

## B.A. Zimmermann's Solo Cello Sonata, page 1, system 6: A Thick Description

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**Abstract:** This paper presents a thick description of a small excerpt of the emblematic Solo Cello Sonata of Bernd Alois Zimmermann. A reading will be developed that will take into account the widest possible range of knowable aspects of the piece, from the aspect of pitches in its serial dimension, to the rhythmic serialization itself, concluding with that which is the main aspect aimed by the composer, which is the writing of Time from the interpreter's demanded gestures. This aspect is presented here with an attempt to systematize musical gesture and its display as a analytical method.

**Keywords:** Rhetoric. Hermeneutic. Musical Gesture. Cello. B. A. Zimmermann

**Título:** A sonata para violoncelo solo de B. A. Zimmermann, página 1, sistema 6: uma descrição densa

**Resumo:** Este trabalho apresenta a descrição densa de um pequeno excerto da emblemática Sonata para violoncelo solo de Bernd Alois Zimmermann. Será desenvolvida uma leitura que levará em conta a maior amplitude possível de aspectos cognoscíveis da peça, desde o aspecto das alturas em sua dimensão serial, até a própria serialização rítmica, concluindo com aquele que é o principal aspecto objetivado pelo compositor, que é a escrita temporal a partir das gestualidades demandadas do intérprete. Esse aspecto é apresentado aqui junto a uma tentativa de sistematização do gesto musical e sua representação em um modelo analítico.

**Palavras-chave:** Retórica. Hermenêutica. Gesto. Violoncelo. B. A. Zimmermann

The Sonata for Cello Solo was written by the German composer Bernd Alois Zimmermann between 1959 and 1960, commissioned by the South German Radio, SDR, in Stuttgart. The piece was written for one of Zimmermann's best friends and one of the greatest cellists of the Twentieth Century, Siegfried Palm. Dedicated to the wife of the composer, the piece brings a subtitle of great significance; It is the first verse of the biblical book of Ecclesiastes, which in Zimmermann's translation of the Vulgate says: "et suis

spatiis transeunte universa sub caelo" (and there is time for every purpose under heaven).

In the first section of the Sonata, Rappresentazione (representation), there is, in its sixth system, one of the most technically and musically difficult excerpts of the whole work, but containing in its density elements of fundamental detection for its interpretation (fig.3) . According to the published edition, there are three pentagrams, where the superior refers to notes played in *sul ponticello*, close to the bridge, the middle pentagram refers to notes played in *pizzicato* and the lower pentagram refers to notes played at the frog. What immediately comes to the eyes in the excerpt is the constant clefshifts due to the fast and extreme changes of register, which, in turn, demand changes between positions very far in the fingerboard of the instrument.

From the point of view of the pitches, Zimmermann employs a serial dodecaphonic procedure in the organization of the piece, following this setting<sup>1</sup>:



Fig. 1 – Tone row adopted in the excerpt

In the passage in question, the series appears mainly in the middle system, but counting on its first note in the upper line:

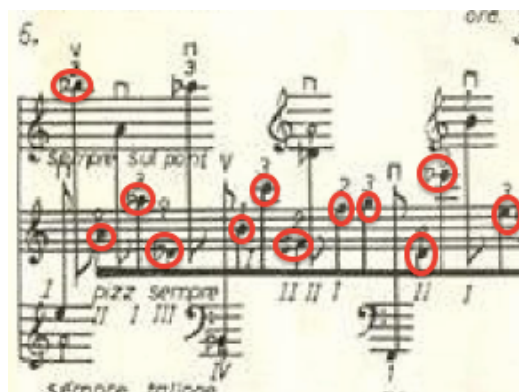


Fig. 2 – The series as used in the excerpt

<sup>1</sup> KONOLD, 1998, p. 225

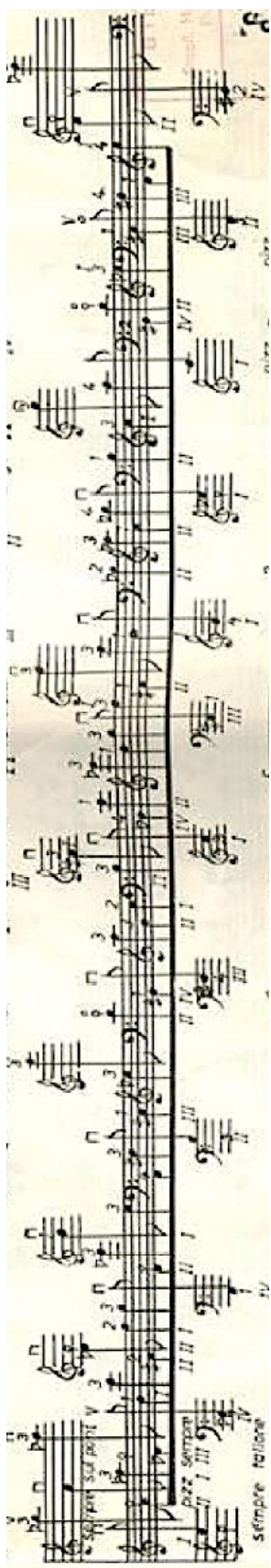


Fig. 3 – Zimmermann – Solo Cello Sonata: p. 1, sistema 6. Edition Modern, 1961.

In addition to the application of the series in the line performed as pizzicato, there is the inclusion of a secondary series in the bottom line, based on a succession of tritones, which is written interpolated to the other lines, but only in the set executed in the bow's frog:



Fig. 4 – Tone row of the bottom pentagram, played *sempre tallone*.

Although this series has an important role in the organization of pitches, it cannot be said that it has the prominence in the discursive flow, having as one of the reasons for this the fact that Zimmermann does not obey to rigor the rules of contrapuntal and permutation in the development of pitches and even by the fact that the interpolations, so contrasting, end up hiding the linearity of the structure.

However, another serial procedure assumes a greater prominence in the constitution of the discourse, by agglutinating more broadly the sound elements grouped in the system. It is a serialization of the counterpoint between the three voices that generates what Konold calls the serial *ritardando* and *accelerando*<sup>2</sup>. Between the first and the other lines, there is an alternation that follows the progression 1-2-4-5-6-7-9-10-10-1, which makes the occurrences of the *sul ponticello* sound less present. At the same time, the opposite happens in the relation between the lower line, played at the frog, and the others, where an accelerating effect is created in the approximation of similar sounds, obeying progression more regularly 6-6-6-5-5-5-5-4-4-4-4. This serial counterpoint of sounds is fundamentally important for a constantly neglected question in the performance of this piece, which is the great contrast required between the sonorities of the three lines. Perhaps motivated by the *Prestissimo Possibile* indication, most cellists tend not to understand that it is part of this possibility not to compromise the timbristic clarity, so that the serial counterpoint of sounds can be heard with their idea of simultaneous dilation in the two directions of time. This issue becomes even more evident when, in Zimmermann's manuscript for the excerpt, a change of color is observed for each voice/layer. Not only that, but three options for the three types of attack are arranged, perhaps for the choice of

<sup>2</sup> Ibid., p. 226.

the performer at that stage of the composition. The manuscript also shows, however, Zimmermann's initial idea that the stretch was to be performed in about ten seconds, which would imply an impractical speed, even if the clarity of the sounds was discarded, which seems to have been the reason for the removal of this indication in the edited version (fig 5).



Fig. 5 – Sonata manuscript, available in the Akademie der Künste de Berlim.

These two serially operated aspects, pitch and counterpoint, are essential for understanding a more objective dimension of the musical material that the score brings. However, there is still a set of elements that have traces in the text and are not yet encompassed in the bidimensionality of the musical note, much less in the twelve-tone sense that suppresses the value of the octave. It is the performatic energy demanded by each change of pitch and mode of attack and that has direct consequences in the temporal dimension imposed by the music. If, on paper, it appears to be only one long sequence with sixty-eight notes, in practice there is a world between each of these notes. The world of the interval.

The interval is not only analytical space, from the point of view of pitches, but also a space of connection between each event, where an amount of energy is required to connect two sound-bodies. The interval is the energetic space that enables the becoming of the next musical event and within which the performer can act as such. However, the score cannot describe the interval and, neither, an analysis that reduces the music only to the printed data and ignores the comprehensiveness of musical discourse. Zimmermann presents his understanding of the interval, which goes beyond the limits of the object and can only inhabit reality in a kind of a priori intuition within the same Kantian category of the *Weltanschauung*<sup>3</sup>.

