

From notation to performance: understanding musical scores



Contents

Introduction	3
Week 1: Understanding the principles of musical scores	4
Week 1.1: Types of musical score	4
1.2 Introducing pitch and rhythm	11
1.3 Organising time	14
1.4 Week 1 summary	20
Week 2: Pianists and piano scores	20
2.1 Variations on a theme	22
2.2 Melody and harmony	24
2.3 Some new symbols	28
2.4 Week 2 quiz	32
2.5 Week 2 summary	32
Week 3: Musical collaboration and the role of the score	32
3.1 Working collaboratively with a score	33
3.2 Instrumental colour	35
3.3 Introducing jazz instrumentation and notation	40
3.4 Week 3 summary	45
Week 4: Understanding orchestral scores	46
4.1 Score order	48
4.2 A conductor discusses: developing a performance	55
4.3 Following a motif	57
4.4 Week 4 quiz	60
4.5 End-of-course round-up	60
References	61
Acknowledgements	61

Introduction

Welcome to the course! Over the next four weeks, you will begin to understand how music is written down, what a musical score is and what it does. You will also learn how musicians use and interpret musical scores in their work.

By the end of this course you will understand what music notation does and some aspects of how it works. You will be able to understand more about different types of music and how they are written down, and what that notation means.

This course includes some musical terms which you may not be familiar with. We have produced a [glossary of terms](#) which you may find useful. When new musical terms appear they are in **bold** text, and will have a definition in the glossary.

In the following video, Open University lecturers Catherine Tackley and Naomi Barker tell you a little more about what to expect from this course.

Video content is not available in this format.

[Introduction](#)



We would like to thank the Royal Northern College of Music (RNCM) for their assistance. RNCM musicians appear by kind permission of the Principal, Professor Linda Merrick. Before you start, The Open University would really appreciate a few minutes of your time to tell us about yourself and your expectations of the course. Your input will help to further improve the online learning experience. If you'd like to help, and if you haven't done so already, please fill in this [optional survey](#).

Week 1: Understanding the principles of musical scores

Week 1.1: Types of musical score

What does the term 'musical score' mean to you? Take a look at these images of scores. Do any aspects of them look familiar to you? Do you have any idea what the music depicted in these examples would sound like?

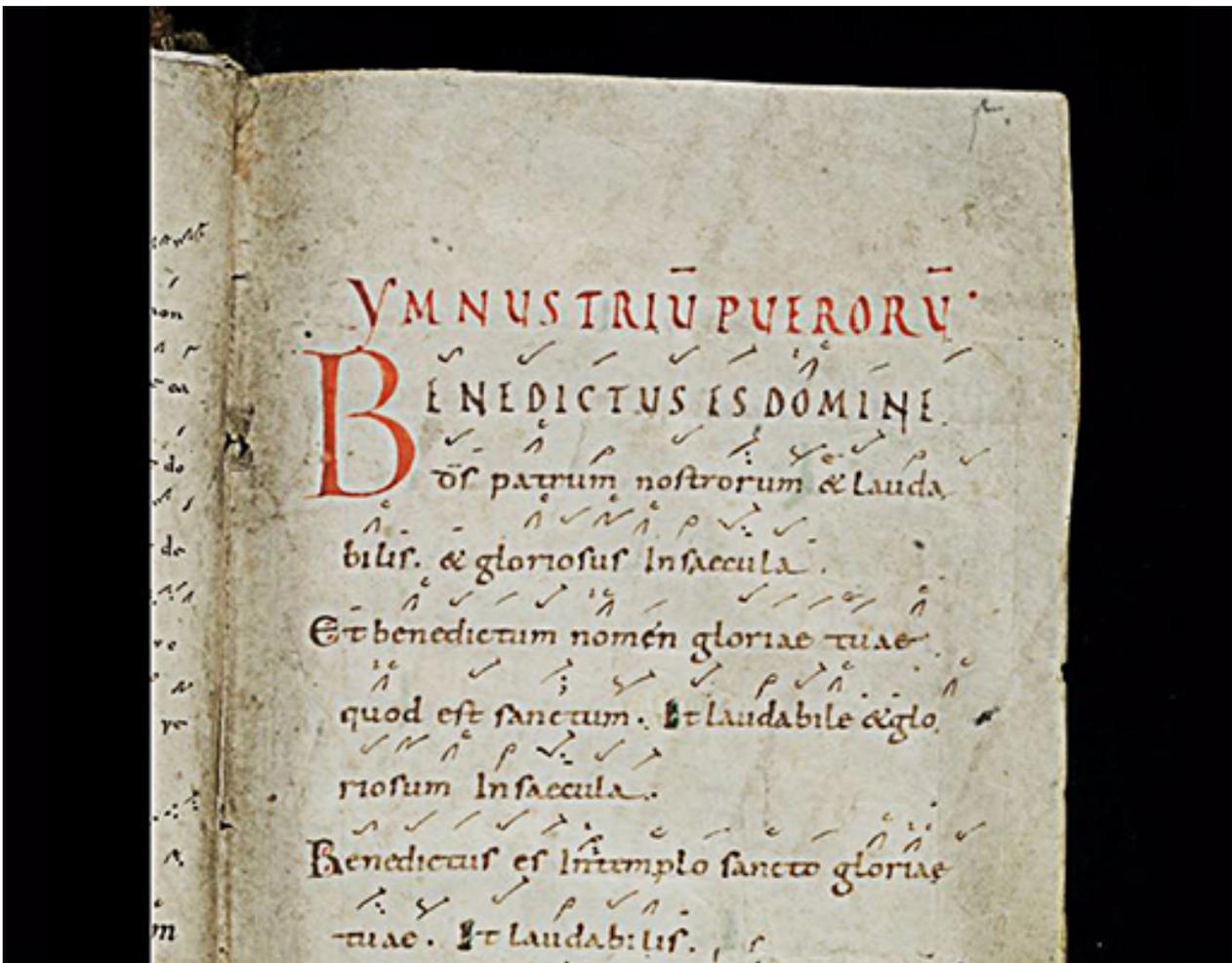


Figure 1 St. Gallen, Stiftsbibliothek

Music from the middle ages (Figure 1) looks very different from the music of today, as it was only intended as a reminder of a melodic shape that went with words that were fully written out.

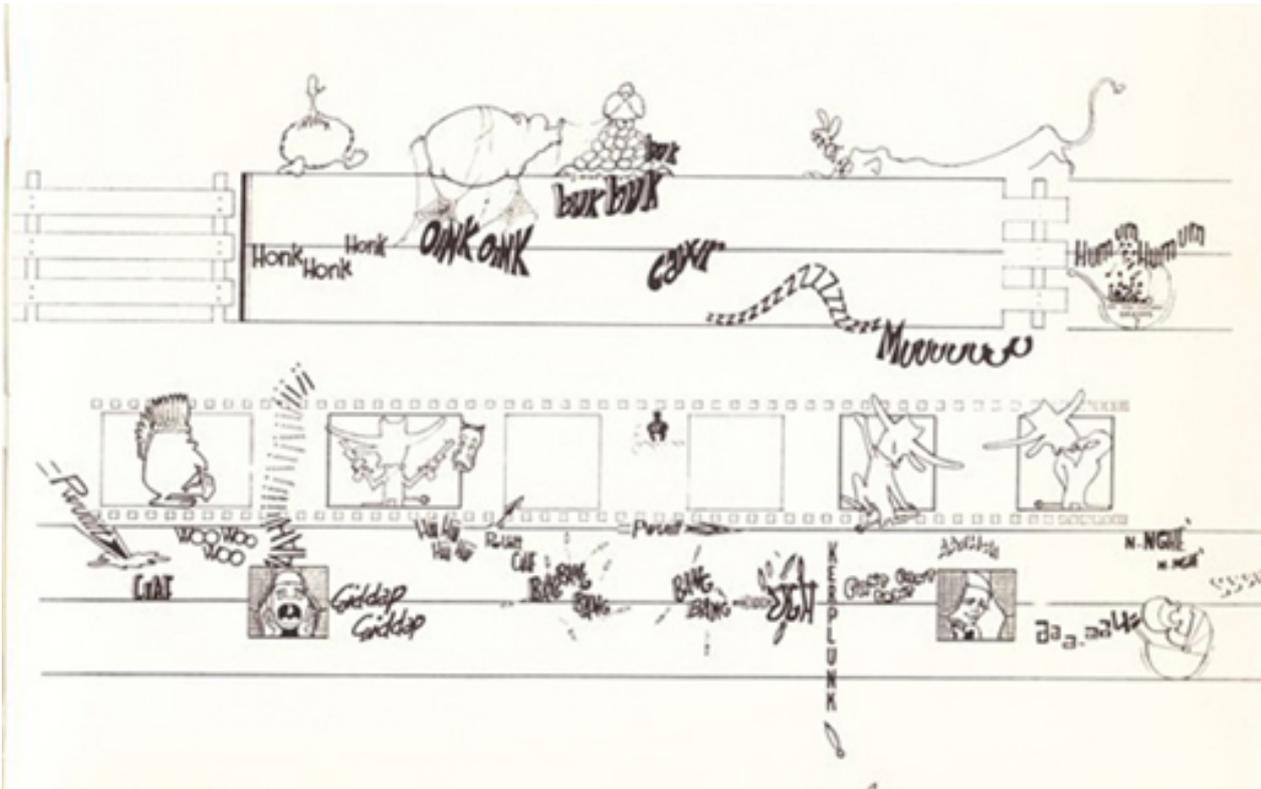


Figure 2

Graphic notations, like the one shown in Figure 2, have been used to represent some music of very recent times. The example in Figure 2 looks like a comic strip, but represents a piece of vocal music.

The Rakes of Mallow

www.traditionalmusic.co.uk

Musical score for the first system of 'The Rakes of Mallow'. It consists of a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. Below the staff are two rows of guitar tablature. The first row of tablature contains the following numbers: 0 0 0 0 1 0 2 0 2 2 2 3 1 0 0 0 0 0 3 3 1 0 2 0 0 0 3 2 0 3 1. The second row of tablature contains: 0 0 0 0 1 0 2 0 2 2 2 3 1 0 0 0 0 0 3 3 1 0 2 0 0 0 0 0 0 0.

Musical score for the second system of 'The Rakes of Mallow'. It consists of a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. Below the staff are two rows of guitar tablature. The first row of tablature contains the following numbers: 0 1 3 3 2 0 3 1 0 3 2 3 2 0 3 1 0 1 3 1 0 2 0 0 2 0 0 0. The second row of tablature contains: 0. A small text at the bottom right of the second system reads: 'Visit www.traditionalmusic.co.uk for more music resources.'

Figure 3

If you play the guitar or deal with popular musical genres you may have come across guitar tab (tablature), chord symbols or lead sheets as shown in Figure 3.



Figure 4 First page / leaf of vol. 3 of Shenqi Mipu

Non-Western cultures such as China and Japan have centuries-old traditions of using tablatures for writing down music that is different from those of Western music. The example in Figure 4 is a score for the qin or Chinese lute.



Figure 5 P. Jurgenson, n.d. (1892), Plate 17668

In Western culture we may be used to seeing scores like the final example in Figure 5, but scores are not always like this.

1.1.1 How do musical scores work?

A standard definition of a musical score is ‘a copy of a composition on a set of staves braced and barred together’ (Oxford Classical Dictionary) or staves ‘that are vertically aligned so as to represent visually the musical coordination’ (Grove Concise Dictionary of Music). Put very simply, it shows all the parts of a piece of music and how they fit together. The function of a musical score is to document a piece of music in a written format, but many different types of notation can be used to achieve this. Look at these examples and consider how the sound and the visual representation of that sound relate to each other. Some notations tell the reader what to do physically with fingers and hands on an instrument while others indicate a general sound structure such as a chord and expect the player to make sense of the rhythm and melody from that. Listen to the song *Greensleeves*. This piece of music is over 400 years old. How do you think it was written down?

