TEXTURE AND FORM IN BEAT FURRER'S MUSIC: AN ANALYSIS OF PRESTO, AND A DUE

A Master's Thesis

by
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Ankara
March 2021

To my master's teachers

Associate Professor, Associate Dean Dr. Tahsin Tolga Yayalar

and

Dr. Ulrich Alexander Kreppein

who have been supporting me throughout this journey

TEXTURE AND FORM IN BEAT FURRER'S MUSIC: AN ANALYSIS OF PRESTO, AND A DUE

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ABSTRACT

TEXTURE AND FORM IN BEAT FURRER'S MUSIC: AN ANALYSIS OF PRESTO, AND A DUE

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Frequently used techniques between the compositions of one specific composer can cause recognizability. It is conceivable to tie compositions to their creator by detecting similar compositional approaches or certain specific techniques and craftsmanship. One of the ways of developing a certain character as a composer is rooted in elaborating and emphasizing a limited number of compositional materials in different frameworks.

This thesis aims to show Beat Furrer's *écriture* in two of his 1997's works, *Presto* and *a due*, which have several common elements and similar approaches in their compositional process. Besides, the thesis traces Furrer's approach towards compositional crafts in both pieces to explore the gathering of his techniques in using patterns. In these pieces, his patterns' organization includes pitch, pitch class, interval, and rhythmic patterns, which is possible to refer them to a post-serialism approach.

In order to grasp this statement, this thesis analyzes texture, form and their relation in Beat Ferrer's music. By analyzing the two pieces and discussing the mutual methods and

procedure between them, this thesis aims to discover his attitudes as a composer for the indicated pieces, which at the end leads to the recognizability of the composer by the listener.

Keywords: Techniques, *Écriture*, Common Elements, Patterns, Post-serialism

ÖZET

BEAT FURRER'İN MÜZİĞİNDE DOKU VE FORM: PRESTO, VE A DUE ANALİZİ

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Belirli bir besteci tarafından çeşitli eserlerinde sıkça kullanılan teknikler zamanla tanınabilir hale gelebilir. Bu nedenle benzer bestecilik yaklaşımlarını ve zanaata yönelik belirli teknikleri eserlerin yaratıcısıyla ilişkilendirmek makul bir yaklaşım olur. Dolayısıyla belirli bir bestecilik stili geliştirmenin yollarından birisi de sınırlı sayıda materyali farklı çerçevelerde incelikle işleyip pekiştirmekten geçer.

Bu tez, Beat Furrer'in, bazı ortak unsurlar ve besteleme sürecinde benzer yaklaşımlar içeren, 1997 tarihli iki eseri *Presto* ve *a due* deki yazı (écriture) anlayışını ele alır. Bununla birlikte, Furrer'in bu iki eserdeki bestecilik zanaati, bestecinin uyguladığı teknik ve paternler tespit edilerek incelenecektir. Bu paternlerin düzenleniş biçimi post-serializm bağlamında ses perdesi, perde sınıflandırması, nota aralığı, ve ritmik paternleri içermektedir.

Anahtar Kelimeler: Teknikler, *Écriture*, Ortak Unsurlar, Paternler, Post-serializm

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INTRODUCTION

> For each piece, I want to create the material and the interrelationship of the intervals anew. Composing would not interest me if I had the impression that I was reproducing a well-worn concept rather than taking a step in a new direction. For sure, some works are recognizably linked together in that they turn on the same idea, but always that idea appears in a completely new light. (Furrer, B. 2017.)

Attributing a piece of music to a specific composer may be achieved through the recognition of certain elements: pitch and rhythmic organization, handling the timbre, orchestration, stylistic features, common habits etc. The combination of these can be summarized with the French word *écriture*. Even though the direct translation of *écriture* is simply *writing* in English, it includes more than that. It refers to technique and craft of writing music as well as to the composer's personal way of writing them. Whilst Furrer's compositional intention may very well to create works where he explores new ideas, he also acknowledges that his works can be linked together through recognizable features. The main goal of this thesis will be identifying his writing style, his *écriture* in two of his compositions.

In other words, the same attitudes by a composer might appear in their different pieces that can lead to help the audience for correctly attributing the piece to its composer. It could be referred to as the attitude of the composer towards the form, energy, speed, repetition, the sonic world, orchestration, and several other features that help to increase the chance of recognizability for the listener therefore yielding

to a personal compositional style. Yet, in this thesis, the main focus is finding the patterns through the analysis of texture and form to reveal the resemblance between Furrer's selected pieces and his post-serial approach.

Since the premiere of his *Frau Nachtigall* for solo violoncello in 1982, Furrer has been actively composing. However, his compositional style has elaborated during these years. For example, his early compositions, such as *... y una canción desesperada* for three Guitars (1986) have different characteristics than *a due* and *Presto*. Moreover, *a due* and *Presto* belong to his period of composition that was highly structured through post-serial approach. Since these pieces count as classics of Furrer and also, they are structured mostly based on patterns, they are helpful examples to be analyzed for discovering his *écriture*. Moreover, it is still possible to trace the signs of *a due* and *Presto*'s compositional techniques in his later compositions like *Phaos* (2006) and *Konzert für Klavier und Ensemble* (2008) as well.

Hence, for this thesis I selected two pieces from the same year to analyze Furrer's compositional technique during this period of his career. There are two chapters in this thesis devoted to each piece. By analyzing these techniques, I will aim to identify Beat Furrer's *écriture* for that particular period. The similar approaches towards composition, which can tie his works together, are uncovered while mentioning some examples and comparing the similarities of his composition materials in these pieces.

LITERATURE

Since Beat Furrer's compositional career is mostly tied to continental Europe: mainly Austria where he lives and teaches, Germany and Switzerland, most of the literature about his music is in German such as the book *Metamorphosen des Klanges Studien zum kompositorischen Werk von Beat Furrer* (Ender, 2014). Additionally, there are articles for the analysis of Furrer's music including Mathias Hermann's text in *Musica floreat!: Jürgen Blume zum 70. Geburtstag - Spektrum Musiktheorie* (2016), which includes analysis of *Spur* (1998). Moreover, Ulrich Mosch from the volume *Metamorphosen*, edited by Michael Kunkel, has a detailed analysis introducing *Presto*'s post-serial procedures; and, he also refers to *a due* shortly: "*Auf* partly based on the same material is also *a due* for viola and piano, which was written a little later." (Mosch, 2011). There are also secondary sources like the text by Christian Baier, and quotation from Marie Luise Maintz which both mentioned aggregate states. (Ender, 2014). Nevertheless, there are some literatures in English about Furrer's music as well. Andile Khumalo, in his thesis *Glissando as a Metaphor in Beat Furrer's FAMA*, emphasizes the similarities between Furrer's music from another perspective as well:

> The use of similar musical material from one work to another in Beat Furrer's works is what unites them in an unmistakable identity. What makes each work unique, however, is the way new networks of meaning for the material become established as the composer reworks his material for a given work. (Khumalo, 2014)

METHODOLOGY

This thesis discusses the compositional methods used in Beat Furrer's two pieces from his middle period: *Presto* and *a due*, and a chapter is dedicated respectively to each piece.

Even though never overtly serial, Beat Furrer's music from the 1990s shows a great deal of influence from post-serial thinking; it is possible to trace his usage of extensive number patterns to these post-war serial methods.

Each chapter will begin with a brief background for each piece, followed by an overview of the formal structure. Since Beat Furrer's music is highly sectionalized, and each section is almost entirely devoted to specific patterns, I chose to analyze the pieces section by section. Therefore, in each chapter, both pieces will be analyzed in-depth, focusing on mostly structures that are based on number patterns. The patterns are mostly used for determining the rhythms and pitches. However, there is also a great deal of timbral planning. Although this is not the main focus of the thesis, these timbral transformations will also be briefly discussed in regard to the overall structure for each piece.

Since Furrer's music stems out from the serial tradition of post-war Europe, I have adopted the post-tonal terminology that was put forward by Allan Forte and then later by Joseph Straus. Some of the analytical methods suggested by Joseph Straus have been used. However, most of the analyses is conducted through detailed graphics, to represent the intricate number patterns that are used in the pieces.

PURPOSE OF STUDY AND CONTRIBUTION

Beat Furrer has established himself as one of the leading composers of European avant-garde music. For a prolific composer as Beat Furrer, there is limited technical writing about his music. Most of these writings are still in German, and literature in English on Furrer's music is limited to a number of dissertations. Considering his

popularity among the younger generation composers, a thorough study of his music is much needed. Even though this thesis is limited to only two of his pieces, it aims to understand his *écriture* during this period of his career. Both of these pieces will be analyzed in detail in terms of pitch and rhythmic organization. Through these analyses, I will highlight how his methods are still closely tied to the post-war serialism. It is common knowledge that his music is based on number patterns, however, it is these two pieces that these patterns are encountered in absolute clarity and concentration. With *Presto* and *a due*, it is possible to trace Beat Furrer's serial origins and also, they would be essential in understanding his later music where these patterns are used in a more subtle way.

CHAPTER I

PRESTO

> "I am interested in speaking time structures that follow a gesture of language, or rather in a structuring of time that represents and expresses itself in repetitive sounds." (Furrer. B. 2001.)

Presto, a composition for flute and piano written in 1997 by Beat Furrer, premiered in March 1998 in Berlin by Eva Furrer (flute) and Marino Formenti (piano). *Presto* demonstrates quite clearly some of the compositional techniques Beat Furrer has been using in the 90s. As it will be apparent in this analysis, most of these techniques have grown out of the post-serial technique. Although Furrer never employs serial procedures in his work, there is a clear compositional thinking that stems out from the serial developments of previous centuries. In this chapter, there is an analysis of *Presto*, in terms of formal structure and compositional textures, pitch, and rhythm.

1.1. Formal Structure

Presto has three sections with an addition of a coda at the end. Therefore, the form can be briefly summarized as ABA' (A B $A^{2'}$+Coda) where the second A section is based on an inner section of the initial A. To some extent, this represents a ternary form without the traditional tonal functionality. Figure 1.1 summarizes the structure of the sections and the subsections of the piece:

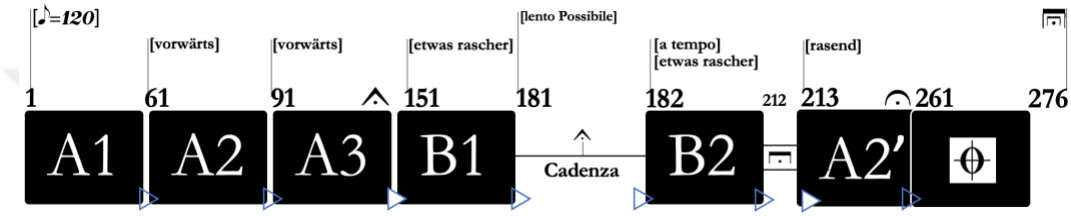


Figure 1.1: Formal structure of *Presto*

Both A and B are further divided into subsections. The A section splits into three subsections where the last one (A^3) ends with a fermata. The B section starts at 151, and the two subsections of B are connected with a short flute cadenza in measures 181. The end of the B is articulated yet with another fermata which refers back to the flute cadenza. Meanwhile, the B section defines itself as a contrasting section in the composition.

The $A^{2'}$ is a variation of A^2, which is then followed by a coda to finish the piece. Although the coda has some textural contrast with $A^{2'}$, it still uses the same material but highly dissolved.

In each section, the piece is laid out by different patterns in various compositional features such as rhythm, interval, and pitch which will be later discussed in detail in this chapter.

1.1.1. Flute techniques, timbral changes, and time signatures in a relation with formal structure

Transforming the level of harmonicity in one instrument or a whole texture is one of the compositional techniques of Furrer's compositions around this time. It would be possible to consider the changes in flute as changes in values in harmonicity. This diversity between the level of harmonicity, happening by the flute, can change the listener's perspective in hearing the music. Moreover, it can prepare the form and create anticipation for further changes in his music. Figures 1.2 and 1.3 illustrate a few examples in *Presto* that demonstrate the timbre changes in different ways. There are examples of a timbre change in one whole of pitch pattern (Fig. 1.2) as well as smaller divisions in the timbre interchanging (Fig 1.3).

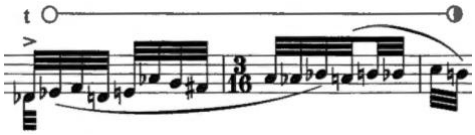


Figure 1.2: *Presto,* measure 61

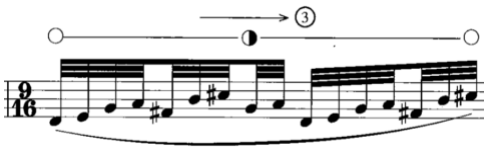
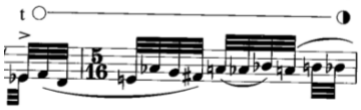


Figure 1.3: *Presto*, measure 260

Moreover, the changing level of harmonicity creates a preparation for timbral alteration. The changing level of harmonicity is not limited to individual instruments.

On the surface, this variation in the flute's timbre can keep the content alive in a micro aspect, but its function can have some more significant roles on a macro level. Changing the level of harmonicity during the piece by flute, can lead the piece to a textural change. This representation of the various sound colors by flute creates another dimension in his composition and can prepare the listener for a textural transition. Air sounds by the flute, through developing the chromatic sets in *Presto*, are the preparation tools for the textural changes in $A^{2'}$ plus coda, besides their function in their integrating with the pitch patterns.

As it was mentioned earlier, in the beginning, the flute presents different gestural characters, each belonging to specific sonic categories: a legato chromatic line, percussive effects, staccato attacks, a trill, and some brief overblown effects. Besides, the chromatic gestures almost consistently go back and forth between pitch and air noise. In the beginning, this is effective at the micro-level, but it will also have a role in the entire piece's timbral transformation. With their own specific timbres, these techniques have a direct connection to each sections' texture. For instance, the transformation from noise to pitch with attached to the pitch pattern (see fig. 1.7) only appears in A and A' when the pitch patterns are represented. Figures 1.5 demonstrates the similar behavior when pitch pattern's timbre changing appears in both A^2 and $A^{2'}$ and figure 1.6, listed the techniques used in the flute part during the A section.



Measure 63 and 64 (A^2)

Measure 213 and 214 ($A^{2'}$)

Figure 1.4: *Presto,* an example of a similar approach towards pitch pattern's timbre changing in A^2 and $A^{2'}$

1. Percussive Effect
2. Staccato Attacks
3. Trill
4. Overblown
5. Jet Whistle
6. Tongue Ram

Figure 1.5: List of the flute techniques in *Presto*

All mentioned categories are presented in A^1 section. In the first three measures, Furrer represents his flute's compositional material which develops throughout the piece. However, in the A^1 section, all mentioned materials are worked out individually and detached separately. As the piece continues, they start to combine and consolidate into a single line (A^2). For instance, in measure 4, the percussive effects and staccato attacks are separated from the chromatic legato line placed in measures 4 and 5. Hence they play different functions (Fig. 1.6).

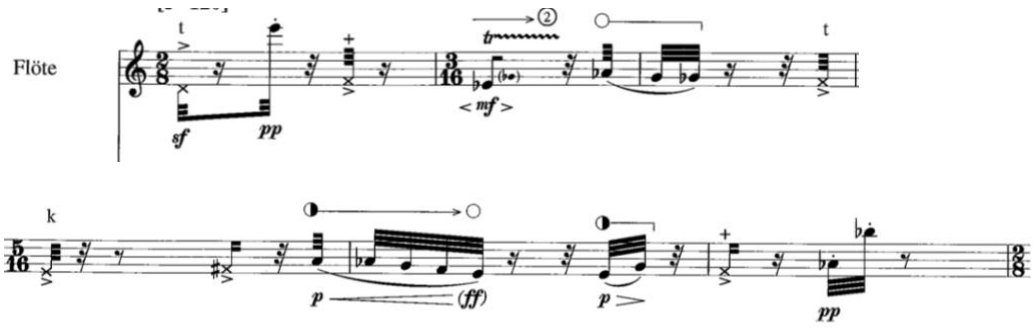


Figure 1.6: *Presto*, measure 1 until 6

On the other hand, after A^2 (measure 61), they start to combine. So, the percussive effects that happen by the flute accents become the trigger function of the pitch pattern in section A^2. As in examples such as measure 61, it also triggers the pattern while it brings out the pitch from noise.

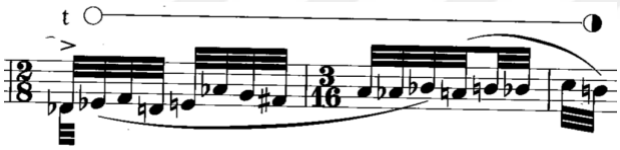


Figure 1.7: *Presto*, measure 61

It is remarkable to mention that the flute part in the B section of the piece does not contain any timbral transformation from noise to pitch or vice versa. It seems that these transformations in a micro-level are attached to the flute pattern (which the thesis will demonstrate the patterns in 1.1.2). In the C section, by returning the flutes pattern, it's timbral transformation also returns, which helps the transition to the coda section.

Concerning the time signature in relation to formal structure, *Presto* can be divided into two groups of time signature in the whole composition:

I. Measures 1 until 212 (except measures 181 and 212)
consisting of 2/8, 3/8, 3/16 and 5/16

II. Measures 213 until 276
consisting of 7/16 and 9/16

Each of the time signature groups assists in representing different features in the composition. For instance, group I in A^1 helps the texture to imply the complementary techniques. Another example, group II creates the opportunity for representing the flute pitch pattern with unequal rhythm subdivision (see fig. 1.13).

1.2. A Section

The A section presents some of *Presto*'s fundamental compositional materials, which are used during the entire piece. Like many of Furrer's pieces, *Presto* also presents its compositional material initially. In this case, the first four measures contain most of the essential elements of the piece. It is possible to witness how the other sections' processes result from elaborating on A^1 's composition materials. These elaborations appear throughout the entire composition by either developing one or a combination of several composition materials from A^1.

