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Creating a Sound-Based Aesthetic
for Music Played on the Classical Guitar

Abstract. Note-based music is very familiar to our ears. And strangely enough, many modern genres incorporate a lot of sound-based music. Leigh Landy tells us that "*sound-based music* typically designates the art form in which the sound, that is, not the musical note, is its basic unit" (Leigh Landy, *Understanding the Art of Sound Organization,* 2007, MIT Press, page 17). It is obvious that note-based music is constructed on the standard Western paradigm, fixed on a grid system. Trevor Wishart calls it a 'Lattice' system; however, he reminds us that "music does not have to be lattice-based at all" (Trevor Wishart, *On Sonic Art,* 1998, Harwood Academic Publishers, page 11). Sound-based music is rooted in timbres heard every day, and includes sounds that fall between the standard Western notes. For much of my music, an amalgamation of the two systems is sought, especially as modern ears are accustomed to both. The talk will comprise reflections and observations on the recent key innovative music for the classical guitar. Starting with certain groundbreaking composers whose works appeared in the late 20th century, for example, Azio Corghi, Helmut Lachenmann, and Rolf Riehm, I will then relate their music to developments in the new millennium. Centering on the ideas and principles expounded in my recent research, the main focus will be on the exclusive usage of extended techniques. There is a wealth of repertoire, and I am constantly discovering more from musicians all over the globe. In the classical guitar canon, the vast majority of pieces are either made up completely from regular notes, or a varied mixture of notes and extended techniques are employed. My intention is to investigate how this usage has influenced more modern times from the standpoint of creators who have exploited extended techniques to develop sound-based music.

Keywords: note-based music, sound-based music, guitar morphology, extended techniques.

1. The changing culture of *note-based* and *sound-based* music

In general, the principles of developing a musical discourse have changed since the mid 20th century, for example, the *note-based* and *sound-based* music dichotomy. Moreover, strangely enough, many modern genres incorporate much sound-based music. Leigh Landy says "*sound-based music* typically designates the art form in which the sound, that is, not the musical note, is its basic unit" (Landy 2007: 17).

It is obvious that music grounded on notes is constructed on the standard Western paradigm, fixed on a grid system. Trevor Wishart calls it a 'Lattice' system; however, he reminds us that "music does not have to be lattice-based at all" (Wishart 1998: 11). Music based on sound is has roots in timbres heard every day, and includes sounds that may fall between the standard Western notes.

This artistic route is clear to see in compositions for classical guitar; the vast majority of works that include sound-based material – and therefore incorporate extended techniques – are constructed around standard notes.[1] Although I concentrate on creating music comprising entirely of extended techniques in my research, in reality the amalgamation of the two systems is preferable and inevitable when working in the field, especially as modern ears are accustomed to both.

The functions of various extended techniques will become clear as the talk progresses. Here is the basic list of extended techniques used in my Studies for solo guitar: Natural and multiphonic harmonics, Bottleneck (plucked) and (unplucked), Snap pizzicato (long) and snap pizzicato, Cross stroke and cross stroke (active scordatura), 'Snare drum' (natural and glissandi), Soundhole resonances (palm, fist, or thumb and buzz), Bi-tone (long) and bi-tone, Mute tap (long) and mute tap, Nut-side, Rapid mute and rapid mute (sixth string), and Pinch mute.

Maybe further changes over time and my dream of having a repertoire of accepted sound-based only guitar pieces will grow culturally. However, let us have a look at recent history, and examine creative musical disciplines centred on discerning the properties of sounds emanating from certain guitar techniques, especially as the research constitutes an investigation into the areas of sound production that included inherent noise content, spectral detail, and the nurturing of improvisatory elements. I will be concentrating on guitar works by Gavin Bryars, Azio Corghi, Philippe Durville, Helmut Lachenmann, and Rolf Riehm, as they have the closest links to my ideas and soundworld.

2. Recent key innovative music for classical guitar

Key repertoire is discussed extensively in my research; I will be drawing on Table 1 as a discussion basis (see Appendix). This chart was devised to relate the relationship between the significant repertoire from the 20th and 21st centuries to the morphological structuring ideas posited in my research, on which my studies

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[1]   See Vishnick 2014: 117.

are based; Guitar Morphology comprises creating musical contours derived from manipulating consecutive, merged, and combined morphologies allied to shaping phrases formed by using archetypal or variant morphologies.[2]

Although notational issues are central, here I will concentrate on the *exclusive usage of extended techniques*, in particular, works where composers have employed extended techniques for significant lengths (Table 1).

Fifteen of the pieces cited in Table 1 contain sections consisting entirely of extended techniques. To help one give an overview of compositional approach, Table 2 has been devised; it comprises three columns – consecutive (including single), merged, and combined morphologies. Therefore, we can now explore the musical ideas in this repertoire in general, and from the perspective of successive, composite, and superimposed sounds. Furthermore, the exclusive usage of extended techniques mentioned in Table 2 forms a bond with my Studies, unifying the author's work to the existing repertoire. It would appear that a unique area in guitar repertoire has been identified, serving as grounds for the specific research focus of writing music that uses only extended techniques (Table 2).

It is apparent from Table 2 that durations of usage are variable.[3] For example, there is a marked contrast of bi-tone usage between *The Squirrel And The Ricketty-Racketty Bridge* (1971) by Bryars, which has a duration of 11', and Brouwer's 42" in *La Espiral Eterna* (1971).

