

## Orchestration as Heterophonic Synthesis of Timbres in Mārtiņš Viļums' *Tvyjōraan* for Chamber Orchestra

**Abstract.** A substantial background of this article lies on my compositional aspiration to integrate extended techniques into orchestration of musical texture. Taking fragments of *Tvyjōraan* for chamber orchestra as a source of examples, the aspects of employing non-conventional timbral possibilities are explored in this paper. The main aim is to filter up such facets along with the compositional approach to orchestral thinking. From this point of departure, the individual types of orchestral techniques are considered. There are five methods of using orchestra given under the exploration:

- 1) the principles of re-synthesising timbral qualities;
- 2) orchestration as magnifying qualities of sound;
- 3) orchestration based on shadow sounds;
- 4) orchestration of the inner space of musical texture (foreground, background and shadow dimensions);
- 5) textural quality as multiplied musical micro-patterns.

While discussing the mentioned properties, the main attention is given to the reorganisation of timbral qualities within micro-textural level. How could small patterns be compositionally transformed seeking to employ new qualities and setting up these from a micro-dimensional to a highest level of sounding material? Obviously, there might be many ways of creative approach to such through-dimensional aspects of realising timbres texturally. Bringing all these matters into consideration, chosen types of orchestration in this paper are consequently explained as a definite aspect based on my musical style.

**Keywords:** expression form, harmonic matrix, harmonic space, heterophonic synthesis, inner space, micro-dimensionality, micro-sonority, micro-texture, microphony, musical texture, orchestration, re-synthesis, shadow sounds, sono-colority, timbral synthesis, *Tvyjōraan*.

Obviously, instruments as elements of an orchestra have their own specific properties and logic how they can be used in interaction between each other. However, techniques of orchestration have been continuously expanding due to the variety of compositional approach, musical style/aesthetics and creative thinking. In contemporary music, the flexibility and potential of creating an individual musical style have an option to be especially reinforced by the extended techniques of instruments. The peculiarity of musical language has been often led by a new interpretation of the instruments' functionality in particular creative context. Therefore, strategy and principles of orchestration are strongly based on a particular approach, aesthetical backgrounds of musical employment. In this article, some compositional principles of the orchestral realization of *Tvyjōraan* will be analysed with the reference to the above-mentioned aspects – i.e., how musical thinking affects and impacts on techniques of orchestration.

All these techniques should be considered in close interrelation with the basic principles of my compositional outlines. The strategy of orchestration here is interpreted as creating and expanding spaces of sounding material wherein certain sound-images of *sono-coloristic* properties come into light. The expression forms of such substance linger and disappear over the patterns and emptiness of spatial landscapes. The formation of my compositional aesthetics is grounded by the principles of *micro-sonority* created by myself. The most important of them are sorted out hereinafter. (a) Form is created via shaping different sonic fields – *harmonic spaces* where particular structure of the harmony has possibilities to be positioned in the range of verticality and horizontality (in an axis of space and time). It could initiate and embrace a certain part of a piece or even a whole composition. Therefore, harmony becomes as a macro-structural pattern and can be interpreted as a harmonic matrix. (b) Internal material of musical expression has potential to be formed by hierarchical differentiation of all sound parameters (loudness, timbre, pitch and duration) in the *figure–texture–shadow* relationship. Such an axis of inward-directed perspective of parameters creates an enlarged deepness of musical texture. The general principle of fashioning musical processes could be described as a rearticulation of the micro-macro layers (as the invariability of sound/sounding implication) in the way they create spatialised expression forms or conditions of peculiar musical consistence.

All the mentioned compositional principles contribute to the possibilities to uncover different levels of orchestration – as micro-structural ramification and transformation of rudimental elements as well as macro-structural signifying of instruments in the range of harmonic space and musical form.

In this article, research background and the main references are attributed to my earlier investigations<sup>1</sup> in the field of understanding musical time-space through a cognitive and psychoacoustic interpretation of creative processes.

### 1. The principles of re-synthesising timbral qualities

Typically, a new mixed type of timbre occurs when instruments are fused together. Particularly, an outcome of the fusion increases when different timbres are being perceived from the same or very near pitch position<sup>2</sup>. It means that a particular tone, melodic line or even textural pattern have possibilities to be orchestrated by mixing timbres of instruments<sup>3</sup>. However, considering the timbral possibilities and extended techniques of each given instruments, there are always more than one “default” option for producing sound/s qualities. In such a way, resynthesized timbre could be arranged even within mono-chromic group of instruments. As it is shown in Example 1, the section of strings (Vn., Vc.) is inter-divided into different timbral articulations yet dwelling on the same tone *b*.

