From Mind to Ear, Music in Transit

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ABSTRACT: The procedure of transferring music from mind to ear requires a double conversion from sound to symbol and back, in order for the sound to regain existence and meaning. This double conversion requires a common language with common syntax for the meaningful transmutation of the structural narrative, from one medium to the other and back.

Music notation is not only incomplete in its representation of meaning, it is also largely deceiving, as readers tend to define syntactical units, motives, phrases, etc. –in a familiar albeit unrelated and irrelevant manner, based on meter, barline and note patterns– as if they were metrical units instead.

KEYWORDS: *analysis and performance, motivic structure, musical syntax, Grundgestalt, Bach Cello Suites*

THE MUSIC

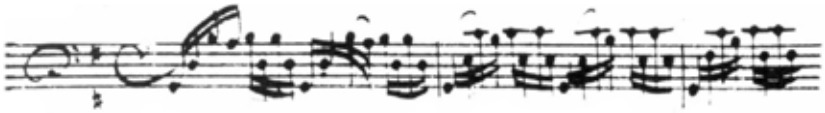
A MUSICAL thought –be it a motive or a phrase– is not simply a series of notes one after the other, but instead an organic structural unit progressing in time towards a final rest point, creating a sense of anticipation as it is directed towards it. Its completeness therefore is achieved when this culminating point has been reached.

Such a structural unit is primordial, establishing the motivic character of the piece, containing rhythm, direction and coherence. Thus, all the other elements such as measure or time signature are chosen to fit its characteristics, since there are no more than mechanisms of pulse distribution and are subordinate to the primordial figure.

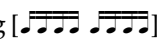
Music is an art, which unfolds in time and as a result its shape is both developed and perceived in sequence. Music notation on the other hand is an optical representation in space, attempting through a transmutation to describe events occurring in time. Thus, there occurs a translation in which music is looked at geographically, as a static object, instead of in motion. The reading therefore of music is taking place into a different language, using a foreign syntax.

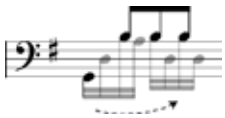
The Prelude from the first Bach Cello Suite, BWV 1007 is rather idiomatic in this respect due to its innate rhythmic perpetuum, presenting a certain ambiguity as to where the boundaries of its basic structural unit are located.[1]

[1] Other examples of similar interest are the Prelude for keyboard, BWV 999, the first Prelude from WTC, BWV 846 and the Prelude of the fourth Cello Suite, BWV 1010.

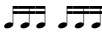


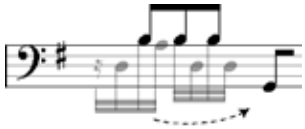
Example 1. Bach Prelude BWV 1007, opening.

On the first look, the basic unit is eight sixteenth notes long [] starting on the first note, repeated twice in each measure. As shown below the unit starts at the beginning of the measure, ending on the weakest part of the beat, missing this way its concluding note, which would be directed to.



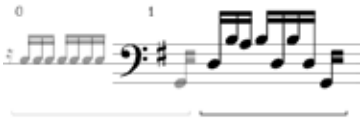
Example 2a. The basic structural unit, the version mostly used in recorded performances.

The obvious deficiency following this interpretation is the lack of direction and its need for a closing note as its last event occurs before the downbeat, thus defying the rules of musical structure. A different interpretation, which would take care of these deficiencies would have to commence on the upbeat, ending on the downbeat, led to it through an anacrusis [] as in the example below.



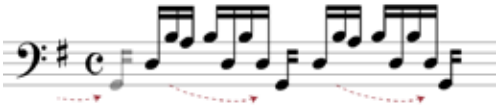
Example 2b. The basic structural unit in relation to its motivic characteristics.

As it becomes apparent adding a note at the end would provide a rest point and finalize the idea but at the same time would force it to drop the initial note, in order to preserve its metrical balance and symmetry. As a result, the initial note would have to be removed from it and be attached to another, earlier unit. Since there is no phrasal unit before the initial note, one leading to it has to be understood in measure zero, whose rhythmic property would be identical.