Audio content is not available in this format.

[Greensleeves](#)

The lute was very popular during the early modern period, and music for this instrument was written in a notation that presents a clear instruction to the player about where to put their fingers on which specific string of a lute. Horizontal lines represent the strings of the instrument and letters the frets. The marks over the lines are indicators of rhythm. You can see a [digital version of the original manuscript](#) hosted by Trinity College Library, Dublin. *Greensleeves* is featured on p. 103.

Modern guitar chord symbols work on a similar principle, but they only provide a suggestion of where to put your left-hand fingers, and nothing else. Other types of notation such as lead sheets, rely on the improvisation skills of the player who is expected to construct melody and rhythm from just chord indications and perhaps an outline of a known melody. These are often used jazz standards and rely on the player being familiar

with the lyrics and structure of the song, and also with how chords are constructed and what they should sound like.

Now try Gershwin's famous *I Got Rhythm*. Look at an [image of the music for I Got Rhythm](#), and listen to it below.

Audio content is not available in this format.

Now look at this score of a fourteenth century song, *Belle, Bonne, Sage, Plaisant* by Baude Cordier. What ideas do you think the writer was trying to convey in sound?

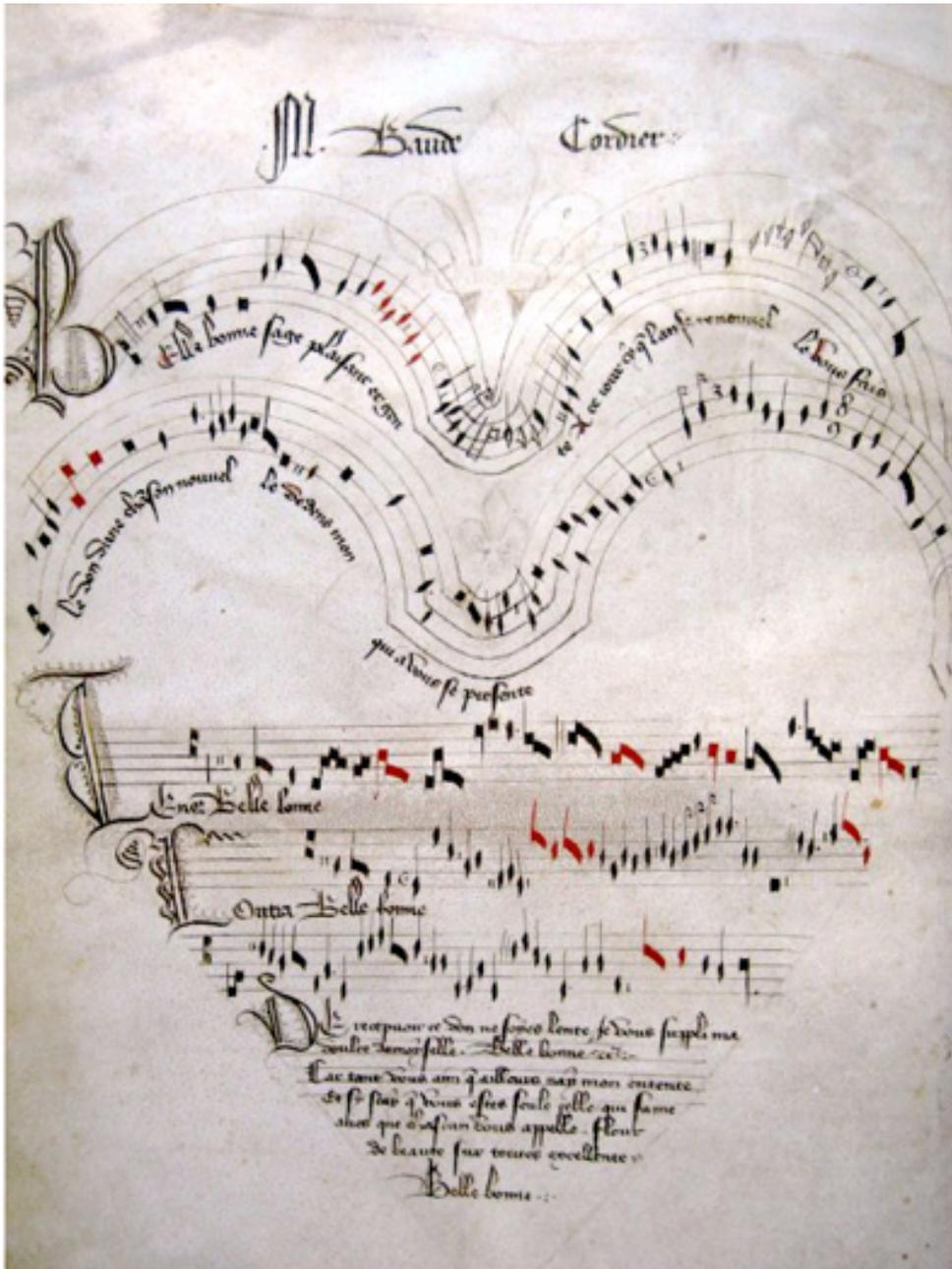


Figure 6

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As you listen to the sound and look at the images of the notation, do you think these examples show how all the parts of the music fit together? Can you work out how what you are seeing connects with what you are hearing? Of course, they all represent sound in some way, but can you identify what particular aspects of sound? This is quite hard, so don't worry if you can't find anything that remotely connects sound and vision. It is precisely because it is hard that musical scores have taken several centuries to develop into the forms we now know.

1.1.2 Some things notations do

The notations featured in the previous section are all different.

The first example, *Greensleeves*, is in a notation that presents a clear instruction to the player about where to put their fingers on each specific string of a lute. Here, the lines represent the strings of the instrument and the letters/numbers represent the frets on the lute. The marks over the lines, are indicators of rhythm. Guitar chord symbols are similar, but they only provide a suggestion of where to put your left-hand fingers, and nothing else.

The second example, *I Got Rhythm*, is a lead sheet for a jazz standard. Jazz ensembles will typically construct a performance using only the lead sheet. Typically, the melody will be played by one (or more) of the musicians, while the rest provide an accompaniment based on the chords written above the melody. This will normally be followed by an improvised solo (or solos) over the chord progression.

The final example is a fourteenth century love song from the beautiful manuscript known as the 'Chantilly codex'. The abstract representation of pitch and rhythm is the key element here. We can fathom very little about the physical aspects of performance (the 'how to'), but it is an attempt to record the pitch and rhythm as a composer might have wanted it to sound. The shape of the notation is perhaps a poetic way of asking the performer to create a mood appropriate to a love song but does not affect the technical aspects of how it would be read.

What do you think are the primary elements of music that should be captured in any kind of notation?

1.1.3 What should a musical score capture?

In the previous section, you were asked what elements of music should be captured in a score – you may have suggested what notes to play (pitch) and rhythm as two of the most important elements.

There are of course other things that may be captured by a score, such as how loud or quiet to play, the mood of the music, what instrument to play on or words for a singer to sing – we'll come back to some of those in later weeks.

Quite a lot of today's music is written down after it has been composed or created, so the sounds come first, and then a written version is created from them later – this is the usual way most pop musicians work. Of course, with modern technology, writing music down from existing sounds is much easier, but in early times when there was no way of recording sound, this was a big challenge. So, how do musicians define the elements of pitch and rhythm, and how have musical scores evolved to convey them?

1.1.4 The ear-eye connection

You may not have had any experience in reading music and may never have seen an orchestral score. In the following video, which is extracted from a television series that

challenged celebrities to try and conduct an orchestra, you will see Goldie, who does not read music, encounter an orchestral score. After you have watched it, think about what processes Goldie went through to understand how the score worked.

Video content is not available in this format.

[Orchestral score](#)



On reflecting about the video of Goldie, we hope you noticed the importance of how the visual element, the dots and lines of the score, is a representation of sound. Connecting what you see with what you hear is fundamental to understanding scores, and especially orchestral scores. Goldie achieved this connection of eye and ear by using what was familiar to him – drum ‘n’ bass sounds and rhythms – and equating them to the blocks of orchestral sound in Grieg’s piece *In the Hall of the Mountain King*.

We hope that you will find ways of making these connections too as you work through this course, so keep thinking about the ear-eye connections – what you hear and what you see as a representation of that sound.

You’ll be looking more closely at how conductors use scores in Week 4.

1.2 Introducing pitch and rhythm

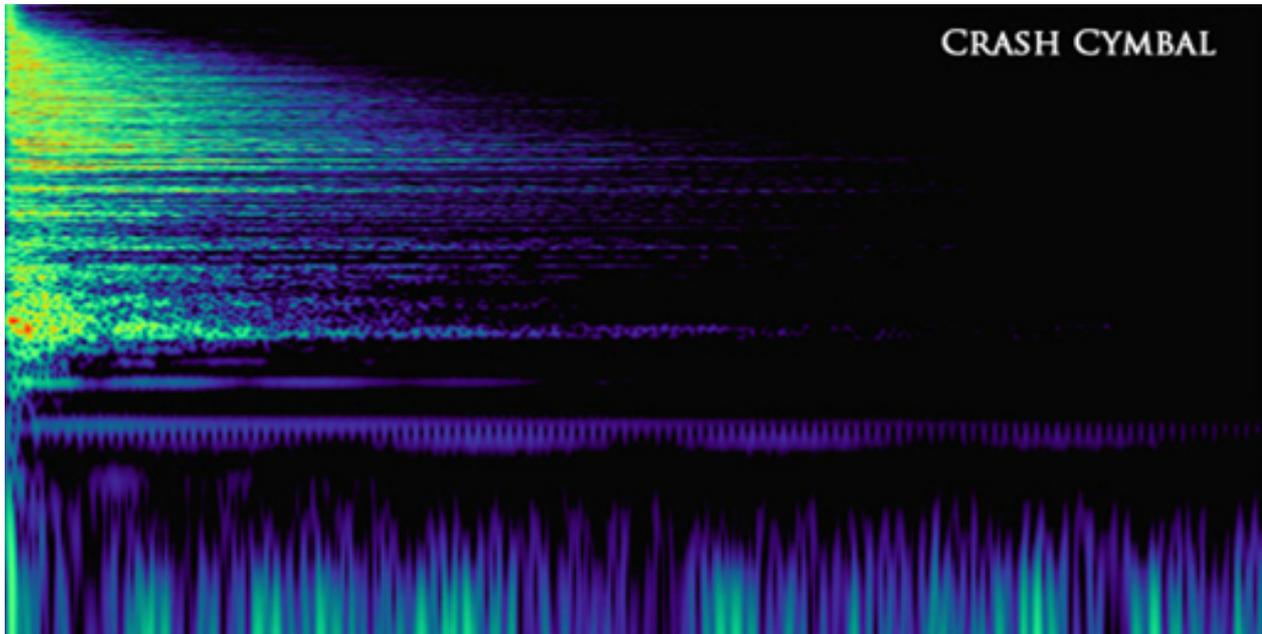


Figure 7 A visual representation of the spectrum of frequencies in a sound as it varies over time

The two primary elements of all music are pitch and duration/rhythm:

- 1 *Pitch* is the term that musicians use for describing how high or how low a note is. Physicists would describe this element as frequency and measure it in cycles per second, or hertz.
- 2 *Rhythm* refers to music's temporal structure, how long or short notes are and how they are stressed.

1.2.1 A little bit of history

A notation capable of representing both pitch and rhythm evolved over a long period of time in Western history from around the tenth century to the middle of the seventeenth century, when it became fully recognisable as the notation in common use today.

