

String Technique

Introduction

Note: this document introduces string techniques and gives examples from String Quartets. There is a separate document with supplementary examples for orchestral writing below.

String instruments are played with a horsehair bow drawn across the strings by the right hand to make them vibrate. The left hand, meanwhile, 'stops' the strings in order to create different notes. This handout documents some of the effects that can be created on string instruments using a variety of techniques

As with any instrument, simply using a mixture of slurs and staccato can make a huge difference to the character of a melodic idea as in this example by Mozart:

Example 1: Mozart String Quartet KV 157 I: bb. 1-8



In this example from a Schubert string quartet the choice of articulation and dynamics creates the character of the music:

- the **fz** markings add energy and emphasize the phrases the slurring in small groups of two and three in the second line create a more legato effect but create a more energetic delivery than longer slurs would
- the semiquavers in the inner parts have no articulation and therefore are quite neutral

Example 2: Schubert Op. 125/1 Allegro

The image displays a musical score for Schubert's Op. 125/1, Allegro, in 3/4 time. The score is written for a string quartet (Violin I, Violin II, Viola, and Cello/Double Bass). The key signature is two flats (B-flat and E-flat). The tempo is marked 'Allegro'. The score is divided into two systems. The first system shows the beginning of the piece, with dynamic markings of *fz* (for emphasis) and *p* (piano). The second system continues the piece, featuring slurs over groups of two and three notes in the upper parts, and *fz* markings in the lower parts. The notation includes various articulations and dynamics that contribute to the energetic and legato character of the music.

In music before the twentieth century, dynamics were most often used either to determine the general character of melodies or shape them. You will find lots of these type of dynamic markings in the examples of string quartets elsewhere on Moodle.

In this handout, the focus is mostly on special playing techniques, but even dynamics and ordinary articulations alone can create quite striking effects when used creatively.

In this Shostakovich quartet note the way in which the composer overlaps the entries so that the next note has already started underneath the accent.

Example 3 Shostakovich Quartet op. 144 no. 15, second movement opening

Adagio $\text{♩} = 80$

25

26

In the same quartet Shostakovich also uses striking contrasts of articulation, with pizzicato, held (tenuto) but separate notes at the beginning of the extract, a fully legato line accompanied by staccato stabs towards the end of the extract:

Example 4: Shostakovich 4tet op. 144 no. 15, second movement fig. 29

29

30

35

Pizzicato

Pizzicato is the technique of plucking the string with a finger rather than drawing the bow across the string. As with many techniques the twentieth century saw much greater variety. In this example from a Bartok string quartet the following techniques can be heard:

- spread chords (opening)
- non-spread chords –achieved by plucking with several fingers at the same time (end)
- ordinary pizzicato but with wider range of dynamics than in earlier music
- ‘Bartok’ or slap pizz. where the string is pulled so it slaps back on the fingerboard (beginning of second line)

Example 6: Bartok Quartet no. 4, IV end

The image displays two systems of musical notation for a string quartet. The first system, starting at measure 115, features a complex texture with various dynamics including *cresc.*, *p*, *mf*, and *f*. The second system, starting at measure 120, is marked *Sostenuto Tempo I. (tranquillo)* and includes dynamic markings such as *ff*, *p*, and *f*, along with the instruction *(non arp.)*. The notation includes treble and bass staves for each of the four instruments, with various rhythmic values and articulation marks.

Double, triple and quadruple stopping

String players can play several notes at the same time and composers often require them to in order to create richer textures. This is much more common in solo and chamber music than it is in orchestral music, in which the same effect can often be achieved using multiple players.

Double stopping (two notes at the same time) can be played in quite a sustained way as in the Dvorak example below, but it is quite technically challenging and you should not ask for passages that are too fast or leaping. In addition The intervals should not exceed an octave as a general rule. Some double stops are very difficult to effect one after another – generally, changing the interval frequently makes it harder. It is worth checking with a string player if you are unsure how practical a passage may be.