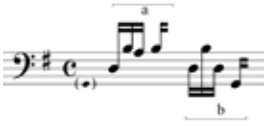
Example 3a. The proper placement of the initial note in relation to structure.

Thus, the performance of the prelude would have to consider that the basic unit is eight sixteenth notes long, starting on the weak and landing on the strong beat. As a result, the first note of each measure would belong to the previous phrasal unit, being its final rest point, to which would be directed.



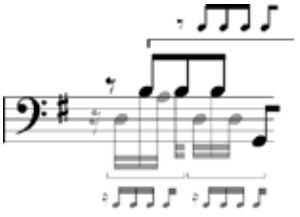
Example 3b. The 'physical' boundaries of the basic unit in relation to measure and the syntactical identification and placement of the initial note.

Taking a closer look at the basic unit it becomes apparent that it consists of two different motives, **a** and **b**.



Example 4. The basic unit comprised of two 4-note motives, **a** and **b**, leading towards the strong beats, pointing to the two outer voices of the 3-part counterpoint.

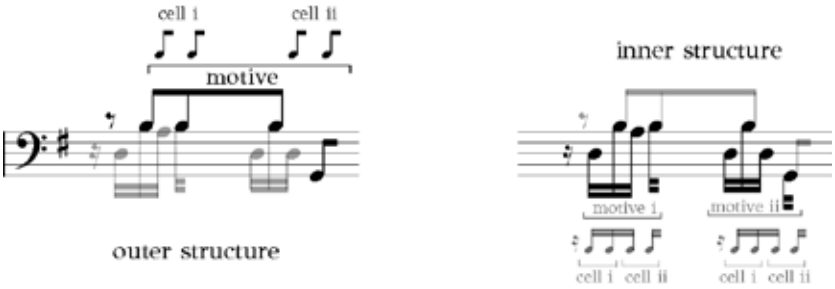
Motive **a** by means of an ornamental lower neighbor emphasizes the melodic movement of the top line while motive **b** provides an arpeggiated accompaniment, bringing the motive to a close. Taking a closer look at the unit itself it becomes apparent that it forms a motive in augmentation consisting of two inner motives.



Example 5a. The unit and the motive within the motive.

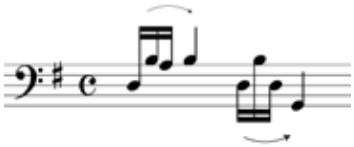
Thus the basic unit contains one motive in eighth notes [𝄾 ♩♩♩ ♪] and two motives in sixteenth notes [𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥], each one functioning on both levels.

In their turn, the two inner motives consist of two cells each, as does the augmented motive.



Example 5b. The unit and the motive within the motive.

Both motives comprising the basic unit are based on the impetus of a 3-note anacrusis leading on to the next strong beats, introducing thus a separate voice each.



Example 6. Direction of the two motives of the basic unit.

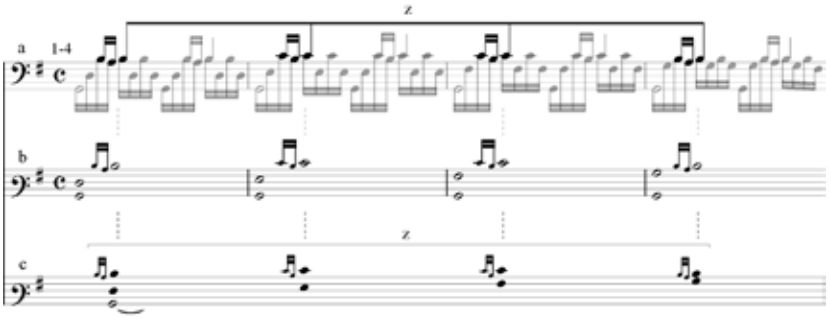
In terms of performance, one could think of two different parallel contrapuntal voices, involved in a dialogue with one another. Thus, the autonomy and continuity of each voice are being preserved, while at the same time motivic entities remain distinct and clear, leading towards an articulated, syntactically correct performance able to render the compositional meaning.

Looking closer at the compositional properties of the basic unit it is obvious that motive **b** does not present new material, it is comprised, instead, of the extensions of the notes of motive **a**.