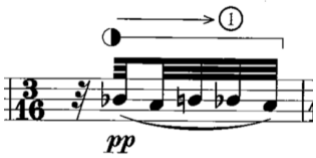
In the A^1 section, the flute, in addition to its percussive task, clarifies itself as a collection of unordered chromatic sets in a specific interval pattern. Moreover, a

rhythmic pattern occurs by the piano, which leads to the interactions between the two instruments.

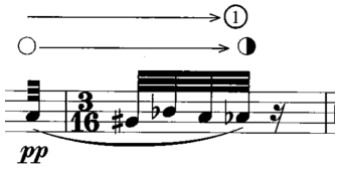
On the surface level, we can observe Beat Furrer is generally using unordered chromatic sets. However, with a detailed analysis, we can observe that the flute follows a rather strict interval pattern. These sets start to expand and develop during the A^1 section by following a pattern of specific intervals, but the pattern breaks each time there is a rest between the flute part. Whenever the flute plays specific pitches during the section, it always follows a rather strict 12-interval pattern. However, in the flute part this pattern appears only in fragmented form. Additionally, it does not always start in the same place, and it is never revealed fully during the A^1 Section. In fact, only eight consecutive intervals are played at most. This whole A^1 section can be regarded as a preparation for the coming A^2 section, in which the flute part will be entirely based on a pitch pattern. Here, this pattern is sixteen thirty-second notes long. Therefore, it repeats itself every whole note duration. The rests occasionally replace notes in the pattern with no distinct rule. However, the rests do not shift the pattern but merely replaces them with silences.

Figure 1.8: *Presto*, measure 61 and 62

As mentioned above, the chromatic sets in the A^1 section are based on interval pattern. For example, the chromatic set in measure 8; the last beat of measure11; plus the first beat of measure 12; are all based on the same ordered interval set: (-1+2 -1 -1).



(-1 +2 -1 -1)



(-1 +2 -1 -1)

Figure 1.9: Interval similarities between the unordered chromatic sets in *Presto*'s A1

As shown in Figure 1.9, the right set in figure 1.9 is a minor second lower than the left set. Therefore, both of these unordered chromatic sets follow the same interval patterns, and they are the same extractions from the A^1's 12-interval pattern. Figure 1.10 demonstrates how the flute part follows a specific interval pattern throughout the A section. There's a pattern of 12 intervals (-3, +1, +3, -1, -1, +3, -1, +2, -1, -1, -2, -1). Obviously, having a particular interval pattern can lead to a specific pitch class row, but since the chromatic sets are very fragmented, it is difficult to pinpoint a specific row. Of course, a count of 12 intervals strongly suggests a post-serial aesthetic here. Hence, it is easier to figure out the trend of their movement during the section by analyzing the interval structure. Figure 1.10 shows the chromatic sets in the A^1 section, containing only the notes with the ordinary headnotes in the score. Therefore, the percussive effects (with x headnotes) and the overblown notes (with square headnotes) are not part of the chart. Also, each row belongs to one set, which does not have any rest within itself.

---------- 12-Interval Pattern ----------

	1	2	3	4	5	6	7	8	9	10	11	12
int.	**-3**	**+1**	**+3**	**-1**	**-1**	**+3**	**-1**	**+2**	**-1**	**-1**	**-2**	**-1**
m.												
2 and 3									-1	-1		
5 and 6									-1	-1	-2	-1
6			+3									
8							-1	+2	-1	-1		
11 and 12							-1	+2	-1	-1		
14 and 15					-1	+3	-1	+2				
16							-1					
16 and 17							-1	+2				
23							-1					
24		+1										
24 and 25									-1	-1		
26 and 27					-1	+3	-1	+2				
27									-1	-1		
28							-1					
28							-1	+2				
28 and 29									-1	-1		
29 and 30						+3	-1					
30							-1	+2	-1			

int.	-3	+1	+3	-1	-1	+3	-1	+2	-1	-1	-2	-1
31 and 32					-1	+3	-1					
33 and 34				-1	-1	+3	-1					
34							-1	+2				
36 and 37						+3	-1					
37								+2				
39							-1					
39 and 40									-1	-1		
40 and 41							-1					
41									-1	-1		
44 and 45							-1	+2	-1	-1		
45							-1					
46							-1	+2				
47 and 48			+3	-1	-1	+3	-1	+2	-1	+2		
49								+2	-1			
50				-1	-1							
51							-1					
51 and 52									-1	-1		
52					-1	+3	-1	+2				
53	-3	+1										
53 and 54						+3	-1					
54 and 55							-1	+2				
55	-3	+1										

int.	-3	+1	+3	-1	-1	+3	-1	+2	-1	-1	-2	-1
55 and 56			+3	-1	-1	+3						
56 and 57	-5	+1										
57			+3	-1								
57 and 58					-1	+3	-1	+2				
58									-1	-1		
58 and 59							-1	+2				
59 and 60			+3	-1	-1	+3						
60							-1	+2	-1	-1		
60							-1	+2				

Figure 1.10: The flute interval pattern in *Presto*'s A^1 section

Figure 1.10 lays out the entire flute part of the A^1 section. Apart from two exceptions, the flute part is entirely built on this specific interval series. The exceptions are indicated underlined: In measure 48, the ending of the pattern became +2 instead of -1, and in measure 56, there is a -5 instead of -2.

As mentioned earlier, one of the essential traits of the A^1 section is the complementary texture (see fig 1.4). The flute generally ends up playing on the measures' downbeats. As a result, we perceived the flute part as the leading voice in this section. The piano's rhythmic pattern creates an opportunity for a complimentary texture in the piece. The entire rhythmic pattern of the piano in the A section is grounded onto a grid of 32nd notes. This is the common rhythmic denominator of the section. The feeling of

movement appears mostly through the interaction of 16th and 32nd between two instruments. However, the rhythmic pattern that the piano establishes is not synchronized with the time signature. This is the way that the piano's rhythmic pattern is visible immediately (see fig 1.11).

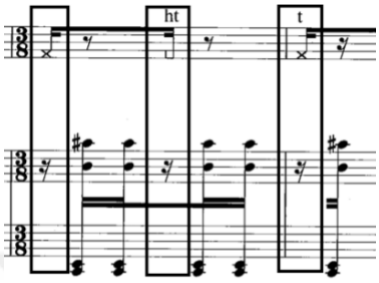


Figure 1.11a: *Presto*, measure 10, the examples of filling the piano's rests by the flute

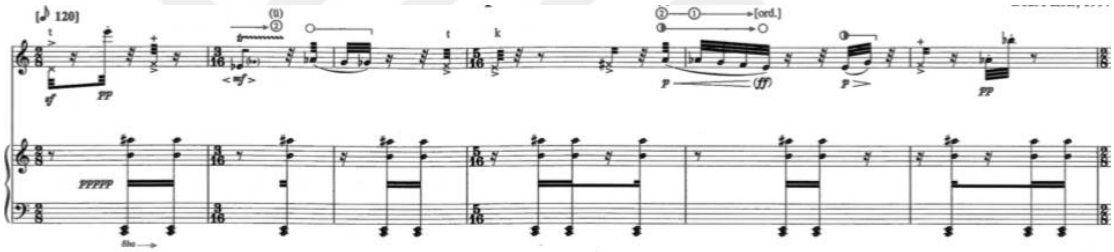


Figure 1.11b: *Presto*, measure 1 until 6, complementary technique

However, the complementary texture continues in A^2 and A^3. It is possible to observe the flute part complements the piano until measure 61 by filling the rests. Yet, A^2 and A^3 are less strict in the complementary relationship between the two instruments compared to the A^1 section.

It is also noteworthy to mention that the piano plays five chords successively during the entire section while still representing the rhythmic pattern. The piece starts with a rhythmical pattern with a piano's static chord (C2 - E2 - B4 - A5#). It begins with a very

low dynamic but at the same time contains in itself a loop that causes a feeling of the move. The piano has five chords in the A section. Figure 1.12 illustrates the relation of the five chords of the piano in the A^1 section. This method of post-tonal voice leading analysis is theorized by Joseph Straus first in his article 'Uniformity, Balance, and Smoothness in Atonal Voice' (2003) and then later in his book 'Introduction to post-tonal theory' (2016). Each straight line in the analysis indicate that these pitches are related either by inversion or transposition. The dotted lines indicate that there's a fuzzy relationship, meaning the original transposition interval or inversion index is altered.

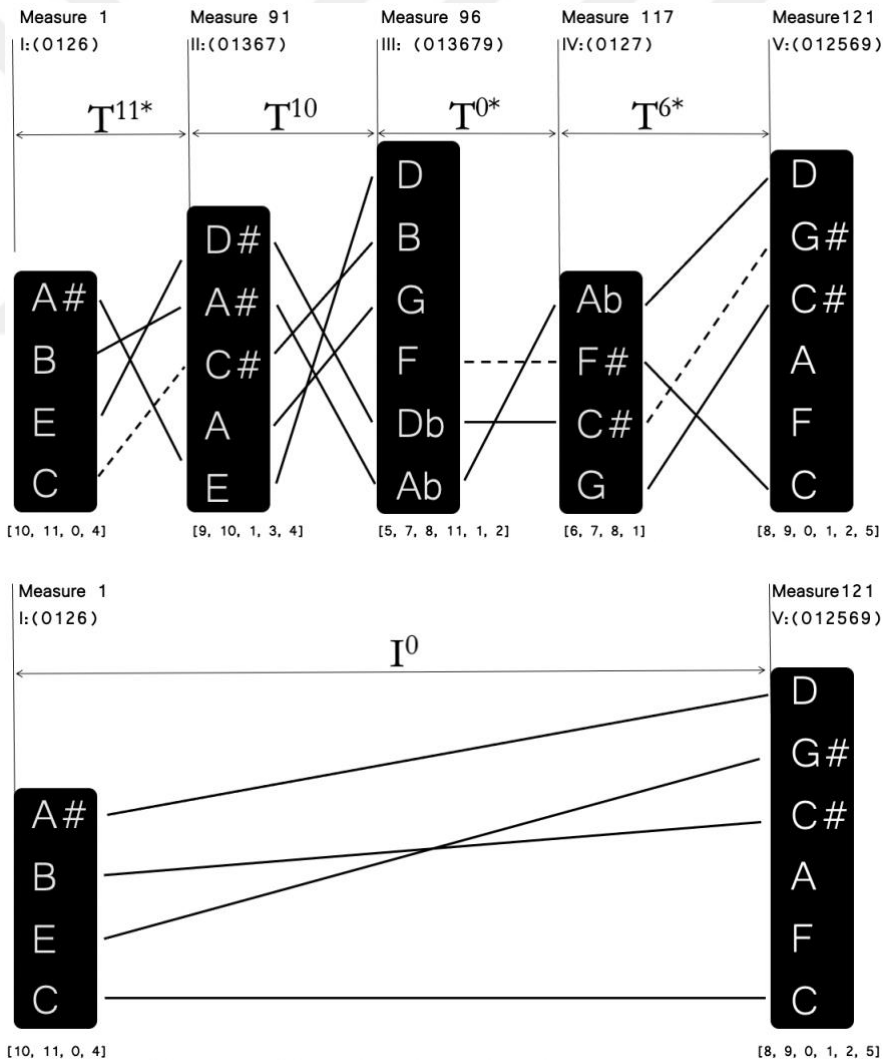


Figure 1.12a: Relation of the five chords of the piano in *Presto*'s A^1 section

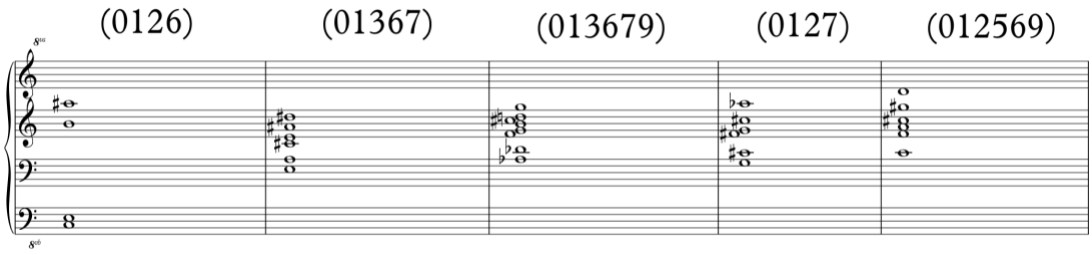


Figure 1.12b: Five piano chords of *Presto*'s A^1 section

As can be seen above, the first presented chord has the most space between notes. The chord (0126) has the relation of I^0 to the fifths chord. The spacious chord, which gets dese in the second set, will be followed by a general ascending towards the B section. One of the particular reasons for this general ascending can be the preparation for section B. It can function as a preparation for the upward arpeggio, which the piano is based on in the B section. It is worth mentioning that section A is divided into five subsections in the chords as well as the rhythmic pattern, which will be discussed further.

As it can be observed, in the A section, there is a strong focus on the rhythmic pattern. The piece starts with a pulsive piano, and its loop repeats after every 15 sixteenth notes, creating a half-mixture of attacks and rests. The piano has a duration of (2-1-3-2-1-2-1-2-1) which the first (2) indicates the starting rest of the rhythmic pattern. The notes are on the 3rd, 4th, 7th, 9th, 11th, 12th, 13th, and the 15th sixteenth notes of the pattern as seen in Fig. 1.13 below, which shows the initial loop, lasting over the first four measures. The rests are complemented with the flute. The piano is extremely static in this section, resembling almost Morse alphabet in its rhythmic design, consisting of combination of short and long pulses. It cycles through a rhythmic loop and obsessively repeats the same chord, albeit five of them in the entire A section. However, both rhythmically and

melodically, the flute is much more fluid. First, it uses 16th and 32nd note durations, and then rests appear much more unexpectedly. Therefore, the flute never allows the piece to have a motoric rhythm. Its melodic content is also much more unsteady and dynamic. As we have seen before, even though there is an interval-pattern in A^1, the pitches are not predetermined: the pattern is always transposed. Hence the flute part invokes a feeling of movement to a section otherwise relatively static because of the piano.

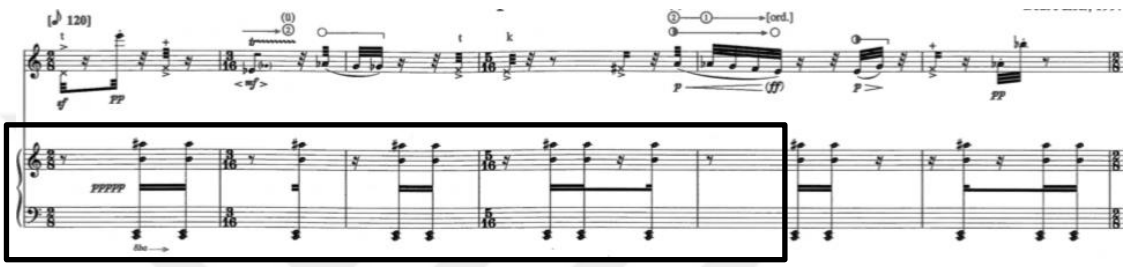


Figure 1.13: *Presto,* measure 1 until 6

The changes in the A section's rhythmic pattern are divided into five subsections that are all equal to 30 measures each. Every 30 measures, the rhythmic patterns proceed to another variation. This change happens after the appearance of the rhythmic pattern nine times, which indeed the last time (9th time) only includes 9 sixteenth notes instead of 15. In other words, eight multiple 15 sixteenth notes plus nine sixteenths, which is equal to 129 sixteenths, is the content of each 30 measures.

I.	measures	01	-	30
II.	measures	31	-	60
III.	measures	61	-	90
IV.	measures	91	-	120
V.	measures	121	-	150

Figure 1.14a: Structure of the rhythmic pattern subsections in *Presto*'s A section

Figure 1.14b: The initial rhythmic pattern of the piano, from measure 1 until 30, in musical notation

Figure 1.14c: The binary representation of the initial rhythmic pattern of the piano from measure 1 until 30: (each cell is based on one 16th note)

In figure 1.14b, the initial piano pattern is represented with music notation. In figure 1.14c, this is converted to binary representation, where each cell denotes a 16th note duration, white cells being rests and blacks being notes.

Figures 1.15 until 1.21 demonstrate the changes and similarities in the rhythmical pattern of the whole A section. In these figures, the illustrated rhythm consists of three colors. Black cells represent the notes, white cells show the rests, and orange colors represent the rests which stay without any changes in the entire A section. Each cell is equal to a 16th note duration.

