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## Thinking through the guitar : the sound-cell-texture chain

Titre, M.

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## Chapter 8 Strummed Sounds

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## Chapter 8 Strummed Sounds

Strummed sounds materialize when one or more strings are struck in an outward motion or in a combination of an outward and inward motion with one or more fingers of the right hand. During the outward motion, the strings are struck with the nail of the finger, while during the inward motion the strings are struck with a combination of the nail and the flesh. Strummed sounds are similar to rasgueado sounds, but are less percussive. This chapter shows ways in which the composer can handle the characteristics of the strummed sound, use it to build horizontal as well as vertical cells, and finally, how these cells can be creatively combined to form musical textures playable on the guitar.

### 8.1 Sound

#### 8.1.1 Pitch range

For strummed sounds, the full range of the guitar can be used, as well as all natural harmonics. In all registers of the strummed sounds range, notes are struck with an outward or inward motion of the fingers of the right hand, usually finger *i* or *p*.

Figure 8.1 Arpeggiated chord



(SONATA, JOSÉ)

Guitarists often use the strumming of a chord as an alternative for a plucked attack or a plucked arpeggiated attack, usually when the notes that make up the chord are scored over adjacent strings. In practice, therefore, Figure 8.1 may thus be performed as a strummed chord or a plucked arpeggiated chord, depending on the preferences of the performer.

Figure 8.2 Strummed chord notation



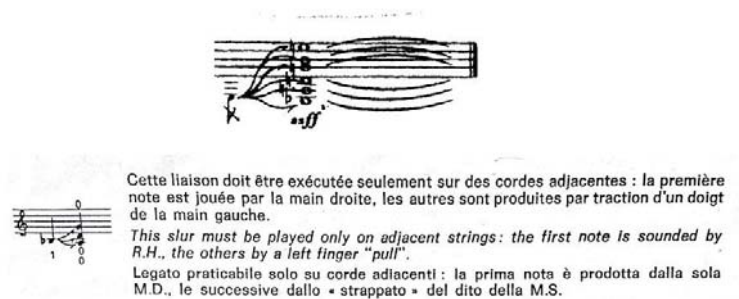
When the composer wishes to have a chord performed in a strummed manner, an arrow indicating the direction of the strum should be used (Figure 8.2), or a verbal instruction such as “strumming”, ideally accompanied by arrows indicating the direction of attack. In many scores, strumming is not explicitly prescribed by the composer, but rather used by the performer as a way to play vertical cells with more dynamic emphasis (Figure 8.40), as way to be able to play rapid and loud successions of vertical cell sequences, and to perform extremely fast sequences of notes that are scored over adjacent strings (Figure 8.38).

## 8.1.2 Timbre possibilities

### Attack

The sound of strummed notes or chords is characterized by the combination of the nails of the fingers clicking against the strings and the resonance of the strings. The sound is quite similar to that of the rasgueado, as in both cases outward and inward strokes of the right hand are alternated. The clicking sound is discernible in outward and inward strokes, and is more audible when the attack is executed with force. In strumming, the alternation of two strumming directions is always discernible; in rasgueado the strumming directions do not always have to alternate because of the amount of fingers that are available for striking the strings. Furthermore, strummed attacks generally sound less percussive than rasgueado attacks.

Figure 8.3 Left hand strumming

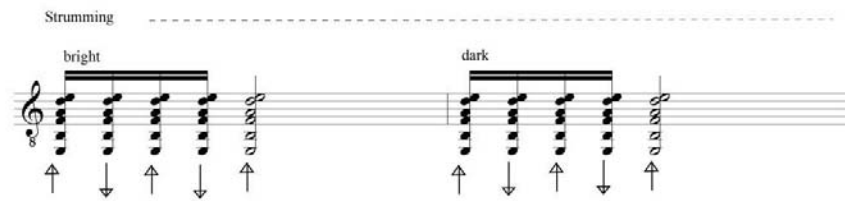


(DUE CANZONI LIDIE, D'ANGELO)

On rare occasions, the strings are strummed with a finger of the left hand, creating a more mellow sound as the strings are attacked with the flesh. In this case, a vertical cell of adjacent open strings is usually scored (Figure 8.3), as it is difficult to strum and stop strings with the left hand alone at the same time.

