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Igor Stravinsky's
Symphonies of wind instruments

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Igor Stravinsky: *Symphonies of Wind Instruments* (1920)

Stravinsky's *Symphonies of Wind Instruments* may be identified as a work that deals with the issue of time in a very special way. The piece resists analysis, especially in the traditional approach, due to its diverse materials and the ways in which they are combined. In addition, its highly fragmented nature and the wide variety of re-orderings to which its materials are subjected enables the piece to reflect multiple types of temporalities simultaneously.

At the first listening experience, one perceives movement at the surface of the texture, which is created by a stepwise motivic motion that supports linearity in the pitch domain. However, upon further analysis, the listener can understand that this linearity works more at a local level while the piece does not actually develop or move to any unequivocal goal at the large-scale level. The main reason for this phenomenon is that behind the foreground, two further underlying structures exist (middle ground and background) that behave in a different way. Many musical analysts have tried to analyze this piece, each with their own approach. One that I found particularly interesting is proposed by Jonathan D. Kramer[1] who focuses on the manifold interrelationships between the materials of these three structural layers in order to draw conclusions on the temporal domain of the piece. According to him, behind the linear foreground, the middle ground, which is divided in units that he calls "moments", behaves non-linearly. The main reason for its non-linearity is due to the unrelatability of these moments in terms of the harmonic material they contain. In addition,

[1] Kramer, Jonathan D. (1988). "The Time of Music. New Meanings, New Temporalities, New Listening Strategies", Schirmer Books, New York, London, pp. 221-285.

their nature is static, in the form of blocks. They are built on combinations of static harmonies that prioritize some of their chords, which are defined as "principal" by Kramer. Particular intervals of these principal chords dominate in each moment. Whenever transitions between different moments occur, they are small and occasional. In addition, these static harmonic areas inside the moments come into conflict with the piece's motion of the surface. Finally, the background layer reflects more motion than the middle ground, as it develops harmonic progression linkages that are more frequent.

The motivic material that sets the foreground of the piece into linear motion is comprised of cells, or groups of pitches with their durations more or less similar to a motive. These are combined in sequences, larger units in the form of chains. These cells are constantly re-ordered inside narrow limits. Some cell orderings inside larger units are more typical than others but this changes according to the musical context, and some types of orderings are even completely excluded in certain contexts. For the listener, the result of this kind of behavior is that it is nearly impossible to predict which cell ordering will come next at any moment. In addition, some orderings are repeated without following an exact pattern, which makes such a prediction even harder. As a matter of fact, the behavior of the cells can be defined more as a kind of "range of possibilities".

The pitch material inside the cells whirls around a few intervals that are not built on harmonic tension principles and which do not seem to have a real beginning or end.[2] Because

[2] Andriessen Louis & Schönberger (1989). "The Apollonian Clockwork. On Stravinsky", Oxford University Press, Oxford, New York, p. 41.

of this, the details of the piece are very difficult to memorize, a common feature of the music of Stravinsky in general.

Up till now, I have described the structural layers of the piece and the way they create its multi-dimensional character. I will now proceed to present a detailed presentation of the form in order to show the way that these three layers are shaped in an organic whole. Some examples from the score will be referred for clarification, whenever this is necessary.[3]

1. Form

i. foreground

a. cells with their sequences

The strategies that Stravinsky uses in order to avoid predictability inside the cell units can be summarized as follows:[4]

a. Slight deviation from an established behavior whenever predictability is going to happen soon (because of many already occurred repetitions).

b. Variation within the cells *and* between the orders of their succession (this creates two points of reference of variation).

c. Change of the length of each moment that contains the cell sequences.

d. Injection of a new cell version or a new moment type whenever the music context needs renewal.

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[3] All examples from the score refer to the revised 1947 version of the piece in the edition *Boosey & Hawkes, New York USA (1952).* At this point I would like to draw the *careful* attention of the reader that in this version the score is transposed.

[4] Kramer, Jonathan D. (1988). "The Time of Music. New Meanings, New Temporalities, New Listening Strategies", Schirmer Books, New York, London, p. 224.

An interesting example where Stravinsky uses repetition and avoids predictability at the same time, can be found in the cell sequences that appear in the seven A sub-moments (A0, A2, A9, A26/27, A37, A39) of the piece (Fig. 1, appx., p. 19).[5] The A sub-moments appear in the beginning of the piece and in some other spots, but all located in its first half. After the last sub-moment (A39), they never appear again in the whole work. The numbers in this figure indicate durations in eighth notes. Bold durations correspond to notes with grace notes attached. Rests are notified in brown color.