It is certainly not the only notation in use, but it is the one most Western musicians will rely on as it is capable of a high level of detail. It is this detail that enables the richness of musical scores that makes them so interesting to study as composers have used this notation in so many different ways to express their ideas.

In starting to understand a musical score, the first step is to understand how both pitch and rhythm are conveyed simultaneously on a single page. Pitch occupies a vertical space. As notes go up higher and lower, they literally move up and down the staff on the vertical plane. Rhythm is about movement through time and occupies the horizontal plane, with longer and short notes having different shapes to indicate different durations of time. The synchronicity of pitch and rhythm is controlled by a beat or pulse. If you tap your foot to a piece of music, you are feeling the underlying pulse.

The earliest Western musical notation was created in monasteries to help monks remember the many chants they had to use during the cycle of the church year. It

consisted of little squiggles and marks called 'neumes' written above words to remind the singer of how the melody went. The association with words meant that it was read from left to right, and this is how standard modern music notation works too. It is, however, not the case for all music notations. In any given culture, the direction music notation tends to follow across the page is the same as for the written script in that culture.

1.2.2 Working with neumes

Activity 1

Take a tune that you know and try to represent the shape of it using coins, stones or buttons that you can move around on a sheet of paper. See if you can put the coins down in a pattern that represents the rise and fall of the melody. This rise and fall is called the melodic contour. It's not that easy without any point of reference. Here's a melody (The Beatles' *Yesterday*) to have a go with.

Audio content is not available in this format.

Discussion

Let's just break that down into shorter sections and have another go.

The first little bit has three notes, short-short-long ('Yes-ter-day'), that are all quite close to each other. What follows is a series of short notes that all move in the same direction and then just at the end fall back to a longer note ('all my troubles seemed so far a-way'). There is another series of short notes that move down towards the start note, with another pause on a longer note ('now it looks as though they're here to stay'). The final eight notes of the phrase jump around a bit more, moving up and down before ending on another long note ('oh, I be-lieve in yes-ter-day').



Figure 8

Even taking this in little sections punctuated by longer notes, it is still not easy to represent accurately how high or low each note is in relation to those around it, nor how long or how short the notes might be. Bigger spaces could have been left where the longer notes are, but if you were trying to do this exercise and didn't know the tune, it would be a bit of a guess as to just how long those notes should be.

1.2.3 Guido of Arezzo

To test out how neumes worked, you can try to create something similar.

The big breakthrough in notation came around 1030 AD when the monk, Guido of Arezzo wrote a treatise called *Aliae Regulae*, in which he demonstrated how a single horizontal line could be drawn on the page as a point of reference for one fixed and named pitch, so that singers could relate all the other notes to it. Guido had already invented a system for reminding singers of the notes of a melody using the joints of the fingers of one hand and pointing to them with the other. You can see this original system in Figure 9.



Figure 9 Guidonian hand

Try drawing a line to represent the note you start on and attempt the previous activity again, putting those coins or buttons down in relation to the line. With a point of reference, you will more easily recognise how far up from the first note the melody rises and then

falls back below it, and finishes by going just a little bit lower before coming back up at the end of the phrase. Figure 10 shows an attempt at this activity.



Figure 10

Guido later added a second, line five notes higher which made things even better as singers could relate their notes to either line. Once the idea of horizontal lines drawn on a page took off, it became the basis for all subsequent developments. All that was needed was for one line to be identified and all the others would be recognisable.

The mark that fixed the pitch of that one line became known as a clef. Rather than just two lines, our modern scores consist of a group of five lines called a staff, hence musical notation is also called staff notation. The two most common clefs (shown in Figure 11) are those that fix the note G for higher notes, called the treble clef, and F for lower notes, called the bass clef. Used together they are known as the grand staff and form the basic layout of a piano score. One other common clef indicates the position of C and is often used by instruments in middle registers.

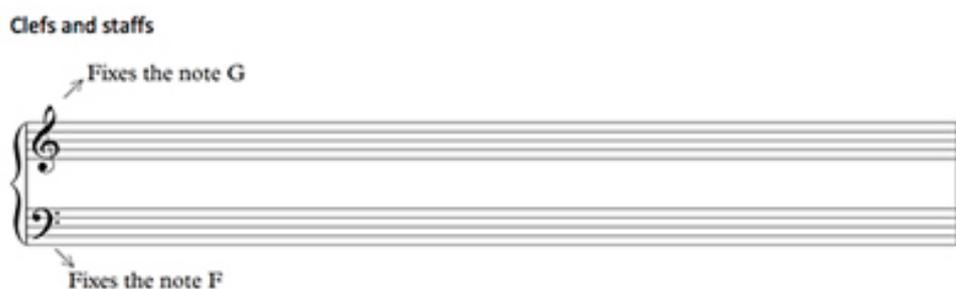


Figure 11

1.3 Organising time

So far we have looked at how pitch is written down. Now, let's look at the element of rhythm. Music exists in time and rhythm includes all the temporal elements of music. All music has rhythm. In other words, all musical sounds have definite durations and definite levels of accent. Overcoming the challenge of writing down how sounds relate to the time they occupy was a major breakthrough in the history of Western music notation.

In the following video, you will hear a discussion about some of the limitations of early notations and you'll get to see some examples. Professor Susan Rankin talks to Open University Professor David Rowland about how difficult it was to convey both pitch and rhythm in a way that was relatively easy to learn and easy for musicians to use. You will also hear one of the earliest examples of English song – a composition that helps us to understand rhythmic notation from this time.

Video content is not available in this format.

[Early notation](#)



1.3.1 Finding the beat



Figure 12

When a group of musicians play together, it is an element of rhythm, specifically pulse, that keeps them together. The way in which rhythm is represented in a score is crucial to a deeper understanding of it.

Rhythmic patterns are created through both note lengths, which relate to each other mathematically (half the length, twice the length, etc.), and accented notes that occur at predictable moments which we call a beat. It is often the rhythm patterns that articulate critical points in a musical score and can help our navigation and understanding of it. Repetition of patterns makes them memorable – consider Queen’s *We Will Rock You* or Ravel’s *Bolero*.

When you tap your foot to music, or dance, you are feeling the beat. Beats are grouped together in twos, threes or fours with the first in each groups being accented more strongly than the rest. The technical term for these groups is **metre**, but you will feel it as something like the difference between a waltz (in three time, omm-pa-pa) and a march (ONE-two-three-four). At the beginning of any piece there is a pair of numbers that looks like a fraction. This is called a **time signature** and the top number is a good indicator of the number of beats in a bar to expect. There are much more complicated types of metre, but you don’t need to worry about them here.

1.3.2 Close listening



Figure 13

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You will probably recognise this tune as *Frère Jacques*, but it is also the melody that forms the basis of the slow movement of Mahler's *Symphony No. 1*, which we will be looking at in more detail later.

You will notice vertical lines dividing up the notes. These are called **bar lines**. Music is divided up into bars that each contain a specific number of beats (pulses) and show the movement of the music through time. Each bar is numbered in these examples. Listen to the melody and try to tap the beat as you go. Notice where you hear longer and shorter notes and how the melodic contour moves up and down as the notes travel across the page. Listen a second time and take note of the different note shapes and other symbols. Now listen to another equally well-known tune, *Twinkle, Twinkle Little Star*.



Figure 14

Audio content is not available in this format.

How is the pitch and rhythm of this tune similar to *Frère Jacques*? How is it different?

1.3.3 What are you listening for?

In the previous section, you should have noticed:

- That both tunes have a time signature that indicates four beats in a bar.

- The different note shapes in the notation – some open notes, some coloured in notes and some notes that are joined together. These indicate notes of different lengths, and being able to spot fast notes or very long notes in a score is useful to keep track of where you are on the page.

As a general rule, the blacker the notes look and the more densely they occupy the space of the bar, the faster the notes in relation to the beat. The more open and white the notes appear, the slower they are in relation to the beat.

Even more importantly, identifying rhythmic patterns can help you understand the structure of a piece of music, as rhythm is often a point of reference in a theme – just think of the opening of Beethoven's *Fifth Symphony* as a case in point (if you're unfamiliar with Beethoven's *Fifth*, there is a recording of it in Week 4).

Audio content is not available in this format.

If you were listening to the contour, you will have noticed that *Twinkle, Twinkle Little Star* is different from *Frère Jacques*, in that the tune starts with a jump up from the first couple of notes and then moves steadily downwards. You will see the shape of the notes on the page – the melodic contour – looks different because of this.

Both of these tunes have patterns of notes, either pitch, or rhythm, or both, that repeat. This is something that all music does, and one of the skills in understanding scores is recognising melodies or rhythms that are the same, because repetition is often what gives a piece of music, however big, its structure and coherence.

1.3.4 Comparing notes: reading a musical score

In this video, you're going to study some [simple melodies](#) to understand more about how to follow single lines of music in a score.

Even if you don't read music, you can get an idea of what rhythm patterns look like by the shape of the notes. As a general rule, the blacker the notes look and the more densely they occupy the space of the bar, the faster the notes in relation to the beat. The more open and white the notes appear, the slower they are in relation to the beat. A single four beat note called a semibreve, for example, may occupy a whole bar, but in the same space of time, you may get 16 semiquavers:

Figure 15

Notice how these faster notes have their stems connected with a beam. These two bars of notes are mathematically equal in value in terms of the duration of their respective sounds, provided the speed of the beat doesn't change.

When you watch this video, use what you understand about note values to help you learn to follow the scores.

Video content is not available in this format.

[Note values](#)

1.3.5 Single line notation in context – the bigger picture

Video content is not available in this format.

1234
Fl. 17
Ob. 17
Tam-tam
Viola
Cello 17
Bass

3
etwas hervortretend
mit Schwammschlägel
mit Dämpfer
pp
pizz.
nur eine Hälfte pp
zur „Langsam“ in gleichmäßigem pp ohne crescendo
U. E. 2981.

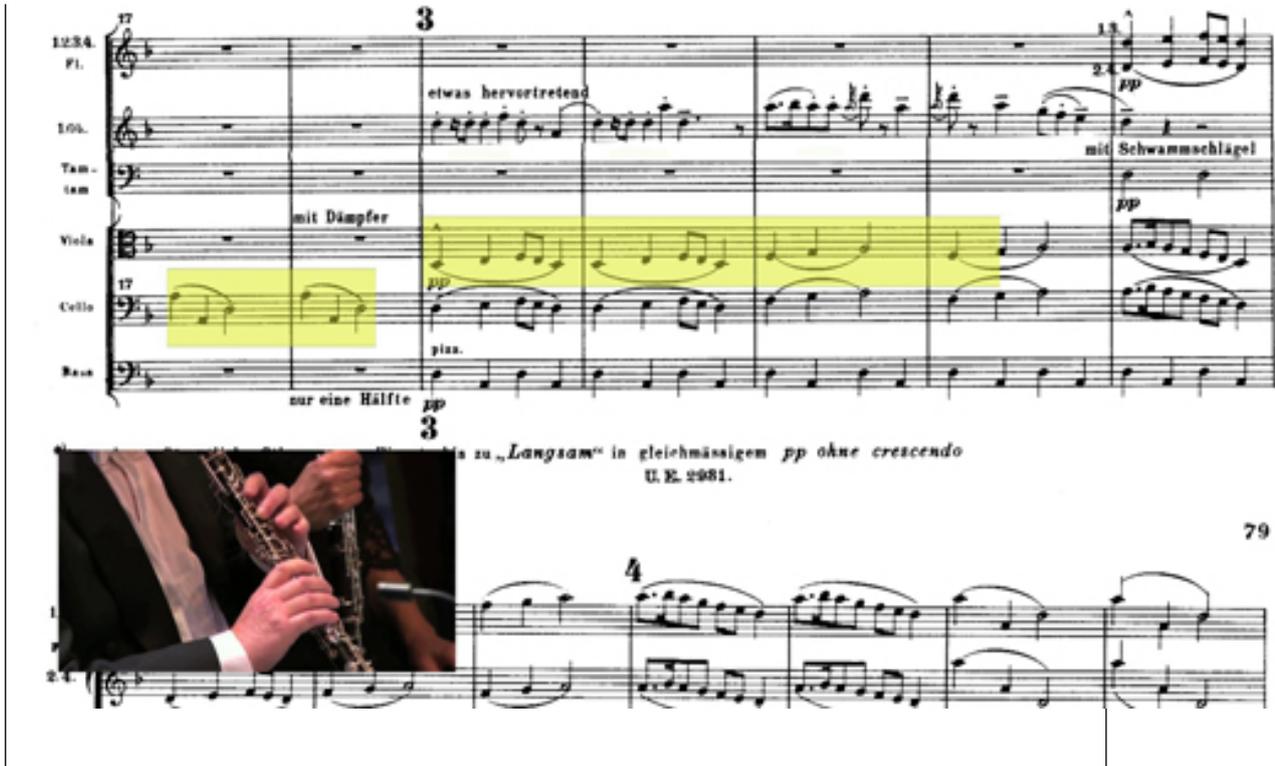
79

4

With practice, you will get used to feeling the beat, listening for repeating rhythmic and melodic patterns and start spotting them in scores that you look at.