There are two groups distributed in different octaves: the first one (Vn.) consists of *molto Fl.+OST+CLO+[CLO-\-CLO]* articulations; the second one – *molto Fl.+OST+CLO*<sup>4</sup>. Each of tone is synthesised by slightly different “scent” of colour. Despite the fact that they are separated by different octaves, they should merge into a fused sound quality sustaining a unity of a continuous melodic line with little interior alterations as a result. Such a kind of individual coloration of each instrument gives an opportunity to accumulate a unique timbral result in respect of sounding verticality (mixed color) as well as processual re-coloration in the axis of time (it unveils a potential to control aspects of timbral metamorphosis in its streaming perspective).

Taking a look into the textural wholeness via variety of individual elements, we can assume that arranging a particular tone or pattern by changing the quality of timbres uncovers abilities to compositionally organise musical *expression forms*<sup>5</sup> by integrating dimensions of micro-textural level.

<sup>1</sup> The main references of terms and psychoacoustic understanding are given in this paper on the basis of my doctoral dissertation – *The Compositional Principles of Articulation of the Musical Timespace (the aspects of spatialization of sound parameters in music in the second half of the 20th century and at the beginning of the 21st century)* (Vilums 2011) as well as other articles related to the topic of doctoral research, such as *Aspects of Compositional Articulation of Musical Space* (Vilums 2011), *Multidimensional Timespace Forms of Bronius Kutavicius' Oratorio Magic Circle of Sanskrit* (Vilums 2014) etc. There are some other concepts and terms of my compositional approach (such as *sono-colority*, *micro-texture*) that lay on aesthetic definements determined in the article *Sono-colority as Multi-Dimensional Texture Articulation Principles in Martiņš Viļums' "Tvyjōraan" for Chamber Orchestra*. A few aspects of methodological approach to the strategy of music analysis are used in this paper. The main concept of music analysis is defined in my dissertation and analytically realised in the article *Energy as Condition Forms of Musical Timespace Articulation in G. Seelsi String Quartet N° 4*. Although, the analytic tools cannot be fully applied to this article because of the specifics of the subject being explored (musical patterns are analysed here from the viewpoint of orchestration).

<sup>2</sup> A human ability to connect musical processes into particular wholeness and undividable patterns can be explained on the basis of Gestalt psychology, according to which we are able automatically reorganise, restructure elements in respect of particular grouping laws (Palmer 1999: 344–345). All the musical parameters seem to be fused together when differences between them are decreased to a critical perceptual level. This process highly depends on a distance in time (temporality of changing musical events) and space (vertical distribution of pitches, i.e., by increasing the distance of tones or groups of them vertically (up or down), probability to perceive them as different streams/layers increases considerably) (Bregman 2002: 225–227). There are four basic grouping strategies, which are the most applicable to music processes: the law of *proximity* – sounds that are close to each other appear to form groups; the law of *similarity* – timbrally, dynamically and structurally (as a musical pattern) similarly sounding elements appear to form groups; the law of *continuity* – the trajectory of musical stream seems to be continuous even when it is interrupted by pauses or other musical elements; *High-Level Grouping Factors* – different elements could form groups in a highest hierarchical system (Deutch 2013: 183–248; Snyder 2000: 45; Dowling, Harwood 1986: 153–163; Bregman 2002: 227–229; etc.). Gestalt principles of grouping musical elements uncover an essential understanding that there is a set of inter-related connections that bounds musical sounds-objects into particular forms. It can be argued that, in this correlation, all the primeval perceptual parameters of sound (pitch, loudness, duration, time) principally are involved in final perception. Giving a reference to the aspect mentioned in the main text above, decreasing a distance of different timbres/instruments in a range of pitch increases the probability to perceive them as a timbral synthesis. The law of *proximity* here comes into play and overtakes the grouping aspect of similarity. In such a case, different timbral sources are fused together and merge into one perceptual quality).