In this figure we can see that the element of repetition is very prominent. However, Stravinsky finds ways to avoid exact reproduction of the durations in order to break the predictability of the cell sequences. He achieves this by shortening some durations (similarly to a "trimming") without destroying the basic shape of the pattern, or by permutation of the pattern without any shortening of durations. After the overlap in A9, sub-moment A26/27 brings us back to the pattern of the opening of the piece. A dichotomy is created in this way, which is also supported by the harmony, as the latter changes at A26/27. As a matter of fact, there are two principal harmonies that group the A sub-moments in the following way: [A0, A2, A9] and [A26/27, A37, A39].

Each of these cell sequences includes either one or two cells without grace notes (i.e. A0 has two cells: 2 2 1 2 -- 2 1 1, whereas A37 has one: 2 2 1 1) and always only one cell with

[5] On the division of moments to sub-moments I elaborate in 1.ii, p. 8. From now on, I will notify all moment types (they are seven in total) with a letter of the Latin alphabet (A corresponding to the first type, B to the second etc.), followed by the rehearsal number of their appearance in the score. This kind of pairing will define the particular sub-moment at each time (i.e. A9 = the sub-moment of moment A that appears at rehearsal nr. 9 in the score etc.).

grace notes attached (indicated in bold numbers in the chart). In this way, a kind of "underlying" coherence is achieved between the cell sequences.

b. the "inject" motive

The music cells are not the only motivic material in this piece. In 1.5-6 [6] an independent motive appears (Fig. 2, appx., p. 19) that is called "extra" or "inject" motive by many analysts that have dealt with the work. This motive doesn't belong to any moment or cell, appearing in other spots of the piece (such as in 4.3-5.1) but not often. Its importance lies in the fact that it slightly dilates the movement of the preceding event (in its first appearance the event in 1.1-1.5). Additionally, this motive's harmonic content deviates from its surroundings, thus being clearly perceived as a different entity. The varying instrumentation also helps in this direction. In Fig. 3 (appx., p. 20) we can see how the harmonic content of this motive deviates from the octatonic collection[7] that comprises the harmony of its surroundings.

In the appearances of this particular motive, our perception of time is affected. We experience time dilation only for a while. It is more a kind of "deferral" at the end of a musical event, a strange "slow down" that is neither a smooth deceleration nor a complete stop, but something in-between.

[6] 1.5-6 = bars 5-6 after rehearsal nr. 1. All subsequent references on specific bars of the score will be notified in the same way.

[7] Octatonic collection is a pitch group derived by any musical scale baring the same name. Such scales are composed by an alternation of whole and half steps. They were broadly used by composers of the first half of the 20th c., such as Bela Bartok, Alexander Scriabin and Igor Stravinsky.

ii. middle ground (moments divided in sub-moments)

Three basic dimensions define the moments of the piece: their tempos, their harmony and their cellular content. Whenever a change of tempo occurs in the piece, it signals the arrival of a new moment. This signal, in combination with their harmonic content that is more or less static, including certain pitches that sound in fixed registers, contributes to a general stasis. As a matter of fact, the middle ground of the piece provokes a kind of temporal experience in which the time "freezes" for a moment.

This effect is created whenever a unit of a music piece is both self-contained and static to such a degree that a kind of "defeat" of the listener's memory is achieved or at least attempted. When this is successful, the listener may accept any order of such "moments" as his or her's attention is focused on the present (the *now*) of the happening and not on what has already happened or will come next. The preference of Stravinsky to this kind of "frozen" moments relates to his ideas on *ontological* time and its repercussions on psychological human perception. Ontological time is another definition of absolute time (or clock time), which never changes and always exists without any acceleration or deceleration. Whenever it is experienced, it creates a pure feeling of euphoria to the listener that can be compared to a calmness that remains undistorted by emotions. In this environment, an ideal space is created so that the formal dimensions of the music work can be objectively perceived.[8]

[8] Kramer, Jonathan D. (1988). "The Time of Music. New Meanings, New Temporalities, New Listening Strategies", Schirmer Books, New York, London, p. 288.