Finish the week by looking at how understanding a single line score can help you understand how much larger scores work and how the various melodies fit together. In the following video, you will be able to follow the score while you listen to a section of Mahler's *Symphony No. 1*. We will look at the melody based on *Frère Jacques* as it appears in different parts of the score, first the double bass, then the cello, the viola and finally the flute.

Video content is not available in this format.



1.4 Week 1 summary

This week you have looked at different types of musical score, how notation works and some historical background to modern Western music notation. You have started listening more critically to melodies, identified their contours and repeating patterns as they are represented in simple scores. You have also started building the skill of close listening and of following a score while listening to the music.

So far, we have taken a wide ranging view of musical scores, and music in different styles and from different cultures. As this is a short course, we cannot possibly discuss so many different types of music in any detail, so from now on, the focus will be on Western art music and big band jazz.

Next week, you will build on these skills and be introduced to piano scores, which have two lines of music to follow. You will also meet pianist Alexander Panfilov as he performs Mozart, and talks about how he uses a score in preparing for performance.

Week 2: Pianists and piano scores

Last week, you learned a little bit about the history of Western music notation and you looked at melodies written on a single staff, listening and comparing different elements of the music.

You are now going to start combining staves and working towards understanding a typical piano score. You are also going to explore how to follow more than two lines of music at once, whether those lines are both to be played on the piano or by combinations of instruments.

In the following video, pianist Alexander Panfilov performs the first six variations of Mozart's *Twelve Variations on 'Ah, vous dirai-je, Maman'*. If you have Spotify, you can hear a complete performance of the piece on the course [Spotify playlist](#) and [download a copy of the score as a PDF](#).

Video content is not available in this format.



Alexander is a graduate of the Royal Northern College of Music where this video was filmed. He won the Arcangelo Speranzo Piano competition in 2013, the Hastings International Piano competition in 2015 and took part in the 2015 Leeds International piano competition and reached the semi-finals.

2.1 Variations on a theme



Figure 1

We're sure you recognised the melody in the piano piece in the video in the previous section. We know it as *Twinkle, Twinkle, Little Star*, but it exists in slightly different forms in several European folk traditions. The French call it *Ah, vous dirai-je, Maman* and the Germans know it as a Christmas song, *Morgen kommt der Weihnachtsmann*.

We're going to use this set of variations by Mozart to demonstrate how a piano score works and to guide you towards understanding how several simultaneous lines of music look and sound.

The principle of **variation** form is that a simple theme, often a well-known melody, generates more and more complex music, culminating in an exciting finale, but at every point along the way, some element of the original theme is present and recognisable. A set of variations is a good starting point when learning about piano scores because there will always be something – often the melody – which is familiar in each variation, which may be used as a point of reference while listening and following the score. This is similar to a series of art prints, where the image is recognisably the same, but has difference in colour, orientation, detail and so on. So, the melody might be spread out over lots of fast notes, there might be a whole range of different rhythms, or the melody might be hidden inside several parts all weaving together, but you should be able to find something familiar in each variation.

2.1.1 Getting started with piano scores

A piano score will always have two lines of music, one for the right hand and one for the left, and generally uses the treble clef for the right hand and bass clef for the left. When following a piece of music that has more than one line, remember that the staves that are played together are joined by a brace that looks like a curly bracket. The notes that sound simultaneously will line up vertically on the staves contained by the brace.

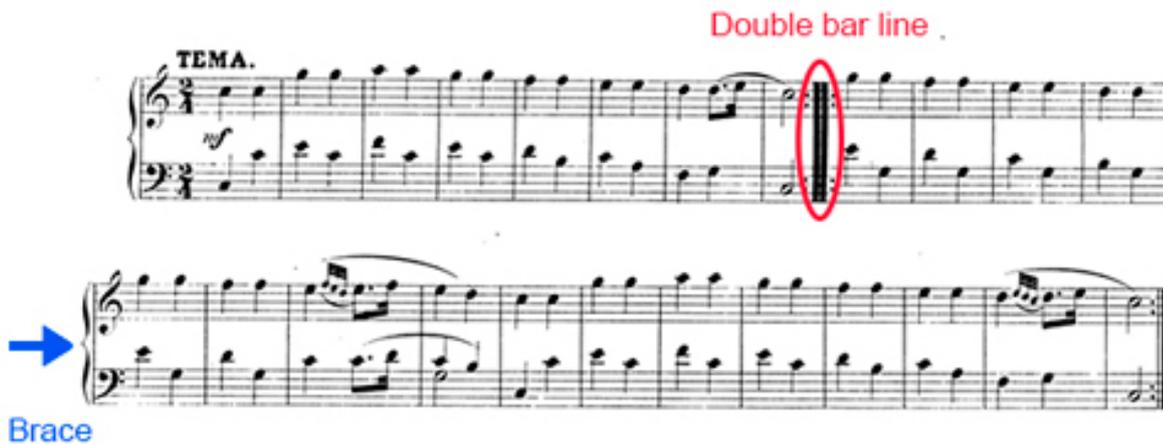


Figure 2

Before you move on, you need to be able to identify some other important signs in the notation – first, the double bar line and second, the repeat mark. If you look at the score right from the beginning, you will see that the first line of music is separated in the middle by two thicker bar lines. There is a similar sign at the end of the second line of music. These are called double bar lines and they are used to indicate the end of a piece of music or the end of a section. Here, they also have two dots placed on either side of the middle line of the staff. This is called a repeat mark and indicates that the player must go back to the beginning or to the previous double bar and play it again. Double bars and repeat marks are important ‘landmarks’ to look out for in a score as they will help your orientation. You may remember from last week, that repetition is important in creating structure in melodies, but also it is an important element in creating larger structures. Knowing how repetition works will help your understanding of a score.

2.2 Melody and harmony



Figure 3

The 'tema' or theme of this set of variations gives us a very simple presentation of the tune and an accompaniment. Hopefully, you will have been able to follow the treble clef part quite easily having practised doing this last week. Now, the problem with following two lines of music at once is that usually they are not the same, especially when that music is for piano. So, let's take a closer look at how this works.

Sometimes when trying to follow a piece of music, with or without a score, we need our ears to tell us which part of the music is the **melody** and which part is less important or accompanying. The melody is usually in the right hand or upper staff and the accompaniment in the left hand or lower staff. The 'tema' uses an accompaniment that is a single line of music that, on its own, is quite simple to follow. Put it together with the melody and you can see that the notes are vertically aligned with the treble clef part, showing that they both move at the same speed – and the pitches of the two lines sound good together, or in other words, they are in **harmony**. With two lines of music that move at the same speed like this, your eye can keep pace with both together.

Can you think of types of music where the melody and accompaniment move together at exactly the same pace?

2.2.1 Texture

St Denio



The image shows a piano score for a piece titled 'St Denio'. It consists of three systems of music, each with a treble and bass staff. The music is written in a key signature of three flats and a 3/4 time signature. The notes in both hands move in parallel motion, creating a block-like texture. The first system starts with a treble staff containing notes G4, A4, B4, C5 and a bass staff containing notes G3, A3, B3, C4. The second system starts with a treble staff containing notes G4, A4, B4, C5 and a bass staff containing notes G3, A3, B3, C4. The third system starts with a treble staff containing notes G4, A4, B4, C5 and a bass staff containing notes G3, A3, B3, C4. The piece ends with a double bar line.

Figure 4

Hymns are a common type of music in which melody and accompaniment move at the same pace. In a hymn tune, like the one shown in Figure 4, most of the notes will move at the same time in blocks, so following both left and right hand parts together is much easier than following parts where they do different things. Listen to this example and follow the score.

Audio content is not available in this format.

Harmony, by definition, uses two or more notes simultaneously. Notice that in this example there are two notes occurring at the same time on each staff, so four notes at the same time in total. Piling up notes vertically in this way, meaning they are struck together by the player, creates chords, which sound much richer than the 'tema' you looked at in the previous section.

Notice how both treble and bass parts have notes of similar lengths and move simultaneously. When musicians talk about the relationship between a melody and what accompanies it, they use the term **texture**. This type of texture we could call 'block chords' because all the elements move together in block-like chunks. You could almost draw a picture of it that might look like a line of bricks or blocks. Sometimes when following a large score, identifying sections of block chords that look like chunks of notes moving together can help you keep track.

2.2.2 Texture in big band jazz



Figure 5 Benny Goodman and his Orchestra in 1935

A texture using block chords is also a common feature in jazz. Music for big bands often features ‘blocks’ of sound, with each instrument within the saxophone, trumpet and trombone sections having similar material. There is one further group of instruments (piano, bass, guitar and drums) that each have slightly different things to play. Collectively, this group is known as the ‘rhythm section’ and can be compared to the engine in a car, driving the music along and coordinating the other elements.

This strong sense of the band being divided into four sections makes following a score of a classic big band piece, which might involve around 20 musicians, not quite as tricky as it might first appear. Sometimes, for an even more powerful effect, the saxophones, trumpet and trombones are all scored to play in block chords – a great example of this can be found in Fletcher Henderson’s arrangement of Irving Berlin’s *Blue Skies* for Benny Goodman’s orchestra. Henderson’s arrangement presents a series of variations based on the melody and harmony of Berlin’s original song. Listen to a short section of this number now. You’ll be looking at this in a bit more detail next week.

Audio content is not available in this format.

2.2.3 Discussing Mozart

Now you have worked through the basics of how melodies work with accompaniments and how textures are created, watch the following video to learn more about how pianist

Alexander Panfilov works with the score to discover more about textures and structures as he prepares for performance.

You may find it helpful to have the score that you downloaded in the introduction to hand as you watch.

Video content is not available in this format.

[Pianist Alexander Panfilov working with scores](#)



Alexander mentions the Viennese Classical style. By this, he means the music written by the composers of the late eighteenth and early nineteenth century, such as Mozart, Haydn and Beethoven.

2.2.4 Comparing notes: the kaleidoscope of piano textures

To learn a little more about the technical aspects of texture and to help you follow them in a score, we are now going to explore a [few short examples in a little more detail](#). This will help you appreciate the range of possibilities open to a composer when working with more than one strand of music, and how those different strands may interact with each other.