Example 7: Dvorak Quartet Op. 34 in D minor (No. 9), third movement

The image displays a musical score for the third movement of Dvorak's Quartet Op. 34 in D minor (No. 9). The score is written for four string instruments: Violin I, Violin II, Viola, and Cello. The tempo is marked 'Adagio' with a metronome marking of 110. The key signature is D minor (three flats) and the time signature is 3/4. The score is divided into three systems. The first system shows the beginning of the piece with dynamic markings of *pp con sordino* and *dim. pp*. The second system features a variety of dynamics including *f*, *dim.*, *p*, *f*, *dim.*, and *pp*, with a *pp espress.* marking at the end. The third system continues with dynamics like *f*, *p*, and *pp*, and includes a *ritard.* marking. The score illustrates double stopping throughout, with the Viola and Cello parts showing quadruple stops (four notes at the same time).

A very different effect is achieved in this Bartok example, in which the double stops are all octaves, adding weight and intensity rather than richness to the aggressive texture. The viola and cello play **quadruple stops** (four notes at the same time).

The triple stops in this Beethoven quartet are more-or-less at the limit of what is practical for consecutive different triple stops – see the second violin part. You will hear that the triple stops in the violins are slightly spread:

Example 9: Beethoven String Quartet Op. 18 No. 4, first movement

In this example from Bartok, the violins are asked NOT to spread the chords but strike the notes together, which can only be done very loudly. The cello, on the other hand, is asked to start the chords at the top and arpeggiated downwards:

Example 10: Bartok String Quartet No. 4, fifth movement

Vibrato

Vibrato is a slight by steady fluctuation in pitch which is added by pivoting on the relevant finger of the left hand, causing the note to bend above and below the main note. String players will usually make the decision themselves how much vibrato to add to a given note but some composers have exploited the contrast between vibrato and 'non vibrato' or 'senza vibrato' as in this example from Bartok. Listen to the relative coldness of the non vibrato at the beginning compared the warmer vibrato chord at the end of the bar 3.

Example 19: Bartok String Quartet No. 4, third movement

31

III.

Non troppo lento. ♩ = 60

The musical score is for the third movement of Bartok's String Quartet No. 4. It is in 4/4 time and marked 'Non troppo lento. ♩ = 60'. The score is divided into two systems. The first system shows the beginning of a phrase with 'non vibrato' markings and a 'pp' dynamic. The second system shows the end of the phrase with 'vibrato' markings and a 'p esp.' dynamic. A box with the number '5' is placed above the second system. The bottom system of the first system has '(sempre vibr.)' markings above the staves.

Open strings

Modern string players tend to avoid playing the open strings of their instruments where practical by using different fingerings. However, open strings create a more resonant sound and composers quite often exploit this in their writing. The open strings of the violin are G, D, A and E, whilst the viola and cello are C, G, D and A.

In the Haydn example below, the G string on the first violin is the lowest note so must be played open as are the bottom Cs on the cello. All the drones in the Shostakovich example are also the lowest strings. As well as being more resonant, open strings tend to sound a bit plainer as vibrato cannot be added:

Example 11: Haydn Quartet Op. 9 No. 1, first movement



The image shows a page of musical notation for the first movement of Haydn's String Quartet Op. 9 No. 1. It features four staves: two for the first violin and two for the first viola/cello. The music is in 2/4 time and G major. The first violin part has a prominent drone on the G string, marked with a forte (f) dynamic. The viola/cello part has a drone on the C string, also marked with f. The second system shows a change in dynamics to piano (p) for both parts. The notation includes various rhythmic patterns and articulation marks.

Example 12: Shostakovich String Quartet No. 8, first movement



The image shows a page of musical notation for the first movement of Shostakovich's String Quartet No. 8. It features four staves: two for the first violin and two for the first viola/cello. The music is in 3/4 time and B-flat major. The first violin part has a drone on the G string, marked with a pianissimo (pp) dynamic. The viola/cello part has a drone on the C string, also marked with pp. The notation includes various rhythmic patterns and articulation marks, including a 'V' marking at the end of the first system.