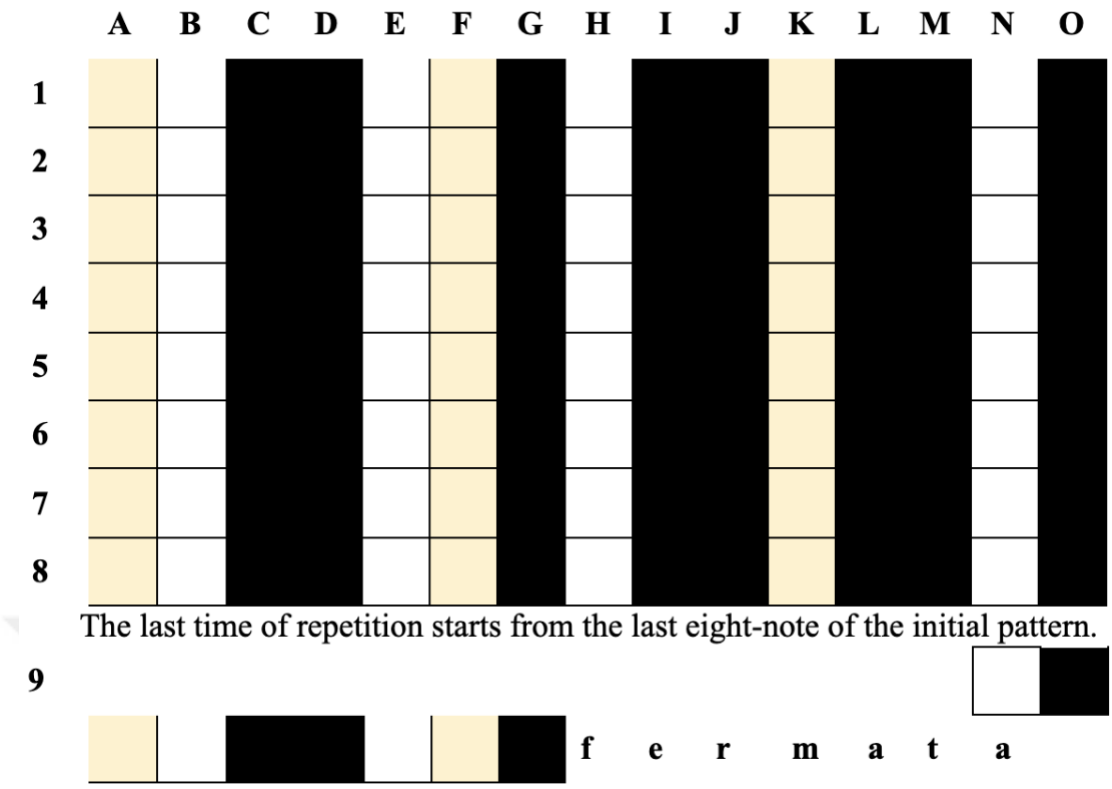


Figure 1.15: *Presto*, rhythmic pattern of measure 1 until 30

In figure 1.15, the loop repeats nine times exactly, but the 9th time is incomplete and only consists of 9 sixteenth notes. The other eight times, there is the exact repetition. Also, the last time the pattern does not start from the usual starting point. It starts from the last eight-note of the rhythmic pattern.

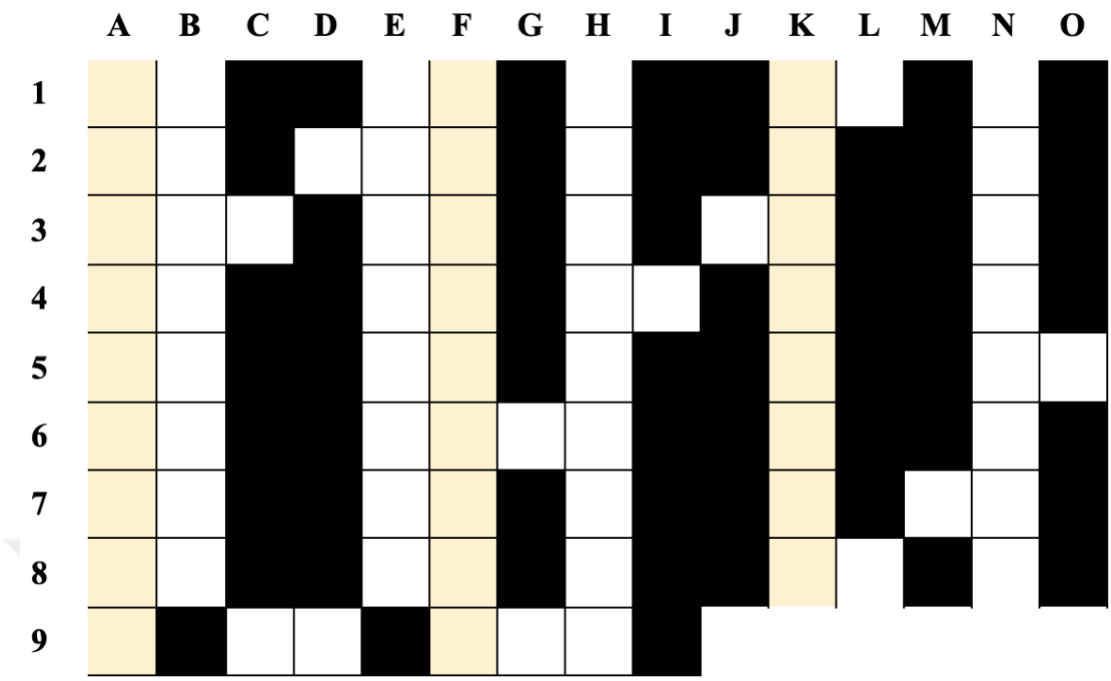


Figure 1.16: *Presto*, rhythmic pattern of measure 31 until 60

In figure 1.16, there are slight changes in different columns. One of the critical changes in this section is the starting point for changing the B and E column. Hence it is possible to mention that is the starting point for breaking the previous stable rhythm. On the other hand, the A, F, and K (First, sixth and eleventh 16th notes, respectively) still constantly rest.

Upon more careful observation, one can see that the change to the pattern is done systematically. The pattern shifts towards the left, which creates a series of rests in a diagonal shape; however, the columns A, F, and K always stay unaffected. They always have a rest, and they are the constants of the pattern. For instance, E1 goes to D2, C3, B4, and A5. Also, L1 goes to K2, then J3, and it continues with the same logic. The same trend happens for O5 as well.

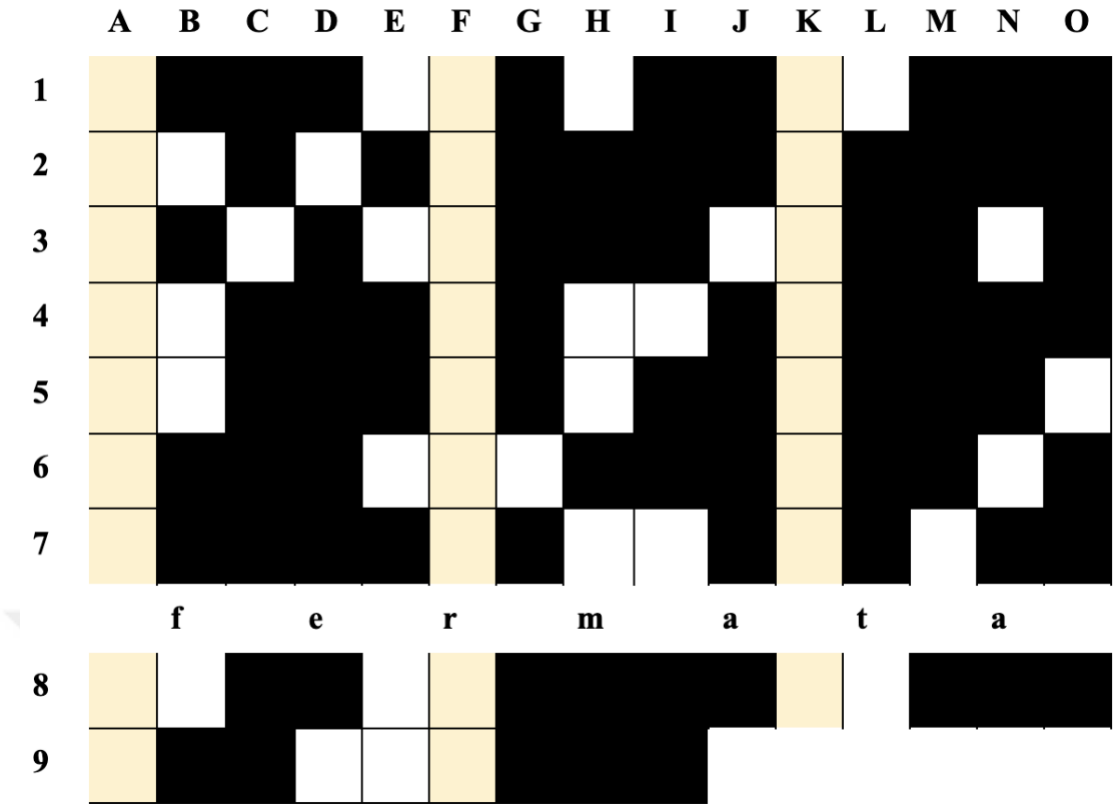


Figure 1.17: *Presto*, rhythmic pattern of measure 61 [vorwärts] until 90

Figure 1.17 show clear evidence that the rhythm had numerous changes. In addition, the columns B, H, and N, which were entirely rests in the beginning, were eliminated. On the other hand, the A, F, and K are still rests. Same as figure 1.16, the shifting rests (diagonal ones) are still visible, but additional rests are added to the section.

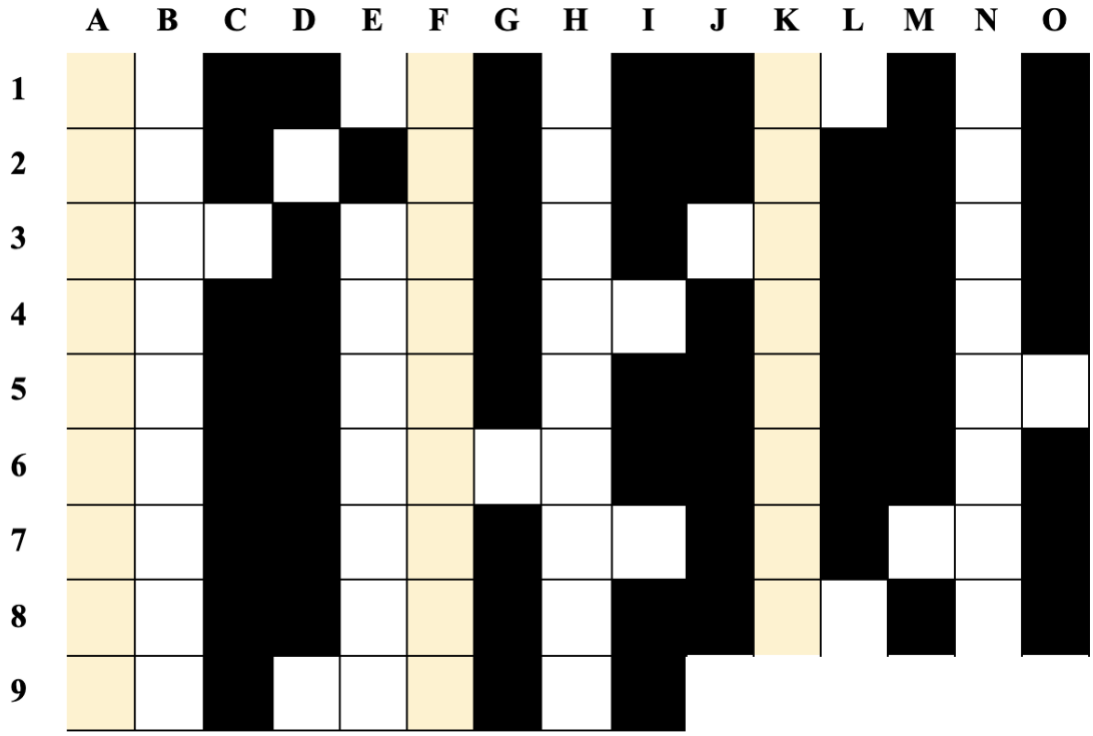


Figure 1.18: *Presto*, rhythmic pattern of measure 91[vorwärts] until measure 120

Figure 1.18, the rhythm becomes closer to its original version. The columns B, E, H, and N, become approximately silent again. Surprisingly, figure 1.16 is the same as figure 1.18, with only differences in E2, I7, and the final row.

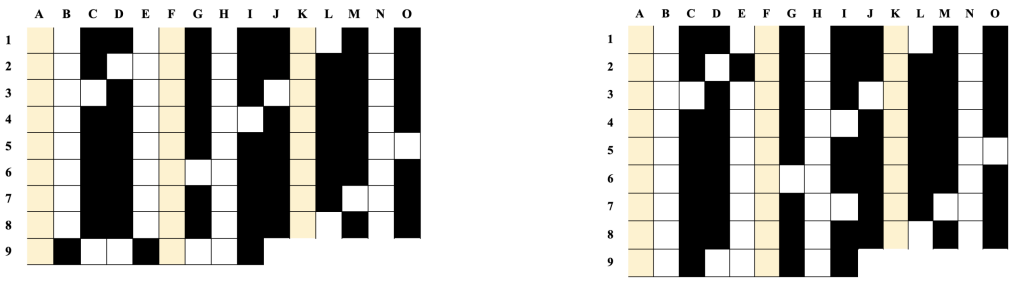


Figure 1.19: Comparison of figure 1.16 and 1.18

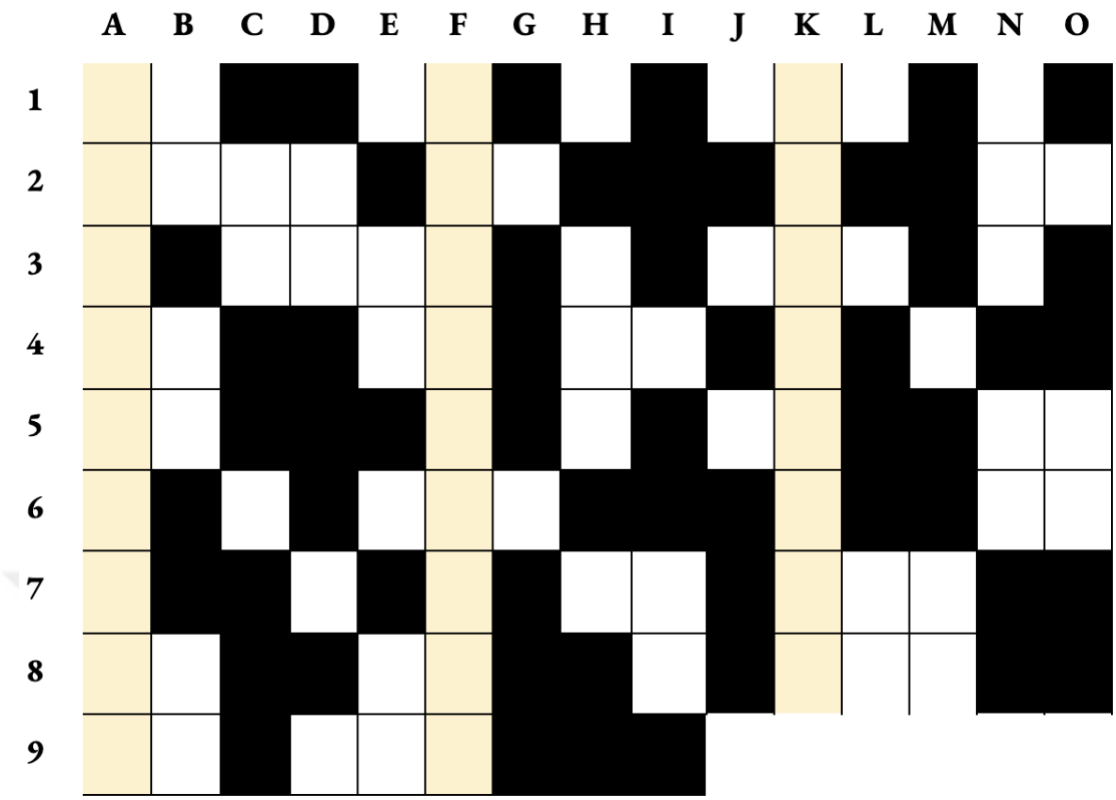


Figure 1.20: *Presto*, rhythmic pattern of measure 121 until 150

In figure 1.20, the rhythmic pattern starts to add the most amount of rest within itself compared to the previous sections. Besides, it is noteworthy to mention that figure 1.20 is a similar version of figure 1.17, which its rests are increased.

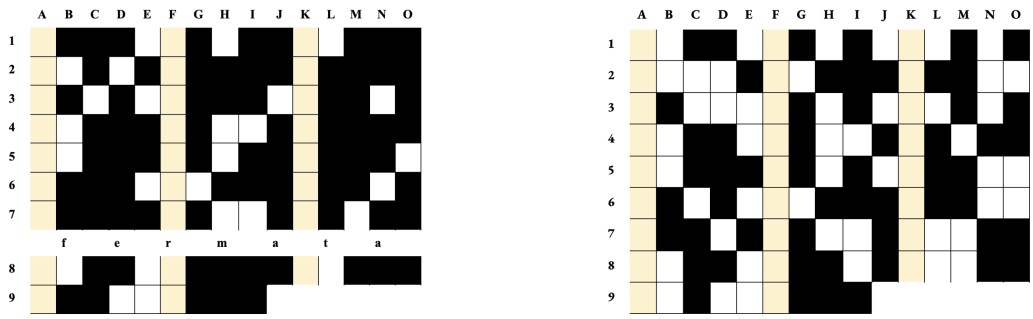


Figure 1.21: Comparison of figure 1.17 and 1.20

In summary, the rhythmic structure of the entire A section is based on variations of the initial pattern. Although the pattern starts to change during the process in the subsections, the rests on the A, F, and the K columns, which are the 1st, 6th, and 11th, stay as rests during the whole process (demonstrated as orange cells in the figures). In other words, Furrer divided his pattern into three subsections, which are separated by one-sixteenth rest notes, and made a variation on them.