The following video demonstrates how the relationship between different sounds can be developed in many different ways. There are a few more symbols in musical scores that can alert us to how the various lines interact. You may have noticed Alexander referring to rests in the video in the previous section. We are now going to expand on how these work.

Video content is not available in this format.

[Relationship between different sounds](#)

2.3 Some new symbols



Figure 6

Mozart's fifth variation introduces some things that we have not yet come across in this course.

First, there is a sign right at the start that looks like a small lowercase 'p' in italics. This is called a dynamic marking and it tells the performer to play this section quietly. Dynamic markings are abbreviations of Italian words for quiet (*piano*) and loud (*forte*). These two basic indicators may be modified to indicate extremes such as *ppp* (very, very quiet) or a moderate middle of the road volume (*mf* or *mp* – moderately loud or moderately quiet). **Dynamics** are also good landmarks to watch out for in a score, as you can very easily hear where music changes volume.

The other signs we need to consider are highlighted in the music shown here but are not notes – they are called rests and show moments of silence.

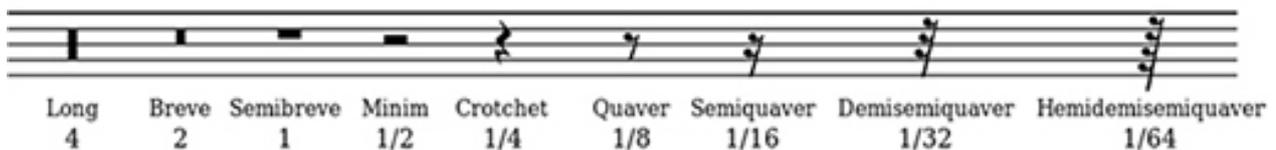


Figure 7

All music has components of silence. In an orchestra or group, an instrument or a group of instruments may drop out of the action for a short while, or there may be a moment where only one hand is needed at the piano, or it can be in the form of an expressive break in the flow of musical sounds. The length of the silence depends on the shape of the rest sign, much like note shapes. As you get more and more instruments and lines in a score, you will see quite a lot of rests where one or more instruments are silent.

Why is silence important in music?

2.3.1 Fitting sound and silence together

The interplay between sound and silence has been an important trend in art music since the mid-twentieth century and much has been written about the philosophy and psychology of silence in music.

These small silences articulate the musical space, so you need to be able to identify rests and places in large scores where instruments are silent in order to understand what is happening and to follow them through. Essentially, you will need to move your eye to the active lines of music not the resting ones.



Figure 8

Audio content is not available in this format.

[Mozart's fifth variation](#)

Listen to Mozart's fifth variation. Here, Mozart breaks up our now familiar melody between the left and right hands, and where one is busy, there is a rest in the other. You may find the movement from one clef to the other tricky to follow at first, but once you get used to

seeing how they fit together, it becomes easier to follow both staves together than to separate them. Notice that Alexander observes the first repeat mark, but not the second one.

2.3.2 Visualising textures in a score

Hopefully, you are starting to see how the different lines of music relate to each other on the page when listening, and you are starting to relate different types of sound to different visual patterns and shapes.

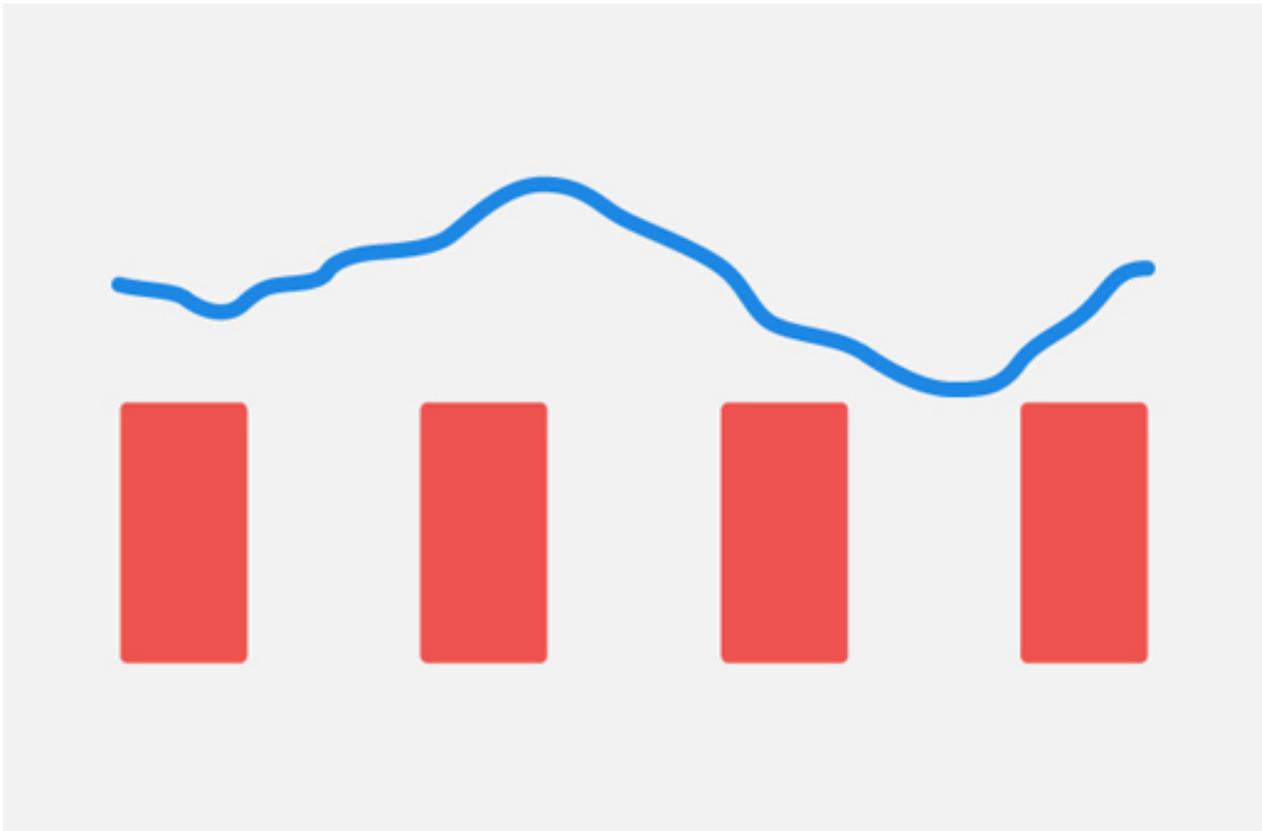


Figure 9

Block chords look different to combinations of fast and slow notes, or to melodies weaving together. Identifying these textures will help you understand the construction of the music and how it is written down and represented in the score. Figure 9 shows how someone might imagine what a melody with chords might look like. Your vision might be different, but some kind of visualisation will help you understand how textures work.

How would you visualise a round or a piece of music with interweaving melodies? Think of a piece of music you know and try to visualise what the texture might look like.

2.3.3 Practising your skills

You probably realise that there is no right or wrong answer about visualising textures. It is simply a way of helping you understand a musical score by visual analogy. Now you have worked through parts of a piano score based on a familiar melody, you will move onto a piece of music that is not built up from a familiar tune in order to practise your skills.

Now you will listen to a piece of music written on what should now be a familiar two stave score. Before you start listening, look at the music, which begins at No. 4 on this [PDF of the music](#), and see if you can identify 'landmarks'.

- Are there double bars and repeat marks?
- Can you identify different types of texture that will help you follow the music?

Once you have scanned through the music, play the audio and follow the score. Remember to tap the beat as you go, and allow your eyes to follow in time with the beat. You might find using your finger to keep your place in the score helps. If there are rests, allow your eyes to follow the active part of the music. You may need to do this a couple of times so that, as the music becomes more familiar, you can find your way around the score more easily.

Audio content is not available in this format.

2.3.4 Fitting it all together

Video content is not available in this format.



You should now practise following the score of the Mozart variations, which you saw in the video at the start of the week.

[Download the PDF of this score](#), before playing the video. Practise following the score as far as you can. Hopefully you will understand how the melodies work in the context of the

score, and that you are becoming more confident at following the music. Note that Alexander observes only the first repeat mark in each variation, but other performers may do it differently.

You can listen to a full recording of all twelve variations on our [Spotify playlist](#) or on YouTube.

If you are reading this course as an ebook, you can access this video here: [Hyperlink to the full name of the video as it appears on [YouTube](#).

Next week you will be using scores that use more lines, so keep on practising, following as much music as you can to develop your skills.

2.4 Week 2 quiz

This quiz allows you to test and apply your knowledge of the course so far.

Complete the [Week 2 quiz now](#).

Open the quiz in a new window or tab then come back here when you are done.

2.5 Week 2 summary

This week you have heard a pianist describe how he works with a musical score and how it helps him understand the structure of a piece and to prepare for a performance. You have learned about how piano music is represented in a score, how variation structures work, what texture, rests and dynamics are, and seen them all brought together in an example by Mozart.

Next week you will be meeting a group of five musicians who play together in a quintet, and looking more closely at how jazz bands use scores.

Week 3: Musical collaboration and the role of the score

Last week, you worked on piano scores that comprise two simultaneous lines of music. You are going to move on to music that uses more than two lines. As you are now familiar with what piano music looks like, you will move on to music for piano with other instruments.

To start off this week, watch a performance of part of the fourth movement of Schubert's *Piano Quintet* in A major, D. 667, known as the *Trout Quintet*. You will be studying this piece in some detail this week, so you might find it useful to [download the PDF](#) of the score now.

Video content is not available in this format.



The performance was filmed at the Royal Northern College of Music in Manchester and features Siobhan Doyle (violin), Kimi Makino (viola), Christopher Mansfield (cello), Filipe Dandalo (double bass) and Jeremy Young (piano).

3.1 Working collaboratively with a score

In the following video, the performers discuss how they use a score to work together as they rehearse and create a performance. Each player will have a slightly different view of the music, as they will generally only see the line of music that they play as an individual. This notation for a particular player is often called a 'part'.

If the music is for a single instrument with piano, such as a violin sonata or a song, the pianist will usually play from music that includes the instrumental or vocal line as well as the piano part, and can often act as a coordinator because they can see the music for both instruments. Here, pianist Jeremy Young explains how although each player only sees their own part, they also work with a score to collaboratively create their performance.

Video content is not available in this format.

[Working collaboratively with scores](#)



For any music that has a number of players such as a string quartet or jazz band, a full score is a means of representing all the parts together so that they can be understood in relation to each other. Each instrument has its own line, but the lines that sound simultaneously are joined by a brace and are aligned vertically to indicate their synchronicity. The written music now has two functions:

- 1 the parts, which present each individual player with the single line of notation for their specific instrument
- 2 the score, which represents the full sound picture of the piece.

3.1.1 Introducing new genres

Last week you were introduced to a set of variations for piano. This movement for piano quintet is also a set of variations, but instead of using a simple folk song for the theme, Schubert uses one of his own compositions, a song called *Die Forelle* or *The Trout*, hence the nickname for the quintet.

Schubert was a genius at song writing and his **lieder** (the German word for songs and, more specifically, art songs) create miniature sound worlds that really capture the meanings of the lyrics. The original song is about a wily trout that evades the fisherman, and has some cheeky hidden meanings. The mood of the words is reflected in a jaunty melody with a rippling piano part that 'paints' a picture of a fast-flowing river. You might like to download a [PDF with both the original German and an English translation of the words](#) .

Once you have listened to Schubert's song, you can compare it to the beginning of the quintet that you saw in the video at the beginning of the week, where he converts it for use with instruments.

Audio content is not available in this format.

3.1.2 Working with instruments

Now you have listened to the performance and heard the performers discussing a little bit about their approach to this music, let's look at the score.