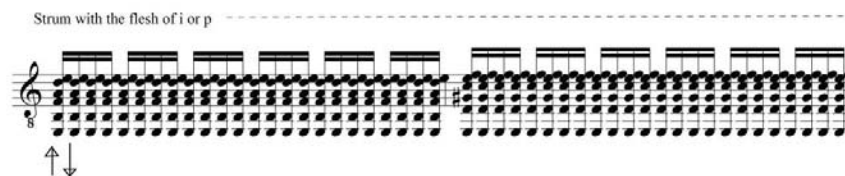
### Sound color and playing position indications

Figure 8.4 Strummed sound tone colors



It is possible to change the tone color of strummed notes by plucking them in the ponticello area or the tasto area (Figure 8.4).

Figure 8.5 Strumming with the flesh



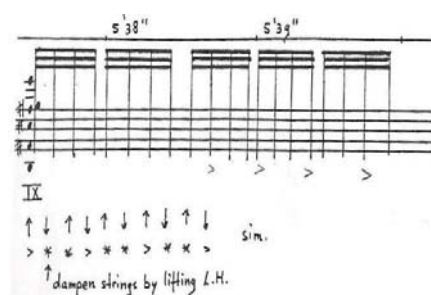
The tone color of strummed sounds can also be changed by asking for a flesh sound. In this case, the performer strums the chord with the flesh of the thumb or the index finger alone, creating a soft and dark sound (Figure 8.5).

### Stopping position

As is the case with regular plucked notes, stopping a note from the middle or high range in a high position on a low string while strumming changes its sound quality. The composer should specify fingerings if she wishes a note to be performed on a particular string.

### Etouffé

Figure 8.6 Etouffé strumming

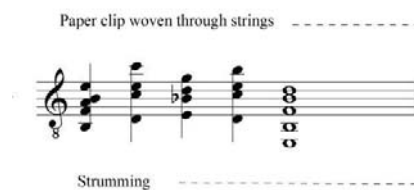


(AUBURN, V/D AA)

The timbre of strummed sounds can be changed by muffling. Etouffé strummed sounds are performed by striking the strings and simultaneously slightly damping the strings with the side of the right hand, or by striking the strings with the right hand and damping the strings with the left hand. The second type of etouffé is most effective when scoring strummed sounds, as it does not hinder the right hand in making the strummed attacks (Figure 8.6). Sounds scored etouffé have a reduced dynamic range and reduced resonance.

## Prepared guitar

Figure 8.7 Paper clip preparation



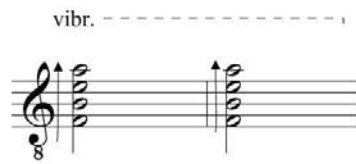
The timbre of strummed sounds can be changed by attaching an object to one or more strings, turning the guitar into a prepared guitar (Figure 8.7). A paper clip, for instance, can be woven through the strings in such a way that some strings are more closely restrained by the paper clip than other strings. This is the case in the video example of Figure 8.7. Those strings that are more restrained by the paper clip are less audible and more transformed in sound color and pitch. Strings that are not touched as closely by the paper clip, on the other hand, are somewhat muffled by the paper clip, but are less transformed by the object and remain closer to their original, non-prepared tone color and pitch.

### 8.1.3 Dynamic range

Strummed vertical cells are among the dynamically strongest sounds that can be performed on the guitar. Because of the speed of the strumming movement and the possibility to push the string far into the direction of the soundboard, strummed notes can reach a high dynamic level, higher than is possible for regular plucked notes. Strummed chords can also be performed at *pianissimo* levels, which is particularly effective if performed with the flesh. This is the case for both inward and outward strumming. The dynamic range of strummed sounds is thus very wide. The more notes present in the vertical strummed cell, the larger its dynamic potential.

### 8.1.4 Vibrato

Figure 8.8 Vibrato



All strummed notes that are stopped with a finger of the left hand can be performed with lateral or vertical vibrato (Figure 8.8).

### 8.1.5 Pitch bends and microtones

Pitch bends for strummed notes are to be prescribed in the same manner as for regular plucked notes. Microtones are also prescribed in the same manner: they are attained through a microtonal scordatura or through bending the string.