Example 7. Linear unfolding of the basic unit, showing the extension of the notes of motive **a** into motive **b**.

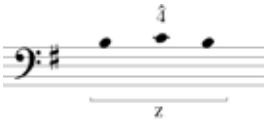
In the motive hierarchy of the basic unit therefore, motive **a**, is the most important, pointing at the 'primary line' (top voice), whereas motive **b** concludes the unit, providing a cadential rest point (7c).

In the linear development of the piece, three different voices, forming 3-part counterpoint, are present. Motive **a**, as it has been shown, brings to the fore the top, most distinctive voice of the three. A performance therefore, must take into account the different levels of importance, keeping intact the motivic patterns and melodic movement as well as the 'movement towards' of the top voice.



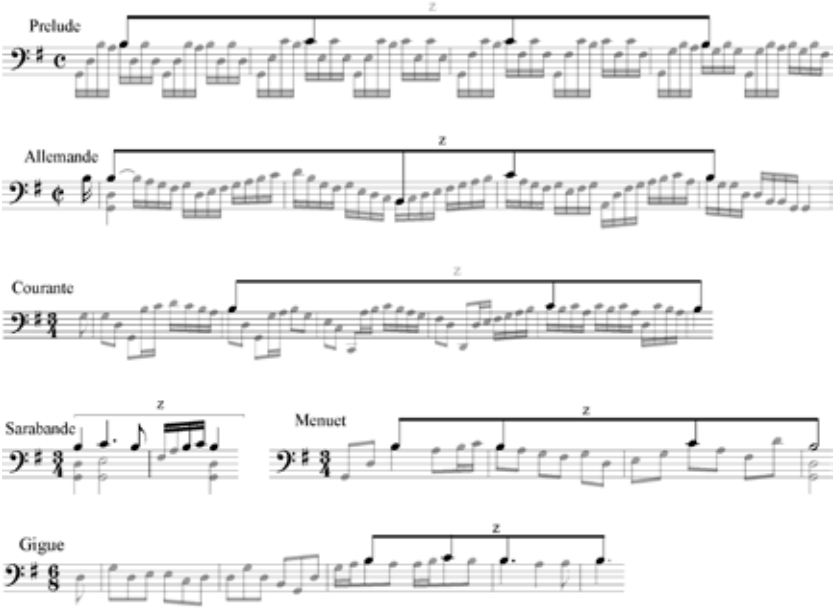
Example 8a. Opening measures (1–4). The reduction (c) shows the three different voices and the rate at which they move as well as the melodic and structural significance of the top voice (z).

In this manner the structural hierarchy is brought forward exhibiting the elements of the thematic material. As it can be seen motive **a** outlines yet another level of slow motion (**z**) moving in whole notes, which constitutes the most prominent structural formation of the prelude, a type of *grundgestalt.*



Example 8b. The *grundgestalt* (**z**) permeating the prelude.

According to the common practice of the time, the suite shares the same key in all movements. Additionally figure **z** apart from being the *grundgestalt* of the prelude has also been the unifying element of the entire suite, being characteristically present in all movements.

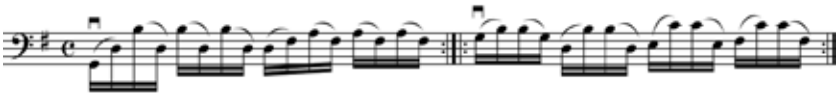


Example 9. Figure **z** as it is presented in the Prelude, Allemande, Courante, Sarabande, Menuet, and Gigue of the suite.

METHOD AND INTERPRETATION

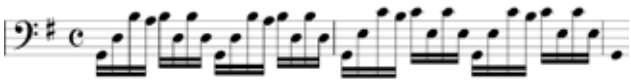
Looking at the next example from the *Violoncello Schule* of Friedrich Dotzauer from 1832 there seems to be a similarity to the pattern above as well as to the Bach prelude, both in rhythm and pitch content.[2]

[2] Dotzauer had published Bach's six suites twice, in 1825 and 1826 in Leipzig.



Example 10. Dotzauer, *Violoncello Schule*: Similarity with the prelude.

