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

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Chapter 7 Rasgueado Sounds

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Chapter 7 Rasgueado Sounds

Rasgueado is the designation for a collection of techniques in which the fingers of the right hand make outward movements in addition to inward movements. Although primarily used in flamenco music, rasgueado sounds are also a common feature in classical guitar music, ranging from Baroque guitar music to 21st century compositions. This chapter shows ways in which the composer can handle the characteristics of the rasgueado 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.

7.1 Sound

7.1.1 Pitch range

For rasgueado sounds, the full range of the guitar can be used (as presented in the chapter on regular plucked sounds), as well as all natural harmonics. In all registers of the rasgueado range, notes are struck with an outward or inward motion of the fingers of the right hand. Unlike plucked sounds, the little finger of the right hand is also used in the performance of rasgueado sounds. In order to indicate that one or more notes are to be played as rasgueados, a verbal instruction should be used, such as “Rasgueado” or “Rasg.”, in addition to arrows designating the direction of attack. If the composer has a particular right hand fingering in mind, this fingering can be provided by using the designation of the individual fingers (c,a,m,i and p).

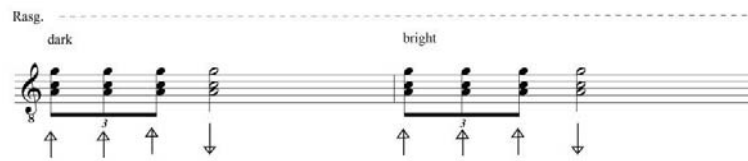
7.1.2 Timbre possibilities

Attack

The rasgueado sound is in essence a mixture of two sounds: that of the sharp attack of the string with the nail of the right hand, followed by a subsequent ringing of the string. The initial sound of a rasgueados is very sharp, much sharper than that of a regular plucked note, because the fingers of the right hand strike the string with the nail alone and with considerable speed. The outward attack can be performed with more ferocity than the inward attack, as it is a more explosive movement and strikes the string with a greater nail surface.

Sound color and playing position indications

Figure 7.1 Rasgueado tone colors



With the rasgueado sound, it is possible to create different sound colors: when it is performed near the fretboard, the sound is dark and mellow, when it is performed close to the bridge, it has a sharp, bright sound (Figure 7.1).

Figure 7.2 Ponticello rasgueado



(SEQUENZA XI, BERIO)

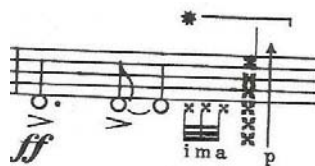
Berio makes use of a ponticello rasgueado in the *Sequenza XI* (Figure 7.2).

Stopping position

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

Etouffé

Figure 7.3 Etouffé rasgueado



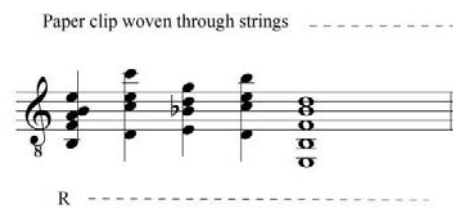
* Rasgueado sulle corde ammortizzate dall'indice della mano sinistra in un punto della tastiera che non dia suoni armonici.

(CINCO PIEZAS, PIAZZOLLA)

The timbre of rasgueado sounds can be changed by muffling. Etouffé rasgueado sounds are performed by striking the strings and simultaneously slightly damping them 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 for rasgueado scoring, as it does not hinder the right hand in performing the rasgueado attacks (Figure 7.3). Sounds scored etouffé have a reduced dynamic range and reduced resonance. Etouffé is indicated with a symbol specified in a legend, or a verbal instruction.

Prepared guitar

Figure 7.4 Paper clip preparation



The timbre of rasgueado sounds can be changed by attaching an object to one or more strings, turning the guitar into a prepared guitar (Figure 7.4). The tighter the object is attached to the strings, the more its vibration is hampered, the more the pitches that are stopped with the fingers of the left hand are changed by the object, and the less clearly the pitch structure of vertical cells can be heard. In the video example of Figure 7.4, the paper clip is tightly woven through the strings. As a result, resonance is short, sounding pitches are lower than those stopped by the left hand, and the pitch structure of the vertical cells cannot be perceived clearly.