There are numerous moments that appear in *Symphonies of Wind Instruments* that can be grouped as seven different types. Each one of these shares similar characteristics in harmony and cellular content. In addition, Stravinsky has fragmented them in smaller units, which Kramer calls "sub-moments". The latter appear in various spots of the piece without specific order. This kind of handling with the sub-moments has a second crucial repercussion on the work: *discontinuity* both in the texture and in the temporal domain (experience of fractured time).

Concerning the levels of discontinuity that are created in the texture, there are two: the contrasting material of the moments and their partitioning in smaller sub-moments. However, there is an intentional ambiguity in this aspect, as the different exposed textures have hidden elements in common that work against a strong discontinuity. For example, in moment A there are common bottom intervals in the basic harmonies of all sub-moments (i.e. the interval F-Bb in A0, A1, A2 and A4). In addition, the interval D-F sounds constantly on the top of all these harmonies and in a fixed register. As a matter of fact, these separated blocks *do* have (some) properties of continuity. The effect of their sequence is an ironic interaction between stasis and motion.

This ambiguity in the approach of Stravinsky is not restricted to the idea of discontinuity. It is also the case for the foreground linearity: small intentional "mistakes"; for example, wrong notes like Fb in 5.1-2 in the tuba and bassoon create disturbance in the linear progression of the musical events. Here we observe a fascinating reciprocal relation of two temporal experiences in Stravinsky's mind: linearity or discontinuity?

iii. background continuity

As it was mentioned before (see p. 4), the background layer of the piece comes into conflict with the non-linear middle ground through some connections of the harmony. An example of this behavior can be found in the treble lines of A0-A9-A26 that move stepwise from a G major triad to E major [G-F#(Gb)-E].[9]

Another element that has repercussions in developing such linkages is the way the "inject" motive behaves (see 1.i.b, p. 7). Although it is clearly perceived as a foreground element, in each new appearance it is transposed. The polarities on pitch centers that are created inside its surroundings (in terms of a "focal" pitch that has more gravitational force), although non-functional, create stepwise motion in the background of the piece. In Fig. 4 (appx., p. 20) we can see an instance of this.

2. Relation to the idea of repetition in the philosophical domain

The way that Stravinsky handles with the cellular content of his moments reflects a strong affiliation of the work's material with the idea of a kind of repetition that is never exact.

In his book *Difference and repetition*[10] the French philosopher Gilles Deleuze speaks extensively on the concept of repetition and explains that this can be interpreted in various ways. Two points that seem to me to be relevant to the piece are: a) the role of imagination

[9] Please refer to the score.

[10] Deleuze, Gilles (1968). "Difference and Repetition", Columbia University Press, New York.

in relation to repetition and b) the creation of copies (simulacra) through the eternal return. According to the first interpretation, [11] intense repetition can create a state of "contemplation", which remains hidden and stays inactive. Because of this, it is easy to be forgotten or to be interpreted as a reaction without any reference to repetition. The role of imagination is important in this case, as it can draw something new from repetition that may be compared to difference. This idea of Deleuze seems quite interesting to me as it makes me think of the constantly repeated elements of the piece in a different approach during the listening experience. For me, the experience of this work is not a passive one — as the constantly changing subtleties of a material contained within a context that never stays fixed — it invites me to create my own version of interpretation of the musical meaning.

The second point Deleuze focuses on concerns the unending blur between original models and their copies and, throughout history, is a recurring theme. This blur of original models and copies is deceptive, making it difficult to identify which is original and which is the copied work.

Deleuze states on this concept:[12]

> *Plato attempted to discipline the eternal return by making it an effect of the Ideas- in other words, making it copy a model. However, in the infinite movement of degraded likeness from copy to copy, we reach a point which everything changes nature, at which copies themselves flip over into simulacra and at which, finally, resemblance or spiritual imitation gives way to repetition.*

[11] Deleuze, Gilles (1968). "Difference and Repetition", Columbia University Press, New York, p.76.

[12] Deleuze, Gilles (1968). "Difference and Repetition", Columbia University Press, New York, p. 128.

Once again, this idea relates somehow to the nature of the circulating cells. In their never-exact repetitions, it is impossible to guess with certainty where the sounding material is derived from, which is the original cell and which its copy. It is also difficult to predict how many of these copies will continue circulating and how long until the next change. As a result, we are left to the acceptance of an ambiguous whole that continuously repeats but never affirms or asserts.