## 8.2 Vertical cells

Strummed sounds are typically performed as vertical cells, usually as chords consisting of four-to six notes. Two- and three-note combinations are also possible.

### 8.2.1 Two-note combinations

Figure 8.9 Two-note vertical cells on adjacent strings



(INTRODUCTION, PASSACAGLIA AND FUGUE, BOGDANOVIĆ)

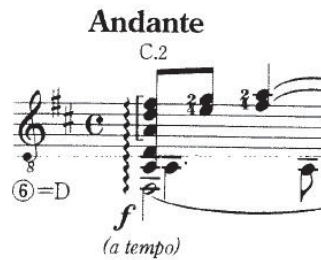
When scoring strummed sounds, the most effective two-note combinations are those scored on two adjacent strings (Figure 8.9), as they avoid additional noises caused by striking damped strings. More so than the rasgueado technique, the strumming technique allows the performer to have good



coordination over strings other than the highest and the lowest two strings; two-note combinations can therefore be scored effectively over all adjacent string combinations.

## 8.2.2 Chord spacings

Figure 8.10 Vertical six-note cell



(SONATINA, MORENO-TORROBA)

Vertical cells can be scored using narrow spacings, wide spacings, mixed spacings, as well as with unisons and clusters. As is the case with two-note combinations, the most effective vertical cell combinations are those scored over adjacent strings (Figure 8.10). Figure 8.10 is an example of a vertical cell for which strumming is not specified, but is often used in practice instead of a plucked attack, as it allows the performer to create a particularly smooth attack over six strings.

## 8.3 Horizontal cells

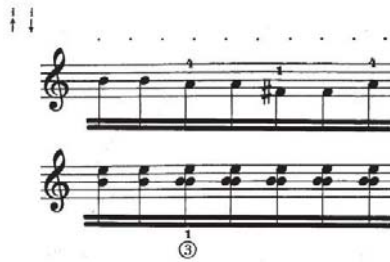
Strummed sounds can be scored into three types of horizontal cells: vertical cell sequences, arpeggiated strums and single string strumming. In this section, these three types are discussed.

### 8.3.1 Vertical cell sequences

#### Design

Vertical cell sequences of strummed sounds are sequences or repetitions of note combinations, usually consisting of two to six notes on adjacent strings.

Figure 8.11 Two-staff notation



(INTRODUCTION, PASSACAGLIA AND FUGUE, BOGDANOVIĆ)

Two-staff notation is a useful way to demonstrate the distinction between the different voices present in a vertical cell sequence (Figure 8.11).

### Resonance

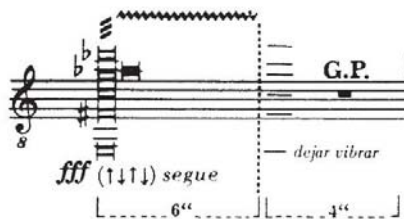
Vertical cells in strummed vertical cell sequences usually do not last beyond their notated value, unless a large interval change is made, which leaves a string unoccupied by the right hand, allowing it to ring on. When vertical cells contain open strings, the degree of resonance increases.

### Harmonic possibilities

The options for pitch combinations can be examined in Appendix A. As is the case with vertical cell sequences of plucked sounds and rasgueado sounds, when a succession of vertical cells of strummed sounds is scored with fewer notes, the choice possibilities of different pitches and keys is greater than is the case with vertical cells containing many notes. Additionally, as vertical cells of strummed sounds are most effective when scored over adjacent strings, having to score vertical cells over adjacent strings limits the options.

### Speed

Figure 8.12 Strummed vertical cell speed



(CANTICUM, BROUWER)

Strummed cells can be performed at considerable speeds, and are among the fastest note sequences possible on the guitar. Professional guitarists are able to play vertical cell sequences of strummed sounds of sixteenth notes at an approximate maximum quarter note speed of 140-170 BPM.

