Tp.), Trumpet in F (TRG), Trombone in F (T.-F.), Piano (P.), Organ (Org.), Pedal (Ped.), Bassoon (Sib), Bassoon (Bc), Bassoon (Sib), Violin (Viol.), Viola (Vle.), and Cello (C.b.). The score features complex rhythmic patterns, including sixteenth and thirty-second notes, and rests. A 'stent.' marking is present above the Flute and Clarinet in C staves. A 'DIV.' marking is present above the Viola staff. The page number '67' is in the top right corner, and 'P.R. 439' is at the bottom center.

Figure 17: continuation of last 10 measures

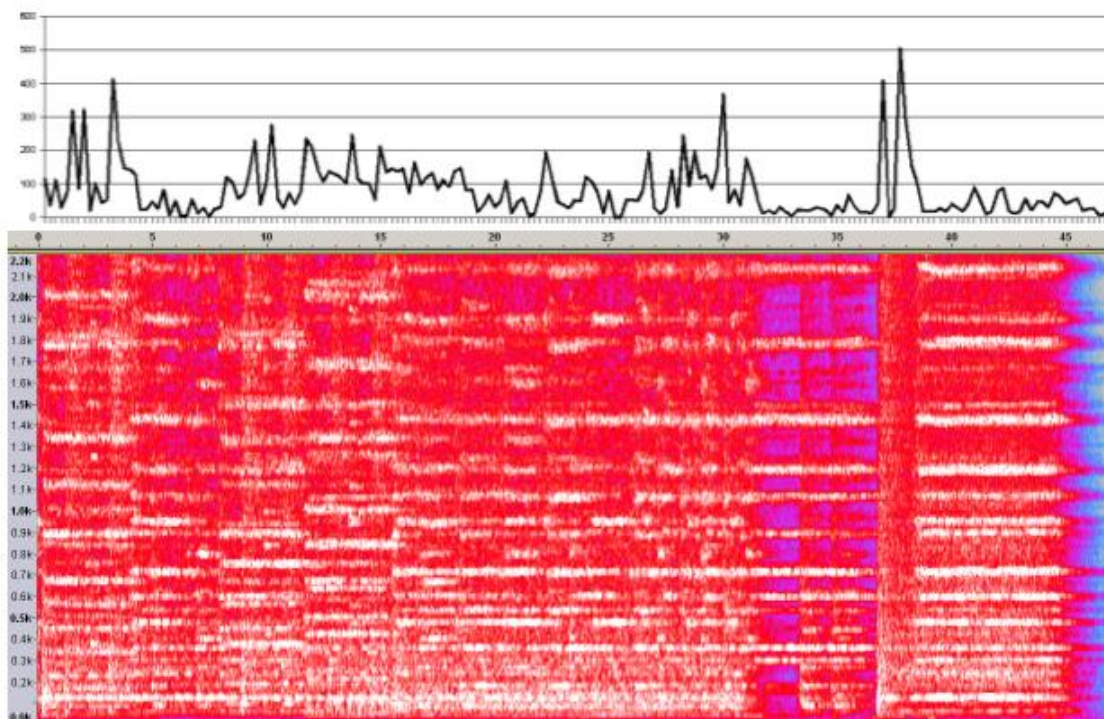


Figure 18: Auditory dissonance and spectrogram for last 10 measures (roughness taken every quarter-second)

“Pines of Rome” by Ottorino Respighi has been a standard of the modern orchestral repertoire ever since its composition in 1924, and is widely regarded as one of the most satisfying dynamic builds in music. Its richness comes from the subtleties written into each part; the layering of rhythms, the harmonic language, and the dynamic changes all play into this, and pages upon pages could be written analyzing it. Because there is so much going on in different instrument voices at various times, it is impossible looking at the spectrogram alone to denote which instrument enters where or what each line is doing. However, valuable things can be learned from the spectrogram, such as intensity of certain frequencies and what instruments are heard the loudest. Complex music such as this should be analyzed with a score and spectrogram hand in hand, as they complement each other quite well, especially in this piece. It is because of this complexity and detail that makes “Pines of the Appian Way” so satisfying to listen to.