Look out for the following elements:

- Double bar lines and repeat marks – can you spot these landmarks?
- Rests – note the rests in the piano part, as it doesn't play at all in this section.
- Dynamics – the *pp* indicates that the dynamic is quiet.
- Melody – this is played by the violin and is in the top treble clef staff.
- Accompaniment – this is provided by the other instruments (viola, cello and double bass). The double bass in the bottom bass clef staff has the slowest moving notes, and gives a repetitive, rhythmic long-short-short pattern.

Figure 1

You will have noticed brackets over the music labelled with numbers one and two. These are first and second time bars; the musicians play the music under the one bracket on the first time, then miss out this bar on the repeat to play the music marked two.

Now, let's put it all together and listen to this section, while following the score. First, keep your eye on the melody, and then see if you can pick out the double bass and follow the bottom line.

Audio content is not available in this format.

How do you think the performers manage to work together to combine all these elements effectively?

3.2 Instrumental colour

Figure 2

The piano starts playing in the first variation of Schubert's *Trout Quintet*. The addition of the piano to the string sounds changes the complex of sound that we hear.

Musicians often talk about instrumental colour or **timbre**, which is a word used to describe how we differentiate between the individual sounds of each instrument, and how they work together.

Download the [PDF of the score](#) and listen to this first variation. Follow the piano part of the score using the techniques that you learned last week, looking for rhythmic patterns and repetitions. Listen a second time to follow the parts of the violin, viola and cello. Are they moving faster or slower than the piano? If you find it really tricky to separate all the individual lines of these instruments, start with just the violin.

Finally, pick out the double bass, and follow that part of the score. How is its sound different from the rest of the strings, and what signs do you see in the score that might indicate something different?

Audio content is not available in this format.

3.2.1 New textures



The image shows a page of a musical score for Variation 1 from Schubert's Trout Quintet, page 53. The score is for piano and features several parts. A red circle highlights a specific rhythmic pattern in the upper staff, labeled 'Motif'. A yellow arrow points to the 'pizz.' (pizzicato) instruction in the bass line. A blue box highlights a section of the score where the melody is played by both the left and right hands simultaneously, labeled 'Doubling'. The score includes various musical notations such as notes, rests, and dynamic markings.

Figure 3 Variation 1 from Schubert's *Trout Quintet*

In Variation 1, Schubert gives the melody to the piano. The melody is built up with repetition of sections and there are many places that use very similar rhythms. The melody is played by both the left hand and right hand simultaneously, causing the melody to stack vertically. This texture is called **doubling** and is often used in orchestral writing.

The violin and cello alternate in playing a little **motif** – the term for a short, distinct fragment of music – that creates a rippling effect. The viola part has a filler that rhythmically keeps the music moving. The double bass is using **pizzicato** (abbreviated in the score as 'pizz. '), a technique in which the player plucks the string with the fingers rather than using the bow.

You may not have been able to follow the string parts without losing your place in the melody. Don't worry about this, because your eyes and ears have to focus in single places first, before you can take all the lines in at once.

Some of you may have noticed that what you hear is slightly different from what is in the score. Please don't worry about this. One of the challenges, but also one of the rewards of working with scores is that you start to realise that pieces of music by famous composers have several lives. Many composers edited, rewrote, changed and reworked their music throughout their careers, leaving us with a puzzle as to what a 'work' really is. Essentially what we have here are performers using different editions of the piece edited from

different original sources. As the function of the viola part here is as a 'filler' we want you to focus on the dialogue between the cello and violin, and on the pizzicato bass.

Audio content is not available in this format.

[Variation 1 from Schubert's *Trout Quintet*](#)

3.2.2 Instrumental tone colour

You have looked at the score of Variation 1 in some detail in the previous sections, and have seen how the music is represented.

In this video Filipe, Siobhan and Christopher talk about different elements of instrumental colour that they work into their performance of this variation.

Video content is not available in this format.

[Elements of instrumental colour](#)



3.2.3 Layering and balancing sounds

In this video, Filipe, Christopher, Kimi, Siobhan and Jeremy talk about how their parts fit together in layers in Variation 3.

Video content is not available in this format.

[Layering sounds](#)



In the next section, you will see the score and how these layers are represented on the page.

3.2.4 Layered textures

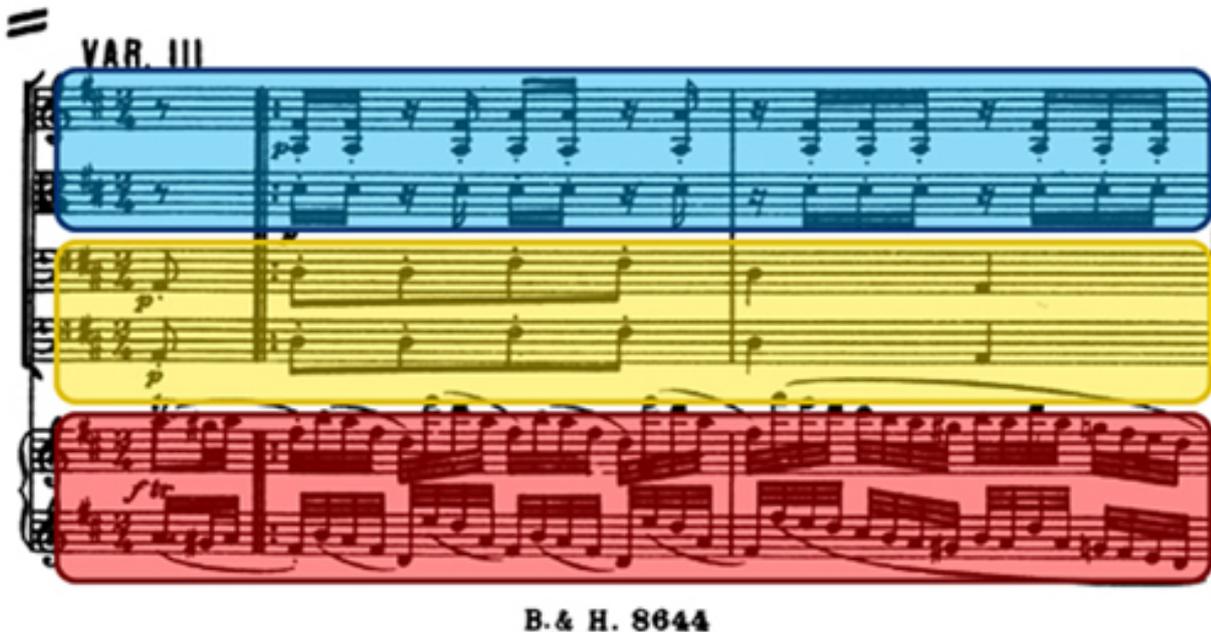


Figure 4 This colour-coded score shows the pairings of the parts – violin with viola, cello with bass and the left and right hands of the piano together

You are already familiar with the technique Schubert uses in Variation 2, as it is similar to that used by Mozart in the first two variations of the set you studied last week – one instrument plays the melody clearly, while others play fast passages around it. We will move on to Schubert's Variation 3.

The first visual impression of the score here is that it is in layers. The piano part looks black with fast notes, the violin and viola parts have lots of gaps with rests and the cello and bass parts look like they are moving at a similar pace. The score has been colour-coded to show you how the parts are grouped.

Picking out layers like this is part of the 'landmark' spotting that is so helpful to understanding how scores work and what they tell us. The layer which has the melody will be the easiest to follow, but it's also important in determining how the performers create and balance the different sounds of the instruments. In this quickly moving variation, the melody is in the slower moving parts, the cello and bass.

In the previous section, you heard the performers discussing how they referred to the score when deciding on elements of balance. Now, listen to it several times and follow each layer of the score in turn using the [PDF of the score](#). Try to listen and look out for patterns and repetitions to help you navigate the structure of the piece. Some sections will be easier to work out than others because they are more repetitive, or because they move more slowly, or because you can hear the instrument concerned more clearly. By the time you've done this exercise a couple of times, following the score gets easier and you will find the important landmarks quickly.

Audio content is not available in this format.

3.2.5 *The Trout* revisited



Figure 5

In the light of what you have learned so far, listen to a recording on [YouTube](#) or [Spotify](#) of the whole of the fourth movement of *The Trout* quintet.

Use the PDF of the score you downloaded previously and follow as much of it as you can. We have not discussed the variations that follow after Variation 3, so this is to help you to practise the skills that you have acquired. You may want to start by looking at these new variations to see if you can spot the different textures and instrumental sounds before you listen to it.

Audio content is not available in this format.

3.3 Introducing jazz instrumentation and notation

Now we are going to look at some music of a completely different style and apply what you have learned to it.



Figure 6

At first glance, this score looks a lot larger than the Schubert example that you’ve been studying this week. However, you will also notice that the instruments are often grouped together and, as we mentioned last week, this is a convention of writing for the jazz orchestra, or big band, in the swing era (around the 1930s). Therefore, you can think about following this score in terms of four key groups: saxophones, trumpets, trombones and finally the rhythm section, which contains piano, guitar, bass and drums (which are not shown in this score).

It’s worth pausing to think about the different roles of the instruments in the rhythm section and, in particular, how they are notated. As the term suggests, instruments in this section are responsible for providing the rhythmic pulse and drive for the ensemble, but they also provide a harmonic basis. There are many unwritten conventions associated with the way in which they do this, which musicians have to be aware of – the notation often only provides a basic guide to the structure of the piece.

Audio content is not available in this format.

3.3.1 Big band timbres and textures

In the previous section, you listened to part of Fletcher Henderson’s arrangement for Benny Goodman of Irving Berlin’s *Blue Skies*, where the saxophones, trumpets and trombones were playing in block chords over the rhythm section.

In the next part of the piece, Henderson separates the brass (trumpets and trombones), who continue with the melody in block chords, from the saxophones, who have something different to play, also in block chords. Henderson demonstrated this in a radio broadcast from 1938.

This musical score for Figure 7 features a saxophone section with four parts: two Alto Saxophones and two Tenor Saxophones. The saxophones are playing a melodic line with slurs and accents. Below them are three Trumpets and two Trombones, all marked 'Mute'. The guitar part consists of a rhythmic pattern of eighth notes. The piano and bass parts provide a harmonic foundation with chords and a steady bass line. The score is written in 2/4 time with a key signature of one flat.

Figure 7

Finally, on this same broadcast, the band demonstrated the introduction to the number, which Henderson says represents a storm. For this part of the arrangement, the saxophone section swap to clarinets to create a different timbre.

This musical score for Figure 8 shows a change in instrumentation. The saxophone section is replaced by four Clarinets (two Alto and two Tenor). The clarinets are playing a melodic line with slurs and accents. Below them are three Trumpets and two Trombones, all marked 'Flutter Tongue'. The guitar part consists of a rhythmic pattern of eighth notes. The piano and bass parts provide a harmonic foundation with chords and a steady bass line. The score is written in 2/4 time with a key signature of one flat.

Figure 8

Listen to the broadcast now and follow Henderson's demonstration.

Audio content is not available in this format.

3.3.2 Putting it all together

The score for *Blue Skies* that you have been looking at was made through a process called transcription, where a musician notates what they hear in a performance.

Writing music down in this way can be very useful when musicologists want to study it. The skill of listening to a piece and writing it down in musical notation takes a lot of practice – even then it’s often necessary to listen to a piece many times in order to notate it accurately. Often it’s not possible to hear exactly what each instrument is doing in large ensemble pieces, and educated guesses are needed to complete the score.

You are now getting more used to listening carefully and thinking about how sound relates to notation, and for the final activity this week you will have a go at making a simple transcription of your own.

Audio content is not available in this format.