7.1.3 Dynamic range

Figure 7.5 Rasgueado dynamics

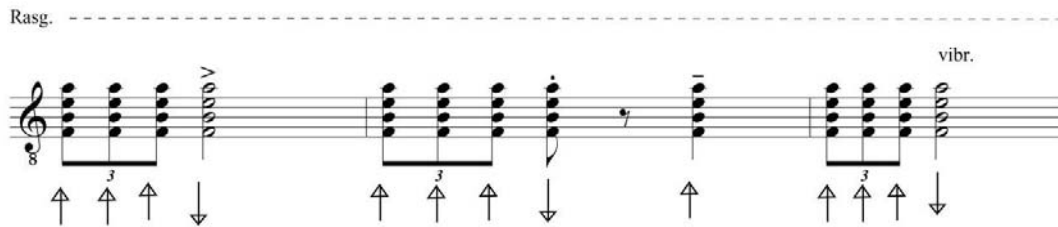
$\text{♩} = 60$
improvvisamente violento

(SEQUENZA XI, BERIO)

Rasgueado chords are among the dynamically strongest sounds that can be performed on the guitar. Due to the speed and force with which the nails strike the string, the rasgueado can reach a high dynamic level, higher than is possible for regular plucked notes. On the other hand, the rasgueado can also be performed at a *pianissimo* level: its dynamic range is thus very wide (Figure 7.5). The more notes present in the vertical rasgueado cell, the larger its dynamic potential.

7.1.4 Vibrato

Figure 7.6 Rasgueado vibrato and articulation



All rasgueado notes that are stopped with a finger of the left hand can be performed with lateral or vertical vibrato (Figure 7.6).

7.1.5 Pitch bends and microtones

Pitch bends for rasgueado notes should be prescribed in the same manner as for regular plucked notes (see section 5.1.5). Microtones can also be prescribed in the same manner: they can be attained through a microtonal scordatura or through bending the string.

7.2 Vertical cells

Rasgueado sounds are typically performed as vertical cells, usually as chords consisting of four- to six-note (Figure 7.5, first example), but rasgueado sounds may also consist vertical cells of, for instance, two notes (Figure 7.5, second example). The c sharp unison in the second example of Figure 7.5 is simultaneously performed on the first and the second string.

7.2.1 Two-note combinations

When scoring rasgueados, the most effective two-note combinations are those scored on two adjacent strings (Figure 7.5), as they avoid additional noises that are caused by striking damped strings. Because of the large striking motion of the rasgueado technique, the technique is particularly suited to strike multiple notes at once. When performing rasgueados, the guitarist is much less able to discriminate between strings that should be struck and those that should not be struck, when compared to performing regular plucked sounds. Therefore, two-note rasgueados are most effective when scored on either the highest two strings or the lowest two strings, as the risk of striking unwanted strings is lowest there.

7.2.2 Vertical cell spacings

Figure 7.7 Unison rasgueado cluster



(SEQUENZA XI, BERIO)

Vertical cells can be scored using narrow spacings, wide spacings, mixed spacings as well as with unisons (Figure 7.7) and clusters.

Figure 7.8 Rasgueado chord spacings on adjacent strings



(SONATA, TURINA)

As is the case with two-note combinations, the most effective vertical cell combinations are those scored over adjacent strings (Figure 7.8).

7.3 Horizontal cells

Horizontal cells of rasgueado sounds are usually scored as vertical cell sequences, but single line horizontal cells can also be scored. Both types of horizontal cells are discussed in this section.

7.3.1 Vertical cell sequences

Design

Vertical cell sequences of rasgueados are sequences or repetitions of note combinations, usually consisting of three to six notes on adjacent strings (Figure 7.8).

Figure 7.9 Two staff notation



(SEVILLANA, TURINA)

In order to allow for space to prescribe a fingering, two staff notation is sometimes used (Figure 7.9). In this example, the top staff is used for the right hand fingering, while the bottom staff is used for pitch notation.

Resonance

Vertical cells in vertical cells sequences of rasgueados 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 notes, when a succession of vertical cells of rasgueados is scored with fewer notes, there is more flexibility in the choice possibilities of different pitches and keys than is the case with vertical cells containing many notes. Additionally, since vertical cells of rasgueados are most effective when scored over adjacent strings, having to score vertical cells over adjacent strings limits the options.