In terms of links between Table 2 and the extended techniques used in my music, bi-tones and rapid mute are used the most. Brouwer, Bryars, Corghi, and Riehm are among those using bi-tones, while Brouwer, Corghi, Durville, and Lachenmann include rapid mute morphologies. Riehm uses two other extended techniques – nut-side and soundhole resonance (palm). Four composers use one other extended technique, Ignacio Baca-Lobera and Lachenmann employ bottleneck morphologies and Maurizio Pisati uses cross stroke, only Durville includes an array of harmonics.

'Snare drum', soundhole resonance (buzz), rapid mute (sixth string), and pinch mute are extended techniques used in my Studies that do not occur in Table 2. Note that there is an abundance of snap pizzicati in the works cited in Table 1. Moreover, seven extended techniques, mentioned in Table 2, are not used in my Studies – spoon, whistling sounds, tambora, golpé, finger and nail scrapes, and hand-rubbing.[4]

3. The development of sound-based sections

3.1. Consecutive, merged, and combined morphologies

Now let us take a closer look at how extended techniques were used to produce consecutive and merged morphologies. Some score samples are included to show the diversity of compositional approaches.

Eight composers use consecutive morphologies. Taking rapid mute morphologies as an example, Durville has written long sections.[5] On Page 3 System 19 of the *Mouvement apparent* (1988) score, Durville employs a lengthy phrase that starts with fast, very loud rapid mute morphologies played ponticello before they gradually become slower (see Figure 1).[6]

Figure 1. Durville's usage of rapid mute (Page 3 System 6)

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2   See Vishnick 2015: 63.

3   Note that all durations given for this section are approximate.

4   See Vishnick 2014: 113–116.

5   Ibid: 118–120.

6   Note that sound examples to all cited works can be found at http://openaccess.city.ac.uk/4164/

Corghi incorporates passages that involve bi-tones, seeking to blend imperceptibly from one state to another. For example, he includes bi-tones that transform into mute taps in *Consonancias y Redobles* (1974). Figure 2 shows the relevant score sections.

Figure 2. Corghi's bi-tone to mute tap transformation in *Consonancias y Redobles*

In the merged column of Table 2, bi-tones are the dominant extended technique. Four composers have explored merged bi-tones Bryars, Brouwer, Kent Olofsson, and Helmut Oehring, while Lachenmann makes use of the two guitars by merging three extended techniques across the instruments – bottleneck, rapid mute, and hand-rubbing.

Gavin Bryars' work is made up entirely of merged bi-tones. Originally, it was scored for one player using two guitars (or multiples of this).[7] The score is entirely text-based.[8] Bryars gives a performance instruction for the manner of bi-tone execution. He writes: "All the notes are played by the fingers playing firmly downwards on the fingerboard" (Bryars 1971: 1.21).[9] A percussive manner is used for the left hand slurs, while the strategically placed right-hand morphologies are played with vibrato. The outcome is a rich texture consisting of upper and lower bi-tone pitches. An even metrical pulse is used throughout. Figure 3 is a copy of Page 1.

Although Bryars' soundworld is similar to that in my studies, there is a contrast in the rhythmic activity; my bi-tone studies are made up of dissimilar units. For example, composite resonances from phrases of varying durations are the focus of the opening section of *Bi-tone tapping Study 1: Merged and consecutive morphologies*.[10]

Rapid mute, bottleneck, and hand rubbing are the dominant extended techniques used by Lachenmann in *Salut für Caudwell* (1977). Merging always occurs by giving the two guitarists contrasting rhythms. The music opens with rapid mute morphologies, and merged bottleneck sounds are employed between bars 429–434. It is not possible to merge rapid mute morphologies with one guitar, due to their short spectral activity.[11]

In his instructive book *Pro Musica Nova*, Wilhelm Bruck spells out the importance of Lachenmann's work "…without a doubt one of the most important pieces ever written for the instrument" (Bruck 1992: 9).[12]

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[7]   Recordings by Derek Bailey (who was the devotee) on LP in 1971 as *Incus 2* but rereleased on CD as *Incus CD10*. There are two other recording in later arrangements by the composer – Gavin Bryars and Seth Josel on *"The Marvelous Aphorisms of Gavin Bryars, the early years"*, and with four layers (eight guitars) on *Obscure 8 "Machine Music"* played by Derek Bailey, Gavin Bryars, Fred Frith and Brian Eno.

[8]   See Vishnick 2014: 90.

[9]   Taken from performance note 1.21, Gavin Bryars *The Squirrel And The Ricketty-Racketty Bridge* 1971.

[10]   See Vishnick 2014: 277.

[11]   Ibid: 106–112 and 114–115.

[12]   Taken from the introduction to his selected section of *Salut für Caudwell. Pro Musica Nova studies for playing contemporary music for guitar* by Wilhelm Bruck.

Lachenmann embraces robust characteristic guitar-playing elements, snap pizzicati and use of a plectrum for example; he also reshapes finger technique to include development of sensitive morphologies that derive from hand-brushing and intimate bottleneck glissandi.

Merged bottleneck morphologies are exploited in my Studies. With the emphasis on consecutive and merged bottleneck sounds, the *Bottleneck study* is fashioned using a mixture of plucked and unplucked morphologies[13] (see Table 1).

