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

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Chapter 14 Scratching String Sounds

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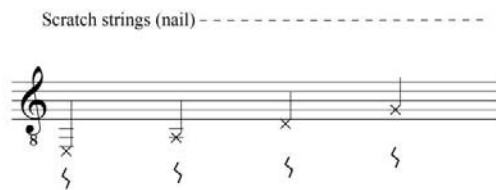
Chapter 14 Scratching String Sounds

Scratching string sounds come into existence when hands, nails or objects slide over the strings. The sound is often unwanted, and performers try to avoid such scratching sounds, described as “unwanted string noises” (Sauter, 1993) when performing. However, string scratches are sometimes intentionally scored by the composer. This chapter shows ways in which the composer can handle the characteristics of the scratching string 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.

14.1 Sound

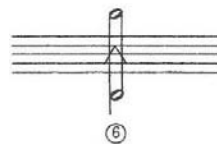
14.1.1 Noise range

Figure 14.1 Scratching sounds



For the production of scratching string sounds, the full string surface of the guitar can be used. The scratch is performed by moving a finger, nail or hand along the strings, creating a sliding or scratching sound. There is no standardized notation for scratching string sounds; a verbal notation such as “scratch” should be used, or a symbol such as the one used in Figure 14.1, and a percussive notehead to indicate that the string does not have to be plucked at the end of the scratch.

Figure 14.2 Scratching string notation

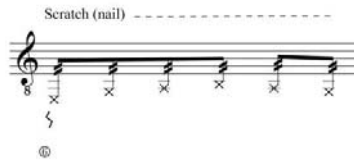


Son siffle, “whistling sound”, means slide upward as fast as possible on the string indicated, using the thumb and middle fingers.

(SONATA, GINASTERA)

Ginastera uses a symbol specified in a legend, and indicates the number of the string on which the scratch should be performed. The scratch is performed with “the thumb and middle fingers”. Ginastera calls this sound a “whistling sound” (Ginastera, 1984).

Figure 14.3 Pitch changes in scratching string sounds



When performing scratching string sounds with the nail of the thumb on the metal-wound strings, stopping a string changes the pitch of the scratching sound (Figure 14.3).

14.1.2 Timbre possibilities

String

Scratching string sounds on the metal-wound strings sound much clearer than on the nylon strings (Figure 14.1).

Attack

Figure 14.4 Scratching with nail and flesh

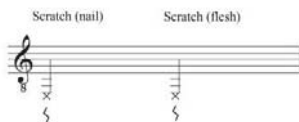
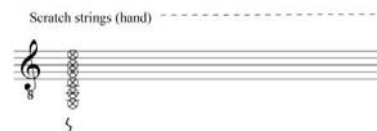
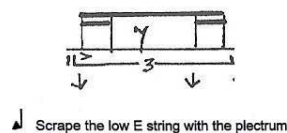


Figure 14.5 Scratching with the hand



The scratching string sound can be performed with the nail, the flesh of the finger, an object, or the hand. Scratching the string with the nail does not affect the sound in nylon strings. The performance with the nail on the metal-wound strings thus leads to more of a scratching sound, while performance with the flesh or the hand on any string leads to more of a whistling sound (Figure 14.4 and Figure 14.5).

Figure 14.6 Plectrum scratch



(AKEPHALE, BARTLETT)

The string can also be scratched with an object, for instance a plectrum (Figure 14.6). This makes it possible to create a more powerful sound on the metal-wound strings when compared to the finger, nail or hand.

14.1.3 Dynamic range

Figure 14.7 Nail scratch dynamics

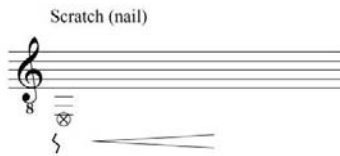
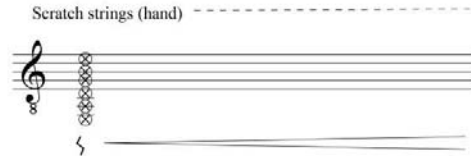


Figure 14.8 Hand scratch dynamics



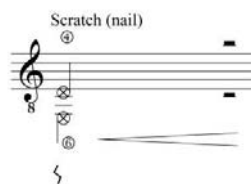
The dynamic range of scratching string sounds is limited. The dynamic range of scratching string sounds attacked with the nail or a plectrum is much wider than that of scratching string sounds attacked with the flesh or the hand (Figure 14.7 and Figure 14.8)

14.2 Vertical cells

Scratching string sounds can be scored over multiple strings, or in combination with other sounds.