<sup>3</sup> As we might know, there are a lot of examples of doubling musical instruments in classical repertoire, e.g., Cl. and Ob. play the main theme in Schubert's *Unfinished Symphony* (m.m. 13–22); Mendelssohn's *Symphony No. 4*, 1st movement, m.m. 140–145, etc.

<sup>4</sup> *Fl.* – *flautando*; *OST* – between *ordinario* and *sul tasto*; *CLO* – between *ordinario* and *col legno*; *\-* with the edge of the bow's hair.

<sup>5</sup> The unique perceptual ability to recognize a sum of elements as a wholeness stands as one of the basic principles in Gestalt psychology (Ch. von Ehrenfels enunciated this term as *Gestaltqualität*). Wholeness as a mental appearance is more important than a sum of particles (Fuchs, Milar 2003: 17; Coren 2003: 105–106; Schirillo 2010: 469). Such an apprehension is applicable for interpreting musical forms, contours, lines and so forth as *expression forms*, which mentally appear in our consciousness while

### Synthesising timbral qualities from modified timbral sources anew:

molto Fl. - molto flautando; OST - between ordinario and tasto;  
CLO - col legno and ord.; \ - by the thin side of bow hair

Example 1

## 2. Orchestration as magnifying qualities of sound

Certainly, there is a huge variety of how inner parameters of sound might induce the actual compositional solutions. Those well-known techniques in spectral music as well as other musical styles, where an aspect of timbre stands as a focal point for compositional approach, could be mentioned<sup>6</sup>. A peculiar spotlight of orchestral thinking in *Tvyjōraan* is given to the amplification of different qualities in the range between noise and tone. In Example 2, the musical texture contains seven differently articulated layers (layers “a”, “b”, “c”, “d”, “e”, “f”, “g” in the given example). Respectively, *shadow sounds* (the layer “a”) as a noise represent an *in-harmonic*<sup>7</sup>, unfocused aspect of sound whereas “e”, “f”, “g” are articulated as barely clarified tones. The central *microphonic*<sup>8</sup> texture element in the given example is a tone *d* accomplished by Vln. II and Brass instruments (Hn., Tpt.). The tone is realised by interchanging relations between *d* and *d*<sup>9</sup>. All the other textural layers, principally, are added as coloristic reflections of amplified qualities of sound. Thus, the layer “a” implies a kind of enlarged blowing quality of soft noise (breathing across the instrument) – an innate property for every natural sound source; in the layer “b”, quality of noise is shifting towards hearable tone, but, at the same time, gradually intermingling with a crashing and snaring result because of the increased bowing pressure. Moreover, this texture uncovers a harmonic structure that signifies organised field where “paths” of tones are gradually transforming in the way to become defocused; the layer “c” can be characterised as very soft muted traces of tones – *b* flat, *a* flat. These tones are fragmentarily rearticulated by woodwinds in the layer “d” (as a

we are listening to musical processes. The meaning of this term in my research context is specified and defined in my dissertation (Viļums 2011: 56).

<sup>6</sup> There are several most cited spectral techniques, such as modulation of *harmonic* to *inharmonic* space; applying *subharmony* as an inversion of harmony-spectrum; technique of *filtration* (by highlighting particular set of harmonics); technique of combination of tones; technique of *interpolation*, etc. (Rose 1996: 11–15, Гризе 2000: 115–116). An increasing importance of timbre in contemporary composers’ creative works (e.g., in the works of H. Lachenmann, H. Tulse, J. Harvey, K. Saariaho, G. Grisey, T. Murail and other followers of spectral music) and a scientific interest (K. D. Martin, J. W. Beauchamp, Sch. Dubnov, R. Plomp et al.) are driven by the necessity to investigate the internal microstructural properties of sound.

<sup>7</sup> Inharmonic sounds (or a set of them) that deviate from basic spectral components (Rose 1996: 8–11). Elements of noise could be added in order to emphasise an effect of applying non-harmonic tones. In Example 2, noise is interpreted as an aspect of inharmonicity.

<sup>8</sup> Microphony could be understood as a smaller group of instruments by which particular spectral characteristics of tone is synthesised. It gives an opportunity to realise different intensities of orchestra within a range of *solī-ensemble-tutti*. This method of orchestration is implemented in Grisey’s “Transitoires” (Rose 1996: 11–15).