Bariolage

An more unusual technique involving open strings is bariolage where an open string is alternated with the same note stopped on a lower string, creating a wah-wah effect that was used by Haydn as well as Brahms in the example below:

Example 13: Brahms Quartet op. 51/1, second movement, trio

Un poco più animato

The image shows a musical score for the Trio section of the second movement of Brahms' Quartet op. 51/1. The tempo is marked 'Un poco più animato' and the measure number is 90. The score is in 3/4 time and features four staves: Violin I, Violin II, Viola, and Cello. The Violin I part is marked 'arco' and 'p' (piano), with a 'dolce' marking. The Violin II part is marked 'arco' and 'p', with '0 0 0' indicating open strings. The Viola and Cello parts are marked 'pizz.' (pizzicato) and 'p'. The score illustrates the bariolage technique where an open string is alternated with a stopped note on a lower string, creating a 'wah-wah' effect. The score ends with a 'poco cresc.' marking.

F. E. 4574

Tremolo

Introduction

The term tremolo refers to two quite distinct techniques. **Bowed tremolo** involves using the bow to repeat notes at a fast speed whereas **fingered tremolo** involves using the fingers to alternate rapidly between two notes. In both techniques the tremolo can either be **measured** (a specific note value such as semiquavers) or **unmeasured** (the notes are played as fast as possible). Depending on the speed, type and volume of a tremolo, the effect can add rhythmic energy or a non-rhythmic shimmer to the texture.

Bowed tremolo (unmeasured)

In the Schubert quartet below the use fast unmeasured tremolo as fast as possible with crescendi adds dramatic excitement, whereas in the following Grieg example the tremolo supplies an icy cold shimmer (enhanced by *sul ponticello* bowing – see later in handout) to a ghostly reprise of the theme from the beginning of the quartet. You can hear on the recording the much more energetic reprise that closes the movement.

Example 14: Schubert Quartet 15 (D 887), second movement

The image shows a musical score for Schubert's Quartet 15, second movement. It consists of two systems of four staves each (Violin I, Violin II, Viola, and Cello/Double Bass). The first system features a prominent fast unmeasured tremolo in the strings, with dynamic markings ranging from *ff* to *p*. The second system continues this texture, with dynamic markings including *ff*, *p*, *decreso.*, and *pp*.

Example 15: Grieg String Quartet op. 27, first movement

The image shows a musical score for Grieg's String Quartet op. 27, first movement. It consists of two systems of four staves each. The first system is marked *Più mosso.* and includes a *trem.* instruction. The second system is marked *pp sul ponticello trem.* and includes a *G. P.* instruction. The score is characterized by a slow, shimmering tremolo in the strings, with dynamic markings ranging from *pp* to *f*. The bottom of the page is marked *pcantabile e molto espress.*

Bowed tremolo (measured)

Measured tremolo creates a more rhythmic effect. In this Dvorak excerpt, the second violin and viola chug along playing two semiquavers per quaver, creating gentle rhythmic momentum under the calm violin melody:

Example 16: Dvorak SQ Op. 34 in D minor (No. 9), first movement



The image shows a musical score for Example 16, consisting of two systems of staves. The first system includes a violin part with a melodic line and a second violin/viola part with a tremolo. The second system continues the tremolo in the second violin/viola part, with a pizzicato section in the bass line. Dynamics include *p*, *pp*, *pizz.*, and *arco*. A first ending bracket labeled 'I' is present in the first system.

Fingered tremolo (unmeasured)

Fingered unmeasured tremolo alternates rapidly between two notes, creating a slightly richer texture due to the impression of, in the example below, four notes playing almost simultaneously. In this Janacek extract, the tremolo is *forte* and quite vigorous but it works equally well when used more quietly. Fingered tremolo can also be measured.

Example 18: Janacek, Intimate Letters, first movement



The image shows a musical score for Example 18, starting at measure 17. It features a violin part with a fingered tremolo. The tempo is marked 'Allegro' with a quarter note equal to 108 (♩ = 108). The score includes measures 17 through 270. Dynamics include *f* and *ff*. The score is in 2/4 time.