Activity 1

First, listen to a longer section of *Blue Skies* and identify the sections that will already be familiar to you:

- 1 where the saxophone players swap to clarinets (0:00–0:10)
- 2 where the saxophones, trumpets and trombones play together in block chords (0:11–0:31)
- 3 where the saxophones and brass sections have different material, but again use block chords (0:52–1:11).

These three points don’t cover the whole score though. Listen again to the performance from the beginning up to 1:51 and make notes on what the saxophones, trumpets and trombones do (don’t worry about the rhythm section, which plays throughout, for the purposes of this exercise). Think about the missing details indicated by a question mark in Table 1.

Table 1 *Blue Skies*

Section	Track timing	Melody	Accompaniment
1	0:00–0:09	Saxes swap to clarinet	Brass flutter tongue
1	0:10–0:30	Saxes, trumpets trombones, block chords	
	0:31–0:35	?	
	0:36–0:40	Trombone solo	? sustained backing
	0:41–0:50	?	
1	0:51–1:10	Sax and brass play different material in block chords	

	1:11– 1:30	? solo	?
	1:31– 1:51	? solo	?

Wind players can produce a distinctive sound by flutter tonguing, like rolling an R, while blowing into the instrument.

Notice that the solos in the last two sections would not have been notated in the original parts used by the Goodman band – they would have been improvised, that is, invented more or less on the spot by the individual musician. Usually the relevant part would contain a version of the melody, sometimes with indications of the harmony, for the musicians to work from.

Once you have done this, take one or two sections and see if you can make your own representation to show what is happening. You will need to listen closely several times in order to do this. Section 1 has been done as an example.

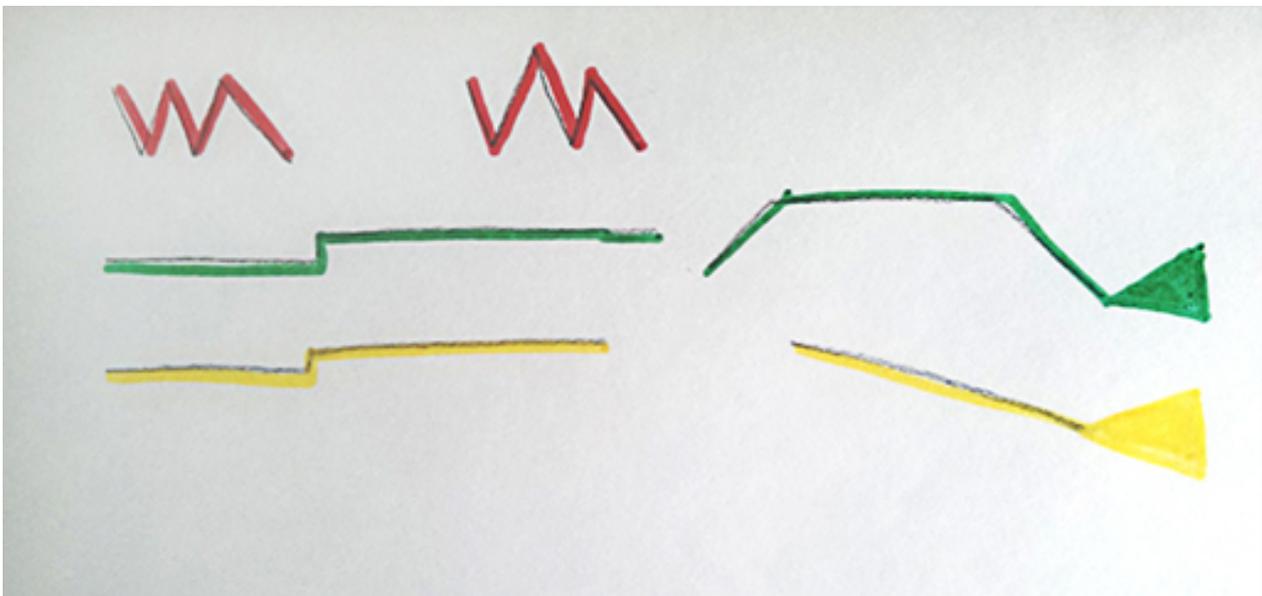


Figure 9

Here, different colours have been used to represent the three instrumental groups (red for clarinets, green for trumpets, yellow for trombones – you could perhaps use one colour for the brass as it’s often difficult to pick out the trombones on this recording). Figure 9 tries to show whether each group is playing constantly, or in shorter bursts; the broad contour of the melodies, and even tries to show the crescendo at the end of this short phrase. There’s no right or wrong way of doing this, so be creative.

3.4 Week 3 summary



Figure 10

By now, you may have realised that music in different styles looks different on the page. It really is useful to have an overview of what to expect in any style of music as you look at and follow a score, especially when these involve more players, as with an orchestra.

Orchestral music from the classical period of the mid- to late eighteenth century, such as symphonies by Mozart, Haydn and Beethoven, all have really clear melodies, and the orchestral instruments tend to work together in blocks – all the strings working as a group, the wind (and horns) working together, and so on. Scores help us to understand how composers approach writing for different instruments and what musicians do when they prepare performances.

By the nineteenth century, the orchestras were much bigger and there are more often interesting parts for solo wind and brass instruments, and you may also find more percussion and instruments such as the harp. Orchestral music of the twentieth century really uses the whole range of instruments and, with the influence of jazz, composers found new ways of introducing jazzy sounds, for example, using percussion or blocks of brass or wind instruments. If you listen to music for film, you may even hear electronic sounds alongside live sounds.

Next week, you will be looking at some scores for music for a large orchestra by Tchaikovsky, Mahler and Beethoven. Conductor Mark Heron will be explaining the role of the conductor and how he works with scores.

Week 4: Understanding orchestral scores

Video content is not available in this format.

[Week 4 Introduction](#)



Up to this point you have looked at a variety of music for single instruments and for small groups of instruments. This week you will be looking at large orchestral scores, drawing on the skills you have already learned.

Large orchestral scores might seem rather daunting, but in fact you have already looked at a full orchestral score at the end of Week 1, and you'll revisit Mahler's first symphony again this week. There are a number of techniques that you have used when you've been looking at scores for piano and in music for smaller ensembles that apply equally to music for large orchestras. The principles of texture are the same, but the layout on the page will look a bit different. Keeping a beat and looking for melodic and rhythmic patterns are still important. Working with these principles will help you understand larger and longer musical scores.

You'll remember from the Schubert quintet you studied last week that most of the players only had the notation for their particular part on the music stand – it was only the pianist that had a full score. However, it was possible, through rehearsals plus eye contact and physical gestures in the performance, for this small group of players to coordinate themselves. Together, they decided how to play certain passages of music and made sure that their individual lines were blended and balanced appropriately.

For larger ensembles, such as an orchestra (which might consist of around 30–100 or more performers), this would be much more difficult to accomplish as communication, discussion and decision making among so many people simultaneously would be challenging. This is why most orchestras have a conductor who takes this coordinating

role, and is usually the only person with a full score in front of them in both rehearsals and performances. This week, you will focus on the conductor's relationship with the score.

This week, you focus on the conductor's relationship with the score with conductor [Mark Heron](#), who teaches at the Royal Northern College of Music and the University of Manchester.

4.1 Score order

Allegro con brio (♩ = 108)

The image shows a page from an orchestral score. The title is "Allegro con brio (♩ = 108)". The score is divided into several sections, each with a colored box on the left containing the instrument names in Italian. The sections are:

- Woodwinds (Yellow box):** 2 Flauti, 2 Oboi, 2 Clarinetti in B, 2 Fagotti. The Clarinet part has a "zu 2" marking and a "ff" dynamic.
- Brass (Green box):** 2 Corni in Es, 2 Trombe in C.
- Timpani (Black text):** Timpani in C-G.
- Strings (Red box):** Violino I, Violino II, Violoncello, Contrabasso. The Violino I and II parts have "ff" dynamics, and the Contrabasso part has a "p" dynamic.

The musical notation consists of staves for each instrument, with notes, rests, and dynamic markings. The woodwinds and strings are playing a rhythmic pattern of eighth notes.

Figure 1

The order of instruments as they appear in the score is always the same, with woodwind instruments at the top of the page in order from high to low, then the brass. The instruments are identified, usually in Italian (as in this example), German or French. You

may not be familiar with all the names of the instruments, especially the more exotic ones, but don't worry about this, so long as you get the idea of the blocks of different types of sound.

In the example in Figure 1, the woodwind are marked in yellow and the brass are marked in green. The strings, marked in red, are at the bottom in order from high to low. Sandwiched between the brass and strings are the percussion instruments and harp. You can see how this layout relates to the way an orchestra is usually seated in Figure 2.

Sections of the Orchestra

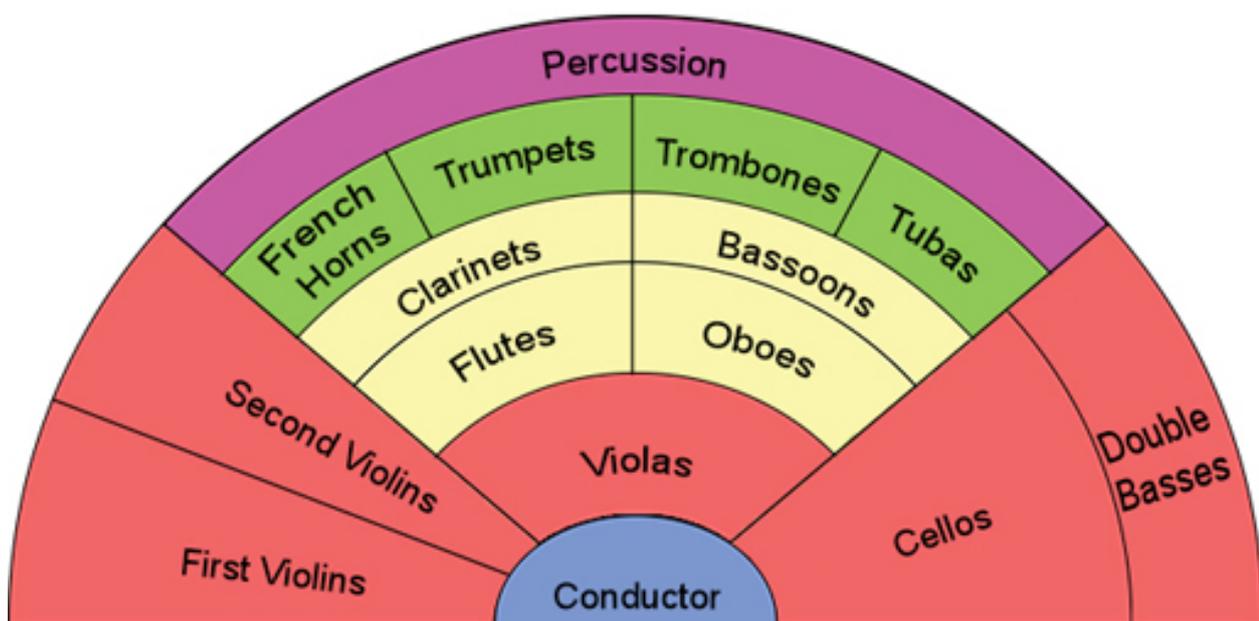


Figure 2

4.1.1 Staves and systems



Figure 3

A line runs down the left-hand side of all the instruments that are playing together, and the bar lines run through the staves.

Both of these signs show that these instruments are sounding simultaneously, and the whole group of staves is referred to as a system. If, on one page there is a section of music that only uses a few instruments, you may find two or more systems on the page separated by this symbol:

//

Watch out for these ‘tramlines’ as it is easy to miss a system especially if there is a small one between two larger ones. The example in Figure 3 is from the third movement of Mahler’s *Symphony No. 1*.