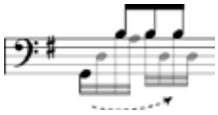
It is obvious that these exercises are not built with phrases in mind, ending all at the weakest part of the measure, having instead the barline as guide. Thus the similarity to the prelude is rather dangerous, as one has been brought up to read groups of notes-of-four instead of motives as part of the instrumental technique, which is oblivious to phrasing, and advertises reading the music in optical groups, separated by the barline.



Example 11. The opening of the prelude, visual and temporal properties.

This figure, due to its resemblance to a multitude of finger exercises, happens to be the most familiar to performers, often bequeathing them the erroneous impression of a music dictated by the measure and the barline, instead of the phrase, as it ought to.

As shown in the example below the pattern most players use for the Bach execution of the prelude is identical as that of the Dotzauer exercise, which cellists grew up with as instrumentalists.[3]

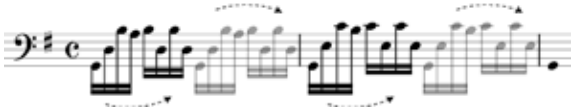


Example 12. The basic figure, common both to the Dotzauer exercise and to the opening of the Bach prelude, leading to the weak part of the beat.

[3] The Dotzauer method, in the style of Bernhard Romberg (Dotzauer's influence) was everywhere in Europe having given nourishment to cello playing since that time. Dotzauer himself, thought of the Bach Suites as exercises for the instrument.

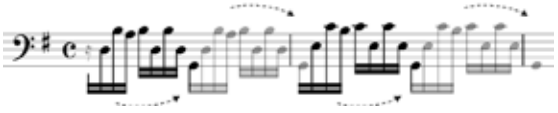
RECOGNIZING THE MUSIC

Following the Dotzauer pattern the performance of the prelude receives mostly performances where it is played according to the barline, bringing to surface several mishaps in its execution, originated in the habits of the players and not in the music itself.



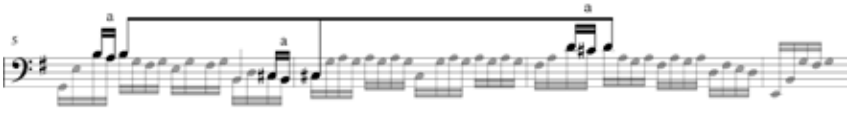
Example 13a. The opening of the prelude, visual and temporal properties.

Thus the predominant approach to the prelude is the one shown in the example above, although posing several problems for the motivic integrity of the piece. According to the motivic structure (see Examples 4–5) the interpretation should follow the version in which the closing of the motive appears on the downbeat, leading to the next unit as shown below.



Example 13b. The opening of the prelude, visual and temporal properties.

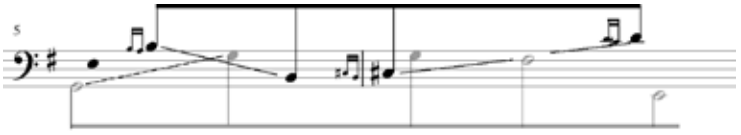
Looking at the next four measures (5–8) the pattern of progression has been broken and a seemingly haphazard voice movement appears at the forefront.



Example 14. The voice movement (measures 5–8) result of voice exchange.

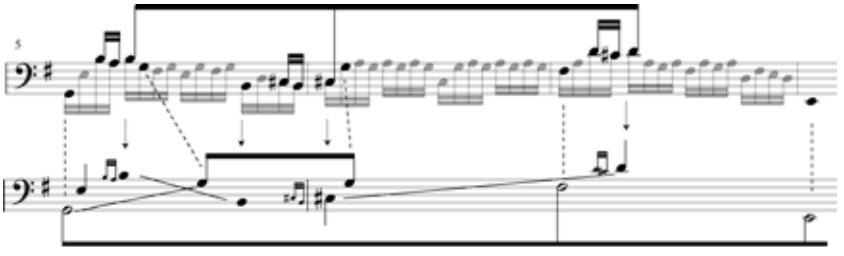
On the measure level there is a voice movement, resulting in a tritone and a diminished 4th (*g*-*c*♯ and *c*♯-*f* respectively). A performance therefore in which the bass is considered to be a separate voice would result in incorrect voice movement.