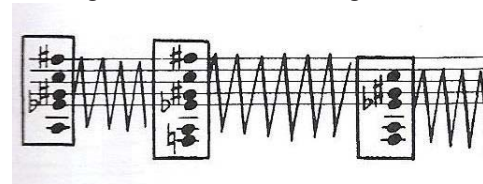
Speed

Figure 7.10 Continuous rasgueado



(SEQUENZA XI, BERIO)

Figure 7.11 Continuous rasgueado



(TELLUR, MURAIL)

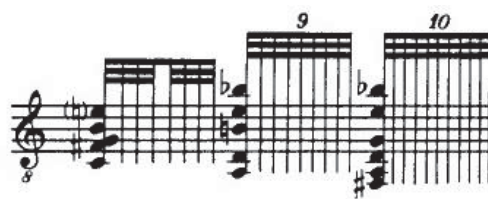
Rasgueado cells can be performed at considerable speed, and are among the fastest note sequences possible on the guitar. The continuous striking of the strings with a rasgueado can be performed at such

high speeds that it sounds like a continuous, rustling sound (Figure 7.10). Murail uses wavy lines to indicate the relative duration of vertical cells performed with continuous rasgueado (Figure 7.11), an effective way to visually represent the duration of these cells.

Rhythmic possibilities

Due in part to the percussive quality rasgueado cells derive from the speed and force with which the strings are struck, rasgueados lend themselves well to the performance of a variety of rhythmic patterns.

Figure 7.12 Varying amounts of attacks per beat



(SEQUENZA XI, BERIO)

The rasgueado can be performed with five fingers of the right hand, which can be used for outward and inward movements. The composer is free in the choice of the amount of times a certain vertical cell should be struck. The performer can strike the vertical cell continuously, and the amount of times per beat that a vertical cell is struck can be varied (Figure 7.12).

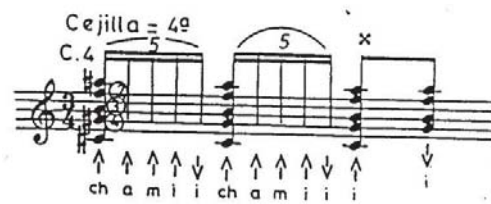
Figure 7.13 Sixteenth note patterns



(PIROPO A LA SOLEA, MERENCIANO AND ESCUDERO)

A typical rhythmical pattern used in flamenco is that of sixteenth notes followed by eight notes (Figure 7.13).

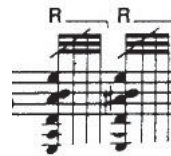
Figure 7.14 Quintuplet pattern



(A LA PERLA DE CADIZ, DE LUCÍA)

Such patterns are also effective when scored in triplets (Figure 7.6) or quintuplets (Figure 7.14).

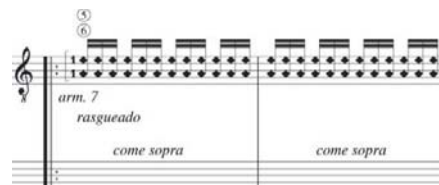
Figure 7.15 Rapid, short bursts



(SEQUENZA XI, BERIO)

Vertical cell sequences of rasgueados can also be scored to be performed in a continuous manner (Figure 7.10), or as rapid, short bursts (Figure 7.15).

Figure 7.16 Continuous harmonics rasgueado



(KOYUNBABA, DOMENICONI)

Domeniconi scores continuous rasgueados of natural harmonics in *Koyunbaba* (Figure 7.16)

Figure 7.17 Accelerating rasgueado



(3 PRELUDES POUR "FATUM", CHAYNES)

Because of the high speed that can be reached with the rasgueado, vertical cell sequences of rasgueados lend themselves well to rhythmic acceleration (Figure 7.17) and deceleration.

Articulation

Vertical cell sequences of rasgueados 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 rasgueados can be connected to a subsequent chord or note by means of a 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 legato than vertical cells that are further apart.

Accents

Because of the wide dynamic range of rasgueado, the composer can effectively make a vertical cell stand out with an accent (Figure 7.6). 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 or combination of fingers.

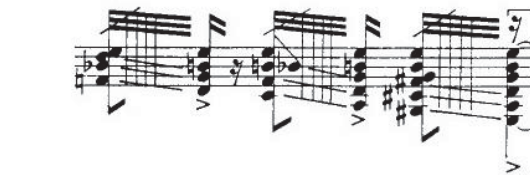
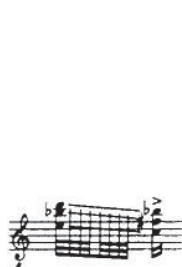
Staccato

A vertical cell sequence can be scored with staccato articulation. In the case of rasgueado, the performer executes the staccato by quickly damping the strings affected by the staccato with the right palm or, in the case of stopped notes, by lifting the fingers after attack (Figure 7.6).