Bow placement

The bow can be drawn across the string at any point from just next to the bridge (ponticello) to up over the fingerboard (tasto). As with many of the techniques discussed here, players usually make their own decisions as to whether the more forceful and gritty tone achieved near the bridge or the more delicate sound created by moving towards the fingerboard is more appropriate. However, composers quite often specify the two extremes of as close to the bridge as possible (*sul ponticello*), which makes quite a harsh sound, or right over the fingerboard (*sul tasto*), which creates a whispery tone.

Sul tasto

The fingered tremolo in the second violin and cello parts from the fourth bar of this extract from a Szymanowski quartet are played right over the fingerboard and therefore come out as a barely audible haze through which the main ideas can be heard:

Example 20: Szymanowski, *Quartet No. 1*, second movement

The image displays a musical score for Szymanowski's Quartet No. 1, second movement, spanning two systems of staves. The first system includes staves for Violin I, Violin II, Viola, and Cello/Double Bass. The second system includes staves for Violin I, Violin II, Viola, and Cello/Double Bass. The score is annotated with various performance instructions and dynamics. In the first system, the Violin I part features a *ppp* dynamic and a *p(dolciss.) (sul tasto)* instruction. The Violin II part has a *mp* dynamic. The Viola part has a *ppp* dynamic and a *ppp (arco)* instruction. The Cello/Double Bass part has a *pp* dynamic and a *pp(en dehors)* instruction. In the second system, the Violin I part has a *ppp* dynamic. The Violin II part has a *ppp* dynamic. The Viola part has a *ppp* dynamic. The Cello/Double Bass part has a *pizz. pp* instruction and a *f poco* dynamic. The score also includes a boxed number '10' and a page number '17' in the top right corner.

Sul ponticello

The melody in the *Molto meno mosso* is a striking example of a quiet *sul pont.* sound – harsh, glassy and without any of the warmth usually associated with string instruments.

Example 21: Janacek, *Intimate Letters*, first movement

Andante M. M. ♩ = 84

Violino I.

Violino II.

Viola

Violoncello

f

f

tr

tr

ff

Molto meno mosso

10

1

rit.

rit.

pp

tr

rit.

sul ponticello

In this extract, the violins are *sul tasto* and the viola is *sul pont.* over a pizzicato cello line. The second violin moves to *sul pont.* after a few bars:

Example 22: Symanowski Quartet No. 1, last movement

26

22

sub. pp
(*sul tasto*)

ppp

sul tasto

sub. pp

sub. pp *sul ponticello*

pizz.

sub. pp

poco cresc.

poco cresc.

pizz.

pizz.

poco cresc.

poco cresc.

sub. ff *pizz.*

pizz.

in modo ordinario

210

Flautato

A related technique to *sul tasto*, and one that is nearly always performed towards the fingerboard, is to take nearly all the weight out of the bow in order to create a very floaty sound. The viola in this extract plays these short flurries with a quiet and ghostly tone.

30 Janacek first movement just before 14

The image shows a musical score for a viola part. It is marked 'Grave' with a tempo of 50. The music is in a minor key and 3/4 time. The first staff is the treble clef, and the second is the bass clef. The tempo is marked 'Grave' with a quarter note equal to 50. The dynamics are marked 'pp' (pianissimo). The instruction 'flautato vzdušně u špičky' is written above the staff. The music consists of short, rapid sixteenth-note flurries, each starting with a sixteenth rest followed by sixteenth notes. The first three flurries are in the treble clef, and the last three are in the bass clef. Each flourish is marked with a '6' below it, indicating a sixteenth note. The score is divided into two systems by a double bar line.

Other bowing techniques

Off-the-string strokes

When playing staccato notes, there is a choice as to whether the bow 'bites' the string without leaving it – **on the string** – or whether it bounces **off the string**. There are various names for techniques that take the bow off the string and on the whole players will decide whether or not they want to do so.