<sup>9</sup> 1st Trumpet and 1st Horn should be tuned  $\frac{1}{4}$  tone lower. A glyph “-” or “+” next to the name of note means that a tone has to be produced a quartertone lower (-) or higher (+). This kind of marking quartertones is chosen in the text of this article, but not in the score.

**Amplifying sound qualities by involving different dimensions**

The score is divided into several sections with specific annotations:

- Section a):** Features woodwinds (Fl. I, Fl. II, Ob., Eng. Hr., Cl. I, Cl. II, Bsn.) and strings (Vn. I, Vn. II, Vla., Vcl., Cb.). Annotations include "brightening harmonic matrix" and "shadow as emphasis on inner noise qualities of sound".
- Section b):** Focuses on the string section (Vn. I, Vn. II, Vla., Vcl., Cb.) with the annotation "brightening/colorizing the central tone 'd'".
- Section c):** Focuses on the string section with the annotation "light and noisy shadow layer of harmonic matrix".
- Section d):** Focuses on the string section with the annotation "micro-texture as extended and magnified tone 'd'".
- Section e):** Focuses on the string section with the annotation "muted harmonic matrix".
- Section f):** Focuses on the string section with the annotation "light coloration-reflection (from central 'd') within tones of harmonic matrix".

The score includes various musical notations such as dynamics (mp, p, pp), articulation (arco, staccato), and performance instructions (poco a poco diminuendo et).

Example 2

highlighted harmonic force from central tone *d*) as well as continuously covered by the very light colouring of *flautando* in the layer “e”. Finally, central tone *d* is organised as mixed texture using Vn. II, 1, 2, 3 and brass instruments (Hn., Tpt.). There is a certain amount of *micro-textural*<sup>10</sup> elements realising central tone: waves of *vibrato*; micro-chromatic shifts by Vn. II, 1 (*d*+) and Vn. II, 3 (*d*-); rhythmic permutation implemented by Vn. II, 2 playing *flautando* – on the tone *d*; brass instruments’ articulation is realised in two ways – by using mutes and quartertone shifts (Hn. 2 and Tpt. is tuned 50 c. lower).

As a result, the above-mentioned articulations in the given Example 2 could be explained as readjusting separate qualities of sound (which by default are undistinctive and lies on a microscopic level of sound) into particular textural segments that are exposed here as overlapping harmonic matrix. Thus, it allows having a compositional control over various amplified sound qualities simultaneously (e.g., embracing heterophonic or polyphonic relations of the mentioned aspects in a musical texture).

### 3. Orchestration based on shadow sounds

In this composition, the so-called *shadow sounds* are realised as a peculiar compositional approach in order to control various aspects of noise, such as brightness, sharpness, narrowness or other kind of sonorities without audible pitch. In Example 3, three types of orchestrated noise can be distinguished: 1) light noise; 2) sharp noise; 3) deep, low noise. There are swapping transitions between light and sharp noise by changing bow pressure (see the grey area in Example 3).

**Orchestration and transition of shadow sounds**

Example 3

Consequently, a new quality of timbre-texture is achieved by realising gradual transformation of articulation (by bow pressure) and dynamics (*cresc.-dim.*). The third textural element (deep, low noise realised by blowing into instruments’ tubes) should be understood here as a deepening aspect of shadow space, that is heterophonically coarticulated within a layer “a” and is additionally nuanced using different phonemes, such

<sup>10</sup> An aspect of timbre alongside with *micro-textural* articulation stands as one of the dominant compositional principles in my musical aesthetics in general. The principles evolve from a cognitive ability to perceive musical aspect of quality, phenomenon of timbre in the way of visualizing, colorizing processes of sounding stream (Viļums 2011: 41–60). Herewith aspects of other parameters as changing or reinforcing sounding elements, which become a quality of musical expression (e.g., thrill aspect of pitch, brightening illumination of loudness), have to be interpreted in terms of micro-textural, timbral, coloristic dimensions.

as [ho], [hu], [hi]<sup>11</sup>. Therefore, transforming areas of noise via axis of time and space<sup>12</sup> are created using diverse groups of instruments (strings and brass instruments) along with the various, herewith subordinated kinds of producing sounds without accurate pitch.