Composers who combine extended techniques morphologies are listed in Table 2. The discussion will now centre on two works – *Consonancias y Redobles* by Corghi and *Toccata Orpheus* (1990) by Riehm. *Consonancias y Redobles* was inspired by the music of Luys Milán.[14] Each of the five movements begins with a statement of the original fragment before passing on to the performance of the different 'musical designs'.[15] The composer writes: "The form and method of performance of *Consonancias y Redobles* are derived from the indications, which Luys Milán wrote as a preface to his *Fantasias for Vihuela*" (Corghi 1974).[16] The *Fantasias* may be found in Milán's book entitled *El Maestro* (Milán 1535).[17]

From Table 2 we see that Corghi uses a number of extended techniques.[18] The fourth movement comprises four sections, where the player chooses the ordering. After the opening Milán quote, Corghi explores combinatorial possibilities, fusing rapid mutes with mute taps. He also combines rapid mutes, mute taps, and then golpé in this section.

Corghi's work relates to my *Rapid mute and pinch mute combined study*, where transformation between extended techniques occurs. This study opens with rapid mute morphologies that gradually change into pinch mutes.[19]

Riehm uses extended techniques throughout *Toccata Orpheus*. However, conventionally plucked pitches occasionally occur, the first appearing after approximately 2' – a discord consisting of four pitches.[20] In *Toccata Orpheus* bi-tone (long) morphologies are predominant and Riehm combines them with mute tap (long), nut-side, and occasionally palm or whistling sounds.

Tapping is the fundamental playing technique in the opening section. Note that I classify bi-tone (long) and mute tap (long) as archetypal morphologies; in short, the behaviour of sound events through time based on the archetypal attack/resonance morphology model.[21] Similar to the situation found in my bi-tone study, mentioned earlier, the left hand strikes the strings near the soundhole while the right hand is utilised over the fretboard or vice versa.[22]

Page 1 — *The Squirrel And The Ricketty-Racketty Bridge* by Gavin Bryars

L.H.	4/5	5/6	6/7	7/8	8/9	9/10	10/11
R.H.	9	11	14	15	9	10	9(2) or (5)

(quiet, modest, highly intelligent and articulate, indistinguishable in dress from the young lawyer or record company executive - even to the briefcase)

L.H.	11/12	12/13	13/14	14/15	15/16	16/17
R.H.	10(2) or 5 9		9	11	14	6

(the clown is no longer necessary, even if the musical journals are now thrown back more than ever on their own invention for the picaresque tales)

L.H.	17/18
R.H.	9

(a reservoir of human tenderness, love, rage, fear, happiness, despair, wonder; in a word, beauty)

Figure 3. Page 1 of *The Squirrel And The Ricketty-Racketty Bridge* by Bryars

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[13] See Vishnick 2014: 250.

[14] Luys Milán (c. 1500–1561 or possibly later).

[15] Taken from performance notes, p. 1, of *Consonancias y Redobles* by Azio Corghi 1974.

[16] Ibid: 1.

[17] The full title of Luys Milán's book is *El Maestro, Libro de Música de Vihuela de Mano*.

[18] See Vishnick 2014: 107.

[19] Ibid: 306.

[20] See System 9, Bar 2, Page 4 of Riehm's score. Note that *Toccata Orpheus* is written using proportional notation, and he employs consecutive rapid mute morphologies in the penultimate section, from System 30.

[21] See Vishnick 2014: 192.

[22] Ibid: 277.

Riehm creates a carefully planned and organised interchanging of movements. He divides tapping production further by specifying the manner of attack and release. For example, attack by striking from a distance or quickly from directly above, release by lifting off rapidly (abrupt termination) or allowing the finger to glide along the string in either direction (a whistling sound occurs). Similar to the release usage applied to my 'snare drum' morphologies,[23] Riehm induces a variant phase by adding a further action to bi-tone production. However, bi-tone (long), mute tap (long), and nut-side are all related – mute taps, and nut-side being upper partials of bi-tones. Moreover, there is no exploitation of contrasting morphologies.

System 1 is typical of the ensuing music (see Figure 4). There is a sound event on every pulse. The music starts with combinations of bi-tones and nut-side morphologies.

Figure 4. System 1 of *Toccata Orpheus* by Riehm

A good example of an extended passage occurs in System 5, Bar 2 of *Toccata Orpheus*, where Riehm combines bi-tones, mute taps, and whistling sounds (see Figure 5). In this section, which is approximately 52" in duration, morphologies are executed entirely on String 6, sound events occurring on every pulse.

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23   Ibid: 261.

Figure 5. System 5 of *Toccata Orpheus* by Riehm

Pitch relationships between bi-tones and nut-side morphologies are explored in my *Soundhole harmonics, nut-side, and bi-tones combined study*, where the development of dissonances is featured.[24]

A difference in compositional approach between the Corghi and Riehm scores is evident. Corghi encourages the player to develop a wide range of interpretive freedom. For instance, his performance notes open with the following: "While interpreting the graphic symbols and signs, the player must realise the formal tendencies of the material with personal fantasy and improvisation" (Corghi 1974: 1). In contrast, to bring about his fundamental compositional aim, Riehm's approach is to provide performative detail, he says "…only the precise execution of the fingerings can guarantee that the composed sound will actually be produced" (Riehm 1990: 13).[25]

3.2. Scordatura

Composers often experiment with alternative tuning systems, especially when seeking to find unusual pitch combinations that can occur simultaneously or across the strings. An example of scordatura usage can be found in Lachenmann's duo *Salut für Caudwell*, where Guitar 1 is tuned normally, while Guitar 2 is tuned a semitone lower.