14.2.1 Multiple string combinations

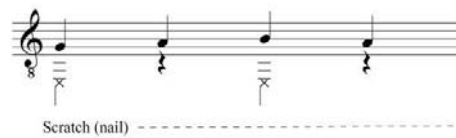
Figure 14.9 Vertical cell of scratching string sound



It is possible to score vertical cells of scratching string sounds; the performer executes these by either using the whole hand (Figure 14.8), or by using multiple fingers of the right hand to scratch multiple strings (Figure 14.9). The difference between single scratching string sounds and vertical cells of scratching string sounds is small in terms of sound and technique. Vertical cells of scratching strings sounds are an enhancement of an already present scratching sound, rather than a vertical stacking of various sounds.

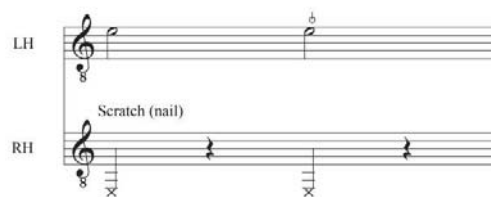
14.2.2 Combinations with other sounds

Figure 14.10 Scratching string sound combined with regular plucked sound



When scoring scratching string sounds that are performed with the left hand, it is possible to create vertical cells of scratching string sounds combined with other sounds performed with the right hand alone. Sounds that can be performed by the right hand alone in such a combination are plucked sounds, natural and artificial harmonics, strummed sounds, rasgueado sounds, right hand percussion, pitched and natural harmonics tambora percussive tambora, Bartok pizzicato sounds, buzzing string sounds, scratching string sounds, and inverted stopping sounds. In addition, it is possible to pluck stopped strings with fingers a,m and i while the thumb produces scratching string sounds (Figure 14.10).

Figure 14.11 Vertical combinations with left hand plucking and Bartok pizzicato



When scoring scratching string sounds that are performed with the right hand, it is possible to create vertical cells of scratching string sounds combined with other sounds performed with the left hand alone. Sounds that can be performed with the left hand alone in such a combination are plucked sounds (Figure 14.11), open string strumming, left hand percussion, percussive tambora, open string Bartok pizzicato sounds (Figure 14.11), and sounds produced by plucking behind the nut.

14.3 Horizontal cells

As pointed out above, there is little difference in sound and technique between single scratching string sounds and vertical cells of scratching string sounds. Therefore, only single line sequences of single lines are discussed in this section.

14.3.1 Single lines of scratching string sounds

Design

A single line horizontal cell of scratching string sounds is a succession of single scratching string sounds.

Resonance

The resonance of scratching string sounds is small: the resonance ends as soon as the scratching movement ends. However, it is possible to create a continuous scratching sound without decay after the initial attack by scoring repeated long scratching notes (Figure 14.7).

Speed

Scratching string sounds can be scored at high speeds (Figure 14.3). If string scratching has to be performed at a high speed, it should be played by scratching up and down.

Rhythmic possibilities

The rhythmic possibilities of scratching string sounds are wide because of the wide speed range of scratching string sounds. It is, for example, possible to create tremolo-like patterns (Figure 14.3), rhythms of scratches interrupted with rests (Figure 14.6) or long or continuous scratches (Figure 14.7).

Figure 14.12 Rhythmic notation for upward and downward scratching



(SALUT FÜR CAUDWELL, LACHENMANN)

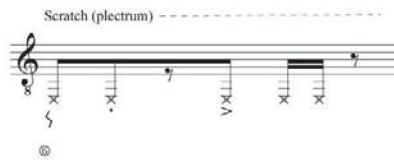
Lachenmann uses a notation with upward and downward arrows, explained in a legend, to indicate the direction and rhythm of string scratching with the hand (Figure 14.12).

Articulation

Single line horizontal cells of scratching string sounds can be scored with a variety of articulations, including accents and staccato.