4.1.2 A conductor discusses: orchestral rehearsals

Video content is not available in this format.
[What happens in an orchestral rehearsal](#)



In this video, Mark talks about what happens in rehearsals. He talks about 'rehearsal marks', letters placed in the score to help a conductor to identify a particular place to the players when starting and stopping to practise particular parts of a piece.

In the Mahler score you looked at in the previous section, numbers were used for this purpose; another alternative is for every bar to be numbered. Rehearsal marks are often placed at points where something important happens, so can help you to navigate complicated full orchestral scores.

4.1.3 Coordinating movement



Figure 4

In ballet music, the conductor has a particularly important job in coordinating the music with the dancing, watching the speed of the dancers' movements and making sure the orchestra stays in time with them.

Tchaikovsky's ballet, *The Nutcracker*, written in 1892, tells the story of a young girl, Clara, who is given a nutcracker as a Christmas gift by her mysterious godfather Dr Drosselmeyer. She falls asleep under the Christmas tree and the toys come to life. The nutcracker becomes a prince who fights a battle with the mouse-king and his army and then takes Clara on a journey to the Land of Snow and Ice and the Land of Sweets. A series of short dances in Act II celebrate the victory of the nutcracker-prince over the mouse-king. These start with a march, followed by a series of dances to represent different sweets – sugar candy, chocolate, coffee, marzipan – some of which have 'national' characteristics, like the flamenco-inspired Spanish dance and the Russian Trepak. The exotic Arabian dance represents coffee.

The Arabian dance is written for a large orchestra, but only a few of the instruments are playing at any one time. [Look at the score](#), and see if you can identify 'landmarks' that might help you follow it. First, check the instruments that will be playing by looking at the names at the start of each stave, then use the skills you have acquired.

If you were the conductor, what would you need to pay attention to? What marks would you make in your score to help you conduct it?

4.1.4 Synthesising sight and sound

Figure 5

Hopefully, in studying the score of the Arabian dance you looked for rests, dynamic markings, layering of textures and repeating patterns. If you were conducting a ballet, you would also need to pay careful attention to rhythm patterns and speed.

Activity 1

Different elements of the music are outlined in Figure 5. Take some coloured pencils and mark these elements up as if you were a conductor, perhaps identifying the instrument groups with colours, marking instructions for dynamics with a specific colour (blue, for example, as seen in Figure 5), and marking the most important melody and any repetitions that you see with a different colour. The instrument groups are marked in the same colours as the diagram of the orchestral layout you saw earlier. You can see the first page of the score in Figure 5.

Discussion

A quick analysis of the score

Rather like the Schubert example we looked at last week, there are 'layers' in the score. The string parts at the bottom have lots of quick notes and the score looks quite black, but the clarinets and cor anglais are all moving together but at a slower pace. There are a number of rests in the opening of the piece – the score looks quite 'open' – so expect to hear only a few instruments. You may also have noticed the dynamic marking, *p*.

We have looked at several **melody and accompaniment** textures in music by Mozart and Schubert where a slow-moving melody accompanies a variation with a lot of quick notes, or the accompaniment is formed by lots of quick notes. A similar technique is being used here. There is a slow-moving melody in the first clarinet part and the strings have a faster moving accompaniment. By bar 14, there is another layer, as the violins start playing the tune that the clarinets had, and the clarinets become another layer of accompaniment playing long slow notes. A new sound is introduced in bar 33, where the bassoons take the melody, but now the violins have rests, so the sound picture is darker with mostly low register instruments. Every now and then there is a 'splash' of tambourine.

The final section of this piece uses another technique that you have already come across in the Mozart variations. The melody is passed between the violins, clarinets and bassoons but in bar 69, a new melody is played by the oboe while the violins carry on playing the original tune. This new melody is a **countermelody** – literally a melody that plays against the melody.

4.1.5 Following the score

Now you have studied the score and marked it up, listen to the music and follow your own score. We've also attached our own attempt at marking up the first part of the [score as a PDF](#). On this score, red arrows have been used to show the main melody.

Audio content is not available in this format.

First, allow your ear to find the different sounds of low strings, clarinets, violins and bassoons in turn and, to start off with, just focus your eyes on a single line – try the clarinet that is playing the melody. Now, listen a second time and focus on following just the music of the low strings with that murmuring accompaniment. Finally, listen one more time, and see if you can bring all the lines together, allowing your eye to jump from the low string accompaniment, to the clarinet melody and then the violins and bassoons playing the melody in turn.

Conductors follow the score too, but in a rather different way to what you have been doing. They have to learn the score so they can give direction to the players before they start to produce a particular sound. In performance, the score then becomes a memory aid, but marked up just as you have done to remind them about key landmarks. However, conductors will be reading, and thinking, several bars ahead of the sounds that they are hearing.

4.2 A conductor discusses: developing a performance

Video content is not available in this format.

[Musical information](#)



In this video, Mark talks about the different types of information which can be found in a score and how conductors go about interpreting this to develop a performance.

4.2.1 Mahler - what to look out for

By now you have probably realised that you don't have to follow every note of the music to understand what is going on in a score. The trick is to know what is important, and where to locate that activity on the page. Watching out for rests, matching the instrument sound to its position on the page, following from the end of one system of music to the next where the line that you are following may shift to a different place are all things to remember while listening and following along.

Using the skills you have learned up to now, we are going to listen to and work with a section of this movement by Mahler in more detail. You are already familiar with some of the components of this music, so as you look at the full orchestral score, don't be daunted by all the lines. Just work up from what we have done and what is familiar and try to join it all together. [Download the PDF](#) of the annotated score of the first part of this movement.

The first eight bars have only two lines of music – the timpani (kettledrum) and double bass. The drum sets and keeps a steady pulse while the basses introduce the *Frère Jacques* melody. The next ten bars introduce the **round** or **canon** in the low instruments – cellos, bassoons, tuba and the clarinet playing its very lowest notes. Remember the

simple round from Week 2? This works in exactly the same way, so try to allow your eye to follow one line all the way to the end of the melody and, if you can, find another line with a different part of the melody and see if you can follow them both at the same time.

You'll remember that rehearsal marks are often placed in scores at points where something important happens. In this case, figure 3 at bar 19 coincides with the start of a new melody played by the oboe. This is another example of a countermelody. So, here we have two layers of music operating together. One is the canon in the lower instruments and the other is the countermelody in the oboe.

4.2.2 Keeping track - Mahler *Symphony No.1*, third movement

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In the previous section, you should have examined and marked up the score of Mahler's *Symphony No. 1*. Watch the video of the third movement of Mahler's *Symphony No. 1*, listening to the orchestra while following the score on screen.

Having watched the video of the rolling score, [download the PDF](#) of the full unannotated score. Mark up your score as you did for the Arabian dance, using blue for dynamic markings and red for those important melodies. If you want to highlight a particular instrument, choose a different colour to pick it out. Then listen to the audio and follow your marked-up score. Remember, there may be more than one system on a page. This is exactly what happens at the beginning, so try to remember what instrument is playing the part that you are following most closely and keep an eye on where that line moves to on the page. Keep thinking about the kind of landmark that we have already discussed that can help orientate your eyes – look out for double bars, areas of rests, and changes in how the music looks that might indicate 'layers' of sound and so on.

Audio content is not available in this format.

4.3 Following a motif

Video content is not available in this format.

Our final score is one of the best known and most loved symphonies ever written – Beethoven's fifth symphony.

As you have worked through different scores over the last four weeks, you have encountered several important techniques used by composers in writing their music down. You have had simple melodies, music written in 'blocks' of sound as chords, accompaniments made up of fast-moving notes, music that is fragmented with rests and broken up between hands on the piano or different instruments in the orchestra and so on. Now you are going to put it all together. The techniques haven't changed, but the individual way Beethoven uses them may make them look different.

You will recognise the iconic start to this symphony. Looking at the score, you will see a block of string instruments all moving together. This group of instruments presents the main **motif**.



Figure 6

Then we have a fragmentation of this motif, passing between instruments with lots of rests in the parts that are not playing. This is followed by another section of block chordal movement then a different fragmentation of the motif, called **imitation** – each line follows the previous with the same idea.



Figure 7

Finally the whole orchestra plays together in layers, with all the strings playing fast-moving notes, while the wind and brass play in chords, first in short notes and then in long

sustained notes. After a brief silence, the horns play the motif on their own, to introduce a new melody played by the violins.

128

Full orchestra playing together

60

Fl.

Ob.

Cl.

Fg.

Cor (E♭)

Tr. (C)

Timp.

Horn motif

New melody

Vi.

Vla.

Vc. Cb.

70

New melody copied by clarinets

And then the flutes and violins together

Cellos and basses have the motif

Figure 8

This new melody is then copied by other instruments, keeping its shape as it moves between different instruments. The other layers of sound are long sustained notes that create an accompaniment to the melody, and repetitions of the motif. If you were conducting this section, you would probably want to be aware of these different layers.

This section ends with another passage that moves between chordal writing and a layered texture where one section of the orchestra is moving fast and another is playing chords at the same time.

4.3.1 A conductor discusses: interpretive approaches

Video content is not available in this format.

[Interpretive approaches to musical scores](#)



In this video, Mark talks about some of the different ways in which conductors have approached performing established classical works such as Beethoven's *Symphony No. 5*.

Having watched the video, [download the PDF](#) score. Look through and mark it up as before, then follow it as you listen to the audio below. This music is quick and keeping up as you follow the score is not always easy. Try to tap the beat as you go, and don't allow your eyes to wander back to music you have already heard as this will leave you behind the pace of the music.

Audio content is not available in this format.

4.3.2 Double bar

You may have realised while watching the video footage about conducting that the score is only a representation of the music, and not the music itself. In jazz, the score is often only a starting point for performers.

However, scores of some kind are often the basis from which performers work. Looking at scores can help our understanding of the way composers of the distant past worked, and

enable composers of today to transfer their musical ideas into a sounding reality. Those spine-tingling, toe-tapping musical experiences that we all have had, often start from a score.

If you want to study more musical scores, your local library may have a music section that includes scores. Some libraries may have both scores and recordings. There are also digital libraries of musical scores such as [IMSLP](#) and many archives are now putting famous composers' handwritten scores online for everyone to study. You may particularly enjoy the [Beethoven digital archive](#) where you can see documents and manuscripts relating to the Fifth Symphony that you have studied briefly here.

4.4 Week 4 quiz

This quiz allows you to test and apply your knowledge of the course.

Complete the [Week 4 quiz now](#).

Open the quiz in a new window or tab then come back here when you are done.

4.5 End-of-course round-up



Figure 9

Over the last four weeks, you have learned about a variety of things that musical scores do and how musicians work with them. You have learned:

- how single line melodies are constructed

- how pianists read two lines of music and interpret what each hand needs to do
- how musicians work together with scores, first as small groups of players and then with a full orchestra.

Each musician you've heard from throughout the course gave insights into what the musical score means to them and how it shapes their work. Of course, we have not touched on how composers use scores, or how popular musicians don't necessarily use scores at all, but use modern technology to create and record their music. Hopefully, you have been inspired to look for more scores and to listen to music in a different way.

Now you've completed the course we would again appreciate a few minutes of your time to tell us a bit about your experience of studying it and what you plan to do next. We will use this information to provide better online experiences for all our learners and to share our findings with others. If you'd like to help, please fill in this [optional survey](#).

References

Hornblower, S. and Spawforth, A. (2005) *The Oxford Classical Dictionary* [Online], Oxford, Oxford University Press, Available at Oxford Reference (Accessed 3 March 2016).

Chorlton, D. and Whitney, K. (2016) *Grove Music Online* [Online], Oxford, Oxford University Press, Available at <http://www.oxfordmusiconline.com/subscriber/article/grove/music/25241> (Accessed 3 March 2016).

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