From this, Zimmermann proposes an understanding of musical time that extrapolates the graphic representation, which equals all the signs to their metric value, suggesting a way of making music where time is not measured in its ideal duration, but a time that is done in the performance itself. He calls that the "effective time duration"<sup>4</sup>, a sense of time that is made not within the dichotomies subject/object or real time/perceived time, but a time that materializes in reality with distinct energetic quantifications and which, therefore, is not linear.

Such a proposal, which escapes the Cartesian plan of the score, makes difficult an analytical proposition about it. However, one can suggest here an image that unfolds the timeline, albeit on two axes, but which deals not only with time as a plane, but with time as an energetic flow. So, instead of a straight line, one could think of this energy agency with several slots. By using the excerpt in question, one can design the variables demanded and the types of relations established within each connection of events and their realization from the technical point of view.

<sup>3</sup> ZIMMERMANN, 2010, p. 149. In the original, Zimmermann refers to Kant directly, but to the concept by means of a derived term, *Anschauungsform*.

<sup>4</sup> *Ibid.*, p. 150.

Concerning the cello, quantities could be attributed that quantify this energy expended, not so much as an empirical measure, but as relations proportional to each other, as is the difference in the fingerboard of the instrument between a position shift of a semitone and a shift of octave. Within this proportionality, two sets of variables can be thought that, because they are simultaneous, multiply in the generation of the sound product, instead of adding and juxtaposing. The first set consists of the elements executed by the left hand, more specifically the position shifts. Although each string skipping constitutes a change of position, it can not be said that all of them compromise a linear energy flow in the same way. Modifications of the entire back-shoulder-arm-forearm-hand-fingers system imply a much higher energy expenditure, in addition to the mental energy used to establish psycho-motor references. For the present model, one proposes a magnitude 1 for the pure note, without accounting any movement. For each position shift, measured by shifts of semitones, an increase of 2.5% of the initial magnitude is attributed. For this analysis are taken as reference the fingerings present in the printed edition, which do not vary significantly from those present in the manuscript. The second set of variables consists of the required elements of the right hand. Two events demand an increase of energy relevant to a quantification, which are the alternation between pizzicato and bow and the string skippings. The change between neighbor strings and the change of attack between frog and sul ponticello do not imply an expense that disrupts the linearity of the flow. Again, by assigning proportional rather than absolute values, one can think of a 10% increase in the initial magnitude for pizzicato and bow grip alternation, plus a 5% increase for one-string skippings and 10% for two-string skippings. From this, it is suggested a quantitative representation of the interval in its energetic variation in time, within the stretch of the sonata in question:

Pitch	LH (%)	RH (%)	Effective Time
E5	0	0	1
Bb5	7,5	0	1,075
A4	2,5	10	1,375
A4	0	10	1,1
Ab5	0	10	1,1
Db5	0	5	1,05
Ab5	0	10	1,1
Bb2	20	10	1,32
B4	5	10	1,155
C6	12,5	0	1,125
F#4	15	0	1,15
Db4	12,5	10	1,125
F4	15	10	1,265
G4	0	0	1
F2	30	10	1,43
D4	5	10	1,155
Eb6	32,5	0	1,325
B5	30	10	1,43
E5	5	10	1,155
F2	22,5	10	1,3475
F#3	0	5	1,05
B3	5	10	1,155
C#3	2,5	10	1,1275
Eb5	17,5	5	1,23375
C6	30	10	1,43
D4	27,5	10	1,4025
G#2	2,5	5	1,07625
F#3	0	10	1,1
A5	27,5	10	1
G4	5	0	1,05
C5	0	0	1
B3	5	0	1,05
F#4	0	10	1,1
C5	5	0	1,05
Bb2	0	10	1,1
E4	5	5	1,1025
Eb6	32,5	0	1,325
D5	20	0	1,2
G5	5	0	1,05
C#3	27,5	10	1,4025
F5	22,5	10	1,3475
F#4	0	0	1
F5	0	10	1,1