Scordatura is common among contemporary works. For example, eleven of the composers cited in Table 1 employ altered tunings. Three types of scordatura are identified – diatonic, microtonal, and active. Although diatonic and microtonal scordatura have a direct impact on a work's soundworld, they are not extended techniques.[26] In contrast, active scordatura production allows performers and composers to experiment with changes in pitch trajectory. Therefore, it is treated as an extended technique in this research.

Re-tuning 'on the fly' as the music unfolds is a technique used by five composers from Table 1 – Brouwer, Edgerton, Gilardino, Murail, and Shende – an action termed *active* scordatura by the author. It results in glissando-based morphologies that are either single (used to initiate and/or finish a passage), or consecutive (part of an iterative passage, or integrated as part of the musical structure).[27]

Active scordatura technique is not exploited in the repertoire as an integral part of compositional texture. For example, none of the above-mentioned composers uses merged morphologies that arise from active scordatura usage, nor do they develop the possibilities of merging microtonal glissandi. This is a rich area that I tackle in the Studies; in particular, the *Cross stroke (active scordatura) study*, where merging cross stroke morphologies or combining with other extended techniques, bottleneck and multiphonic harmonics are an important element of the compositional fabric.[28]

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[24] Ibid: 313.

[25] Taken from the 'Explanation to the score' booklet of *Toccata Orpheus* by Rolf Riehm.

[26] See Vishnick 2014: 97.

[27] Ibid: 98.

[28] Ibid: 260.

Changing the pitch trajectory during the resonance phase produces active scordatura glissandi. This is achieved by turning the tuning keys either way using the left hand. Three types of cross stroke (active scordatura) are possible, *ascending* – tightening the key, *descending* – loosening the key and *curvilinear* – around the same pitch in a tightening and loosening motion during a single resonance. Curvilinear morphologies are divided into oscillating – denoted by a regularly contoured horizontal sine-wave shape, and undulating – an irregularly contoured symbol.[29]

4. Concluding comments

Closing thoughts for this paper are concerned with the soundworld of the cited repertoire. We have seen that musical settings centred exclusively on extended techniques occur, but are uncommon. Thus enriching the relevance of an aspect of the research inquiry made earlier: that a detailed examination into extended techniques morphologies in contemporary repertoire is an important historical development for guitarists. Hence an investigation of sections where only extended techniques exist and looking into ways of developing a new repertoire.

The works mentioned by Corghi, Lachenmann, and Riehm come closest to this ideal, especially as they combine two relevant extended techniques in extended passages. However, there are no examples of exploring the richer possibilities of combining three extended techniques that match those found in my list. For example, Pisati combines three extended techniques on one short occasion (see Table 2: *Combined* column).

It would appear that exploring the possibilities that extended techniques offer is a way for musicians to increase the diversity of instrumental colour.[30] From my research, it is evident that composers manipulate extended techniques as successive, composite, or superimposed sounds; the inherent possibilities of this soundworld are further developed in my Studies. The repertoire of most interest deals with exclusive usage of extended techniques, and we note that Corghi and Durville are among those who use consecutive morphologies, *Mouvement apparent* by Durville for instance. It is also evident that in *Consonancias y Redobles* Corghi combines rapid mutes with mute tap morphologies, which have much in common.

The soundworld of my studies develops this music further, achieved by including the archetype and variants models mentioned earlier, methods for evaluating guitar sounds, and how integrating morphologies may form the basis for composing pieces. It may be seen as an extension of the extended passages by Bryars, Corghi, Durville, Lachenmann, and Riehm, formed into sound-based works in their own right. Especially as these musicians, in their own way, have solved some of the musical problems inevitably encountered when playing passages comprising only extended techniques.[31] The compositional methodologies of these musicians have influenced or affirmed the content of my music.

Through studying the guitar music of the above mentioned composers, we have gained enough information to focus on didactic aspects. Moreover, as a result of examining the compositional facets of extended techniques usage in the repertoire, the pedagogical tools needed to comprehend and apprehend a sound-based discourse can be discussed. By manipulating the selected techniques and focusing on practical musical issues, the process of creating a soundworld made up entirely of extended techniques morphologies can now be contemplated.

My intention is to challenge traditional modes of analysis by emphasizing the importance of the resulting sound.[32] This also requires a change of perspective from 20th-century formal interpretational ideals, connected to the theoretical, to the more up-to-date notion that performer and score may be equally interlinked.

Given the quality of the composers who have worked with extended techniques, it is surprising that composer-guitarist collaborations have not led to exploring the many combinatorial possibilities. From my perspective, this unfilled space reinforces my central research issue. In short, that there is a requirement to examine all aspects of guitar morphology, covering performing, teaching and composing. In particular, one way of intensifying the spectral possibilities in contemporary guitar music is to examine contrasting extended techniques and layering morphologies, processes that I use.

In creating the sound-based Studies, my intention has been to reflect on the past, enrich the present, and imagine the future.