### Rhythmic possibilities

Figure 8.13 Upward and downward strumming

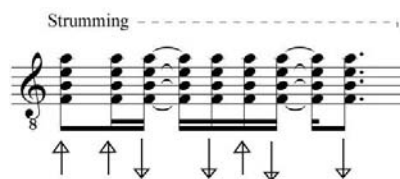


Auf- und Abstriche mit einem Finger oder mit dem Daumen und einem beliebigen Finger der RH. "Auf" bedeutet in diesem Zusammenhang: "aufwärts in bezug auf die Tonhöhe". In Wirklichkeit bedeutet "auf" für den Gitarristen: "in Richtung Boden".  
Up and down strokes with one finger of RH or thumb and any finger. "Up" means in this context "up with respect to pitch". For the guitarist "up" is actually "towards the floor".

(SEQUENZA XI, BERIO)

When using upward and downward strumming, the rhythm of the strumming sequence is characterized by an alternation of the two different strumming directions (Figure 8.13). In comparison, rasgueado offers more possibilities for rhythmic variation in the strumming pattern, as it allows for attack with multiple fingers, rather than two alternating strumming directions.

Figure 8.14 Syncopated strumming



Scoring syncopated patterns of strummed vertical cell sequences evades the clear impression of up-and-down strumming, as syncopated rhythms can be performed in a way that makes up-and-down strums alternate with strums in the same direction (Figure 8.14). As is the case for vertical cell sequences of rasgueado sounds, vertical cell sequences of strummed sounds lend themselves well to rhythmic acceleration because of the high speed that can be reached with strumming.

## Articulation

Vertical cell sequences of strummed sounds can be scored with a variety of articulations, such as slurs, legato, accents, staccato and glissando.

### Slurs

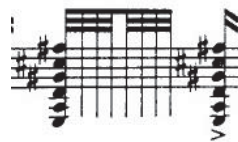
One or more notes in a vertical sequence of strummed sounds can be connected to a subsequent chord or note by means of a slur. The condition here is that the slurred notes lie within the left hand span.

### Legato

As is the case with regular plucked notes and rasgueados, sequences of different vertical cells that are located close by on the fretboard are easier to perform legato than vertical cells that are further apart. The composer should use a phrase mark to indicate that vertical cells are to be performed legato.

### Accents

Figure 8.15 Accented strummed chord

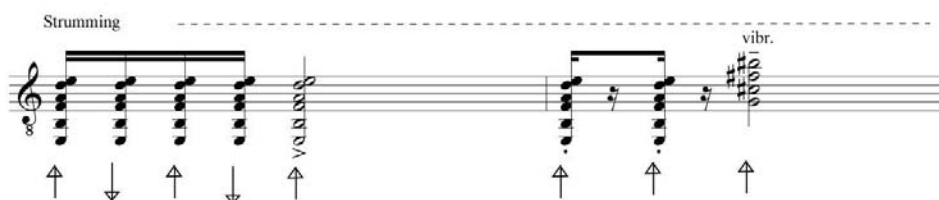


(SEQUENZA XI, BERIO)

Because of the wide dynamic range of strummed sounds, the composer can effectively make a vertical cell stand out with an accent (Figure 8.15). In contrast to vertical cells of plucked notes, it is not possible to make only a specific note from the vertical cell stand out, as the complete cell is struck with the same finger.

### Staccato

Figure 8.16 Vertical cell articulation



Vertical cells sequences can be scored with staccato articulation. In the case of strumming, the performer executes these by quickly damping the strings affected by the staccato with the right palm (Figure 8.16) or, in the case of stopped notes, by lifting the fingers after attack.

### Glissando

Vertical cell sequences of strummed sounds can be scored with three types of glissando. The first type is the glissando that is performed after striking the vertical cell, in the same way a glissando can be performed after a note or vertical cell is plucked in the case of regular plucked notes. The second type is a glissando that is performed while the strumming is still being executed. Additionally, vertical cell sequences of strummed notes can be scored with a tuning key glissando. With such a glissando, only one string can be detuned at a time.

### Embellishment

Embellishments can be employed in vertical cell sequences by attaching a left hand trill to one of the notes in a vertical cell. The strumming, which is performed with the right hand, can continue while the left hand performs the embellishment.