The peculiar voice movement especially apparent in the bass, can be decoded and explained to be the result of voice exchange in order to show proper voice leading, aided by the characteristic presence of figure **a**.



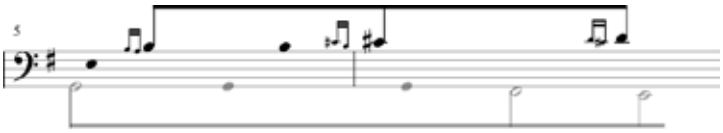
Example 15. The apparent voice movement before proper voice exchange is restored.

Thus, a more careful observation is necessary which is able to show the transfer of register and the voice exchange in order for the actual voice movement to be illuminated, removing the *c*♯ from the bass and placing it in the top voice where it belongs.



Example 16a. The voice movement as it appears taking into account the voice exchange.

After decoding the exchange, the two basic outer voices are revealed, showing clearly the way in which each voice is developed as well as the way in which these measures should be performed.



Example 16b. The voice movement after the voice exchange restoration.

As it can be seen the deceptive melodic dissonance (*g-c♯-f)* in the bass has been solved and the actual sequence of the notes is smoothly divided into two separate voices in stepwise motion.

A further explication of the material for measures 1–8 is given here where –after the restoration of the voice exchange– both the smooth voice movement as well as an initial seven-measure '*ascending line*' leading to *d* over a dominant harmony, are revealed.

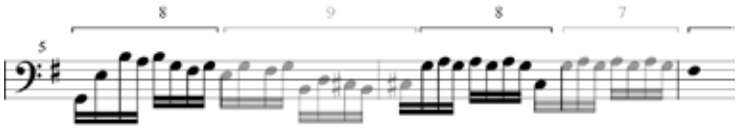
Example 17. The basic line showing the proper voice leading (measures 1–8).

This voice movement towards the Dominant is also a unifying element of the entire piece as it appears in all subsequent movements of the suite.

METRIC IMPROVISATION

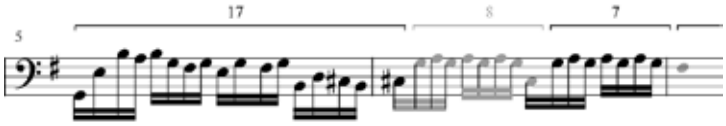
It is interesting to note that quite a few professional performances of the prelude have identified the basic unit as being [𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯] instead of [𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 | 𝅘𝅥𝅯].

The first problem with this approach appears in measure 6 where the seemingly arpeggiated pattern of the prelude is for the first time broken, replaced by stepwise motion leading to a close on the *c♯* on the strong beat. That forces performers to add an extra note to the 8-note pattern making it a 9-note one [𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 | 𝅘𝅥𝅯] which they are forced to match with a 7-note pattern [𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯] at the end of measure 6, upsetting thus the rhythmic flow as they try to return to the previous 8-note pattern [𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯] in the next measure.



Example 18a. The metric discrepancy in measures 5–6.

Additionally, quite a few performers take the entire fifth measure as one unit performing it as a cadenza leading to the *c*♯, returning to their initial pattern two measures later (measure 7).

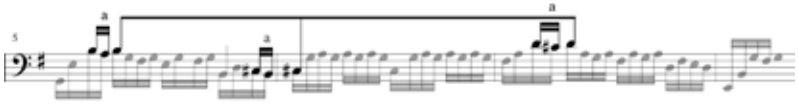


Example 18b. Measures 5–6, the incorrect cadenza-like rhythmic interpretation of the passage.

The result in both cases is a double rhythmic shift of antichronism, which is certainly not dictated by the composition.

It is worth examining what makes the music seem to come to a close in measure 6. As it has been shown (Example 16), the melodic progression continues, reaching the Dominant, onto the next measure 7. Thus the *c*♯ is only the leading note towards the *d* on the second beat of measure 7, following the pattern already established on the first measure.[4]

[4] This fall on *d* is parallel to the long *d* on measure 22.