As an example:

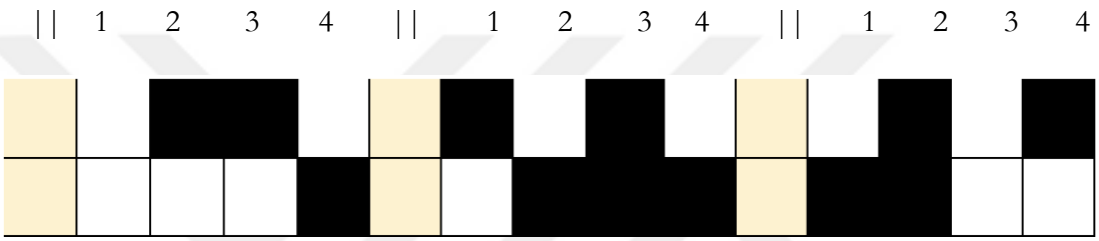


Figure 1.22: Demonstration of the division of rhythmic pattern into three subsections

After every nine times, the section is repeated with a new series of variations. This starts from measure 31 for the first time. The original pattern appears intact at various points. Furthermore, the diagonal rests, which appears after measure 61 (Fig. 1.20), remain until the end of the A section as well. They are listed as below:

1. E1 to A5 (E1, D2, C3, B4, A,5)
2. L1 to D9 (L1, K2, J3, I4, H5, G6, F7, E8, D9)
3. O5 to L8 (O5, O6, M7, L8)

1.3. B Section

In the B section, the rhythmic pattern changes: the sequence of the rhythmic values initially used in the flute starts to form patterns of the sixteenth, sixteenth triplet, and thirty-second chains in piano. (Mosch, 2011) The piece applies another approach towards its development. In the piano part, it is mostly possible to observe the ordered interval pattern with different starting notes throughout the section. From measure 151 in the piano of the B section, it is possible to follow the interval pattern of (+7, +6, +7, +7, +10, +3, +7, +4, +7, +6, +1, +1, +1), leading to an ordered set repetition with the cycle of fifth. Obviously, each of the intervals in the pattern might also appear in an inversion contour (-5, -6, -5, -5, -2, -9, -5, -8, -5, -6, -11, -11, -11).

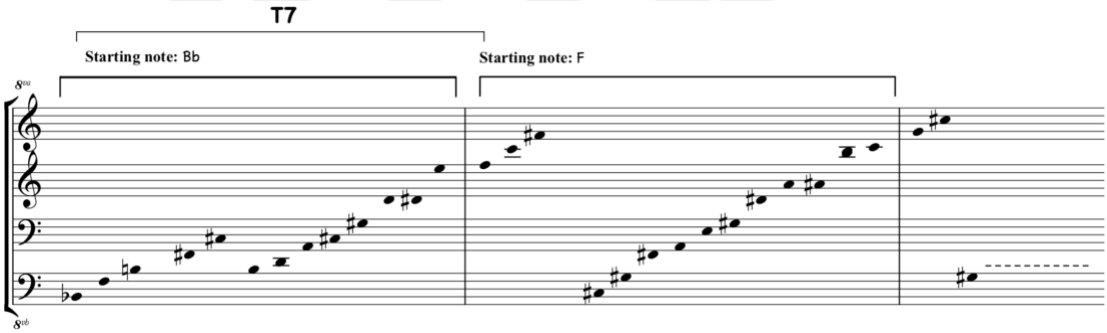


Figure 1.23a: *Presto*, the fifth cycle of the B section

In figure 1.23b, it is demonstrated the entire B^1 section ordered set in the piano part with its starting note. The left column in figure 1.23b shows the starting note in the specific measure.

R = The starting note placed in the right hand of the piano

L = The starting note placed in the left hand of the piano

White Cells (-): Eliminated notes in the ordered set

151 Bb	10	5	11	6	1	11	2	9	1	8	2	3	4
154 F	5	0	6	1	8	6	9	4	8	3	9	10	11
157 C	0	7	1	8	3	1	4	11	3	10	4	5	6
160 G	7	2	8	3	10	8	11	6	10	5	11	0	1
163 D	2	9	3	10	5	3	6	1	5	0	6	7	8
166 A	9	4	10	5	0	10	1	8	0	7	1	2	3
168 E	4	11	5	0	7	5	8	3	7	2	8	9	10
171 B	11	6	0	7	2	3	0	10	2	9	3	4	5
174 F#/ R	6	1		-	-	-							
							10	5	9	4	10	11	0
175 C#/ L	1	8	2	9	7	2	5	0	-				
						2				11	5	6	7
176 G#/ R	8	3	9	4	11	9	0						
								7	11	6	0	1	2
177 D#/ R	3	10	4	11	6	4	7	-					
									6	1	7	8	9
178 Bb/ RL	10	5	11	6	1	11	2	9					
179												3	4
F/L	5	0	6	1	8	6	9	4	8	3	9		
181												10	11
C/L	0	7	1	8	3	-	-	-	-	-	-		

Figure 1.23b: *Presto*, the fifth cycle and the interval pattern (ordered set) of the B section

As Figure 1.23b shows, the fifths cycle starts with Bb, and it completes one round to include all 12-tones as starting notes. However, the cycle continues and repeats the Bb, F, and C additionally. Figure 1.23c shows one example of the entire interval pattern of the ordered set along with its notes, which leads to creating the fifth cycle:

Ordered set: [10, 5, 11, 6, 1, <u>11</u>, 2, 9, <u>1</u>, 8, <u>10</u>, 3, 4] [5, ...]

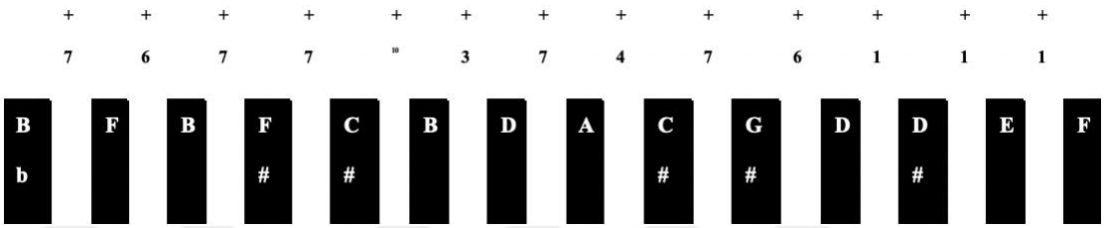


Figure 1.23c: The ordered set with the Bb starting note, (the underline numbers are repeated notes)

The ordered set with ten notes plus three repeated ones in between can represent the post-serialism approach in *Presto* as well (see fig. 1.23c). As it points out in figure 1.23b, If we stick to the pattern, we will notice that C2 and Eb2 in measure 172 should be swapped in order to keep the pattern intact. Since the interval pattern is repeating rigidly, the C2 and Eb2 should switch their order. This switch can lead to having a pattern that follows its logic as the same as the previous ones. Furthermore, after measure 174, the pattern starts to include rests within itself, creating gaps in its interval order; and it happens while the piano interval pattern does the counterpoints of ascending sixteenth triplets.

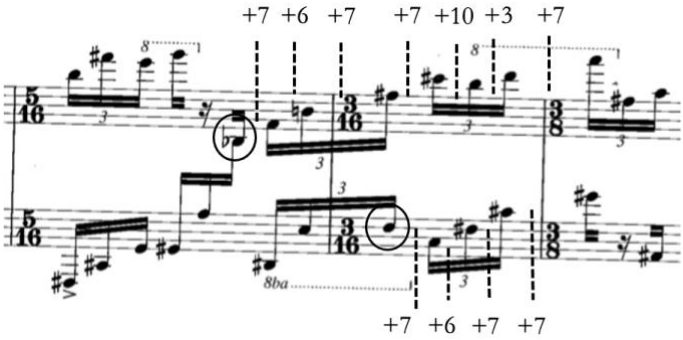


Figure 1.24: *Presto*, measure 178 and 179, ascending counterpoints of sixteenth triplet

On the other hand, it is possible to trace some pitch patterns in the flute part as well. As shown in figures 1.25 and 1.26, they are two different pitch patterns that include rests in between them. However, since the piano pitches change during the section, the flute pitches are also not stable. Hence, it is impossible to see each pitch pattern in the flute part more than a few times.

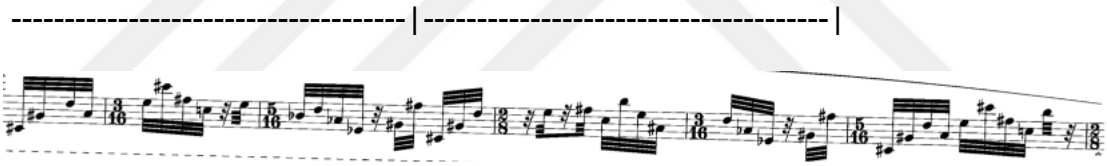


Figure 1.25: *Presto,* measure 170 until 175, an example of a pitch pattern which is repeated two times

In figure 1.25, the pattern starts from C#4 in measure 170, and it ends with F#5 in measure 172, and then it repeats before it starts to change from after 176.

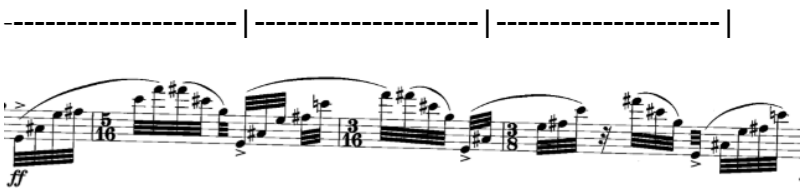


Figure 1.26: *Presto,* measure 177 until 180, and an example of a pitch pattern which is repeated three times

In figure 1.26, the pattern starts from E4 in measure 177 and ends with G5 in measure 172; then it repeats before it breaks with the cadenza in measure 181.

The B^1 and B^2 sections are separated by a cadenza in the flute part and divided into two parts by a fermata. In more detail, the piece encounters a sudden break after playing 180 measures. The listener can perceive the cadenza as a distinguished part owing to the register of the flute. Also, the flute in measure 181 is not written in the common register of the flute that appears in *Presto*. Furthermore, the feeling of stability via the long-sustained notes after passing the sections (A and B^1), which mostly creates the feeling of rhythmic patterns, is the other fact that holds and separates the music from the other parts. The similarities between the two parts of cadenza (measure 181), in terms of note's duration and the grace notes' rhythm, create a feeling that the second part of the cadenza is a developed version that starts with retrograding the contour of the first part. In figure 1.27, the grace notes are indicated with underlines. It is worth mentioning the cadenza based on the two whole tone scales:

A	<u>C#</u>	D#	<u>G</u>	<u>A</u>	<u>F</u>	B	Bb
9	1	3	7	9	5	11	10

First part of the cadenza, Prime form (012468T)

Fermata

D	E	<u>G#</u>	Bb	<u>C</u>	<u>B</u>	<u>D#</u>	F	<u>A</u>	B	C#	C
2	4	8	10	0	10	3	5	9	11	1	0

Second part of the cadenza, Prime Form (01234789)

Figure 1.27: *Presto*, Cadenza structure

The B^2 section is a mixture of most of the other section components. It includes the detached momentarily pulses of the piano, which gradually creates a feeling of acceleration by turning to sixteenth and sixteenth triplets in the beginning, and then reaching the ascending thirty-second notes. The B^2 section includes the unordered chromatic movements, complementary techniques, and the presenting of the interval leaps, which appeared in the previous sections. The complementary technique happens not only between the piano and the flute, but it happens between both the pianist's hands and as well. The two instruments show different textures at the beginning of the B^2 section, while they become one single texture towards the end (measure 211). This single texture occurs by synchronizing the notes and creating chords via both instruments towards the section's process. Measure 212 (which is similar to a second cadenza) starts after the grace note at the last note of measure 211 (end of the B.2 section). It creates a feeling of freezing of the movements in the music. This interruption happens after the last chord of (Db-A-C), which both instruments present at the last note of 211. The sustained B of the cadenza, followed by the piano pedal, helps the transition to the $A^{2'}$ section. The moment that the flute returns to its low register and presets the feeling of motion by returning back to the unordered chromatic pattern again while the piano only plays punctually.

1.4. A' Section ($A^{2'}$+Coda)

In the A and B sections, both the piano and the flute communicate within two different rhythmical layers, while in the A' section, they transform into a single layer of rhythmic patterns. (Mosch, 2011). Besides, the A' section is a variation of the A^2 section. Both A' and A^2 are representing a pitch pattern with an unfixed rest position within themselves.

However, in A, the pitch pattern is distributed among two instruments suggesting a hocket technique.

In section A' we encounter a completely different rhythmic design. This whole section has the length of 512 sixteenth notes. Only two time-signatures are used 7/16 and 9/16. They alternate throughout this entire passage. When combined, these two measures make up to 16/16 measure, which is in fact equal to the duration of the pattern.

Surprisingly, the pattern includes 32 notes, and as mentioned above, it appears 32 times in the A' section. In other words, the combination of 7/16 + 9/16 bars repeat itself for 32 times. The notes within the time signature can be demonstrated as below:

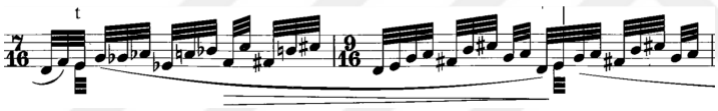


Figure 1.28a: *Presto,* measure 247 and 248, the flute part

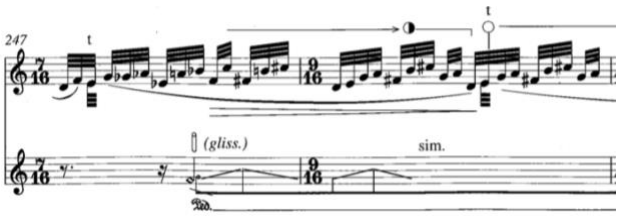


Figure 1.28b: *Presto,* measure 247 and 248

Also, the pattern is occasionally distributed between the instruments. In this case, the piano plays a maximum of three notes in a row from the pattern. The rest of the pattern continues by the flute. Figure 1.29 is an example of the separation of the pattern between the instruments.

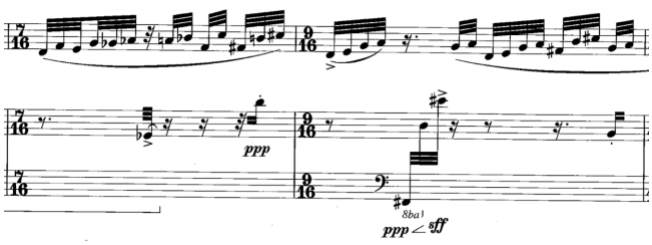


Figure 1.29: *Presto,* measure 213, hocketing of the pattern

Figure 1.30 shows the pitch pattern of the A' section within the time signatures.

|---------- 7/16 ----------| |---------- 9/16 ----------|

D	F	E	G	G b	A b	E b	A	B b	F	C	F #	B	C #	D	E	G	A	F #	B	C #	G	A	D	E	G	A	F #	B	C #	G	A
2	5	4	7	6	8	4	9	10	5	0	6	11	1	2	4	7	9	6	11	1	7	9	2	4	7	9	6	11	1	7	9

Figure 1.30: *Presto,* flute pitch pattern of the A' section

However, the last nine 32nd notes consists of the exact eight pitch class repetition:

D	**E**	**G**	**A**	**F#**	**B**	**C#**	**G**	**A**
2	**4**	**7**	**9**	**6**	**11**	**1**	**7**	**9**

The A' and the coda sections consist of the same pitch pattern. However, there are moments that the pitch pattern turns to the pitch class pattern via octave displacements. These octave displacements of the flute happen a few times in A[2]' section and increase slightly in the coda section. Figure 1.31 is an example of the change from pitch pattern to pitch class pattern. In measures 253 and 245, the pitch pattern remains until the fourth 32nd note of the 9/16, and then, it starts to transform to pitch class pattern through the octave displacements.

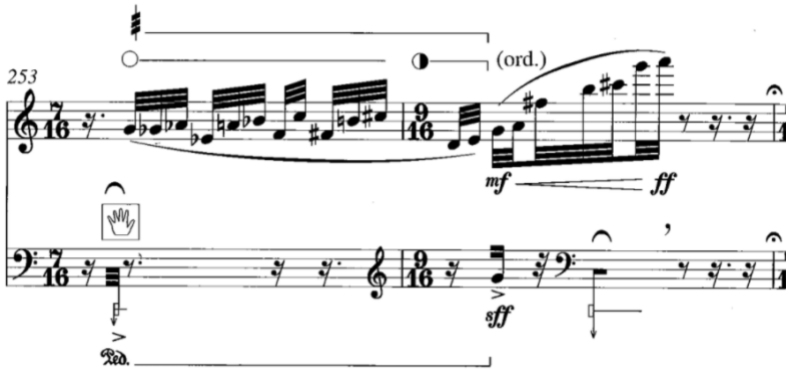


Figure 1.31: *Presto*, measure 253 and 254

One of the other variations between A and A$^{2'}$ is reversal of the instruments' role. In the A section, it is possible to observe that the flute is the instrument that complemented the rests between the piano. In contrast, the A' section piano, with its momentary pulses, completes the pitch pattern of thirty-two 32nd notes.