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[29]   Ibid: 259.
[30]   Ibid: 119.
[31]   Ibid: 78–96.
[32]   Ibid: 158.

Appendix

Table 1. Key repertoire

Technique	Connection	Works
Natural harmonics	Consecutive morphologies of higher harmonics	Bedford, David *You Asked for It* 1969
	Merged morphologies	Brouwer, Leo *Paisaje Cubana con Campana*s 1968 Pisati, Maurizio *Sette Studi* 1990 Mvt's II and IV Newland, Paul *Essays in Idleness* 2001 Mvt's I and III
	Combined with higher harmonics and conventionally plucked pitches, and merged higher harmonics including soundhole harmonics	Durville, Philippe *Mouvement Apparent* 1988
	A higher harmonic combined with conventionally-plucked pitches	Murail, Tristan *Tellur* 1977 (Figure C section)
	Merged natural with a single higher harmonic combined with conventionally plucked piches	Shende, Vineet *Suite in Raag Marva* 2010 Mvt IV *Jhala*
	Combined with snap pizzicato	Ferneyhough, Brian *Kurze Schatten II* 1983–9 Mvt 1
	Combined with conventionally plucked pitches, merged, and single morphologies	Kagel, Mauricio *Faites votre jeu I* from *Sonant* 1964
Multiphonic harmonics	Single morphologies	Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var 3
	Consecutive morphologies	Pereira, Joseph *Bento Box* 2007 for alto flute, guitar, and vibraphone
	Merged morphologies	Bland, William *Untitled Composition in Three Sections* 1975 Durville, Philippe *Mouvement Apparent* 1988
Bottleneck	Consecutive morphologies	Lachenmann, Helmut *Salut für Caudwell* 1977 Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var 1 Baca-Lobera, Ignacio *La Lógica de los Sueños* 2010 for voice, 2 guitars (one player) and electronics
	Combined with etouffé pizz	Brooks, William *Footnotes* 1982 Mvt 3 *Crump*
	Combined with natural harmonics, gong and tam tam (tremolo)	Biberian, Gilbert *Prisms No. 2* 1970 for ten guitars and percussion
	Combined with electroacoustic sounds	Kokoras, Panayiotis *Slide* 2002
	Combined with conventionally-plucked pitches (and electroacoustic sounds)	Guzmán, Edgar *Apnea* 2004–2005 for acoustic guitar and tape
Snap pizzicato (long)	Single and consecutive morphologies	Koshkin, Nikita *Usher Waltz* 1996
	Consecutive	Lorentzen, Bent *Umbra* 1973 Mvt 4
	Merged (simultaneous) and single morphologies	Giner, Bruno *Trans-errance 1* 1984
	Merged (simultaneous) morphologies	Brouwer, Leo *La Espiral Eterna* 1971
	Merged morphologies	Scelsi, Giacinto *Ko-Tha- 'A Dance of Shiva'* 1967 Henze, Hanz Werner *Memorias de 'El Cimarrón'* 1970 Mvt II
	Combined with natural harmonics or golpé	Kagel, Mauricio *Faites votre jeu I* from *Sonant* 1964
	Combined with natural harmonics and conventionally-plucked pitches. Single and merged morphologies	Guzmán, Edgar *Apnea* 2004–2005 for acoustic guitar and tape
	Combined with conventionally plucked pitches	Halffter, Christóbal *Codex 1* 1963 Haubensock-Ramati, Roman *Hexachord 1 and 2* 1976 Murail, Tristan *Tellur* 1977 (Figure E section)
Snap pizzicato	A single morphology	Durville, Philippe *Mouvement Apparent* 1988
	Single morphologies	Kagel, Mauricio *Faites votre jeu II* from *Sonant* 1964 Bergman, Erik *Midnight* Op. 83 1977 Dench, Chris *Severence* 1994 Hayden, Sam *Axe(s)* 1997, revised 2008–9 Guzmán, Edgar *Apnea* 2004–2005 for acoustic guitar and tape
	Single morphologies into slurred pitches	Ginastera, Alberto *Sonata* 1976
	Single morphologies (within fast moving texture)	Kampela, Arthur *Percussion Studies I, II* and *III* 1997
	Single, merged (simultaneous), and consecutive morphologies	Giner, Bruno *Trans-errance 1* 1984