### Non-functional writing

Figure 8.17 Non-functional writing



Examples of non-functional writing in vertical cell sequences of strummed sounds:

- Sequences of vertical cells scored over non-adjacent strings (Figure 8.17)
- Sequences of vertical cells that contain vertical cells that lie outside the hand span

### Combinations with other sounds

In the classical guitar literature, vertical cell sequences of strummed sounds are often scored in close conjunction with other sounds. In this section, common combinations from the literature are discussed.

#### *Vertical cell alternated with single line of plucked notes*

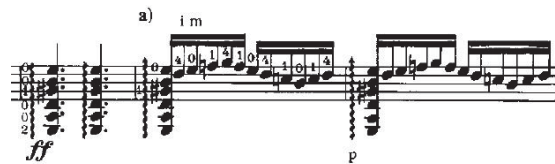
Figure 8.18 Strumming and plucked single line



(SONATINA MERIDIONAL, PONCE)

A cell combination that often appears in the repertoire is that of strummed vertical cell sequences alternated with single line horizontal cells of plucked sounds (Figure 8.18). Figure 8.18 is an example of a vertical cell for which strumming is not prescribed, but is often used in practice instead of a plucking. In this case, the advantage of using strummed chords instead of plucked chords is that strumming can be performed at a higher dynamic level.

Figure 8.19 Strumming rapidly alternated with single line plucking



(CONCIERTO DE ARANJUEZ, RODRIGO)

The performer needs some time to change from strumming to playing; Figure 8.18 demonstrates the approximate maximum speed for such an alternation.

*Vertical rasgueado cell sequence alternated with strumming*

See Chapter 7

*Vertical strummed sound sequence alternated with tambora*

Figure 8.20 Strumming and tambora



(SEQUENZA XI, BERIO)

Vertical cell sequences of strummed sounds and vertical tambora cell sequences can be connected at high speeds with little time necessary in alternating between these two sounds (Figure 8.20).

Figure 8.21 Strumming and tambora

Il più presto possibile, almeno  $\text{♩} = 144$

Tambora, "beating on the strings": with the thumb

(SONATA, GINASTERA)

Figure 8.21 demonstrates the approximate maximum playable speed for such an alternation.

### 8.3.2 Arpeggiated strums

#### Design

Figure 8.22 Arpeggiated strum notation

(TRES PIEZAS ESPAÑOLAS, RODRIGO)

Figure 8.23 Arpeggiated strum notation

(CUEVA DEL GATO, DE LUCÍA)

Arpeggiated strums are vertical cells that are arpeggiated by strumming the cell in upward and/or downward direction. Although strums in fact always arpeggiate a vertical cell at very high speeds, this arpeggiation is often hardly audible, or not audible at all because of its high speed. When the speed of the arpeggiated strum is lowered, the succession of notes that are arpeggiated becomes apparent. The arpeggiated strum is usually performed by strumming in an upward direction with one finger, and in a downward direction with another finger. Alternatively, the upward direction can be performed as an arpeggiated plucked chord, and the downward direction as a strummed chord. The arpeggiated strum is usually performed over five or six strings (Figure 8.22, Figure 8.23).

Figure 8.24 Arpeggiated strum of natural harmonics<sup>50</sup>

(HOMENAJE, FALLA)

An arpeggiated strum can also be performed over natural harmonics, in upward direction, downward direction (Figure 8.24) or both. If performed only in downward direction, an arpeggio strum of natural harmonics can be performed with the right hand alone, leaving the left hand free to produce other sounds, for instance a percussive sound or a left hand hammered sound.

The arpeggiated strum should be written out rhythmically (Figure 8.22) or indicated with a symbol, such as the arrow in Figure 8.23.

### Resonance

Arpeggiated strums are similar to plucked arpeggios in the sense that most notes ring on beyond their notated value, unless it is explicitly specified that notes should be damped after plucking. Because of the high speed at which an arpeggiated strum may be performed, the notes in the arpeggiated strum, as in Figure 8.22 for instance, can only be damped at the end of the strum.

### Harmonic possibilities

The harmonic possibilities of arpeggiated strums are derived from the possibilities to form vertical cells. Scoring arpeggiated strums in higher registers has as its consequence that a more limited amount of bass notes is available.