Accents

Figure 14.13 Scratching string articulation



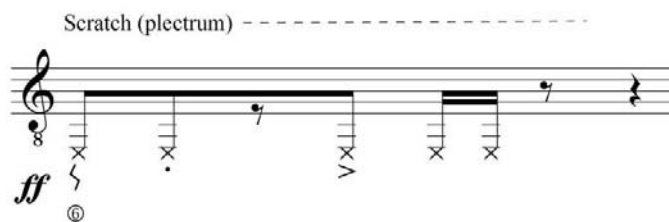
Single line horizontal cells of scratching string sounds can be scored with accents. Such accents are particularly effective when scored for a nail or plectrum, as these are able to provide the widest dynamic range (Figure 14.13).

Staccato

Single line horizontal cells of scratching string sounds can also be scored with staccato articulation (Figure 14.13). The guitarist performs the staccato by damping the string after attack with the left or right hand, or by scratching only a small surface of the string.

Non-functional writing

Figure 14.14 Non-functional writing



An example of non-functional writing for single line horizontal cells of scratching string sounds:

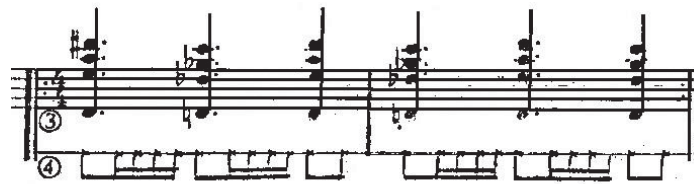
- *Fortissimo* scoring of scratching string sounds (Figure 14.14)

Combinations with other sounds

Single line horizontal cells of scratching string sounds can be combined with other sounds. In this section, literature examples are discussed.

String scratching with regular plucked notes

Figure 14.15 String scratching combined with regular plucked notes



③ La uña del pulgar derecho "rasca" la sexta cuerda.

(TANGOLEADA, CARDOSO)

Cardoso combines a scratching sound, performed with the thumbnail on the sixth string, with vertical cells of plucked sounds (Figure 14.15). In order to make the simultaneous performance of the vertical cell possible, the fourth string is plucked by the left index finger.

String scratch followed by plucking, combined with etouffé plucked sounds

Figure 14.16 String scratch followed by plucking, combined with etouffé plucked sounds

(LA ESPIRAL ETERNA, BROUWER)

Brouwer uses a scratching string sound at the end of which the string is plucked. This scratch is combined with etouffé regular plucked sounds (Figure 14.16). The two sounds can be connected at moderate speeds: the performer needs some time to get back into position after the string scratch followed by plucking, and the etouffé action requires some preparation time as the side of the hand needs to be rested on the strings.

14.4 Textures

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

14.4.1 Textures as continuations of horizontal cells

Texture of pitched scratching and etouffé plucking

Figure 14.17 Texture combining pitched scratching and etouffé plucking

The musical score for Figure 14.17 is in 8/8 time and marked 'Un poco lento'. It consists of three measures. The first measure starts with a dynamic of *ppp* and a fermata over a note. The second measure has a dynamic of *pp* and a fermata over a note. The third measure has a dynamic of *ppp* and a fermata over a note. The score also includes markings for *sfz*, *sim.*, *poco*, *rall.*, and *molto vibrato*.

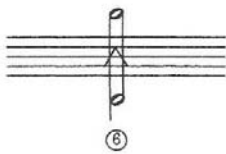
(LA ESPIRAL ETERNA, BROUWER)

Brouwer continues the horizontal cell that combines string scratching followed by plucking and etouffé plucked notes over a longer period of time, creating a texture (Figure 14.17). The string scratch, accumulating in a plucked note, is used as a dynamic effect to contrast with the softly scored, muffled notes. The fermatas on the scratched notes allow the guitarist to return the right hand to the normal playing position and prepare the hand for the performance of muffled notes.

14.4.2 Textures as combinations of horizontal cells

Chordal and arpeggio texture containing scratching string sound

Figure 14.18 Scratching sound in chordal and arpeggio texture



Son sifflè, "whistling sound", means slide upward as fast as possible on the string indicated, using the thumb and middle fingers.

(SONATA, GINASTERA)

Ginastera uses the scratching sound in the midst of a chordal and arpeggio texture of plucked and strummed sounds (Figure 14.18). The whistling sound, employed here by Ginastera toward the end of the line, is rarely encountered in the guitar repertoire. The oddness of the whistling sound at the height of the accelerating note buildup creates a memorable and surprising moment in the *Sonata*. Ginastera leaves the performer sufficient time to both prepare the execution of the scratch and return the right hand to the customary playing position afterwards.