3. Connection to the cinema montage

The writing of the piece bares many similarities with the film montage technique, a technique of film editing where a series of short shots are edited into a sequence. Both the constant reordering of the cell material that resembles to a moving mosaic towards diverse directions and the discontinuity that we experience through the fractured nature of the texture, create repercussions in the temporal domain that are comparable with this technique. According to Gilles Deleuze:[13]

The technique of montage puts the cinematographic image into a relationship with the whole; that is, with time conceived as the Open. In this way it gives an indirect image of time, simultaneously in the individual movement-image and in the whole of the film.

Of particular importance and relevance to the work is the montage technique of the Soviet cinematographer Sergei Eisenstein.[14] What he actually achieved was to synthesize a theme through the juxtaposition of its partial elements that are perceived as isolated and

[13] Deleuze, Gilles (1986). "Cinema 1. The Movement Image", University of Minnesota Press, Minneapolis, p. 55.

[14] Sergei Eisenstein (1898-1948) was a Soviet film director, a pioneer in the theory and practice of montage. His most famous silent films are *Strike* (1925), *Battleship Potemkin* (1925) and *October* (1928).

moving in independent temporalities. This merits attention as it is notably close to the way Stravinsky works with the partial elements of the piece (moments, sub-moments, cells, individual note) and the way he makes them communicate in the overall form. Both the idea of multidimensionality of time and its "fractures" play their role here.

The way that the montage "cut" relates to the musical discourse of the *Symphonies* is more than obvious. It also makes us wonder how Stravinsky actually worked in this composition process. Would a possible scenario be that he first composed the "moments," fragmenting them afterwards into "sub-moments" and injecting different materials between them, or did he compose discontinuous events from the beginning?

Moving to the last part of this chapter of the study, I will indicate instances in the piece where parallels to different types of film montage are clearly reflected.

i. the *any-space-whatevers* in the cinema of Robert Bresson

The way that the moments of the piece endlessly re-order their cells and their sequences are reminiscent to the type of montage called *any-space-whatevers* of which Robert Bresson[15] is a representative filmmaker. In this particular montage style, the homogeneity of the image has been lost, its own parts lacking metrical relations. The result is that the possible linkages of the image's elements with each other can be created in an

[15] Robert Bresson (1901-1999) was a film director whose works are regarded as outstanding examples of the *minimalistic* school of cinema. His probably most famous movie is *A Man Escaped* (1956).

infinite number of ways. The space in this kind of montage has become indeterminate, a *singular* space possible at every moment.[16]

ii. comparison to the "irrational cut" of the *new wave* French cinema[17]

The most abrupt textural break in the piece occurs at the beginning of sub-moment E42. From this point and after, we encounter material that differentiates drastically from the previous moments. This spot could be possibly paralleled with the so-called "irrational cut", that appears frequently in the French "New Wave" cinema. In this type of montage the two images (before and after the cut) seem to lack a defined end and beginning. The cut is valid for itself but the way that the two images do or do not associate is not important anymore.[18] The sub-moment E42 is located exactly at the middle of the piece and stays there similarly to a pillar, separating the musical discourse in two distinct parts.

iii. the experience of simultaneous temporalities inside the same moment

In sub-moment D11 (see Fig. 5, appx., p. 21) three layers of material are juxtaposed: a) double reeds and trumpet III (m. 11.1-3), b) clarinets, horns and trumpets (m. 11.4) and c) trombones. The third layer recalls the "inject" motive of 1.6. (see Fig. 2, appx., p. 19) that dilates its preceding events whenever it appears. The major difference this time is that it sounds *simultaneously* with another layer of different material (layer 1) and both before and

[16] Deleuze, Gilles (1986). "Cinema 1. The Movement Image", University of Minnesota Press, Minneapolis, p. 109.

[17] *New Wave* (*La Nouvelle Vague* in French) is a French film movement that appeared in the 50s and 60s, one of the most influential in the history of cinema. Its filmmakers rejected the conventions of the traditional film in France of the time and explored radical experimentations with film editing and narrative. They were also engaged with social and political issues of their time. Iconic representatives of this movement are Jean-Philippe Godard, Francois Truffaut and Louis Malle.