	Consecutive morphologies	Kagel, Mauricio *Faites votre jeu I* from *Sonant* 1964 Bedford, David *You Asked for It* 1969 Henze, Hanz Werner *Memorias de 'El Cimarrón'* 1970 Mvt II Lorentzen, Bent *Umbra* 1973 Mvt 4 Corghi, Azio *Consonancias y Redobles* 1974 (Section C/1) Lachenmann, Helmut *Salut für Caudwell* 1977 Murail, Tristan *Tellur* 1977 (Figure E section) Verdery, Benjamin *11 Etudes* – Etude 11 *Home is Here* 2005 Baca-Lobera, Ignacio *La Lógica de los Sueños* 2010 for voice, 2 guitars (one player) and electronics
	Combined with natural harmonies	Ferneyhough, Brian *Kurze Schatten II* 1983–9 (all Mvt's)
	Combined with conventionally plucked pitches (*Var 1*) and multiphonic harmonics (*Var 6*)	Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var's 1 and 6
	Combined with 'snare drum' and conventionally plucked pitches, and single morphologies	Heininen, Paavo *Touching* Op. 40 1978
	Combined with golpé	Riehm, Rolf *Notturno für die trauerlos Sterbenden* 1977
	Combined with conventionally plucked pitches	Biberian, Gilbert *Prisms No. 2* 1970 for ten guitars and percussion
	Combined with conventionally plucked pitches, a single morphologies also used	Haubensock-Ramati, Roman *Hexachord 1* and *2* 1976 for solo or two guitars
	Combined with conventionally plucked pitches, a single morphology also used	Pereira, Joseph *Bento Box* 2007 for alto flute, guitar, and vibraphone
	Combined with electroacoustic sounds	Kokoras, Panayiotis *Slide* 2002 MS
Nut-side	Consecutive morphologies	Kagel, Mauricio *Faites votre jeu II* from *Sonant* 1964 Ferneyhough, Brian *Kurze Schatten II* 1983–9 Mvt 7 Pisati, Maurizio *Sette Studi* 1990 Mvt V Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var 1
	Merged morphologies	Gilardino, Angelo *Abreuana* 1971 Frengel, Michael *Bingo Variations* 2006 Mvt IX *Bingo 'The Hard Way'*
	Merged with natural harmonics, single morphologies also used	Hayden, Sam *Axe(s)* 1997, revised 2008–9
	Combined with bi-tones	Riehm, Rolf *Toccata Orpheus* 1990 (system 1)
	Combined with alto flute, percussion, and strings (opening section)	Fujikura, Dai *ICE* 2009/10 for 2 flutes, oboe, clarinet, bassoon, guitar, violin, viola, cello, and bass
	Combined with prepared clip and harmonies	Shende, Vineet *Suite in Raag Marva* 2010 Mvt's I *Alap* and IV *Jhala*
Cross stroke	Single morphologies	Lachenmann, Helmut *Salut für Caudwell* 1977
	Consecutive morphologies	Riehm, Rolf *Notturno für die trauerlos Sterbenden* 1977
	Combined resonance with golpé and consecutive iterative attacks	Pisati, Maurizio *Caprichos de simios y burro* 2003 Mvt I
'Snare drum'	Consecutive morphologies	Koshkin, Nikita *The Princes Toys* 1992 Verdery, Benjamin *11 Etudes* – Etude 11 *Home is Here* 2005
	Combined with bi-tones and a natural harmonics	Halffter, Christóbal *Codex I* 1963
	Combined with snap pizz and conventionally plucked pitches	Heininen, Paavo *Touching* Op. 40 1978
	Combined with rapid mute and golpé	Brooks, William *Footnotes* 1982 Mvt 1 *Cage*
	Combined with conventionally plucked pitches and consecutive morphologies	Bergman, Erik *Midnight* Op. 83 1977
	Combined with golpé	Corghi, Azio *Consonancias y Redobles* 1974 (Section C/1)
	Combined with golpé and consecutive morphologies	Pearson, Stephen Funk *Brunella the dancing bear* 1983
'Snare drum' (gliss)		none
'Snare drum' (slide)		none

Soundhole resonance (palm, fist, or thumb)	Single and consecutive morphologies	Kampela, Arthur *Percussion Studies I, II* and *III* 1997
	Consecutive morphologies	Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var 3
	Consecutive morphologies and combined with bi-tones	Pisati, Maurizio *Caprichos de simios y burro* 2003 Mvt's II and III
	Combined with bi-tones	Riehm, Rolf *Toccata Orpheus* 1990 (system 12) Oehring, Helmut *Foxfire Eins* 1993
	Combined with golpé	Olofsson, Kent *Treccia* 1990–92
Soundhole resonance (buzz)		none
Tapping (bi-tone)	Single and consecutive morphologies	Kagel, Mauricio *Faites votre jeu I* from *Sonant* 1964
	Consecutive morphologies	Brouwer, Leo *Paisaje Cubana con Campanas* 1968 Biberian, Gilbert *Prisms No. 2* 1970 for ten guitars and percussion Rak, Štěpán *Voces de profundis* 1984 Koshkin, Nikita *The Princes Toys* 1992 Kampela, Arthur *Percussion Studies I, II* and *III* 1997 Pisati, Maurizio *Caprichos de simios y burro* 2003 Mvt II Frengel, Michael *Bingo Variations* 2006 Mvt IV *Crazy 'T'* and Mvt VII *Normal Bingo 'B'* Pereira, Joseph *Bento Box* 2007 for alto flute, guitar, and vibraphone
	Consecutive morphologies and combined with soundhole resonance	Oehring, Helmut *Foxfire Eins* 1993
	Consecutive morphologies and combined with conventionally plucked pitches	Riehm, Rolf *Notturno für die trauerlos Sterbenden* 1977
	Merged morphologies	Kagel, Mauricio *Faites votre jeu II* from *Sonant* 1964 Bryars, Gavin *The Squirrel and the Ricketty-Racketty Bridge* 1971 Brouwer, Leo *La Espiral Eterna* 1971 Corghi, Azio *Consonancias y Redobles* 1974 (section R/2) Guzmán, Edgar *Apnea* 2004–2005 for acoustic guitar and tape
	Merged with natural harmonics (or conventionally plucked pitches), single morphologies also used	Hayden, Sam *Axe(s)* 1997, revised 2008–9
	Merged morphologies and combined with nut-side	Riehm, Rolf *Toccata Orpheus* 1990 (system 1)
	Combined with 'snare drum' and natural harmonic	Halffter, Christóbal *Codex I* 1963
	Combined with snap pizz	Murail, Tristan *Tellur* 1977 (Figure E section)
	Combined with nail sizzle	Lorentzen, Bent *Umbra* 1973 Mvt 2
	Combined with conventionally plucked pitches (Var's 1, 3, and 6) and sponge motion – back and forth (Var 5)	Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var 1, 3, 5, and 6
	Combined with golpé	Olofsson, Kent *Treccia* 1990–92
	Combined with conventionally plucked pitches	Dench, Chris *Severence* 1994
	Combined with conventionally plucked pitches and merged	Goss, Stephen *Oxen of the Sun* 2003–4 (Mvt's III and IV) for one player on 6- and 10-strings guitars at the same time
Tapping (mute)	Merged morphologies	Corghi, Azio *Consonancias y Redobles* 1974 (section R/2)
	Combined with golpé then etouffé pizzicato	Brooks, William *Footnotes* 1982 Mvt 3 *Crump*
	Combined with conventionally plucked pitches	Rak, Štěpán *Voces de profundis* 1984