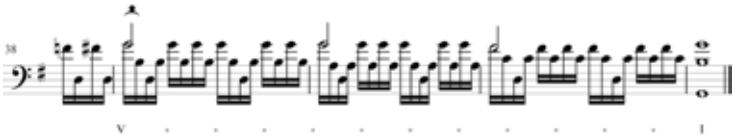
Example 18c. The actual direction of the voice movement in measures 5–7.

In measure 6 the seemingly arpeggiated pattern of the prelude is for the first time broken, replaced by stepwise motion leading towards *c*♯. A note-to-note approach thus, would give the impression that the *c*♯ as a point of arrival, aided by the fact that it is followed by *g*, forming a melodic dissonance (tritone) a connection, which is to be avoided, misleading performers that there is an end there.

A performance however observing the voice movement has to continue through the *c*♯, which is not a closing but a leading note, to *d* (measure 7) and consequently, following the extension and the cadential harmonic progression ii/V–V/V–V reach the *d* on measure 10.[5]

[5] There is an exhibition of structural understanding of these measures in the 1996 recording of Jaap ter Linden (but not in the 2006 one) where both figure a and the movement towards *d*, are clearly shown.

Burdened with tone quality, pitch progression and rhythmic complexity, performers often tend to neglect issues of harmony, disregarding sometimes vital information about the structure of the composition. The most common misinterpretation is that of non-harmonic notes, which are treated as belonging to the harmony and therefore executed as something they are not. In measures 39–41 there is a perfect authentic cadence (V–I) bringing the prelude to a close.



Example 19. Measures 39–41 as they appear in the score.

As it can be seen there is a double appoggiatura (𝆕) over the Dominant (V), which resolves –one note at a time– in the next two measures. As a result however of the chromatic movement of the previous measures the *g* appoggiatura is perceived by performers as the note of resolution, causing utmost confusion to the ear.[6]

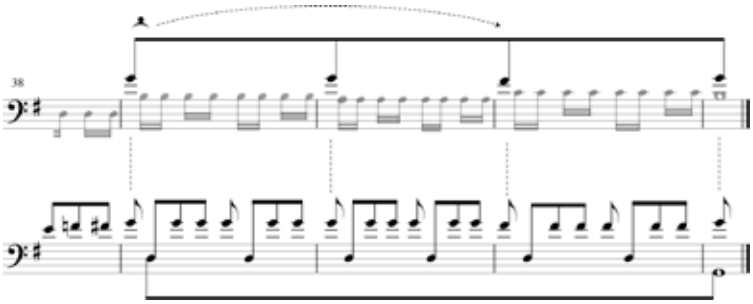
In order to obtain a better understanding of the passage the two appoggiaturas (Example 20a), being non-harmonic notes, have to be removed allowing the actual –harmonic– notes to sound in their place (Example 20b).

Example 20. The resolution of the double appoggiatura as guide towards a correct performance.

Thus, after their removal, a three-measure *prolongation* of the Dominant harmony is revealed. It also becomes evident that the *f*♯ (measure 38) is only a note of anticipation and the actual resolution comes three measures later aided by a rhythmic ostinato (𝄾 𝅘𝅥𝅮𝅘𝅥𝅮𝅘𝅥𝅮 𝅘𝅥𝅯) leading to the final –and only– resolution, in the last measure.[7]

[6] Anner Bylsma, a dedicated performer of the style who has twice put the suites on record, states that the high *g* under discussion (measure 39) "is the long awaited resolution of the low *a* in measure 31" (Bylsma 1998: 22).

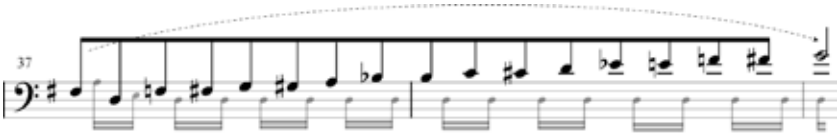
[7] The figuration is a rhythmic augmentation of motive **a**, although unfortunately in some recordings instead of the inherent (𝄾 𝅘𝅥𝅮𝅘𝅥𝅮𝅘𝅥𝅮 𝅘𝅥𝅯), it appears as (𝅘𝅥𝅮𝅘𝅥𝅮 𝅘𝅥𝅯𝄾) reinforcing the erroneous sense of an intensified extension of I.