#### 4. Orchestration of the inner space of musical texture (foreground, background and shadow dimensions)

With reference to the aspect of possibilities to create an inner space of musical texture mentioned in introduction of this paper, there are some principles of how such a deepness of sounding material might be realised. Firstly, loudness as the main parameter of potential to draw sounding processes in an illusionary perspective should be highlighted. Thus, dynamically stronger (or increasing) musical elements are tended to be associatively perceived as being closer (in the case of *crescendo* – as approaching), and vice versa – quieter elements of music texture – as being positioned in a greater distance or in a background comparably to louder elements<sup>13</sup>. Secondly, peculiarity of the other sound parameters – such as pitch, aspect of time-rhythm, and especially timbre – should also be taken into account. Respectively, the parameter of pitch plays an important role in cases where details, size and volume of textural object should be applied (e.g., figure may be projected as a chord, as a whole layer or, solitarily, as a one tone, etc.). The parameter of timbre can be perceptually actualised through the aspect of brightness, clearness (in the axis of noise-tone), roughness – in such a way it increases an illusionary spatial effect regarding the positions and distances of the inner textural perspective (such an aspect naturally intermingles with the parameter of loudness). The axis of time serves as a crucial dimension for understanding musical texture in respect of horizontality of music perception – e.g., by gradual interchanging processes of the foreground/background layers, transitioning of a musical figure forward/backward. Cutting to the chase, it is necessary to give an adequate time for our perception to recognize perceptual illusions of a distance.

Finally, two main types of compositional-orchestral strategy connected to the inner dimension of musical texture could be marked out: 1) changing articulation (including extended techniques) in order to realise particular segments in the axis of figure-ground-shadow; 2) distributing instruments or groups of them to induce the space-making layers. Obviously, both methods have a lot of options to be interchanged – a group of instruments could be realised as a modulating process through different spatial dimensions (figure/background/shadow), whereas transforming texture in this axis of deepness have a possibility to be branched out or sustained to a particular layer.

In Example 4, the aspect of inner textural dimension is realised along with the transformation of timbral quality. There are three basic types of articulation: a) a microtonal fluctuation on tones *b*, *b+* that derives from multiphonic produced tone *cis* by Cl. 2 and subsequently picked up by Cl. 1; b) a multiphonic expansion of tone *cis* by Ob. 1; c) shadow tones produced by brass instruments (air blowing across the tube). Basically, these types are distributed into two orchestral groups: 1) single tones and multiphonic articulations dominate within the wind instruments; 2) shadow sounds prevail within the brass instruments. All these articulations are subordinated respectively in order to create a united expression form wherein the figure which is initially highlighted by wooden instruments (layer a, b) continues to be articulated in the interchanged relations within the texture consisting of shadows and fused tones afterwards. Thus, a figure in a layer “a” is submerged within the upcoming space of shadow and blurred sounding of the oboe’s multiphony. That textural fusion/fused texture evaporates via the shadowed thrills afterwards (realised by flutes) and the clearness of the initial figure appears anew. All the layers of textural implementation (figure-background-shadow) are exposed via transformational trajectories of inner space as a result of an orchestral strategy. It means that a figure (layer “a”) is undergoing appearing–disappearing–reappearing processes. Meanwhile, the background texture (layer “b”) together with the shadows (layer “c”) is being transformed in other ways – they are dynamically increased and decreased afterwards.

<sup>11</sup> The letters in brackets should be pronounced together as one phoneme. In the order [ho]-[hu]-[hi] they are represented from the lowest to the highest whispering/murmuring sounds as gradually shifting and overlapping colours of shadow sounds.

<sup>12</sup> Space, at this point, should be understood as a bandwidth of noise in a vertical dimension as well as an aspect of deepness within a perspective of sounding area.

<sup>13</sup> The results of the research conducted by M. Chowning show that if the area of sound sources decreases (or when the distance of a source increases), its distance increases like a receding visual object. Such an aspect of perspective is defined as a general principle of auditory and visual perception, which is an integrated harmonization of understanding the exterior world (Chowning 2000).

## Blending of shadow, background texture and figure

The image displays a musical score for Example 4, illustrating the blending of shadow, background texture, and figure. The score is written for a variety of instruments: Flute 1 (Fl. 1), Flute 2 (Fl. 2), Oboe 1 (Ob. 1), English Horn (Eng. Hrn.), Clarinet 1 (Cl. 1), Clarinet 2 (Cl. 2), Bassoon (Bsn.), Horn (Hrn.), Trumpet 1 (Trpt. 1), and Trumpet 2 (Trpt. 2). The score is annotated with three main areas: 'background' (top), 'figure (the figure's decay to the dimension of shadows and background)' (middle), and 'shadows' (bottom). A diagram at the bottom shows a progression from 'clear tone' to 'fused tone' to 'clear tone'.