Rapid mute	Single and consecutive morphologies	Guzmán, Edgar *Apnea* 2004–2005 for acoustic guitar and tape
	Consecutive morphologies	Halffter, Christóbal *Codex I* 1963 Henze, Hanz Werner *Memorias de 'El Cimarrón'* 1970 Mvt III Brouwer, Leo *La Espiral Eterna* 1971 Bergman, Erik *Midnight* Op. 83 1977 Ferneyhough, Brian *Kurze Schatten II* 1983–9 Mvt 7 Giner, Bruno *Trans-errance 1* 1984 Durville, Philippe *Mouvement Apparent* 1988 Pisati, Maurizio *Sette Studi* 1990 Mvt's I, II, and IV Dench, Chris *Severence* 1994 Kampela, Arthur *Percussion Studies I, II* and *III* 1997 Frengel, Michael *Bingo Variations* 2006 Mvt II *Postage Stamp* Ribot, Marc *Exercises in Futility* 2007 Exercise 1 *Five gestures*
	Consecutive morphologies and combined with etouffé pizz, conventionally pluched pitches, bowed gong, and tam tam (tremolo)	Biberian, Gilbert *Prisms No. 2* 1970 for ten guitars and percussion
	Consecutive morphologies and combined with conventionally pluched pitches	Pisati, Maurizio *Caprichos de simios y burro* 2003 Mvt's II and IV
	Combined with bottleneck, merged and consecutive morphologies	Lachenmann, Helmut *Salut für Caudwell* 1977
	Combined with mute taps	Corghi, Azio *Consonancias y Redobles* 1974 (section R/2)
	Combined with 'snare drum' (using matchstick) and golpé	Brooks, William *Footnotes* 1982 Mvt 1 *Cage*
	Combined with conventionally strummed pitches	Edgerton, Michael Edward *Tempo Mental Rap* 2005 Var 1
	Combined with conventionally played pitches and consecutive morphologies	Heininen, Paavo *Touching* Op. 40 1978
	Combined with golpé	Olofsson, Kent *Treccia* 1990–92
	Combined with harmonics, consecutive morphologies also used	Murail, Tristan *Tellur* 1977 (Figure A section)
	Combined with electroacoustic sounds	Kokoras, Panayiotis *Slide* 2002 MS
Pinch mute		none

Table 2. Overview of exlusive extended techniques usage

Work	Duration	Consecutive (including single)	Merged	Combined
Baca-Lobera, Ignacio *La Lógica de los Sueños* 2010	23.5"			Bottleneck and voice (5.5") Bi-tones and voice (3") Bi-tones, golpé, and voice (7") Bottleneck, golpé, and voice (8")
Brouwer, Leo *La Espiral Eterna* 1971	52"	Rapid mute (10")	Bi-tones (42")	
Bryars, Gavin *The Squirrel and the Ricketty-Racketty Bridge* 1971	11'		Bi-tones (11')	
Corghi, Azio *Consonancias y Redobles* 1974 (R/2)	3'	Bi-tones to mute taps (55")		Rapid mute and mute tap (35") Rapid mute and golpé (45")
Durville, Philippe *Mouvement Apparent* 1988	1.15"	Rapid mute (30")	Soundhole harmonics with natural harmonics (45"). Soundhole, higher, and multiphonic harmonics with natural harmonics (10") – campanelas-style	
Fujikura, Dai *ICE* 2009/10	46"–52"			Nut-side and ensemble, opening (26"–30"), then bar 53 (20"–22")
Kokoras, Panayiotis *Slide* 2002	2.04"			Bottleneck and tape (2.04")
Lachenmann, Helmut *Salut für Caudwell* 1977	3.20"		Rapid mute *bars 1–10* (19"), bottleneck *bars 429–434* (15"), hand-rubbing *bars 468–533* (1.50")	Rapid mute and bottleneck *bars 11–20* (26"), bottleneck and hand-rubbing *bars 435–467* (1.30")
Lorentzen, Bent *Umbra* 1973, Mvt 4	45"	Snap pizzicato, and snap pizzicato [long] (45")		
Olofsson, Kent *Treccia* 1990–92	1'	Bi-tones / (Integrated texture 20")	Bi-tones	Bi-tones and golpé (40")
Oehring, Helmut *Foxfire Eins* 1993, opening section (bars 1–18)	1.35"	Soundhole resonance (palm) – single, and mute taps (15")	Bi-tones (1.20")	
Pisati, Maurizio *Caprichos de simios y burro* 2003, Mvt 1	2'			Golpé and tambora *bars 11–35* (45"). Cross stroke and golpé *bars 39–68* (50"). Golpé, cross stroke, and tambora *bars 71–72* (c. 8")
Rak, Štěpán *Voces de profundis*	3.36"	Finger scrapes (30") Spoon [including wah-wah effect] (1')	Spoon [arpeggios] (43")	Finger scrapes and bi-tones (23") Bi-tones and spoon (1')
Ribot, Marc *Exercises in Futility* 2007. Exercise 1 *Five gestures* and Exercise 2 *Morton*	1.22"	Exercise 1 – Rapid mute (35")		Exercise 1 – Rapid mute and nail scrapes (37") Exercise 2 – Rapid mute and golpé (20")
Riehm, Rolf *Toccata Orpheus* 1990, opening section	2'			Bi-tones integrated with mute taps, nut-side, soundhole resonance (palm), and whistling sounds (2')