[18] Deleuze, Gilles (1989). "Cinema 2. The Time-Image", University of Minnesota Press, Minneapolis, p. 200.

after layer 2 that is also of different nature. This creates a strange "shift" of focus comparable to the changing focus of a film camera as it creates an angle of depth. In this instance of the piece, our attention is de-stabilized as we experience three different temporalities at the same time.

iv. the idea of the *ellipse* in the cinema of Ernst Lubitsch and its relation to the closure of the piece.

In the cinema of Ernst Lubitsch, [19] quite often we encounter an interesting phenomenon: an action in the movie is repeated with a slight, nearly indiscernible difference, which is sufficient to relate this same action with two quite distant situations simultaneously (in a different way than a cause and its effect). These two situations could be contradictory, opposing, or one real and one illusory. Because these two situations are synchronous, it is difficult to define with certainty which one belongs to the original action and which to the "slightly" altered. This phenomenon is called *ellipse* in the cinema terminology and is comparable to two distant situations in the film that form a double center.[20]

In E70.2-3 of the score (Fig. 6, appx., p. 22) we may consider a parallel to the previous concept: the prominent motive D-C-D in the first trumpet is reinforced by the tuba in an out of phase layering (mm. 70.3-5). As the bass line of the latter continues to move even in 70.5-6 (D-E) and the G major chord of the trumpets sounds one bar after the D of the bass, a new

[19] Ernst Lubitsch (1892-1947) was a German-American film director mostly known for his highly sophisticated *comedies of manners* among which the most famous are *Ninotchka* (1939) and *The Shop Around the Corner* (1940).

[20] Deleuze, Gilles (1986). "Cinema 1. The Movement Image", University of Minnesota Press, Minneapolis, p. 162.

harmony appears at 70.6, which is a result of the out of phase motion of the two sound layers (a. trumpets and trombones, b. tuba). This is a coincidence or "accident" that Stravinsky seems to accept. The new chord is a combination of the G-major and E-minor triads and its importance lies in the fact that it has never appeared in moment E before. Because of this, it somehow "announces" that the piece will soon come to its end. In addition, this music event is felt to start with a delay because of the initial pause in the horns at E70.1-2.

The co-existence of these two tiny intentional "flaws" contributes to a radical change in the way we perceive the route of the piece. After this incident, it starts to have directionality aiming to closure, a directionality that we perceive without having actually grasped when this change of attitude happened and why. In a strange way, these two "trivial" mistakes are more than enough to create a chasm between two distant situations: non-directional from the opening of the work up to that point — directional after that.

4. Afterthoughts

One might wonder how it is possible for a composer to achieve coherence and balance in a musical work that is characterized by such an elaborate fragmentation of a texture and by such a dissimilar content. In *Symphonies of Wind Instruments* there is structural equivalence between sections of unequal length. A sense of "rightness" for the closure of each moment (or "sub-moment") is achieved by a complex proportional structure that governs the piece. Its analysis is not included in this study because of issues of length. A reflection of

this proportional logic is obvious in the three tempos of the work that relate with each other in the following way (Ex. 13, p. 17):[21]

Tempo II : I (in quarter notes) = 108 : 72 = 3 : 2

Tempo III : II (in quarter notes) = 144 : 108 = 4 : 3

Tempo III : I (in quarter notes) = 144 : 72 = 2 : 1

Ex. 13: Proportional structure of the three tempos of the work

[21] It is not a coincidence that there is not even one *accel., rit.* or *rubato* in this piece.

Bibliography

1. Literatures

Andriessen Louis & Schönberger (1989). "The Apollonian Clockwork. On Stravinsky", Oxford University Press, Oxford, New York.

Deleuze, Gilles (1986). "Cinema 1. The Movement Image", University of Minnesota Press, Minneapolis.

Deleuze, Gilles (1989). "Cinema 2. The Time-Image", University of Minnesota Press, Minneapolis.

Deleuze, Gilles (1968). "Difference and Repetition", Columbia University Press, New York.

Kramer, Jonathan D. (1988). "The Time of Music. New Meanings, New Temporalities, New Listening Strategies", Schirmer Books, New York, London.

Merleau-Ponty, Maurice (1964). "Sense and Non-Sense", Northwestern University Press, USA.

Merleau-Ponty, Maurice (1968). "The Visible and the Invisible", Northwestern University Press, Evanston.

2. Music scores

Stravinsky, Igor. "Symphonies of Wind Instruments", 1947 v., New York, Boosey & Hawkes, 1952.