Glissando

A vertical cell sequence 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 may be performed after a note or vertical cell is plucked in the case of regular plucked notes.

Figure 7.18 Rasgueado glissando

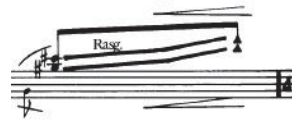


Glissando mit Fingern der LH, während die RH ein rasches Vorschlagnoten-Rasgado (c, a, m, i) ausführt. Der akzentuierte Schlußakkord wird mit dem Daumen erreicht.
Glissando with fingers of LH while RH plays fast grace note rasgado (c, a, m, i). Land on final accented chord with thumb.

(SEQUENZA XI, BERIO)

The second type of glissando is performed while the rasgueado is still being executed (Figure 7.18).

Figure 7.19 Ascending rasgueado glissando to undefined pitches



(3 PRELUDES POUR "FATUM", CHAYNES)

Chaynes scores an ascending rasgueado glissando of a two-note vertical cell to two high, undefined pitches (Figure 7.19).

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

Non-functional writing

Figure 7.20 Non-functional writing



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

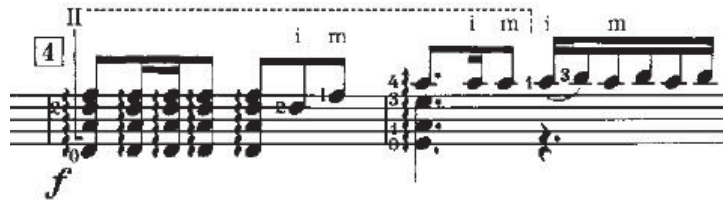
- Sequences of vertical cells scored over non-adjacent strings (Figure 7.20)
- Sequences of vertical cells that contain vertical cells that lie outside the hand span

Combinations with other sounds

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

Vertical rasgueado cell sequence alternated with single line of regular plucked sounds

Figure 7.21 Rasgueado and single line of plucked notes



(CONCIERTO DE ARANJUEZ, RODRIGO)

Vertical rasgueado cell sequences and single plucked lines can be connected and alternated at a moderately high speed, as the above example shows (Figure 7.21). This example also demonstrates the approximate maximum speed at which these two sounds can be alternated.

Vertical rasgueado cell sequence alternated with strummed sounds

Figure 7.22 Rasgueado and strumming

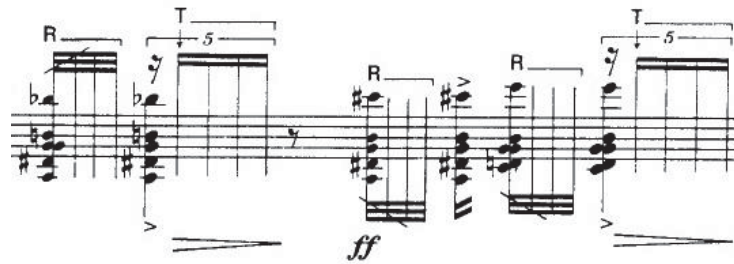


(SEQUENZA XI, BERIO)

Vertical rasgueado cell sequences and vertical strummed cell sequences can be connected at high speeds with virtually no time necessary in alternating between these two sounds (Figure 7.22).

Vertical rasgueado cell sequence alternated with tambora sounds

Figure 7.23 Rasgueado and tambora



(SEQUENZA XI, BERIO)

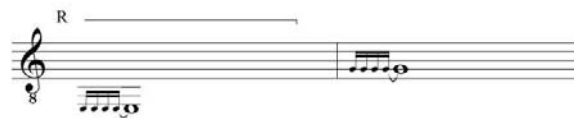
Vertical rasgueado cell sequences and vertical tambora⁴⁹ cell sequences can be connected at high speeds with little time necessary in alternating between the two sounds (Figure 7.23). This example demonstrates the approximate maximum playable speed for such an alternation.

7.3.2 Single lines

Design

A single line horizontal rasgueado cell is a succession of single rasgueado notes. Because of the large movement that is used to produce a rasgueado, it takes a high degree of coordination to perform a single line rasgueado. Single line rasgueados are easiest to perform on the sixth string, while much more difficult to perform effectively on other strings. This is because there are no strings below the sixth string that make an accurate attack difficult to achieve.

Figure 7.24 Single line rasgueado and tremolo



When the composer wishes to score a rasgueado on another string, it is more effective to opt for a tremolo instead, as the resulting sound is quite similar (Figure 7.24). Single line rasgueados are relatively rare in the guitar repertoire.