C6	17,5	10	1,2925
B4	20	0	1,2
G4	5	10	1,155
Bb3	0	10	1,1
Ab5	20	0	1,2
A4	0	0	1
Bb5	0	0	1
Eb5	0	10	1,1
B3	22,5	10	1,3475
C5	7,5	0	1,075
G5	20	10	1,32
A5	0	10	1,1
A5	0	10	1,1
G#2	17,5	10	1,2925
D4	5	5	1,1025
Eb5	0	0	1
C#3	5	5	1,1025
D4	2,5	10	1,1275
F#3	0	10	1,1
F2	5	0	1,05
E5	10	10	1,21
D4	0	10	1,1
G#2	5	5	1,1025
Eb6	35	10	1,485

**Tab. 1** : Quantitative analysis of the intervals. (Center center [ $\cong 261.6$  Hz] = C4)

More interesting still can be the representation of the disturbances in the line of time that, instead of running linearly, is injured due to the dilations caused by the energetic variation:

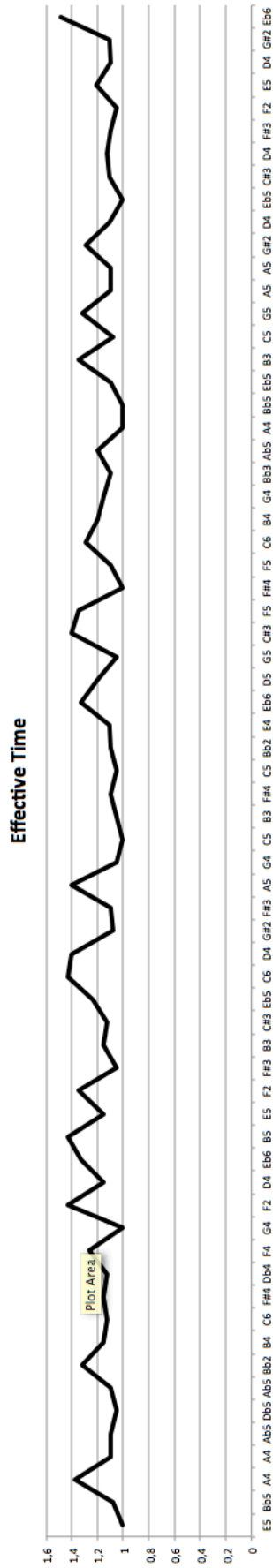


Fig. 6 – Disturbances in the Line of Time (Y: energy time in the interval; X: pitches)

It is necessary to reinforce the unpretentiousness of proposing here a general analytical model, but it only proposes the effort to create a tool more appropriate to the set of actions involved in the musical discourse in question, making possible, together with the aspects previously analyzed, a thick description of reality and not its reduction to a model that is foreign external to it. The energetic variation is represented proportionally and can undoubtedly vary in absolute values depending on different technical levels between performers, in addition to other variables such as particular difficulties and inadequate preparations.

If, on the one hand, these variations can be analyzed quantitatively, on the other hand their qualitative aspect is not new within the musical practice. Siegfried Palm himself, cellist for whom Zimmermann wrote the sonata, confirms that the distance between the intervals implied this expansion for the composer, in performance<sup>5</sup>. In fact, this information is only necessary, since instrumentalists forget the origin of their repertoire, and even that this was a common practice, present from the most remote examples of the repertoire, as is clear in *Ricercar 5*, By Domenico Gabrielli:



Fig. 7 – Domenico Gabrielli, *Ricercar 5*, cc. 1-4

It can not be left aside in a conception of analysis of the musical discourse, therefore, the dialogue that happens between composer and interpreter in its production. As Luciano Berio said, "it is very important to understand (...) that a musical instrument is itself a fragment of musical language"<sup>6</sup>. It would be wrong to ignore the acoustic implications of a sound signal that is the notation, just as it would be to ignore the act of listening to a discourse. The score cannot contain the fullness of meaning that musical discourse has.

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<sup>5</sup> PALM, 1985, notes on "Vier kurze Studien", written by Zimmermann

<sup>6</sup> BERIO, 1983, p. 78

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