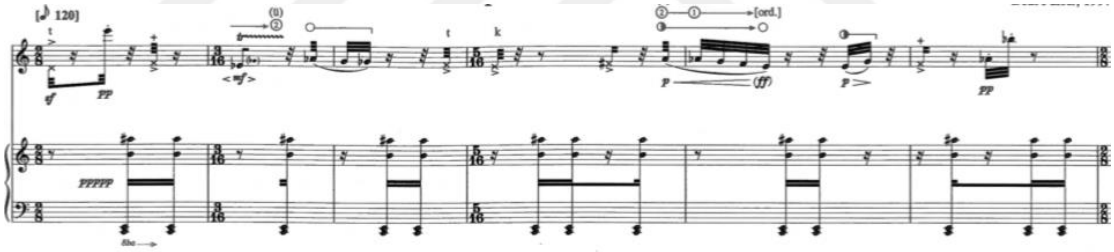


Figure 1.32: *Presto,* measure 1 until 6 (A section)

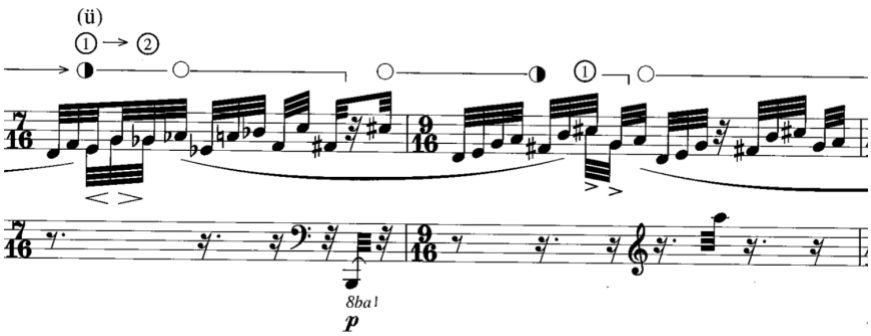


Figure 1.33: *Presto,* measure 217 and 218 (A' section)

In the A' section, usage of the complementary technique is similar to the A section. However, this time, the flute is the instrument that creates the sense of motion with its static unordered chromatic sets repetition. The other variation compared to the A section is that, as mentioned above, piano and flutes create one single line of pattern while having an individual character in the A section. In other words, hocket way in terms of rhythmic linear technique, which happens freely via the two instruments, occurs in the A' section. Therefore, in the A' section, it is not easy to observe a fixed structure for the piano's rhythmic pattern. Although it is possible to follow a fixed-pitch pattern for the piano and the flute, it is not possible to find a rhythmical pattern in this section. The rests between the piano notes are changing freely, and the piano functions as complementing the flute's pitch pattern. Figure 1.34 demonstrates the number of rests between the piano notes. Each cell is based on the grid of 32nd notes, which is the smallest common rhythmic unit. In figure 1.34, black cells represent the notes, and white ones represent the rests.

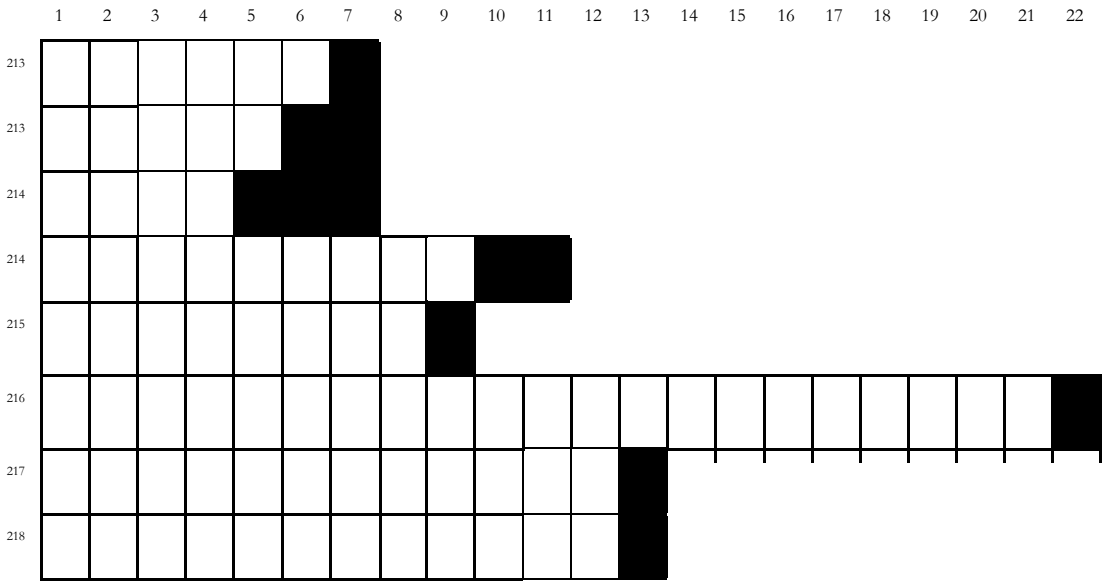
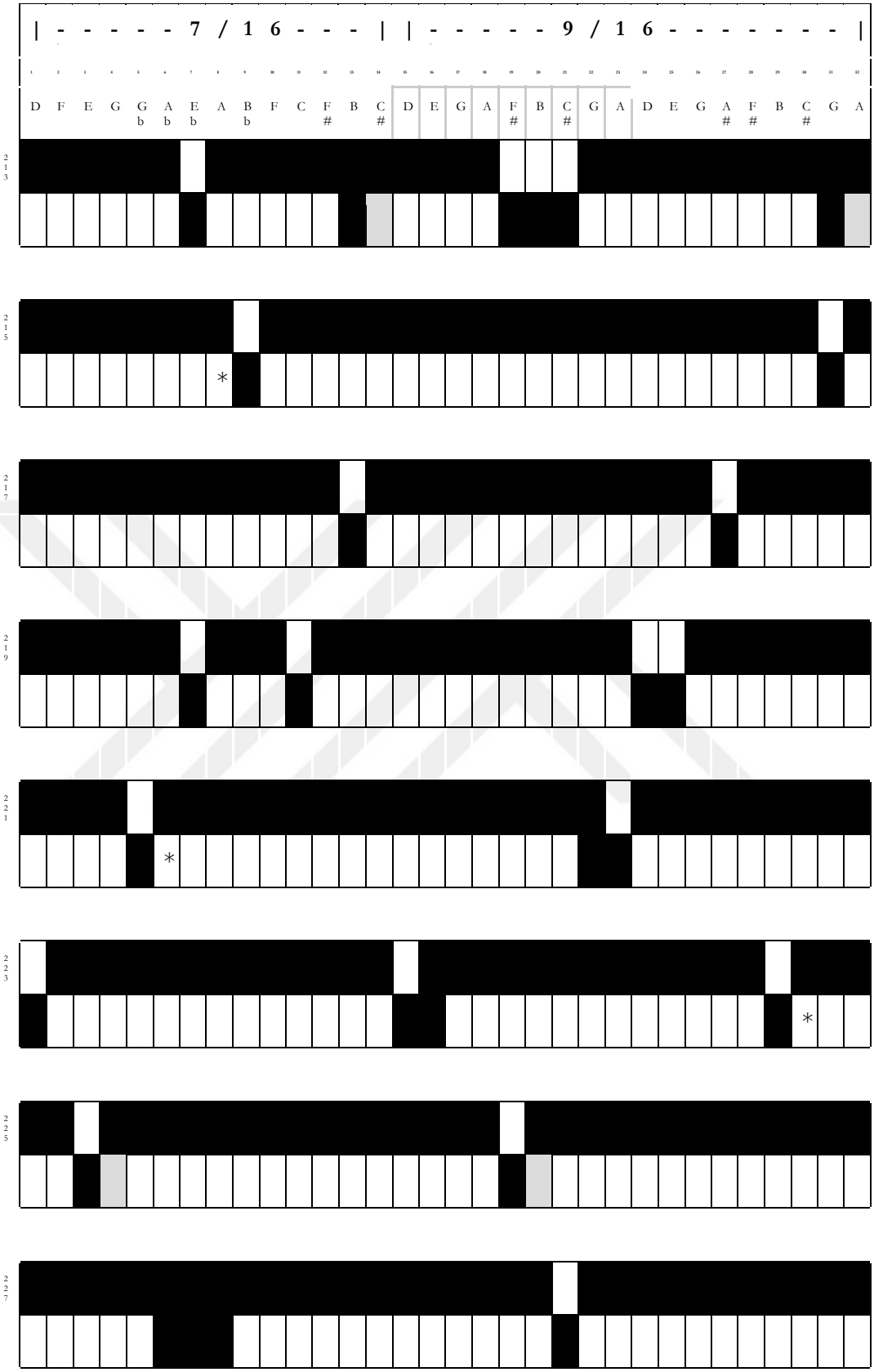


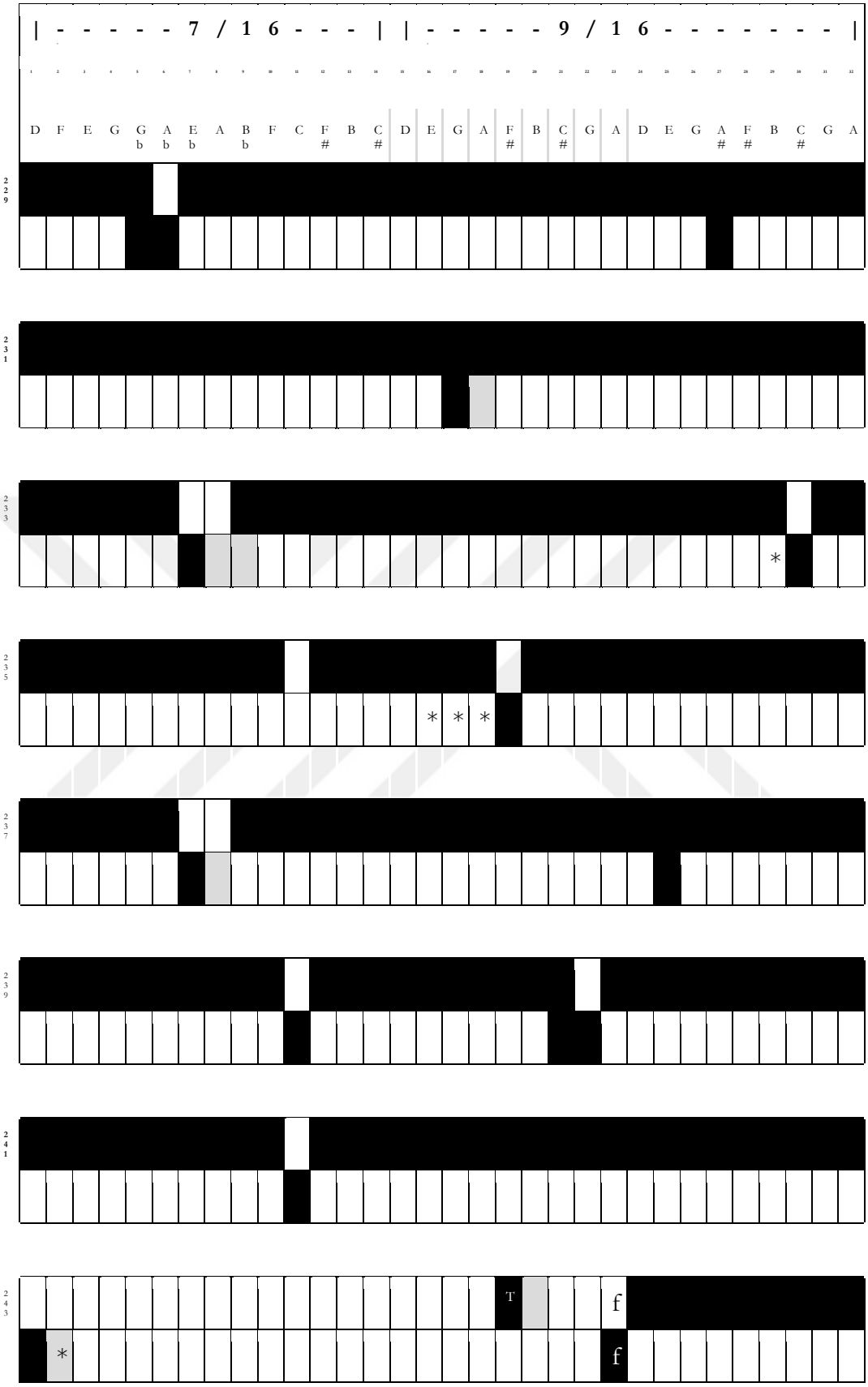
Figure 1.34: *Presto*, the piano part from measure 213

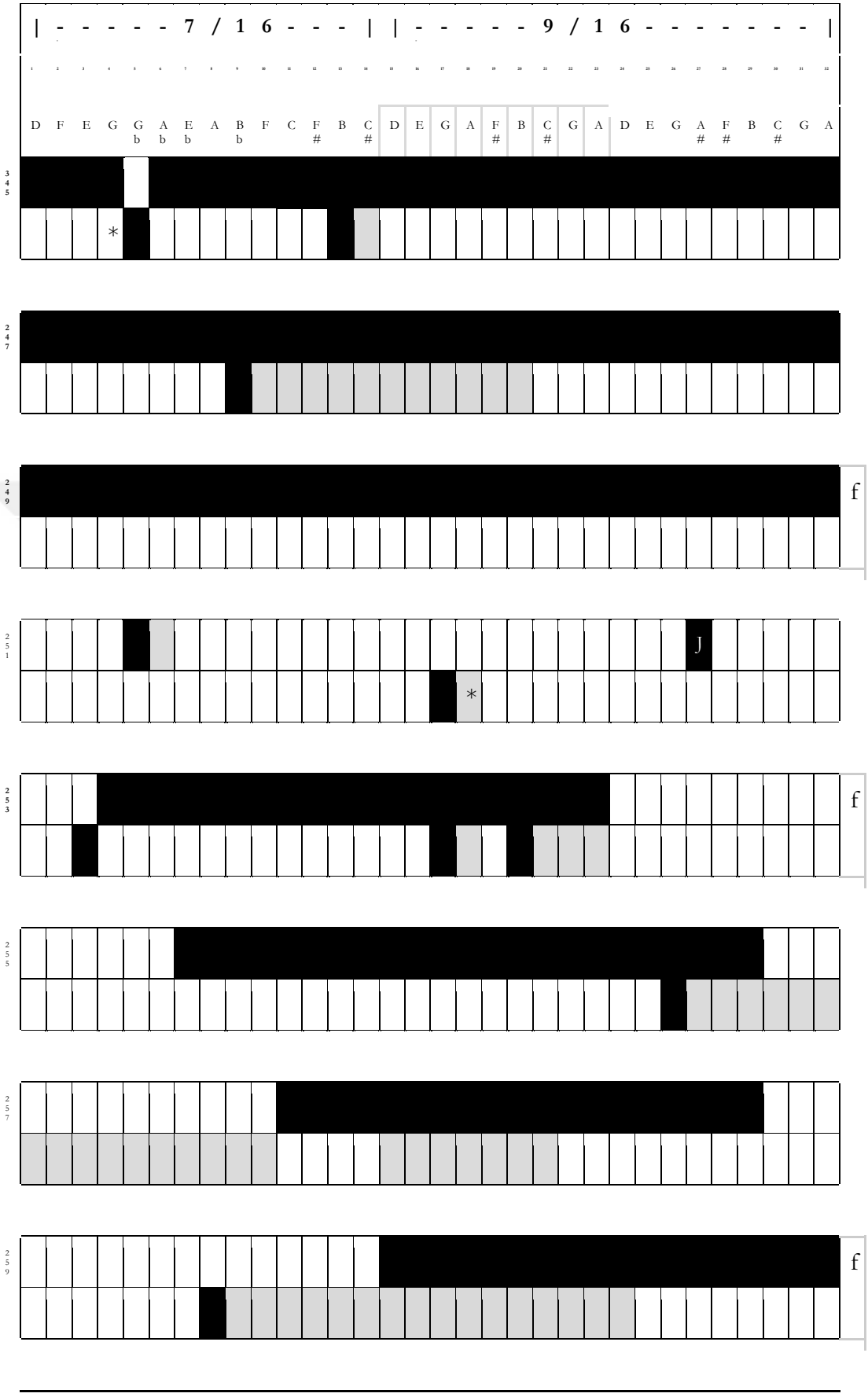
As demonstrated in figure 1.34, although there are some similarities in the rests' duration between the piano notes, the number of rests between the piano notes is not equal. Hence, there are no fixed rhythmic patterns in the section.

Figure 1.35 illustrates the complementary relationship between the two instruments. The figure shows the changes in the piano's rest positions in the A^{2}' and the coda sections. In the A^{2}' section, the flute rests are interacted by the piano and mostly filled in a complementary manner. In the coda section, both instruments change to more sustained and punctual notes with significantly increased rests between them, leading to textural transformation to end the piece.

In figure 1.35, each cell is based on one 32nd note. The black cells represent the notes, and the grey ones show their sustained duration. The asterisks (*) show the clusters and same as previous figures, white colors represent the rest.


| - - - - - 7 / 1 6 - - - | | - - - - - 9 / 1 6 - - - - - - - |
D F E G Gb Ab Eb A Bb F C F# B C# D E G A F# B C# G A D E G A# F# B C# G A
213
215
217
219
221
223
225
227


| - - - - - 7 / 1 6 - - - | | - - - - - 9 / 1 6 - - - - - - - |
D F E G Gb Ab Eb A Bb F C F# B C# D E G A F# B C# G A D E G A# F# B C# G A
229
231
233
235
237
239
241
243
T
f
f


| - - - - - 7 / 1 6 - - - | | - - - - - 9 / 1 6 - - - - - - - |
D F E G Gb Ab Eb A Bb F C F# B C# D E G A F# B C# G A D E G A# F# B C# G A
345
247
249
f
251
J
253
f
255
257
259
f

c o d a

| - - - - - 7 / 1 6 - - - | | - - - - - 9 / 1 6 - - - - - - - |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

D F E G Gb Ab Eb A Bb F C F# B C# D E G A F# B C# G A D E G A# F# B C# G A

261

p

263

S

*

265

S

T

*

*

267

269

S

S

S

S S

f

*

271

tr

273

J

S

275

tr

tr

f

Figure 1.35: Complementary relationships between the two instruments in the A' section. The letter 'f' represents fermata, and the letter 'p' shows the accented piano pedal in a specific moment of the pattern. 'J', 'T', and 'S' show the flute's Jet Whistle, Tongue Ram and Slap Tongue, respectively.

As a conclusion from figure 1.35, the linear flute chromatic movements break gradually by the rests in between them, leading to more sustained notes by piano towards the end until they both shift to momentarily pulses (both with percussive and pitch) within the existing pitch pattern. The piano starts to use the pedal from the measure 212 in measure 212. Meanwhile, the piano pedal prepares the transition from the repetitive slurred notes of the flute to replace it with the piano's sustained notes. Besides, for the first time in the piece, the piano plays solely (D2 and F2), which can be assumed as a contrast to the cadenza. Furthermore, it helps to break the textural pattern of the flute for preparing the coda.