Example 21. The rhythmic pattern (𝄾 ♩♩♩ ♪) based on motive **a**, leading towards the final cadence.

A note should be made about the chromatic movement (measures 37–38) introducing the final cadence and the events leading to it. The most important notes of the entire prelude are *a* and *d*. Note *d* acts as a point of arrival several times within the piece the most important being in measures 10, 22 and 29. Up to this point the role of *a* has been that of V/V of *d* approaching it through its leading note *c*♯. From measure 29 onward note *a* has been treated harmonically as ii, leading through a particularly long pedal (measures 31–38) towards the Dominant, which again through another pedal point on *d* (measures 37–41) brings the piece to a close. It is also worth noting the leading note *f*♯ appearing simultaneously (measure 37) over the *d* pedal, lasting for five measures before it resolves to *g* in the final measure.

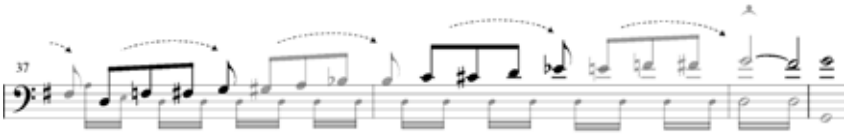
This passage (measures 37–38) is often played as one unit losing its inherent 4-note rhythmic pattern identity [𝄾 ♩♩♩ ♪] of the initial motive, giving the impression of an upward continuous movement ending on the G appoggiatura, leaving a taste of the Doppler effect to the ear.



Example 22a. The improvisatory approach in which all notes are played as in a chromatic scale, ignoring the inherent 4-note pattern.

The next example shows the inherent rhythmic pattern of the seemingly chromatic scale, the stress points of which would clarify the harmonic progression as well as define the motivic structural boundaries.[8]

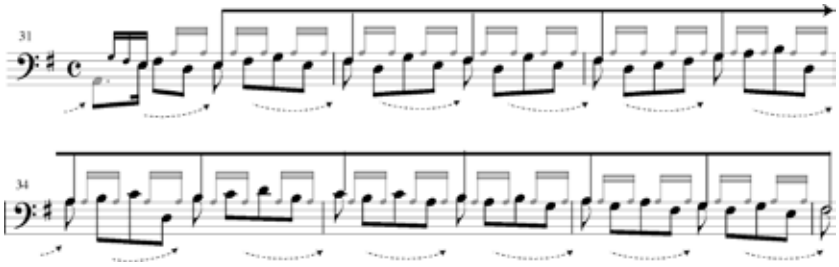
[8] The execution of these two measures as one unit and the need for a point of arrival at its end, are possibly responsible for the wrong attestation of note *g* (measure 39) as note of resolution (see Example 24).



Example 22b. The 4-note rhythmic pattern, distinguishing the difference in execution between a motivic compositional device and that of a mere chromatic scale (measures 37–38).

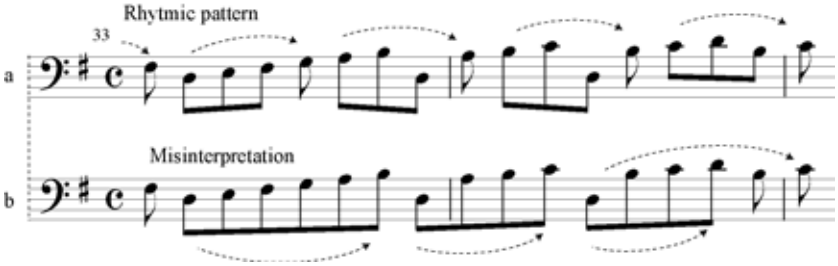
REINVENTING THE LINE

Following the principle of the rhythmic unit based on motive **a** [♩♩♩ ♪] measures 31–37 have to be seen under the same light, giving melodic and harmonic direction towards the *f*♯ (measure 37), which marks the starting point of the final cadence.



Example 23. The rhythmic pattern [♩♩♩ ♪] inherent to the piece, applied to the passage (measures 31–36) leading to V towards the final cadence of the prelude, providing punctuation marks in order to illuminate its syntactical meaning.