Resonance

Passages of single line horizontal cells of rasgueado sounds scored on the sixth string do not ring on after their notated value when followed by another note, as they are scored on the same string.

⁴⁹ Tambora sounds emerge when the strings are struck in a percussive manner. Tambora sounds are discussed in more detail in Chapter 10.

Harmonic possibilities

The pitch choice possibilities of single line horizontal cells of rasgueado sounds scored on the sixth string are limited to the pitches on the sixth string.

Speed

As is the case with vertical rasgueado cell sequences, single line horizontal cells of rasgueado sounds can be performed at considerable speed.

Rhythmical possibilities, Articulation, Embellishment

See appropriate section in “vertical cell sequences”.

Non-functional writing

Figure 7.25 Non-functional writing



Example of non-functional writing:

- Single line rasgueados scored on strings other than the sixth string (Figure 7.25)

Combinations with other sounds

Figure 7.26 Rasgueado followed by Bartok pizzicato



(SEQUENZA XI, BERIO)

In the *Sequenza XI*, Berio uses a single line rasgueado followed by a Bartok pizzicato. The change from a single line rasgueado to a Bartok pizzicato on the same string can be performed at a high speed and virtually without delay (Figure 7.26).

7.4 Textures

Many of the textures containing rasgueado sounds found in the guitar repertoire are combinations of different types of horizontal cells. The following examples are presented primarily for the purpose of illustrating how textures in repertoire pieces have been put together.

7.4.1 Textures as combinations of horizontal cells

Rasgueado and strumming texture

Figure 7.27 Rasgueado and strumming

(TRES PIEZAS ESPAÑOLAS, RODRIGO)

Rodrigo uses a rasgueado and strumming texture in the second movement of his *Tres Piezas Españolas* (Figure 7.27). The percussive quality of the rasgueado is used here to create a rhythmic flow, and the rasgueado is ideally suited for the performance of the rapid vertical cell repetitions in 32nd notes and in triplets of 16th notes. As one of the loudest guitar sounds, the rasgueado helps to reinforce the *fortissimo* dynamics of the passage. The direction in which the rasgueado should be performed and the manner in which rasgueado and strumming are to be alternated, are not indicated in the score, leaving the execution to the discretion of the performer. It is advisable to specify how rasgueados are to be performed, either in the score or outlined in a performance note preceding the score, in order to clearly inform the performer of the composer's intentions.

Rasgueado, strumming and single line plucking texture

Figure 7.28 Rasgueado, strumming and single line plucking in Berio

The image displays a musical score for guitar, specifically 'Sequenza XI' by Luciano Berio. It consists of four staves of notation. The first staff begins with a tempo marking of $\text{♩} = 60$ and the instruction 'improvvisamente stento'. The score is characterized by dense, complex textures, including rasgueado (strumming) patterns, strumming, and single line plucking. Dynamics are indicated by *ff* (fortissimo) and *pp* (pianissimo). The notation includes various articulations and fingerings, such as '3'' and 'RH'.

(SEQUENZA XI, BERIO)

Berio combines rasgueado patterns and alternates them with a variety of strumming patterns and single line plucking (Figure 7.28). The rasgueado is employed here as an aggressive and, through its irregular rhythmic values, unpredictable force. The use of open strings in the vertical cells, as well as the dense and dissonant spacing against stopped notes, makes very loud performance of these rasgueados possible. The rasgueado sections are contrasted with more gentle passages of single line regular plucking. Rasgueado and regular plucking are juxtaposed in terms of color, dynamics and character. Although the direction of each rasgueado is not specified in the score, Berio does include instructions on the fingering of rasgueados in the performance notes of the piece.

Harmonics rasgueado and regular note rasgueado texture

Figure 7.29 Harmonics and regular note rasgueado

(KOYUNBABA, DOMENICONI)

Domeniconi uses a texture that includes harmonics rasgueado, combined with regular rasgueado notes that ring on, and vertical cell sequences of regular note rasgueados (Figure 7.29). The harmonics are here, unusually, used as a continuous, rustling sound; the fact that the left hand continuously damps the harmonics gives this section its characteristic, faintly muffled sound. The temporary extension of the vertical cell of two natural harmonics with a third, non-harmonic note in the third measure (as well as at later occasions in the example) results in a clever combination of colors, especially because this note continues to ring on as the harmonic rasgueado continues. Further adding to the diversity of tone colors is the alternation of harmonics and regular notes. These alternations are easily performed by the player, as they consist of harmonics in position XII and open strings.