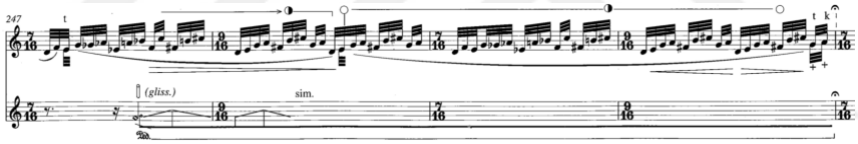


Figure 1.36: *Presto*, measure 247 until 250

In figure 1.36, the piano, with the help of glissando, helps with a smoother transition to break the texture of unordered chromatic movements. After the double barline of the measure 260, the coda starts. It follows the same logic as A' in terms of pattern, but it also evidences a complete detached pattern that still happens in the hocketing way. Lastly, at the very end of the composition (from measure 272), the piano pedals are followed by bringing back the trill techniques of the flute from the A section.

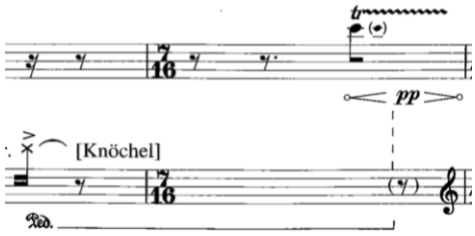


Figure 1.37: *Presto*, measure 274 and 275

1.5. Chapter Conclusion

As a conclusion regarding this chapter, *Presto* is constructed based on several patterns such as interval, rhythmic, and pitch and pitch class patterns. The piece runs with the structured variation of the patterns along with representing contrast sections in the piece. The representation of unordered chromatic sets and pitch patterns are some of the evidences for assuming *Presto*'s compositional approach as a post serialism attitude. Also, the use of various flute techniques such as percussive effects, overblowing, trill, and timbral changes in the piece, prepares the textual transformation for the piece's ending.

CHAPTER II

a Due

> As far as the arrangement of 'still' and 'a due' is concerned, these projections are into another tonal space, less in the sense of overpainting than adding another resonance space. From 'still' is 'voices - still' and from 'a due' is 'track'. (Furrer, B. 2014.)

2.1. Formal Structure

A due for viola and piano is composed by Beat Furrer in 1997[1]. The piece was premiered by Michael Gieler (viola) and Loretta Gieler (piano) in January 1998 in Rotterdam. It is written around the same period as *Presto,* and they share similarities in terms of composition technique. Both pieces have common strategies for their material, such as the post-serial approach and the usage of patterns in creating textures. However, the formal structure of *a due* is not as straightforward as *Presto. A due* contains several textures that are superimposed. Therefore, at some parts of the piece, they are two disparate textures on top of each other, making the piece almost multi-textural. Due to these juxtapositions of textures between the two instruments, it is not easy to categorize the form by using standard formal types. Nevertheless, since the piano has a leading role in many parts of the overall form, it is possible to distinguish the sections through the piano part. Figure 2.1 shows *a due's* formal structure, based on the perceivable textural changes by the piano part.

1 A year later, Furrer composed *Spur* which can be assumed as the elaborated and orchestrated version of a duo. Both pieces are essentially the same, however the single viola line of *a due* has blown into a four-part string writing.

A	B	C
1 - 112 (A^1)	113 - 138 (B^1)	
139 - 143 (A^2)	144 - 179 (B^2)	
180 - 228 (A^3)	229 - 247 (B^{3a})	
248 - 273 (A^4)	274 - 283 (B^{3b})	
284 - 323 (A^5)	324 - 341 (B^4)	342 - 365 (C^1)
366 - 406 (A^6) {a (366) + a' (389)}		407 - 456 (C^2) 457 - 504 (Coda) {c'+c+c'+a+c'+a+c'+c+coda}

Figure 2.1: Formal structure of *a due* (based on the piano)

As figure 2.1 shows, the A section appears the most. We can observe six instances of A during the piece. The B section appears five times, and lastly, C section appears twice. Besides, A^6 and C^2 are combined by subsections or interruptions within themselves. For instance, the C^2 section is interrupted twice by a brief A material. These interruptions take two measures long each (Measures 439 – 440, and measures 445 – 446). Since sections of A are presented shortly in the C^2 section, they have not been counted as individual sections in this analysis. Yet, the pitch contents of these interruptions are represented separately in figure 2.3.

2.1.1. Viola techniques, timbral changes, and map of the piano's pitch in a relation with formal structure

A due is shaped with a series of transformative blocks which are connected and juxtaposed with each other. These sections represent different textures which naturally establish some contrast in the piece. However, each of the indicated textures, mostly have potentials to transform into the other ones through both pitch and rhythm.

In *a due*, the viola has more diversity in terms of pitch material and timbral variety when compared to the piano. It includes many different techniques such as flageolet, various pizzicatos, and percussive effects. These techniques are combined in such a way that the viola part alone establishes a multi-layered texture. This is exactly the argument Mathias Hermann makes in his analysis of *Spur*. He argues that these sound objects function as a background network in the piece; and figure 2.2 is the list of thirteen viola's techniques, which are distinguished by specific kinds of articulation in the piece (Hermann, 2016).

1. Col legno »spotted«
2. Saltando
3. Sforzato with decrescendo
4. Flageolet with crescendo
5. Tremolo with crescendo / decrescendo
6. Pizzicato-flageolett with reverberation
7. Martellato left hand with glissando
8. Arco interval
9. Tremolo marcato sforzato with decrescendo

10. Trill with half-flageolett
11. Pizzicato with fingernail
12. Smothered pizzicato
13. Col legno battuto

Figure 2.2: M. Hermann's list of viola's techniques in *a due*

These techniques represent different sound colors. Representing them through the piece can prepare the transformation of the textures' timbre in *a due*. One of the significant places that is possible to observe this transformation is the ending (coda), which both instruments create a different texture compared to the previous sections. The piano with the glissando on its string along with the viola's flageolet, create a texture which has been prepared by the viola in advance. It is worth mentioning that this is the same technique that Furrer used in *Presto* with the flute part. Hence, similar to *Presto*, these techniques directly connect to the preparation of different, specifically the coda, with their own specific timbres.

On the other hand, the piano generates a strong motoric pattern during the piece. It seems that the piano acts as a crucial leader for the development of the pitch content in the piece. The combination of the rhythmic pattern and its pitch content can grasp the listener's attention towards to the unfolding of the music. Therefore, it seems the piece follows a clear trajectory towards accumulating a complete 12-tone aggregate by the piano. Figure 2.3 tracks the pitches of the piano part to show how and when different pitches enter the piece. This accumulation of pitches eventually leads to the completion of the 12-note aggregate. Additionally, the figure shows how certain pitches are being

eliminated from the aggregate towards the ending of the piece.

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
10	11	0	1	2	3	4	5	6	7	8	9

(Measure 1-341)

1-	Bb	Cb										
99-		B	C									
113-	Bb	B	C	C#								
139-			C	C#	D							
180-			C	Db	D							
198-					D	Eb						
210-					D	D#	E					
214-					D	Eb	E					A
229-			C									
248-	A#	B	C	C#	D			E	F#	G	G#	A
265-	A#	B	C	C#		D#	E	F		G	G#	
274-			C									
284-					D		E	F				
307-		B		C#	D						G#	A
324-		B										

(Measure 342-430)

342-	Bb	B	C	C#	D	D#	E	F	F#	G	Ab	A
366-	A #	B	C	C#	D	Eb	E	F	Gb	G	Ab	A
389-	Bb	B	C	C#	D	D#	E	F	F#	G	G#	A
407-	Bb	B	C	C#	D	Eb	E	F	F #	G	Ab	A
427-	Bb	B	C	Db	D	Eb	E	F	F#	G	Ab	A

	1	2	3	4	5	6	7	8	9	10	11	12
	10	11	0	1	2	3	4	5	6	7	8	9

Measure 431-504

431-	Bb	B	Do	C#	D	D#		F		G	Ab	A
439-	Bb		Do	C#	D	Eb	E	F	F#	G	Ab	A
441-	Bb								F#		G#	
445-	Bb	B		C#	D	Eb	E	F	F#	G	Ab	A
447-	Bb	B		C#	D		E		F#	G	G#	A
453-	Bb	B	C	C#	D	Eb	E	F	F#	G	Ab	A
458-	Bb	B	C	C#	D		E	F	F#	G	Ab	A

Figure 2.3: Map of the piano's pitch content in *a due*. The underlined letters represent the new notes in the particular part.

It is then possible to divide the piece roughly into three sections in relation to 12-tone aggregate formation in the piano part.

1. Measure 1-341
2. Measure 342-430
3. Measure 431-504

Figure 2.4: Division of the 12-tones' piano map in *a due*

As shown in figure 2.3, the piano starts with only two notes (Bb-Cb) in the beginning and creates a gradual ascending of pitch class until measure 229. This gradual ascent follows a chromatic scale. By measure 248, a complete aggregate has been attained. However, between measure 248 and 341, the aggregate is not maintained as a collection.

Only after measure 342, the piano starts to represent all the 12-tones in an ascending contour with unordered chromatic notes. Hence, it could be said the gradual pitch

ascending transforms to ascending unordered chromatic whilst completing the 12-tone aggregate (see fig. 2.5).

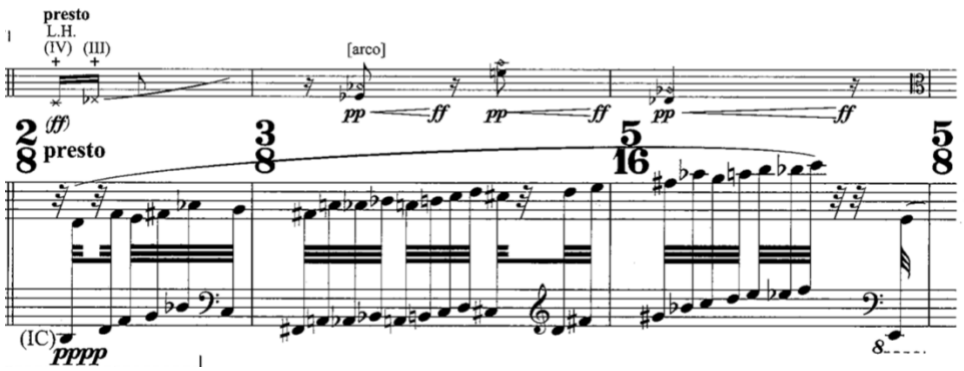


Figure 2.5: *A due*, measure 342 until 344, the example of the unordered chromatic ascending

All the 12-tones appear during measures 343 until 431 in the piano. After 431, a few notes are eliminated in each part but still it is possible to perceive the sense of the entire 12-tone aggregate used the whole section.

2.2. A Section

The A section, with motoric rhythmics and big interval leaps of the piano. has some distinguishable features with itself. It is remarkable to mention that in the A section it is possible to find both rhythmic patterns and pitch patterns in the piano part. Based on figure 2.3, the pitch content in the A section evolves in a systematic way during the piece. This enlargement of the pitch content applies to the entire A section. The piano starts with only two notes playing nearly with octave intervals in A^1, and it develops into a complete 12-note aggregate in A^6. In this chapter, a few examples of the pitch and rhythmic pattern of A are shown. It is essential to mention that the pitch and the

rhythmic patterns in the following examples of A are not aligned, showing a sign of isorhythmic approach in some parts of the A section. Moreover, the piano's hidden rhythmic pattern can be regarded a preparation for the B section that is rigidly structured based on the piano's rhythmic patterns. Figure 2.6 uncovers the pitch pattern in A^1.

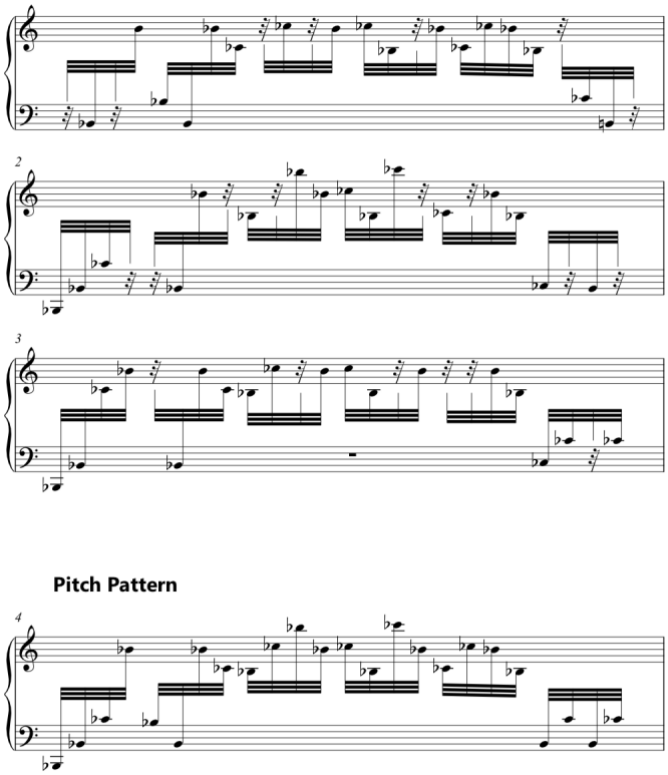


Figure 2.6: *A due*, exemplified trend of finding the pitch pattern in A^1

Since the piano part has rests replacing notes, it is only possible to extract the complete 24-note pattern after the third repetition (figure 2.6). However, the rests within the patterns are not arbitrary. As it mentioned before the piano has also a rhythmic pattern. However, since this rhythmic pattern has 30 units (32nd notes in this case), it is not aligned with the pitch pattern.

0	1	0	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1

Figure 2.7: *A due*, binary representation of the rhythmic pattern in A^1. Each digit is based on one thirty-second note. 1 represents notes and 0 represents rests.

In A^2, the piano's pitch pattern is compressed to 23 elements and its rhythmic pattern is transformed to a constant continuation of thirty-second notes.

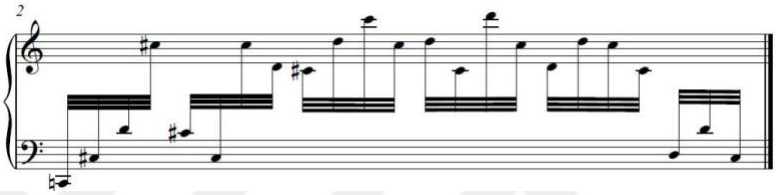
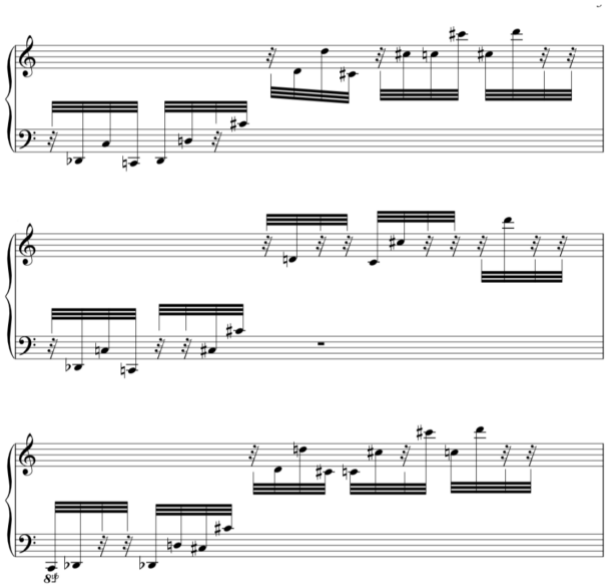


Figure 2.8: *A due*, an example of the pitch pattern in A^2

Furthermore, the piano's pitch pattern in A^3 comes down to 20 elements. It is possible to see that in each section the length of the pitch pattern shortened compared to previous one: in A^1 24, in A^2 23, and in A^3 20 there are thirty-second notes, respectively. This clearly shows a gradual decrease in the pattern in these sections. However, the pattern changes more dramatically in measure 222. Figure 2.9 shows the pitch pattern in A^3 section and also demonstrates the change after measure 222.



The patter starts to change in measure 222:

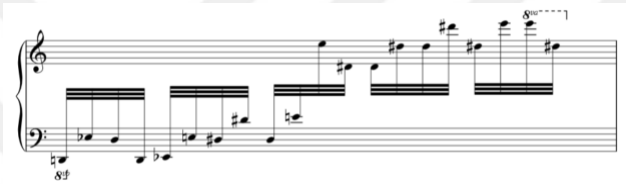


Figure 2.9: *A due*, examples of the pitch pattern in A^3

As figure 2.9 shows, we can still deduce the pattern in its complete form after the third repetition.

2.3. B Section

One of the main compositional aspects of *a due* is the pulsive sections which are mostly articulated by the piano. These pulsive sections are categorized under the B section of the piece. Surprisingly, the piano has the exact same pattern as *Presto* (see Fig. 1.14). Hence, it means the piano follows a 15 sixteenth notes pattern, and it repeats ten times for the first time. Figures 2.10 until 2.16 illustrate the B sections' rhythmic pattern along

with their changes during the piece. In figures 2.10 until 2.15, each cell is based on one sixteenth note, and in 2.16, each one is based on one thirty-second note. The black cells represent the notes, and the white ones show the rests in the pattern.