The most common off-the-stroke is *spiccato*. Grieg specifically asks for it in the viola part of this excerpt, which might otherwise be played on and, in this recording, the violins also play their quavers off the string, which is implied but not stated by the *scherzo* and *staccato* markings:

Example 32: Grieg String Quartet No. 1, last movement

The image shows a musical score for a string quartet. It is in 2/4 time and a minor key. The score is divided into four staves: Violin I, Violin II, Viola, and Cello/Double Bass. The tempo is marked 'pp scherz. e vivace'. The dynamics are marked 'pp' (pianissimo). The instruction 'arco' is written above the first staff. The instruction 'spiccato' is written above the second staff. The instruction 'vivace' is written above the third staff. The instruction 'pp vivace' is written below the fourth staff. The music consists of short, rapid sixteenth-note flurries, each starting with a sixteenth rest followed by sixteenth notes. The first three flurries are in the treble clef, and the last three are in the bass clef. Each flourish is marked with a '6' below it, indicating a sixteenth note. The score is divided into two systems by a double bar line.

In this second excerpt from the same work, there is no *spiccato* marking but the speed of these non-legato notes at least implies that it is a possibility. In this recording the viola starts just about on the string but then moves to *spiccato* in the second line. The violin plays all the non-slurred notes *spiccato*.

Example 33: Grieg String Quartet No. 1, last movement



Saltando

Saltando is an off-the-string technique that is implied when fast notes are both staccato and slurred. Slow slurred staccato will be played on the string with the notes 'tucked' together but the only way to play the type of figure written here is to throw the bow onto the string so that it bounces (which is the meaning of saltando):

Example 5: Sibelius Voces Intimae, Movement 5 (after fig. 1)



Au talon / repeated down bows

A more vicious off-the-string technique does not involve bouncing but attacking right at the heel (*talon*) of the bow. The heel is the bit closest to the players hand and where the most force can be exerted. The bow is pinged off the string creating the attack. This can be heard in the first bar of the beginning of this movement from Bartok's sixth quartet.

In the following bar the stroke is still *au talon* but combined with another forceful technique, that of the repeated down bow (indicated by the square brackets above each note). Many composers across music history have employed repeated downbows for extra emphasis and force.

Example 31: Bartok, String quartet no. 6, third movement

Burletta

Moderato, $\text{♩} = 90$
au talon

The image shows a musical score for the third movement of Bartok's String Quartet No. 6, titled 'Burletta'. The score is in 4/4 time and features four staves. The first three staves are for the string quartet, and the fourth is for the soprano. The tempo is Moderato (♩ = 90). The first system shows the beginning of the piece with 'au talon' markings and square brackets above the notes. The second system starts at measure 25, marked 'come sopra', and includes 'IV' and '(au talon)' markings.

Col legno

A much rarer technique not much used before the twentieth century is to hit the strings with the wood of the bow to create a quiet, clattering woody sound (string players are not keen on doing this because it damages the varnish on their bows – orchestral players sometimes use a cheaper bow when asked to play *col legno*). A famous orchestral example of *col legno* is in Holst's 'Mars' from *The Planets* but the sound can be more clearly heard in this excerpt from Britten's first suite for solo cello:

Example 23: Britten solo cello suite No. 1, IV

The image shows a musical score for a solo cello piece. It is titled "Alta marcia moderato" with a tempo marking of quarter note = 120. The score is written in G major (one sharp) and 12/8 time. It consists of two staves. The first staff begins with "arco" and "pp" (pianissimo), followed by fingerings II and I. The second staff begins with "arco" and "pp" (pianissimo), followed by fingering III. Both staves transition to "col legno" (col legno) and "pp saltando" (pianissimo saltando), indicated by "V" marks above the notes.

Muted timbres

The most obvious way to get a muted sound is obviously by using a mute! A mute clamps onto the bridge and dampens down the vibrations from the strings, thus deadening and dulling the sound (mostly by stopping higher harmonics sounding). The term used is **con sordino (or sord.)**.