### Speed

Figure 8.25 Rapid arpeggiated strum



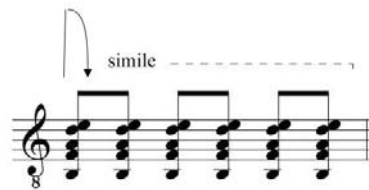
(SEQUENZA XI, BERIO)

<sup>50</sup> In this example, the composer does not indicate the sounding pitch of natural harmonics, but instead notates the open string pitch and indicates the position in which the finger should touch the nodal point. This notation can be confusing for the performer. Therefore, the composer should notate the sounding pitch instead, and use diamond shaped noteheads to signal that the note is a harmonic (see section 6.1.1).



When one considers the potential speed with which notes that make up the vertical cell follow one another, the arpeggiated strum can be performed at very high speeds. This speed becomes most apparent in the notation used in Figure 8.22 and Figure 8.25. The use of an arpeggiated strum is not explicitly specified in Figure 8.25. However, Berio wants the notes to be performed as fast as possible, and the arpeggiated strum allows for the fastest performance if this passage.

Figure 8.26 Vertical cell sequence of arpeggiated strums



When one considers a vertical cell sequence of arpeggiated strums, the notes which make up the vertical cells follow one another at high speeds, but the vertical cells themselves consequently can only follow one another at a lower speed level, as the arpeggiated strum first has to be completed before the next vertical cell can be performed (Figure 8.26).

### Rhythmic possibilities

Figure 8.27 Acceleration and deceleration



The advantage of the arpeggiated strum over arpeggios is that it can be performed not only at higher speeds, but also that the speed with which the arpeggiated strum is performed can easily be controlled and altered. For this reason, arpeggiated strums lend themselves well to rhythmic acceleration and deceleration (Figure 8.27).

### Articulation

Arpeggiated strums can be scored with a variety of articulations, such as slurs, legato, accents, staccato and glissando.

### Slurs

Figure 8.28 Slur in arpeggiated strum



One or more notes in an arpeggiated strum can be connected to a subsequent chord or note by means of a slur (Figure 8.28). Due to the speed of the strum, the performance of Figure 8.28 in practice results in the sounding of the slur during the strumming of notes that follow the slur.

### Legato

As is the case with regular plucked notes, sequences of different vertical cells that are located close by on the fretboard are easier to perform with legato articulation than vertical cells that are further apart. The composer should use a phrase mark to indicate that a succession of arpeggiated strums is to be performed legato.

### Accents

Because of the wide dynamic range of strummed sounds, the composer can effectively make an arpeggiated strum stand out from other arpeggiated strums with an accent.

Figure 8.29 Accent in arpeggiated strum



Additionally, it is possible to accent specific notes in the arpeggiated strum itself. This works well when applied to either the pitch on the lowest string or the highest string (Figure 8.29) of the arpeggiated strum, as these can be most effectively and distinctively accented by the performer using the strumming movement, without mistakenly applying the accent to other strings.

### Staccato

Because arpeggiated attacks stretch the length of a vertical cell rather than shortening it, staccato is not possible for the arpeggiated strum as a whole. It is, however, possible for the last note of the strum.

### Glissando

Figure 8.30 Glissando in arpeggiated strum



Arpeggiated strums can be scored with three types of glissando. The first type is the glissando that is performed after executing the strum. The second type of glissando consists of a glissando that is performed while the arpeggiated strum is still being performed (Figure 8.30). Additionally, arpeggiated strums notes can be scored with a tuning key glissando. With such a glissando, only one string can be detuned at a time.

### Embellishment

Embellishments can be employed in arpeggiated strums by attaching a left hand trill to one of the notes in a vertical cell. As strumming is performed with the right hand, this raises the possibility to have the left hand perform embellishments.

### Non-functional writing

Figure 8.31 Non-functional writing



Examples of non-functional writing in arpeggiated strums:

- Using staccato articulations on individual notes inside a rapid arpeggiated strum (Figure 8.31)
- Arpeggiated strums of notes that lie outside the hand span

### Combinations with other sounds

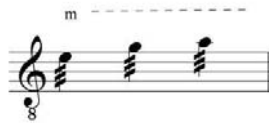
Arpeggiated strums are often used in a longer sequence of strums, as will be described in the texture section of this chapter, or as a special way of performing a vertical cell. When the arpeggiated strum comes after plucked sounds, it can be switched to at a relatively high speed, as it is easy to bring the

hand into strumming position (Figure 8.23). The other way around, when the plucked sounds follow the arpeggiated strum, some preparation time is needed, as the arpeggiated strum brings the hand outside of its regular plucking position.