Appendix

A0: 2 2 1 2 -- 2 1 1 -- 1 **1** 4
A2: 2 1 2 -- 2 1 1 -- **1 1** 1
A9 (two small sequences in overlap): 2 2 1 1 -- **1 1** 2
2 2 1 2 -- 2 1 1 -- **1 1** 1
A26/27: 2 2 1 2 -- 2 1 1 -- **1 1** 8
A37: 2 2 1 1 -- **1 1** 3
A39: 2 2 1 2 -- 2 1 1 -- **1 1** 2 1

Fig. 1: Cell sequences' durations of all A sub-moments

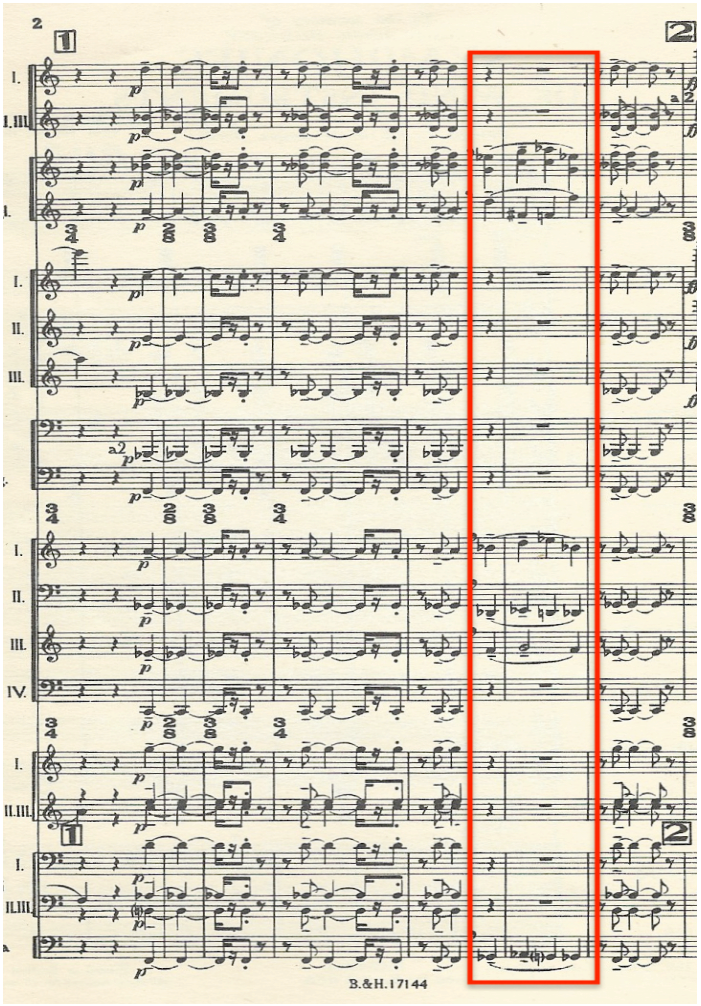

Fig. 2: The "inject motive" in 1.5-6[22]

[22] Stravinsky, Igor. "Symphonies of Wind Instruments", 1947 v., New York, Boosey & Hawkes, 1952, p. 2.

Rehearsal nr. in the score	Harmonic content[23]	Deviations from the principal harmonic content[24]
0	c#-**d**-e-**f**-**g**-ab-**bb**-**b**	
1	c#-**d**-e-**f**-g-**ab**-**bb**-**b**	
1.5-6 (inject motive)	c#-d-**e**-f-**g**-**ab**-**bb**-**b**	**c, eb, gb**
2	c#-**d**-e-**f**-**g**-ab-**bb**-**b**	
3	c#-**d**-e-f-**g**-ab-bb-b	**f#**
4	c#-**d**-e-**f**-g-**ab**-**bb**-**b**	
4.3-5.1 (inject motive)	**c#-d-e-f-g-ab-bb-b**	**c, eb, gb, a**
5	c#-**d**-**e**[25]-**f**-g-**ab**-**bb**-**b**	

Fig. 3: Deviations of the "inject" motive's harmonic content from its surrounding harmony

Rehearsal nr. of "inject" motive's appearance	Transpositions (focal pitch)
Right before 2	F (because of the Gb in the tuba that resolves to F in A2)
5	F
Right before 11	F (weak)
11	G
12	G
Right before 28	E
28	D
Right before 43	D
66	D
67	Eb

Resulting background continuity: **F-G-E-D-Eb.**

Fig. 4: Background continuity achieved through transpositions of the "inject" motive's focal pitch

[23] Principal harmonies are marked in bold.