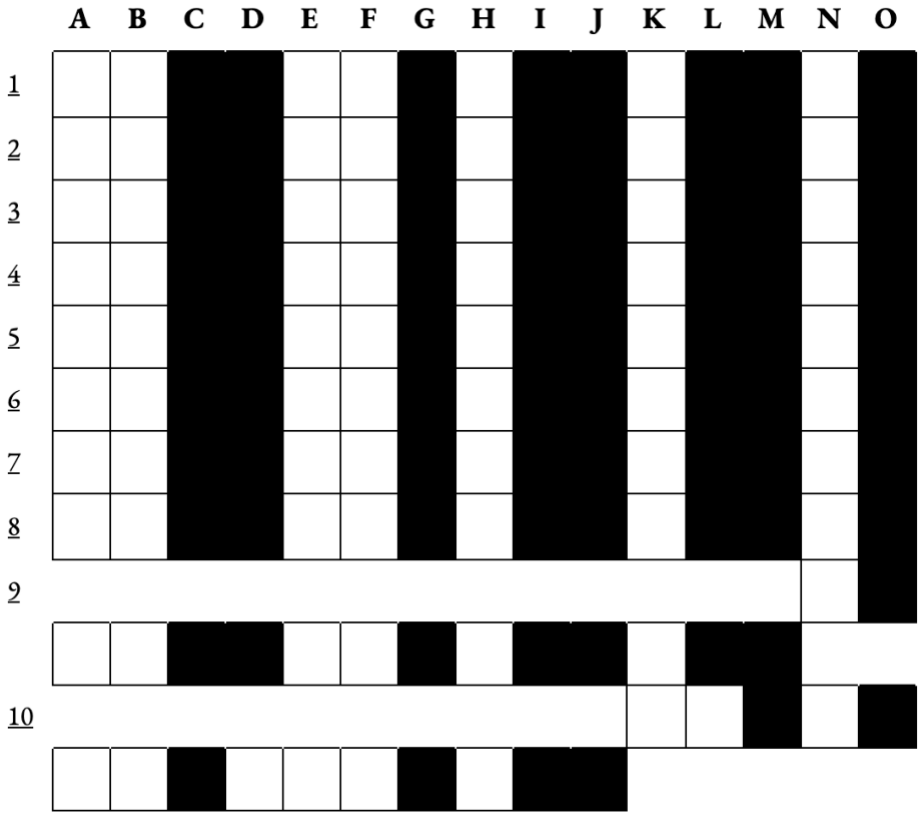


Figure 2.10: *A due*, rhythmic pattern of measure 113 until 138 (B^1)

As shown in figure 2.10, the pattern repeats ten times in total, leading to 150 sixteenth notes in total. However, the pattern repeats eight times without any variations, but it has some small changes and shifts in the pattern in the last two times of its repetition.

The next measure that the pulsive piano reappears is in measure 144. This time the pattern has some shifting and variations within itself. In B^2, the pattern repeats fourteen times which is approximately four times more than B^1. The last time the pattern is

incomplete, it only consists eleven sixteenth notes. Hence, the section is 216 sixteenth notes long in total. Figure 2.11 illustrates the process of the pattern from 144 until 179.

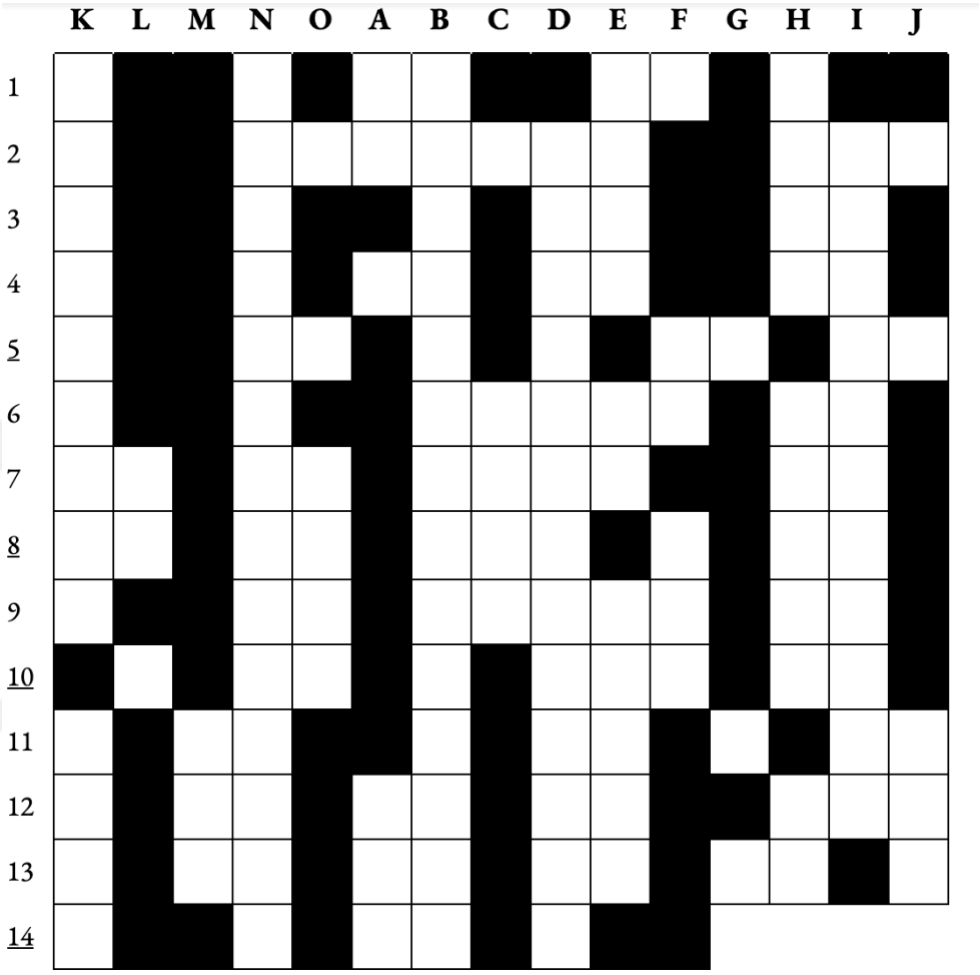


Figure 2.11: *A due*, Rhythmic pattern of measure 144 until 179 (B^2)

As figure 2.11 uncovers, it seems that the whole pattern shifts ten cells to the right. Additionally, it shows that this shift is accompanied by several variations and changes in the pattern. The first starting column becomes K due to this shift (see Fig. 2.12). It is remarkable to mention that the B^2 starting point is the same as B^1's last occurrence.

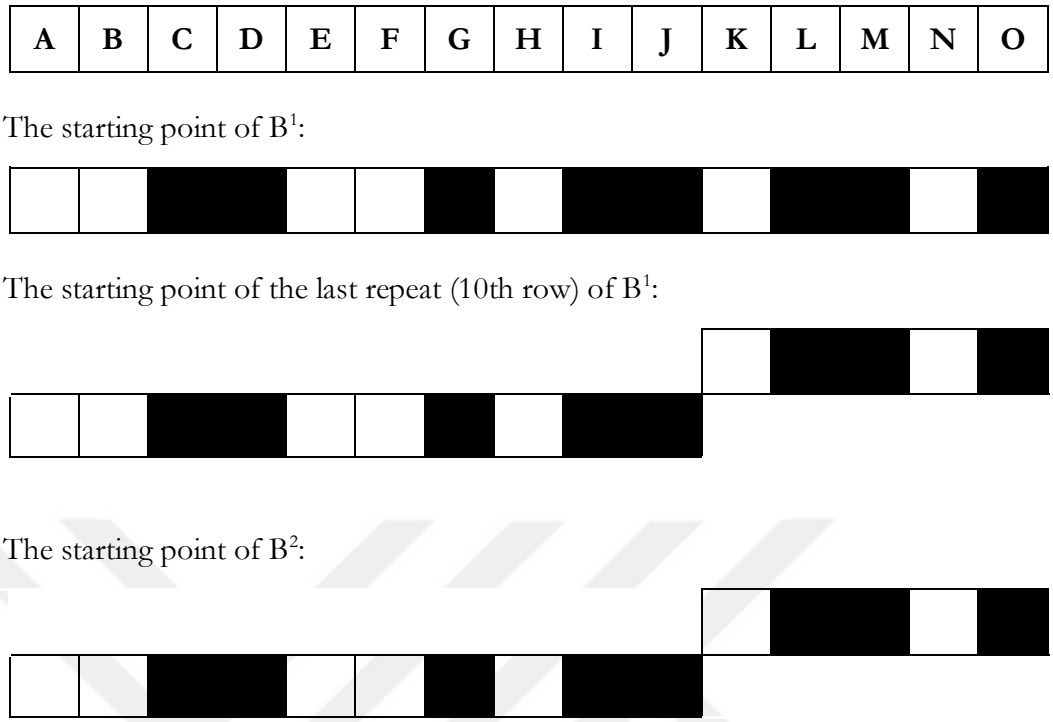


Figure 2.12: Shifting of the rhythmic pattern in *a due*'s B^1 and B^2

One of the other aspects of B^2 is the complementary relationship between the two instruments. It is noteworthy to mention that in B^2, the viola also produces pulses via repetitive pitches. These viola pulses are played with pizzicato, and they appear between measure 144 until 150 and complement the piano chords. Furthermore, the viola plays rhythmically with left-hand pizzicato briefly, and this occurs between 168 until 179. Figure 2.13 demonstrates the examples of viola in the B^2 section.

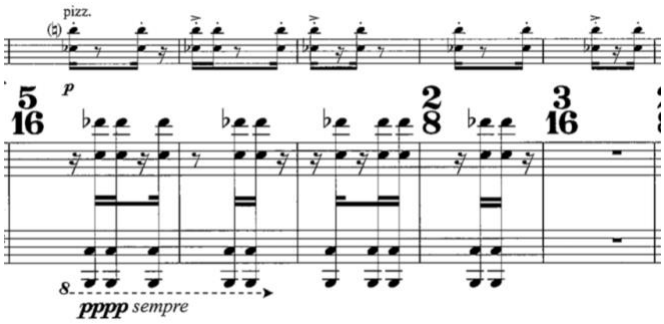


Figure 2.13a: *A due*, viola pulses between measure 144 until 148. The complementary relationships between the viola pizzicato and the piano chords.

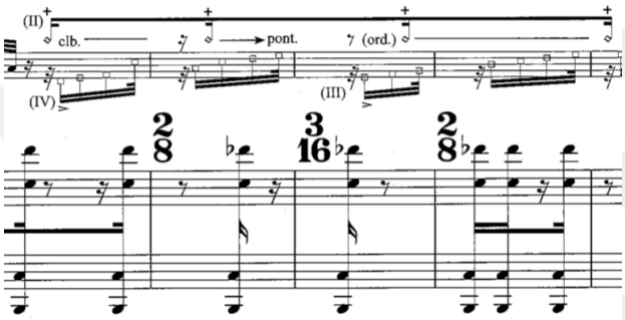


Figure 2.13b: *A due*, viola pulses between measure 168 until 172

The rhythmic pattern appears a bit differently for the next time. In B^1 and B^2, the pattern is played by a chord of piano, but in B^3 the pattern shows itself as a single repetitive note. In both measures 229 until 247 and 274 until 283, the same pitch is used (C-Natural in the first octave of the piano). Therefore, it is possible to think about it together as one big section (B^3) which is split from B^{3a} and B^{3b}. The rhythmic pattern reappears for the first time with the same starting point as B^2 (column K). However, it consists of a few changes within itself. Figure 2.14a and 2.14b illustrates the variations on the rhythmic pattern in B^3.

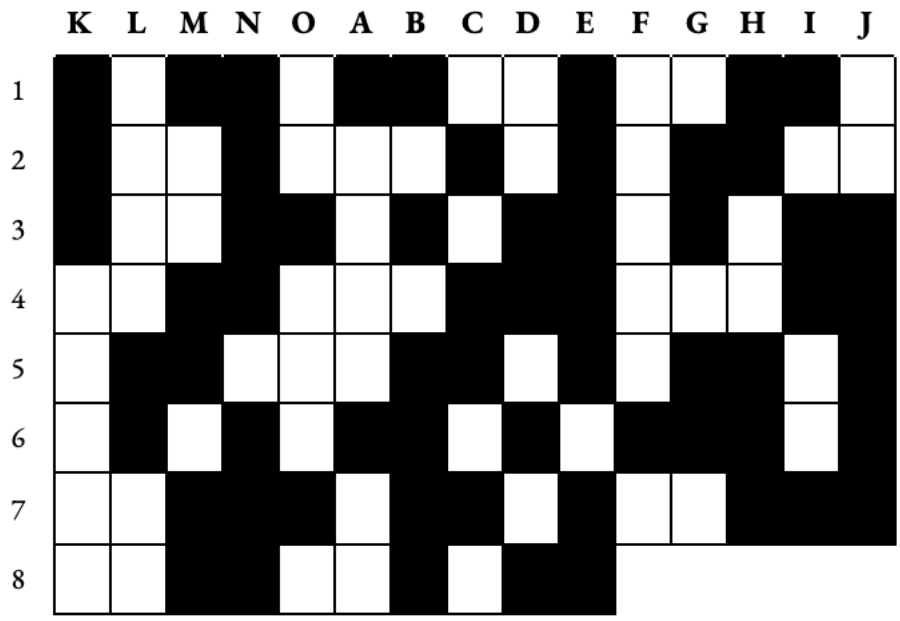


Figure 2.14a: *A due*, rhythmic pattern of measures 229 until 247 (B^{3a})

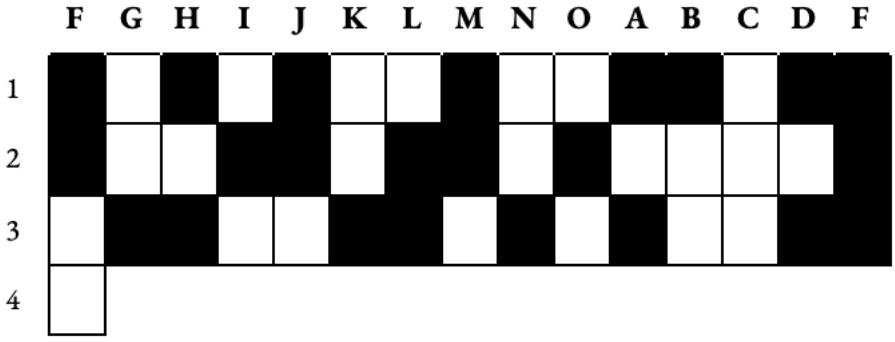
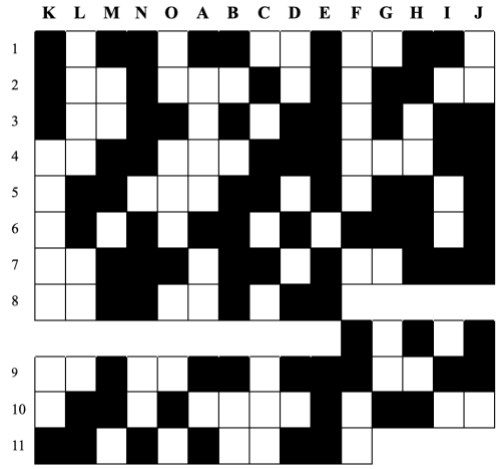


Figure 2.14b: *A due*, rhythmic pattern of measures 274 until 283 (B^{3b})

As shown in figure 2.14, the amount of variation increases during this part. However, if B^{3b} is assumed as the continuation of B^{3a}, it is possible to witness this part's variation through the overall shift towards the left. Figure 2.15 shows the combination of B^{3a} and B^{3b}, representing the overall shift in B^{3}.



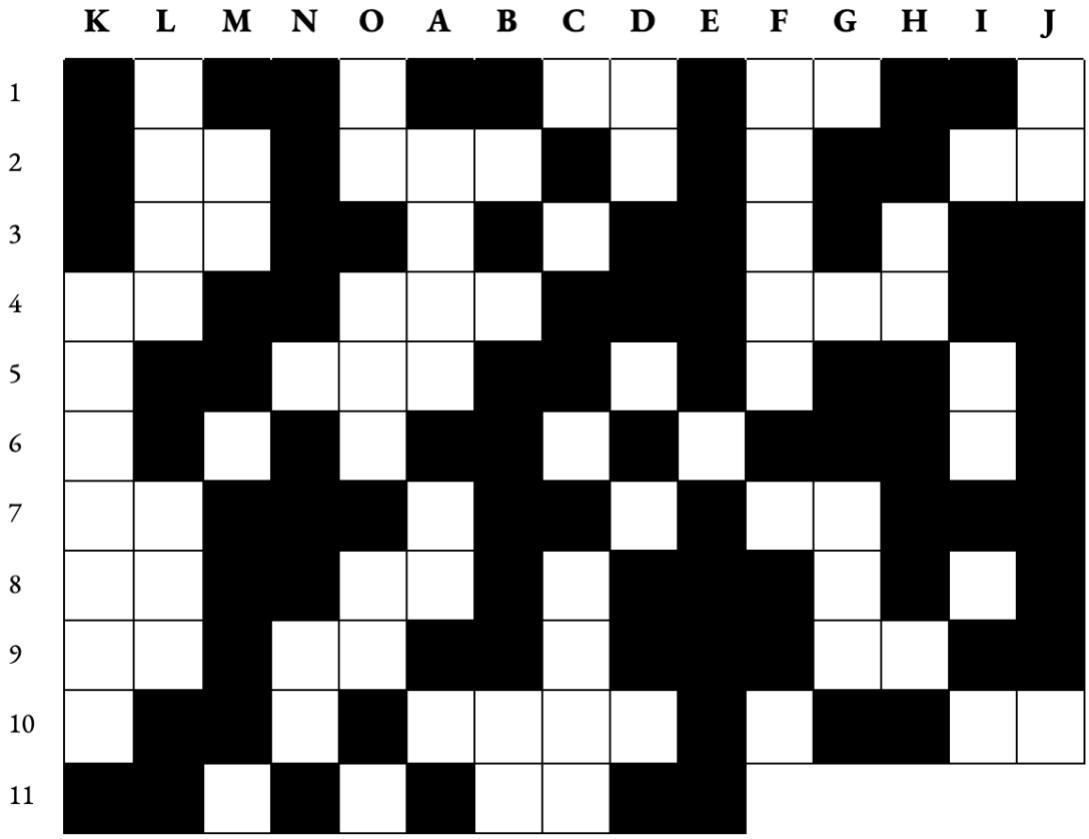


Figure 2.15: *A due*, combined B^{3a} and B^{3b} sections' rhythmic pattern

In the B^3 section, it is possible to navigate the shifting pattern by both black and white cells. As an example of the mentioned shift, in figure 2.15, it is possible to point out the shifted rest from C1 to K8. Therefore, the cells C1, B2, A3, O4, N5, M6, L7, K8 are all rests. Similarly, J1 to O11 (except B9) are all white cells (rests) in a diagonal shape. In contrast, examples of black cells (notes) in a diagonal shape are F1 to K8 (except F1) and I1 to N11 (except F4).