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Garso artikuliacija grindžiamos estetikos formavimas klasikinei gitarai skirtoje muzikoje

Santrauka

Problemos nagrinėjimas pradedamas besikeičiančių procesų identifikavimu, kada greta garso aukščiais besiremiančios muzikos vis svaresnę vietą užima skambesio artikuliacija pagrįsta kūryba, aprėpianti laikotarpį nuo XX a. vidurio iki XXI amžiaus. Supažindinama su šios srities tyrėjų idėjomis: Leigh Landy išsamiai charakterizavo sudėtingą garso artikuliacija paremtos (ir tuo besiskiriančios nuo garso aukščiu paremtos) muzikos pasaulį, aptardamas visas jos šiuolaikines formas, o Trevoras Wishartas išryškino kūrybinės manipuliacijos skambesiu pagrindus.

Aptariami naujausi ir inovaciniai kūriniai klasikinei gitarai, taip pat nagrinėjama, kaip kompozitoriai naudojo išplėstinę grojimo techniką kurdami garso artikuliacija pagrįstą muziką. Daugiausia dėmesio skiriant kūriniams gitarai solo, bandoma atskleisti ryšius tarp iškilaus repertuaro ir morfologinio struktūravimo idėjų, propaguojamų šiame tyrime. Kūriniai, kuriuose kompozitoriai eksploatavo išplėstinę techniką ilgesnėmis atkarpomis, yra ypač išskiriami iš kanono. Tarp tokių pažymėtini Leo Brouweris, Gavinas Bryarsas, Azio Corghi, Philippe Durville ir Rolfas Riehmas.

Išskirtinis išplėstinės grojimo technikos naudojimas šiuose kūriniuose siejasi su paties autoriaus muzika, kai kompozicijos formuojamos pasitelkiant morfologinės manipuliacijos principus. Tai yra autoriaus praktiką su kitų kompozitorių kūryba vienijantis veiksnys. Taigi galima teigti, kad identifikuota savita gitaros repertuaro sritis, suponuojanti specifinę kūrybinių tyrinėjimų kryptį – komponavimą, besiremiantį išimtinai išplėstine grojimo technika, Landy įvardijamą kaip garso artikuliacija pagrįstos muzikos kūrimą.

Apibendrinant tyrimus, apmąstomas pateiktų kūrinių garsinis pasaulis, pažymima, kad vis dažniau remiamasi tik išplėstine grojimo technika, tačiau šis reiškinys dar nėra įprastas. Tai dar labiau išryškina šios sferos tyrimo svarbą: išsamus išplėstinės technikos morfologijos studijavimas šiuolaikinėje muzikoje gali būti svarbus istorinis žingsnis gitaros meno raidoje; tai įprasmina epizodų, kuriuose naudojama tik išplėstinė technika, nagrinėjimą ir naujų garso artikuliacija paremtų komponavimo būdų paieškas.

Galima teigti, kad Corghi, Lachenmanno ir Riehmo kūriniai labiausiai priartėja prie šio idealo, ypač tada, kai jie kombinuoja du išplėstinės technikos tipus vienu metu ilgesniuose pasažuose. Vis dėlto nėra tokių pavyzdžių, kurie padėtų atskleisti dar didesnes galimybes kombinuojant tris išplėstinės technikos tipus, pateiktus autoriaus sudarytame sąraše. Straipsnio autorius šiuo metu dirba su fragmentais, kuriuose persidengs keturi išplėstinės technikos tipai.

Neneigiant kompozitorių, dirbusių su išplėstine grojimo technika, nuopelnų, vis dėlto stebina faktas, kad kompozitorių ir gitaros atlikėjų bendradarbiavimas nepadėjo atrasti dar turtingesnių sprendimų. Vienas iš būdų praplėsti šiuolaikinės gitarai skirtos muzikos galimybių spektrą yra kontrastuojančios išplėstinės technikos ir skirtingų morfologinių tipų sluoksniavimas – procesai, kuriuos autorius pats plėtoja savo praktikoje.