[24] The notes marked in red sound together with the harmonies of the left column.

[25] The fb that appears in the tuba and bassoon.
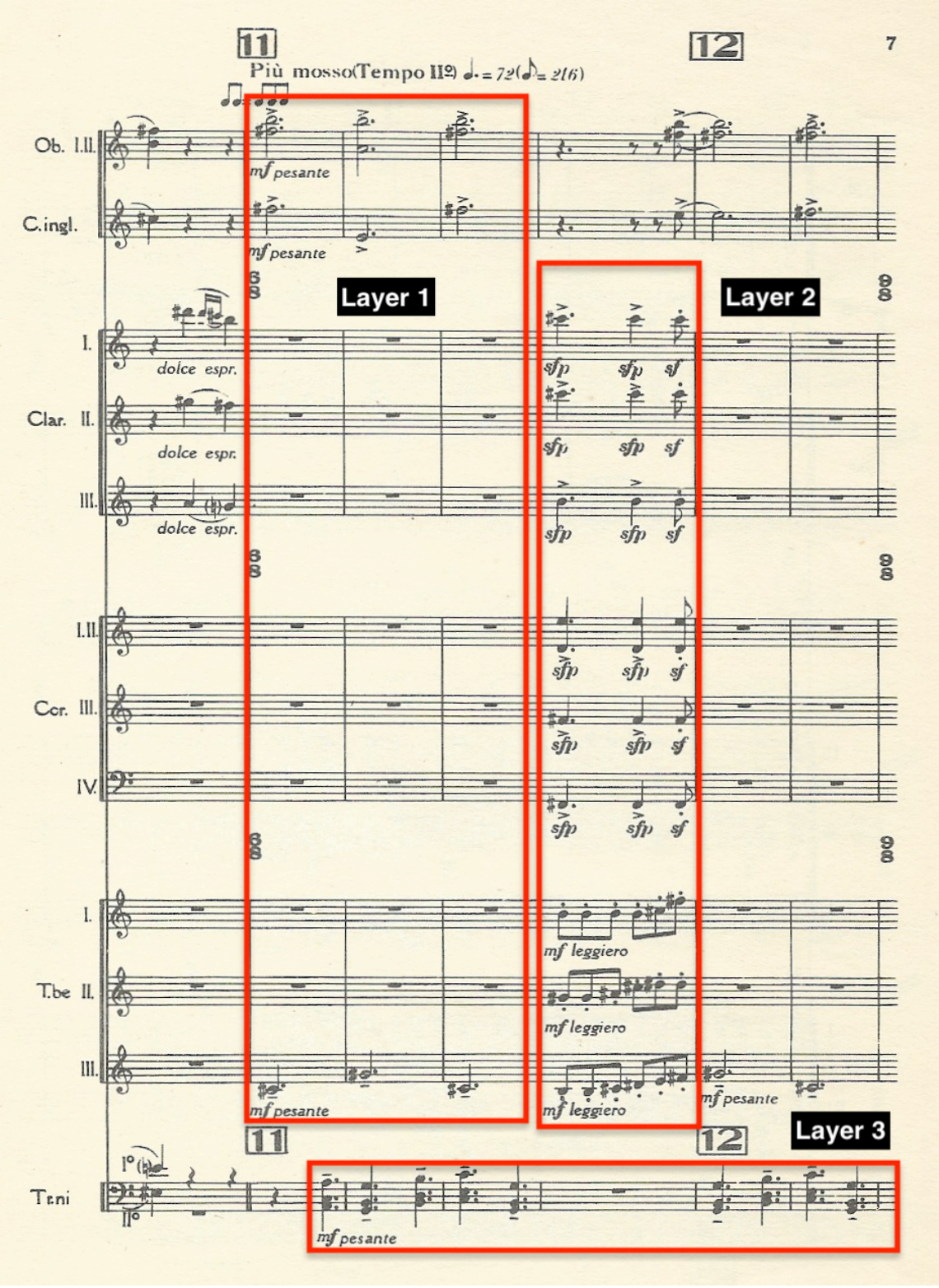
Fig. 5: Experience of three simultaneous temporalities in D11[26]

[26] Stravinsky, Igor. "Symphonies of Wind Instruments", 1947 v., New York, Boosey & Hawkes, 1952, p. 7.