In B^4, the pattern returns to its root in terms of the starting point of the rhythm. Obviously, it has some variations compared to the original version, but it has apparent similarities with B^1 (see Fig 2.17).

Additionally, the number of repetitions of the pattern in B^4 is similar to B^2, is approximately fourteen times. Figure 2.17 illustrates the pattern and its variation in the B^4 section. In Figure 2.17, each cell is based on one thirty-second note duration.

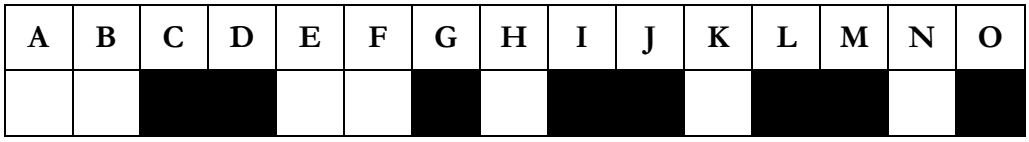


Figure 2.16: Initial rhythmic pattern of *a due*'s B section

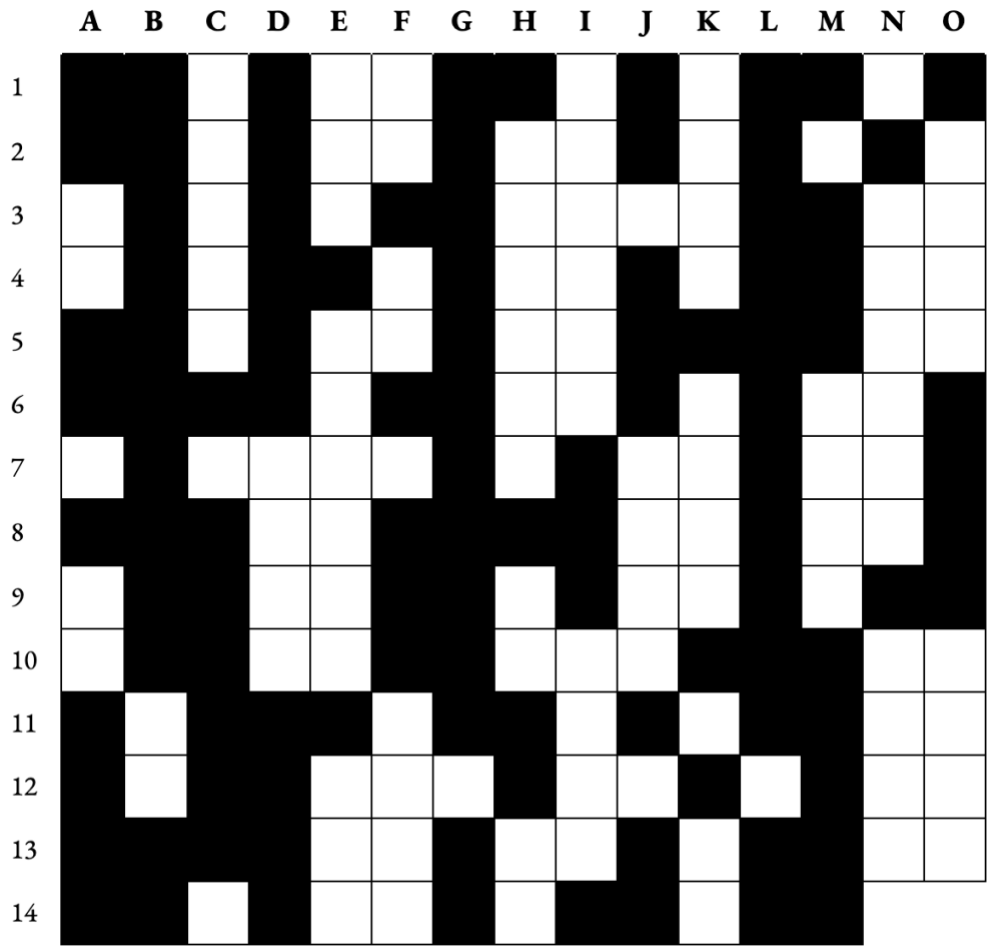


Figure 2.17: *A due*, rhythmic pattern of measure 324 until 341 (B^4)
(each cell is based on one thirty-second note)

As a result of B^1, B^2, and B^3 variations, there are specific shifts in the black cells in B^4. There are three black cells that shift in a diagonal shape through the section, which are H1 to A8, O1 to B14, and O8 to I14. In this regard, the black cells' existence in a diagonal shape is a similar approach for the structure of this section compared to B^2.

2.3.1. B section's signs in other parts of *a due*

The B section is defined as a contrast part that happens by the pulsive piano. Moreover, it is possible to navigate the signs of the B section in other parts of the piece as well. Two of the significant places that it should be mentioned are:

1. Measure 307 until 323, the repetitive C#1 played by piano

2. Measure 366 until 375, the repetitive pizzicato (C-Db) played by piano

Concerning measures 307 until 323, the piano plays the C#1 between the constant interval leaps. Remarkably, this C#1 has a rhythmic pattern. It can be considered that the repetitive C#1, without any lower pitch around itself, can be an alteration of the B sections' approach towards applying the pulsive piano. Although the mentioned measures are based on the constant piano interval leaps, it seems that the C#1 appears in its own rhythmic pattern in between (see Fig. 2.18).

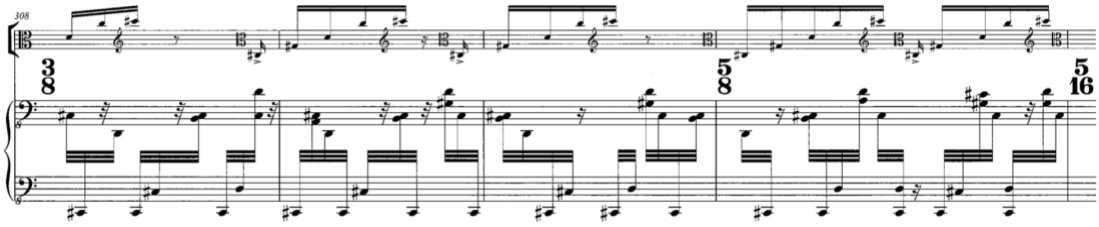


Figure 2.18: *A due*, measure 308 until 311

The pattern of eleven thirty-second notes considered specific places for presenting the C#1 (see Fig. 2.19). The C#1 appears on the 1st, 5th, and the 8th thirty-second notes. However, after measure 312, they are occasions that rests replace the C#1, but it does not fill its place with any other pitch in the pattern. The pattern starts with the last C#1 of the measure 307, and it repeats 17 times.

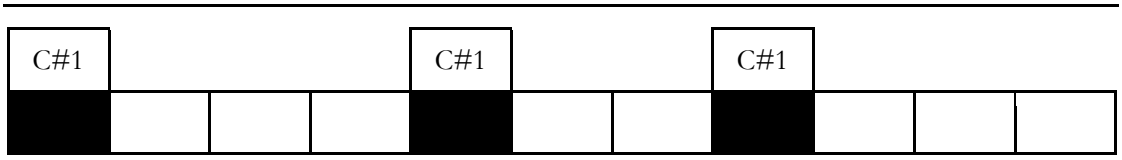


Figure 2.19: *A due*, C#1 rhythmic pattern between measure 307 until 323 (each cell is based on one thirty-second note)

As another example of the B sections signs in other parts, measures 307 until 323 represent rhythmic pizzicatos with fixed notes (see Fig 2.20). The viola complements the piano, and it continually repeats the (C-Db) chord.

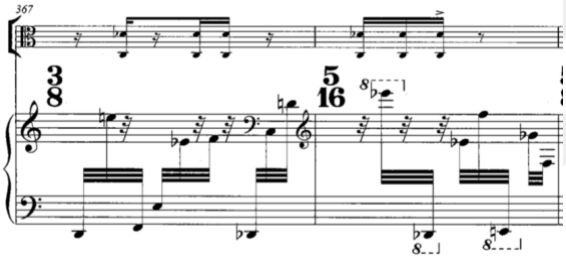


Figure 2.20: *A due*, measure 367 and 368

2.4. C Section

The C section represents the ascending gesture with unordered chromatic notes in the piano part. The gesture consists of two ascending chromatic sets placed synced on top of each other, which naturally create chords. However, these two chromatic sets start with the same note initially, and they change during the gesture. Obviously, each chromatic gesture does not contain any immediate pitch repetitions.

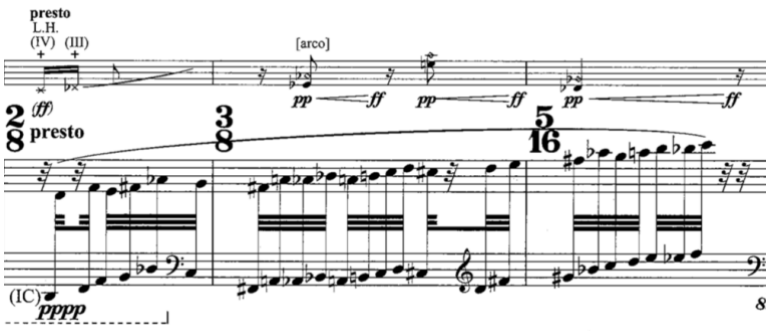


Figure 2.21: *A due*, measure 342 until 343

One of the piece's remarkable points is the contrasting entrance of C^1 (measure 342), which represents all the 12-tones for the first time in the piano part (see fig. 2.21). This section is 24 measures long, and during the section, the number of rests between the notes is increased. Moreover, while adding more rest in between, a few chromatic chords appear (see fig. 2.22). It seems that these chords are representing the missing notes replaced by the rests in the gesture. Figure 2.22 shows the two examples of these chords in C^1.

Measures 357-358 Measures 364

Figure 2.22: Two examples of chords with chromatic notes in *a due*'s C^1 section

The next time that the C section appears in the piano is measure 427. This time C^2 with a varied texture emerges, and the coda follows it. However, the C^2 section contains

subsections and two brief interruptions by A section. Figure 2.23 shows the summarized structure of the C^2.

C^2

c'^1 (407)	**c^1 (427)**	**c'^2 (431)**
a^1 (439)	**c'^3 (441)**	**a^2 (445)**
c'^4 (447)	**c^2 (453)**	**c'^5/coda (457)**

Figure 2.23: *A due*, the structure of C^2 (The subsections are indicated with small letters)

On the surface, C^2 appears dissimilar compared to C^1, but in fact, it is a variation of C^1 through replacing rests in between the ascending chromatic notes.

The C2 section represents one of its patterns from 427 until 430 and the other one from 453 until 456, which are named as c^1 and c^2 subsections, respectively (see fig. 2.23). Looking more into details, c^1 shows the complete pattern and based on that, it is possible to navigate the excerpts of its ascending gesture pattern in the c'^1 subsection. In the c'^1 subsection, the pattern is fragmented. Mostly, in each fragmented part, the pattern's notes order remained the same and the rest in between does not affect its order. However, these fragmented parts include octaves displacement. Figure 2.24 demonstrates the examples of c^1 subsection pattern's excerpts in c'^1 subsection.

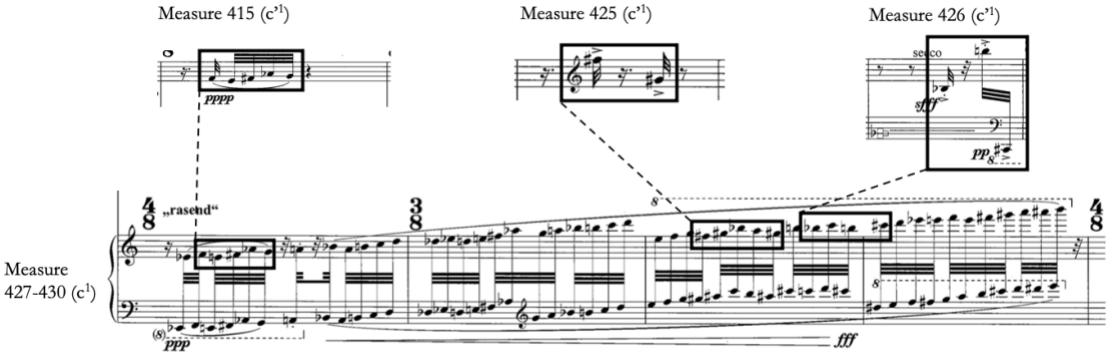


Figure 2.24: *A due*, c^1 subsection pattern (ascending chromatic gesture) and three examples of its excerpts in c'^1

As another example, it is possible to trace the same trend between c^2 and c'^2- c'^3- c'^4. Same as the previous time, the complete pattern represented in c^2 and the fragmented extractions of the pattern appears in c'^2- c'^3- c'^4 (see fig. 2.25). Similar to c^1, c^2 contains two ascending chromatic gestures on top of each other that initially start with the same note and change during the gesture.

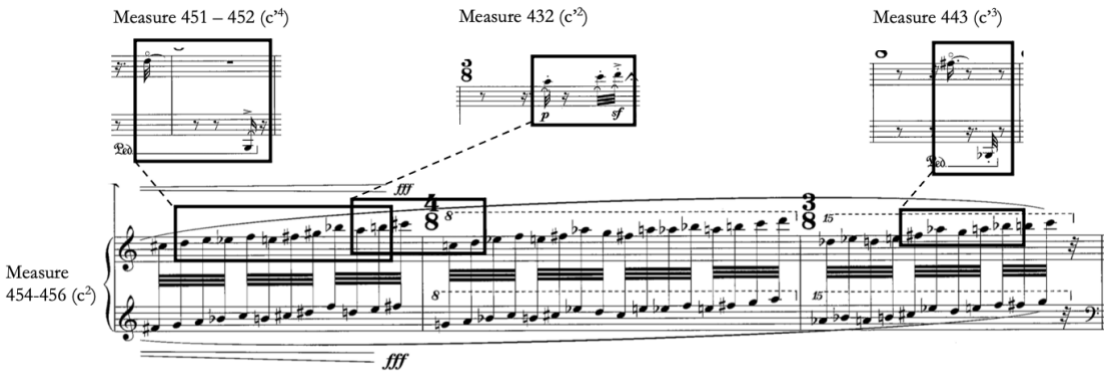


Figure 2.25: *A due*, c^2 subsection pattern (ascending chromatic gesture) and three examples of its excerpts in c'^2, c'^3, and c'^4

The c^2 section ends with a fermata which is the starting point of the coda as well. This time, the viola presents the ascending chromatic gesture in the beginning of the coda. It

is worth mentioning that this representation of ascending chromatic gesture by viola happens in several places in the piece, such as measure 376 until 378, and 386 until 388.

In the coda, both instruments structure a section that can also be regarded as a dissolution of the piece's previous compositional materials. However, it seems that the coda follows a similar plan as c'4 in the piano part. It is still possible to see the fragmented extractions of c^2 in the coda section as well. It is noteworthy to mention that this approach for ending the piece is similar to *Presto*.

2.5. Chapter Conclusion

A due is constructed based on several patterns. In this sense, both *Presto* and *a due* share a lot of compositional techniques. The piece unfolds as the patterns are varied and juxtaposed. *A due* includes chromatic ascent in micro and macro levels. It develops its initial piano's pitch content via a gradual chromatic ascent (see 2.3.). The piece also includes ascending chromatic gestures played by both instruments in different parts of the piece. Through the extensive usage of number patterns and 12-tone aggregate formation, *a due,* like *Presto,* is another good example how Beat Furrer derives his compositional methods from post-serial techniques. Again, just like in *Presto*, the use of multiple viola techniques, such as percussive effects, flageolet, trill, and timbral changes in the piece, has structural implications and prepares the overall timbral transformation of the piece.

CONCLUSION

As the text proposed, there are techniques in Furrer's music that are common between the indicated compositions. They might be varied but still identifiable. The thesis presents this approach based on analyses of two pieces from 1997 by Beat Furrer, which are constructed by several mutual compositional materials as well as their common strategies to form, pitch, rhythm, and juxtaposition.

Presto and *a due* are constructed on several number patterns: interval, rhythmic, pitch, and pitch-class patterns. Furrer builds his structures by representing contrasting sections along with the variation of the patterns. Furthermore, *Presto* and *a due* establish their structures with patterns constructed by ordered contents from a post-serialism approach where number patterns are developed exclusively. These patterns are tied to the form. They are straightly linked to the sections and changing the textures. However, there are moments that distinctive sections' textures are merged simultaneously. This blending leads to having a layered and multi-voice, texture. Hence, in these moments, is it possible to observe the potential in the formal transition to each of the merged layers.

It is worth mentioning that there are some other major common aspects between *Presto* and *a due* such as complementary textures, unordered chromatic sets, and ascending figures. Also, switching and transforming in the level of harmonicity in his composition's textures along with its relation to the form is a perceivable point in his music.

The common features between the different works of a composer can explain recognizability. Through their similarities, the two indicated pieces can guide the listener to recognize the composer without knowing in advance. Sensing a similar attitude towards developing patterns or juxtaposing while having contrasting textures can help the listeners to determine the piece under the name of Furrer.

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