Example 4

## 5. Textural quality as multiplied musical micro-patterns

A key strategy of orchestration in *Tvyjōraan* could be characterised as an aspiration to make new qualities of sounding expression: from the smallest element (micro level) to macro-textural fields along with different feasible ways of spreading these elements into the wholeness of a musical form (macro level). As a final example of orchestral strategies of the investigated subject, the aspect of expanding micro-dimensional qualities to the range of harmonic field has to be discussed. In Example 5, the fairly simple chord based on fifths is embellished by micro-chromatic transitions between *fis*-*g* and *cis*-*d* (in a quartertone distance between them). Whereas one voice is keeping its position constantly (e.g., *g*-), another voice is surrounding it moving in *glissandi*-kind quartertone gestures up and down (consequently *g*-*fis*) starting from primary tone. At this point, a new transformed kind of a tone quality is accumulated by fusing particular pitch wherein one tone is made as rotating around central axis of another one. Furthermore, such a synthesised quality of micro-textural level is laid as a substance for macro-textural projection. These blurred elements are multiplied in respect of every pitch position of a given chord, i.e., approximate fifth *g*- [+ -], *d*- [+ -] is distributed three times per octaves. Besides the mentioned aspect of fusing tones into a small range of an interval of minor second, there are other manipulations of sounding material which are realised by changing timbral qualities (along with the gradually increasing dynamic range). In Example 5, we can see that central tones *g*-, *d*- are articulated as having very poor clarity of producing tone (*col legno tratto*, *molto legato*), whereas rotating tones are characterised by gradually changing positions of a bow from *sul tasto* (ST) to *ordinario* (O). Hence, all the sounding aspects of articulation are implemented into the micro-dimensional range of sound parameters. As a result, a reassembled diffused quality of textural pattern (where peculiarity/operation of fulfilling one tone area is spread out via all the elements of harmony) is realised within all groups of strings. It is worth mentioning that there is another layer of micro-chromatically extended pitch zone that is additionally implemented by a new micro-textural articulation around focal tone *a*+ in the discussed textural layer. On the one hand, it consists of micro-chromatic extension similarly to other tones of harmony; on the other hand, this textural

**Amplifying and creating new qualities of timbre-texture patterns:** CL tratto+timbral modulation ST→O

The score is divided into four systems for Vn.I, Vn.II, Vla., and Vc. Each system shows multiple staves with musical notation and performance instructions. Key annotations include:

- Vn.I and Vn.II:** "CLO tratto molto legato", "p legato, arcato ad libitum", "ST", "pp".
- Vn.II:** "OST molto legato", "mp", "legato arcato lento molto vibrato", "ST", "SP", "Fl, arcato irregolare", "mp".
- Vla.:** "CLO tratto molto legato", "p legato, arcato ad libitum", "ST", "pp".
- Vc.:** "CLO tratto legato", "p legato, arcato ad libitum", "ST", "pp".

On the right side, four examples of "fused pitch" are shown, each with a label: "fused pitch between cis-d", "fused pitch between fis-g", "fused pitch between cis-d", and "fused pitch between fis-g". A dashed box labeled "the beginning of a new micro-textural layer" encompasses the Vn.II part and its corresponding fused pitch examples.

Example 5

object is compositionally individualised via differing modes of articulation. In other words, micro-chromatic movements, instead of being realised as *glissandi* (as it can be shown in other parts of a chord), are articulated here as extended timbral “sharpening” from *sul tasto* (ST) to *sul ponticello* (SP). Alongside this gesture, *molto vibrato* is switched to *molto flautando* and thrills afterwards (see Ex. 5, area outlined).