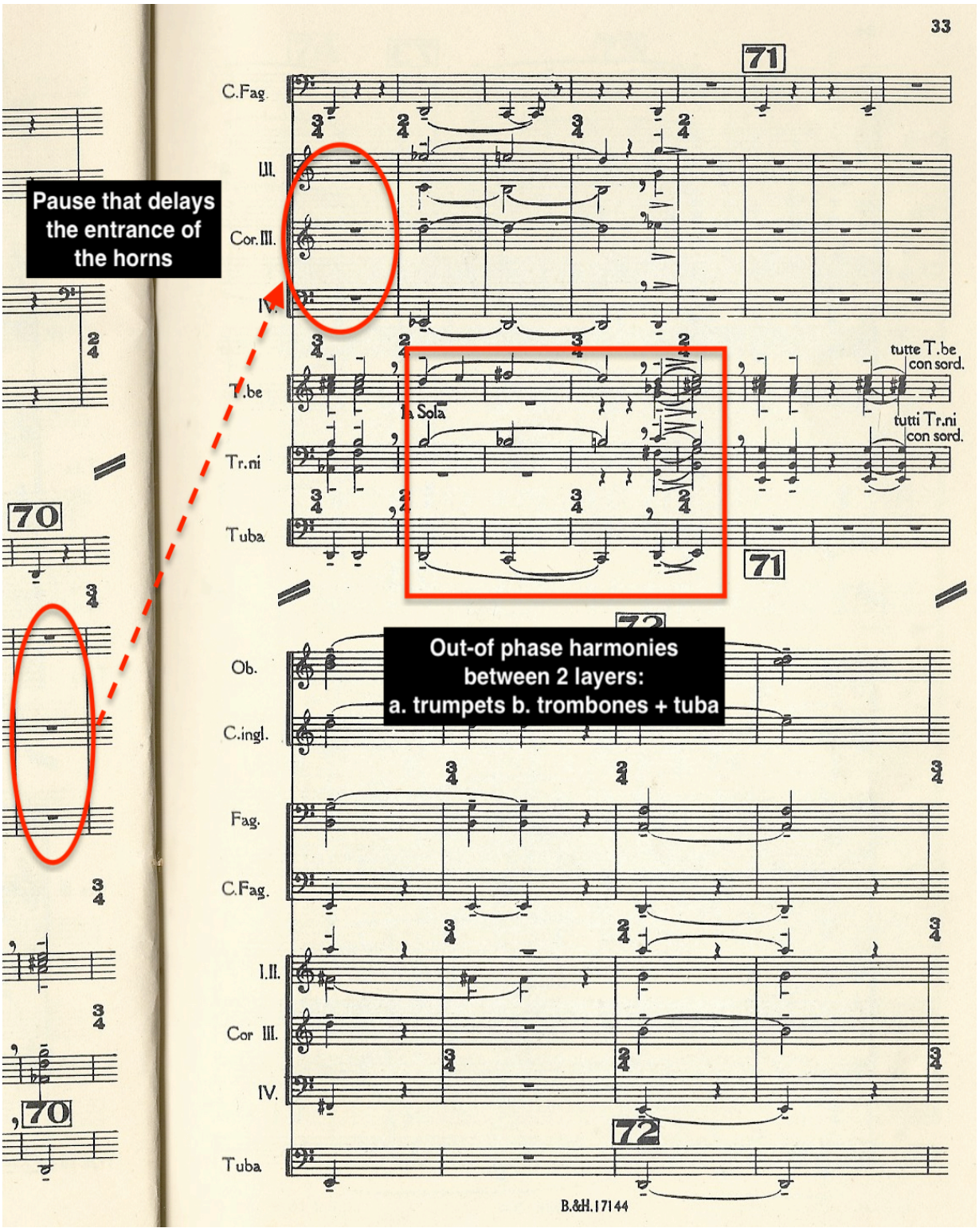

Fig. 6: Tiny intentional "flaws" that direct the piece to its end[27]

[27] Stravinsky, Igor. "Symphonies of Wind Instruments", 1947 v., New York, Boosey & Hawkes, 1952, p. 33.