On several recordings the stepwise motion of the notes often misleads performers to elongate the four-note motive (measure 33). Thus, following the stepwise motion misinterpret these two measures, producing arbitrary figures, oblivious to the motivic structure of the composition.



Example 24. The rhythmic misinterpretation (b) of motive **a** [♩♩♩ ♪] and its correct placement according to the motivic structure (a) in measures 33–34.

In this way the motivic pattern (a) gets distorted forming groups according to the non structural stepwise motion (b), producing a rather incoherent melodic line, which seems to ignore basic rules of musical syntax and is unable to deliver the compositional meaning.

As a result of the effort of Rococo methods to release on the performance market sheer dexterity it was made possible for the wish to come true, achieving exactly that, to fill the concert halls with stunning bravura at the expense of musical structure, having brought the instrument to become both the purpose and the goal; an end in itself.

Within this context, it seems a different approach is necessary, one which is not a descriptive depiction of the geography that lies on paper, but one which translates meaningfully the symbols on it, using the syntax of music, for one does exist.

[9] The year refers to the date of recording.

Recorded performances examined[9]

Bailey, Zuill	2008	Telarc
Bengtsson, Erling Blöndal	1984	Danacord
Beschi, Paolo	1996*	Winter & Winter
Bylsma, Anner	1979*	Sony
Bylsma, Anner	1992*	Sony
Casals, Pablo	1939	THE50s
Coppey, Marc	2003	H Mundi
Demenga, Thomas	1991	ECM
Dieltiens, Roel	1991*	Accent
Dieltiens, Roel	2009*	Etcetera
Fanlo, Iagoba	2007	Arsis
Fournier, Pierre	1959	DG
Fujiwara, Mari	1982	Denon
Gastinel, Anne	2007	Naïve
Gendron, Maurice	1964	Philips
Harnoncourt, Nikolaus	1965	Teldec
Harrell, Lynn	1985	London
Isserlis, Steven	2006	Hyperion
Kirshbaum, Ralph	1993	Virgin
Klinger, Sebastian	2008	Oehms
Kuijken, Wieland	2001*	Arcana
Lipkind, Gavriel	2006*	Edel
Linden, Jaap Ter	1996*	H Mundi

Linden, Jaap Ter	2006*	Brilliant
Ma,Yo-Yo	1982	CBS
Ma, Yo-Yo	1998	Sony
Mainardi, Enrico	1957	Orfeo
Maisky, Mischa	1985	DG
Markevitch, Dimitry	1992*	Gallo
Mørk, Truls	2005	Virgin
Onczay, Csaba	1992	Naxos
Queyras, Jean-Guihen	2007	H Mundi
Quijken, Wieland	2001	Arcana
Rostropovich, Mstislav	1991	EMI
Rudin, Alexander	2000	Naxos
Schiff, Heinrich	1984	EMI
Starker, Janos	1959	EMI
Suzuki, Hidemi	1995*	H Mundi
Thedeen, Torleif	1996	BIS
Wang, Jian	2004	DG
Wispelwey, Pieter	1998*	Channel
Yoran, Viktor	1992	Denon

Transcriptions

Kuijken, Sigiwald	2009	Accent	Viola da Spalla
Pandolfo, Paolo	2001	Glossa	Viola da Gamba
Terakado, Ryo	2008	Denon	Cello da Spalla
Imai, Nabuko	1997	Philips	Viola
Rysanov, Maxim	2009	Bis	Viola
Meyer, Edgar	2000	Sony	Contrabass
Baborak, Radek	2002	Kryston	Horn
Hazelzet, Wilbert	1999	Glossa	Flute
Jonge, Leendert de	1999	Columns	Flute
Nicolet, Aurele	1980	Denon	Flute
Verbruggen, Marion	1991	H Mundi	Recorder
Lams, Bert	2005	Inko	Guitar
Wangenheim, Andreas von	1999	Arte Nova	Guitar
Yamashita, Kazuhito	1989	Crown	Guitar

* Baroque Cello

References

Bylsma, A. (1998). *Bach, the Fencing Master*. Amsterdam: A. Bylsma