27 Bartok String Quartet No. 5 Scherzo (movement 3?)

The image displays a musical score for Bartok's String Quartet No. 5, Scherzo (movement 3). The score is written for four string instruments (Violin I, Violin II, Viola, and Cello/Double Bass) and is marked "Tempo I. (Scherzo da capo) con sord." (with mute). The score is divided into two systems. The first system shows the beginning of the piece, with the first measure marked with a double bar line and a repeat sign. The second system begins with a measure marked with a box containing the number "5". The score includes various musical notations such as notes, rests, and dynamic markings like "p", "pp", "pizz.", and "arco". The "con sord." marking is present throughout the first system, indicating that the strings are to be played with a mute. The "pizz." marking indicates a pizzicato (plucked) sound, and "arco" indicates a normal bowed sound.

Sul G

Another way of getting a more muted sound is to ask for a line to be played on a lower string than normal. Playing high up on the lower strings produces a more mellow but also richer sound. The commonest example of this is asking violinists to play melodies on the G string (*sul G*). In this example the first violin stays on the G string whereas without the instruction they would move onto higher strings:

Example 28: Sibelius *Voces Intimae* Fourth movement

The image shows a musical score for Sibelius's *Voces Intimae*, Fourth movement. The top system features a violin part with a 'sul G.' instruction, indicating that the melody should be played on the G string. The violin part is marked *mf*. Below it, the piano accompaniment is shown with dynamics ranging from *mf* to *f*, including a *poco p* marking. The bottom system continues the piano accompaniment with dynamics like *f* and *mp*. The score is numbered 'E. E. 6908' at the bottom.

A related effect can be gained by putting high melodic lines in the viola or cello, which produces a very different quality of sound. In this example the cello plays a tune that is in the violin register. The sound is slightly less bright and, at this volume a little forced (notice the fabulous slides or *glissandi* at the end of the recorded extract).

Example 29: Bartok, *String quartet No. 6*, second movement

The image shows a musical score for Bartok's *String quartet No. 6*, second movement. The score is marked 'Rubato' and 'Animato, molto agitato'. It includes dynamic markings such as *pp*, *cresc.*, *f*, and *pizz.*. The score is numbered '83' and '89' at the top and bottom respectively. The score is numbered '23' at the top right.

Harmonics

Natural harmonics

The notes on string instruments are usually created by changing the vibrating length of the string by 'stopping' it with the left hand. An alternative is to touch the string lightly to produce a harmonic. Harmonics are created when a standing wave is set up on the string that divides it into equal parts, the length of which create the new higher note. The simplest is to touch the node half way along a string so that the two halves of the string vibrate creating a note an octave above the open string, but there are many other possibilities.

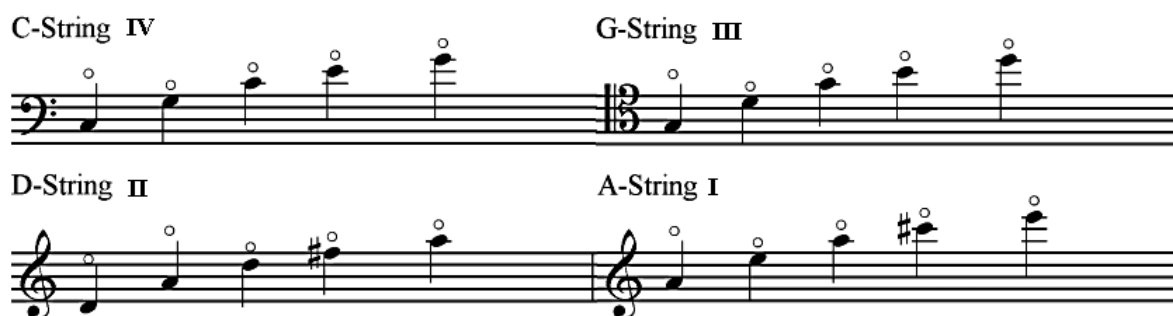
The natural harmonics that can be produced on the violin are shown in the diagram below.