### 8.3.3 Single string strumming

#### Design

Figure 8.32 Single string strumming



When applied to a single string, strumming is an alternation of an outward attack and an inward, plucked attack. Rather than the sound of nails clicking against the strings that is characteristic for strummed vertical cells, single string strumming rather sounds like a quick note succession. Single note strums should be notated as single tremolo lines with a verbal indication as to how they are to be performed. Single string strums are relatively rare in the repertoire, as they are difficult to coordinate. An alternative for single string strumming are single string tremolos.

#### Resonance

Sounds in a single string horizontal cell of strummed sounds usually do not ring on beyond their notated value when scored on the same string or when they jump to an adjacent string, because the strumming finger can easily touch the previous string, damping its resonance. In the case of larger interval jumps to a non-adjacent string, the strummed notes can ring on beyond their notated value when the previous string is left unoccupied.

#### Speed

The strumming motion on one string is a rapid movement: notes in single string strumming can thus be performed at high speeds (Figure 8.32).

#### Rhythmical possibilities

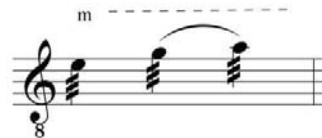
When using upward and downward strumming, the rhythm of the strumming sequence is characterized by an alternation of the two different strumming directions, as is the case when strumming vertical cell sequences. Because of the high speeds that may be reached with this technique, single string strumming lends itself well to acceleration and deceleration.

## Articulation

Single lines of strummed sounds can be scored with a variety of articulations, such as slurs, legato, accents, staccato and glissando.

### Slurs

Figure 8.33 Slur in single string strumming



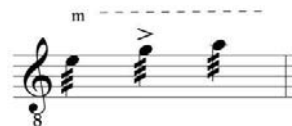
One or more notes in a sequence of single string strums can be connected to a subsequent note by means of a slur (Figure 8.33). Condition is that the connected notes lie within the hand span.

### Legato

As is the case with regular plucked notes, sequences of single line strumming of notes that are located close by on the fretboard are easier to perform legato than sequences of notes that are further apart. The composer should use a phrase mark to indicate that a sequence of single line strumming is to be performed legato.

### Accents

Figure 8.34 Accent in single string strumming



Because of the wide dynamic range of strumming, the composer can effectively make a note in single line of strummed sounds stand out with an accent (Figure 8.34).

### Staccato

Single string strumming can be scored with staccato articulation. The performer executes the staccato by quickly damping the strings affected by the staccato with the right palm or, in the case of a stopped note, by lifting the stopping finger after attack.

### Glissando

Vertical cells can be scored with three types of glissando. The first type is the glissando that is performed after striking the note. The second type is a glissando that is performed while the strumming is still being performed. Additionally, single lines of strummed notes can be scored with a tuning key glissando. With such a glissando, only one string can be detuned at a time.

## Embellishment

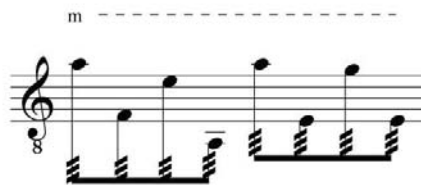
Figure 8.35 Single string strum with left hand trill



Embellishments can be employed in vertical cell sequences by attaching a left hand trill to one of the notes in a vertical cell (Figure 8.35). In the case of a string change, the left hand can continue performing an embellishment on the initial string, while the right hand performs the strumming attack on another string.

## Non-functional writing

Figure 8.36 Non-functional writing



An example of non-functional writing for single string strumming:

- Rapid jumps from one string to another string (Figure 8.36)

## Combinations with other sounds

Figure 8.37 Single string strumming



(FROM THE NEW WORLD, DVOŘÁK ARR. YAMASHITA)

Single string strumming can be combined with plucked bass notes and accompaniment. This type of writing is effective, but difficult for the performer when it involves simultaneous performance of a vertical plucked cells and single line strumming (Figure 8.37).