### Conclusion

All the strategies of orchestration implemented in *Tvyjōraan* for chamber orchestra could be characterised as creating new qualities of musical texture via various compositional approaches to them. One of the main ideas considered in this paper is understanding the strategy of orchestration in the way of applying quantitative changes of various articulations (such as loudness, timbre, pitch transformations via an axis of time) to a microscopic dimension of musical texture. It comes out that employment of suchlike manipulations in a particular way uncovers possibilities of musical expression forms to be realised in a new qualitative fashion. The principle of how different voices of instruments are gathered into very small textural areas could be defined as **micro-orchestration**. Analysis of the given musical fragments reveals that aspects of these small



orchestral implementations might be accomplished via synthesising timbral parameters anew (Ex. 1), magnifying inner qualities of sound to the macro-textural level (Ex. 2), transforming orchestral qualities within the perspective of textural deepness (Ex. 3), changing the aspect of clarity by integrating potential of articulated/filtered noise (Ex. 4), and finally – multiplying micro-dimensional sounding patterns to the wholeness of harmonic space. It is worth reminding that all these principles of micro-orchestral articulations have been shown here aside the compositional techniques and aesthetical backgrounds developed by myself. The other specific ways of evolving musical material into new qualities of musical expression as a kind of micro-textural orchestration should be developed in further investigations.

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## Orkestruotė kaip heterofoninė tembrų sintezė Martiño Viļumo kūrinyje *Tvyjōraan* kameriniam orkestrui Santrauka

Šio straipsnio turinys ir analitinės prieigos yra sąlygotos mano kaip kompozitoriaus siekio išplėstines grojimo technikas integruoti į muzikinės faktūros orkestruotės aspektus. Pasitelkiant kūrinio *Tvyjōraan* kameriniam orkestrui pavyzdžius analizuojamos netradicinės akustinių tembrų sintezavimo galimybės. Nauji faktūros ir tembro sąveikos aspektai čia interpretuojami kartu su komponavimo principų sprendimais. Taigi muzikos realizacija aptariama kaip individualizuota orkestruotės technika, kuri susiformuoja per koreliaciją su kūrinio kompozicine estetika bei stilistika.

Orkestruotės strategija analizuojama integruojant kompozicinius siekius sukurti ir išplėtoti skambesio erdvę, kurioje išryškintos tam tikros *sono-koloristinės* savybės. Šių savybių *išraiškos formos* susidaro ir išnyksta tarp harmoninės erdvės brėžinių ir tuštumos, kaskart sukurdamos savitą skambesio „kraštovaizdį“. Šių vaizdinių kompozicinei realizacijai pasitelkiami mano muzikos estetikai būdingi *mikrosonoristikos* principai.

*Tvyjōraan* kompoziciniai principai siejami su galimybėmis atverti skirtingus orkestruotės lygmenis – nuo mikrostruktūrinių tembro artikuliacijos galimybių iki makrostruktūrinių instrumentų įprasminimo harmoninėje erdvėje ir muzikos formoje. Straipsnyje aptariami penki orkestruotės principai: 1) tembrinių savybių resintezė; 2) tembro mikrosavybių padidinimas ir išplėtimas; 3) *šešėlinių garsų* orkestruotės aspektai; 4) muzikos faktūros vidinių erdvinių savybių orkestruotė (pasitelkiant *figūros–fono–šešėlių* dimensijas); 5) mikrostruktūrinių tembro sintezavimo ir varijavimo savybių projekcija ir multiplikacija makrofaktūros lygmeniu. Aptariant minėtuosius orkestruotės aspektus, ypatingas dėmesys skiriamas tembro kokybinių aspektų artikuliacijai ir reorganizacijai mikrofaktūriniame skambesio dimensijoje.

Visos *Tvyjōraan* orkestruotės strategijos gali būti apibūdinamos kaip naujos kokybės faktūros sukūrimas, kuris įgyvendinamas skirtingomis tembrų realizacijos komponavimo strategijomis. Viena pagrindinių aptariamų idėjų šiame straipsnyje siejama su orkestruotės strategijų interpretavimu kaip artikuliacijų *kiekybinių* pokyčių įgyvendinimu mikroskopinėje muzikos faktūros dimensijoje. Šie kompoziciniai sprendimai atveria galimybes skirtingais strateginiais aspektais įgyvendinti *kokybiškai* naujas muzikos raiškos formas. Tokios orkestruotės strategijos, kurios suponuoja skirtingų tembrinių artikuliacijų jungimą itin mažuose faktūros pavidaluose, gali būti apibrėžiamos *mikroorkestruotės* terminu.