- the Roman numeral denotes the string (IV = G, III = D, II = A, I = E)
- the small circle shows that it is a harmonic
- the note itself is the sounding pitch (not where you touch the string)

When notating harmonics you should include the string indication as well as the small circle.



This shows cello harmonics (viola is the same but an octave higher):



The use of natural harmonics in this extract create a purer colour to the tone and lightens up the overall sound:

Example 25: Borodin, Quartet No. 1, fourth movement (Allegro Risoluto)

The image shows a musical score for a string quartet, specifically the fourth movement of Borodin's Quartet No. 1. The score is divided into two systems. The first system starts at measure 60 and includes a key signature change to B major (indicated by a 'B' with a double bar above it). The notation features a complex rhythmic pattern of sixteenth notes in the upper staves, while the lower staves play sustained notes with natural harmonics. Performance markings include 'p dolce' and 'dolce' in several places. The second system continues the piece with similar textures and dynamics.

False harmonics

Natural harmonics can only be created on the notes shown above, but a natural harmonic on any note can be faked by changing the length of the string with one finger (or on the cello and bass the thumb) and then lightly touching the string a fourth above, which generates a very whispery note two octaves higher.

The notation is very precise as shown in the lower staff below, with the sounding note not written. Other false harmonics are possible – consult an instrumentation book if you are interested but they are hard to produce and rarely used.

The diagram illustrates the notation for a false harmonic. It consists of two staves. The top staff is labeled 'sounding:' and shows three notes: a flat B (B[♭]), a G, and another flat B (B[♭]). A dashed line above the first note is labeled '8^{va}', indicating the sounding note is two octaves higher than the written note. The bottom staff is labeled 'written:' and shows the corresponding written notes: a flat B (B[♭]), a G, and another flat B (B[♭]).

In this famous example the cello plays muted solo false harmonics as a solo for the first six bars – the effect is cold and magical:

Example 26: Shostakovich, Piano Trio No. 2, first movement

The first system of the musical score shows three staves. The top staff is labeled 'Violine' and contains a whole rest for the entire duration. The middle staff is labeled 'Violoncello' and begins with the instruction 'con sord.' and a dynamic marking 'p'. It features a series of notes with a 'tenuto' marking. The bottom staff is labeled 'Klavier' and is marked 'Andante' with a tempo of 60. It contains whole rests for the first six bars.

This section provides a detailed view of the first six bars. The top staff is the Violoncello part, starting with 'con sord.' and 'p', followed by a 'tenuto' marking. The middle staff shows the piano accompaniment, which is mostly whole rests. The bottom staff shows the piano accompaniment with two first endings marked '1' and '2'. The second ending includes the instruction 'pp tenuto' and a dynamic marking 'pp'.

Glissando

A glissando is when you slide rather than move cleanly between notes. In this example the effect is rather light-hearted but simultaneous glissandi (as in the second movement of Bartok's sixth string quartet) can be powerful and dramatic.

Example 24: Shostakovich, Quartet op. 49, fourth movement

The image displays a musical score for the fourth movement of Shostakovich's Quartet op. 49, specifically focusing on measures 69 and 70. The score is written for four staves: two treble clefs (Violin I and Violin II) and two bass clefs (Viola and Cello/Double Bass). Measure 69 begins with a box containing the number '69'. The first two staves (Violin I and Violin II) play a melody with a glissando indicated by a wavy line and the word 'gliss.' above the notes. The dynamic is marked 'p'. The third and fourth staves (Viola and Cello/Double Bass) play a more rhythmic accompaniment, also marked 'p'. Measure 70 begins with a box containing the number '70'. The first staff (Violin I) has a 'solo' marking and plays a melodic line with a glissando. The second staff (Violin II) plays a similar melodic line with a glissando. The third and fourth staves (Viola and Cello/Double Bass) play a rhythmic accompaniment. The dynamic for the solo parts is marked 'pp'. The score includes various musical notations such as slurs, ties, and dynamic markings.