## 8.4 Textures

In the guitar repertoire both continuations and combinations of different horizontal cells containing strummed sounds are found. The following examples are presented primarily for the purpose of illustrating how textures in repertoire pieces have been put together.

### 8.4.1 Textures as continuations of horizontal cells

#### Arpeggiated strum texture

Figure 8.38 Arpeggiated strum texture



(CONCIERTO DE ARANJUEZ, RODRIGO)

In the Cadenza of the *Concierto de Aranjuez*, Rodrigo uses an arpeggiated strum texture (Figure 8.38). Strumming is not specified in the score, but guitarists use the arpeggiated strumming technique to perform this passage at the speed indicated in the score. The strumming motion, performed at a high speed, has as its advantage that it can easily be performed for a longer period of time without leading to fatigue in the right hand. The top note is appropriately chosen as the note to be emphasized with an accent, as only the top and bottom notes of rapid arpeggiated strums are accented without difficulty. The left hand is subject to various position changes, as the Roman numerals above the score suggest, but these position changes only take place on the highest four strings. The two lowest bass strings, on the other hand, are not affected by the position change. The resonance of these bass strings alleviates the small interruptions of sound caused by position changes of the left hand.

### 8.4.2 Textures as combinations of horizontal cells

#### Power strum texture

Figure 8.39 Power strum texture

(AUBURN, v/D AA)

In *Auburn*, van der Aa uses a texture that consists of powerful strums in upward pitch direction, reminiscent of pick strumming on the electric guitar (Figure 8.39). The rapid position changes of the left hand, which are more difficult to perform in higher positions, lead to a staccato sound on the vertical cells. The monotony thus caused is further enhanced by the fact that the vertical cells are strummed in the same direction. Variety is provided through the alternation with cells that combine upward and downward strums with guitar body percussion.

### Asturias texture

Figure 8.40 Asturias texture

(ASTURIAS, ALBÉNIZ ARR. SEGOVIA)



In Segovia's transcription of *Asturias*, an accented strummed vertical cell is alternated with arpeggio cells (Figure 8.40). This example shows an effective way in which strumming can be used to create dynamic contrast. The performer strums the vertical cell with force, while the ensuing arpeggio is performed at a lower dynamic level, due to the dynamic characteristics of the regular plucked note and the necessity to play the arpeggio at a relatively low dynamic level in order to reach the desired speed. The open second string used in the arpeggio provides a persistently resonating pitch of *b* throughout the section, which is enhanced by the appearance of the same pitch in the melody, scored on the fourth string. The resonance of the open second string also ensures that possible interruptions of sound are diminished in their audibility when the left hand reaches for the vertical cell at the start of each measure.

### Strumming and pitched tambora texture

Figure 8.41 Strumming and tambora texture

The musical score consists of three staves. The top staff, labeled 'tastiera', shows a sequence of strummed vertical cells and arpeggios. The middle staff continues the strummed vertical cells. The bottom staff features arpeggios and is marked '1 damps arpegg.' and 'sim.'. Dynamics include 'f', 'p', and 'dim.'. Fingerings and string numbers are indicated throughout.

(SONATA, GINASTERA)

Ginastera uses a texture that includes upward and downward strummed vertical cell sequences and rapid alternations with tambora sounds (Figure 8.41). Two open strings are scored in combination with stopped notes on the third and fourth string; this allows for the scoring of dense vertical cells.

### Strumming and percussive tambora texture

Figure 8.42 Strumming, rasgueado and percussive tambora

*pp cresc.*

*rasgueado*

*p cresc.*

*rasgueado*

*mf cresc.*

*f cresc.*

Tambora, "beating on the strings":

with the palm

with the thumb

with the clenched fist  
(See note page 11)

(SONATA, GINASTERA)

In the same composition, Ginastera uses a texture that alternates between strumming and percussive tambora sounds (Figure 8.42). In this texture, a percussive flavor is added to the syncopated rhythm of the strummed six-string vertical cells. Although the tambora notation seems to suggest that pitches can be heard, this is not the case and the instances of tambora in this example sound like percussive slaps when performed in the manner prescribed by Ginastera. For more details on tambora and its notation, refer to Chapter 10.